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WEALTH of the AMERICAN PEOPLE

WEALTH of the AMERICAN PEOPLE

A History of Their Economic Life

by

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New York

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To Aunt Ada

who has loved us all

PREFACE

This book is in part a by-product of many years of research on the economic life of the ordinary American. The evidence as it accumulated came more and more to convince the writer that social and economic things among the great mass of the people cannot be separated. More than that, it made it apparent that economic history is a history of consumption as well as of production; the spender no less than the earner has shaped the material course of the nation. The early books in the field were written in the shadow of the rising factories and were as a result largely industrial histories. Even agriculture received relatively little attention. The rise of consumers' goods to dominance and the growing emphasis on the individual as a primary center of economic interest has slowly unrolled an impressive panorama of physical progress, and the emergence of the United States as a powerful nation, able to play the leading role in defeating what appeared to be basic threats to the democratic theory of government, is seen as a magnificent accomplishment not only of industry but of all other material activities as well.

There will be those who quarrel with the content of this volume. They will point out many vital omissions, and they will see no justification for my decision to reduce footnotes to the barest minimum and cut the bibliography to a brief selection while retaining material they may regard as extraneous. The author has only two defenses: first, that one volume is no longer adequate for a full treatment of the subject, and, second, that the economic life of the people cannot possibly be encompassed in the mere story of production. There will be those also who object to the title. Yet to the writer the one great distinguishing thing of Americans is their wealth—wealth not so much in money as in goods; in leisure; in educational and cultural opportunities; in ability to try the new products of science and therefore to encourage them; in privileges usually reserved for the few; and even in rights to dream and hope far beyond the horizons of other millions of the earth. The wealth of the American people is, in spite of many evils and many shortcomings, a wondrous wealth that must take the lead in bringing to the peoples of the rest of the world goods that knowledge has made them want. The chocolate, the radios, the baseball equipment, the moving pictures, the jeeps, the cigarettes, and the countless other outpourings of the pounding factories

that the fighting forces in the recent war scattered afar sowed more poverty than did the blazing guns. The simple cup of rice, the thatched hut that served the past will not serve the future. The laws of economics, however inflexible, will be bent to that fact.

Much of the material used in the preparation of this book was gathered from libraries, historical societies, state archives, and individual collections in all but two of the states east of the Rocky Mountains. One of the joys of research was the welcome everywhere received; indeed, it seems as though the aim of the keepers of the records of the past is to make the scholar feel that they are glad that he has come. It is deeply regretted that only a small portion of all that was made available could be specifically incorporated into this particular story. Much help has come too in other ways. Research organizations have made possible many months of uninterrupted study in various phases of American history, business houses have freely lent their aid, publishing firms have granted permission to quote from the riches of their presses, newspapers and magazines have accorded reproduction privileges, historians and economists have taken of their valuable time to read portions of the manuscript, the staff of Prentice-Hall has been patient and tolerant, and friends everywhere have given of their advice, their encouragement, and their skill. To attempt to list the persons and the institutions that have contributed to the making of this volume would mean that some would be unintentionally omitted. I shall here merely thank them all, and whoever reads will know my gratefulness. The book, except in form, is theirs in many ways. Much of the credit for anything that is good in it is due to them and to my wife, who on long research trips and in every step of writing and checking has borne more than her share of an undertaking that on the title page would to the uninitiated appear to be mine.

JAMES A. BARNES

Elkins Park, Pennsylvania

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WEALTH of the AMERICAN PEOPLE

Chapter 1

THE OLD WORLD AND THE NEW

The drama of America's economic development as it sweeps from the journeys of the early European adventurers into the unknown seas of a vast universe to the modern age of atomic energy in a world that has suddenly shrunk to midget proportions is an exciting one. Unfortunately there is no longer room in a single volume to present the whole. Parts must be viewed only in boldest outline. In this survey in particular the story of those eventful and significant years between the establishment of the first unrelated settlements and the writing of the Constitution that drew the one-time colonies together as states into a federal union must be foreshortened. It would, however, be impossible to understand the growth of the nation without knowing something about the pioneers who peopled the land and without comprehending the gifts of the land to the people.

Basically the discovery of America was the result of the efforts of Europe to supply urgent and expanding economic wants the satisfaction of which had become difficult. When exploration first began, there was no deliberate intention on the part of the Old World to extend its geographic boundaries. There were no dreams of building great new empires in strange new places. Few Europeans, in fact, suspected that the Atlantic three thousand miles to the westward washed the shores of a far-flung continent. But daring sailors seeking in the closing years of the fifteenth century to overcome economic handicaps pushed the realms of their sovereigns into unknown parts of the world in an eager attempt to reach the Orient by water. That fact marks the beginning of the age of discovery and of modern history. It marks too one of the profound incidents in what is frequently referred to as the march of civilization. Europe had come into full being—a Europe whose provincial towns were eventually to smother completely glamorous Bagdad, Constantinople, Salonika, Cairo, Alexandria, and Damascus at the eastern end of the Mediterranean; a Europe whose rising states were long to fight in desperate rivalry to establish themselves in the newly discovered regions; a Europe that was to disseminate its culture over much of the world; a Europe that was to encourage the growth of the common

man; a Europe that was to spread throughout its reach a capitalistic structure destined ever to stir controversy and conflict.

The World That Preceded Modern Europe. *Rome and Its Grandeur.* In order to comprehend the full import of the age of discovery, it is necessary to follow the steps of man from his quiet life on the shores of the peaceful Mediterranean to the launching of his puny little ships on the threatening billows of the Atlantic. Long before the dawn of the Christian era the Roman Empire, centered on the Tiber, had come to dominate a fringe of land skirting the Mediterranean from end to end. At its height it included what is known as the Balkans, the territory south of the Black Sea, and a narrow area stretching along the Levant and the northern edge of Africa westward to the ocean and swelled out northward beyond Gibraltar to cover Spain, Gaul, and even England. A web of commerce spun itself over the great inclosed sea as goods from afar poured in and out of the busy ports. Roman legions preserved peace and Roman institutions sponsored cultural progress, but the stage was far too small for the grandeur of the play. Eventually decay from within and attack from without destroyed the empire. Invading Goths from the north sacked Rome in 410 A.D., and in the East, except at Constantinople, other barbarians beat back the lines of trade that had made the Mediterranean nursery of a brilliant civilization. In the seventh century Mohammedans spread through Asia Minor westward across Africa to Spain and were at last defeated at Tours, north of the Pyrenees, in 732 by Charles Martel.

The Middle Ages. The impact of the forces that broke the unity of the Mediterranean region was felt for nearly a thousand years: roughly from the fifth to the fifteenth century, inaptly called the Middle Ages. The rupture with the past was not particularly sudden, nor did civilization wholly disappear. The German invaders because of their long contact with the conquered had already absorbed much that was Roman. Substitution and modification were sometimes as apparent as destruction. It is true that at first there was nowhere a common urge or a common thread that could tie the land together, and, even though evidences of culture and knowledge were obvious and individuals with ambitions and hopes were frequently to be seen, cohesion was lacking. The sea led no longer to the rich storehouse of goods it once had tapped. The roads that had been burdened with commerce were in places empty. Familiar political ties had dissolved. Authority was local and therefore ineffectual; it often could neither preserve culture nor maintain order. Security and mobility, essentials when human beings depend upon one another for goods, were seriously disturbed. Driven by the stern necessity of eating what they grew and growing what

they ate, many who had previously made their living by other means turned to the earth for sustenance. The troubled people, fighting starvation and fearing violence from the cutthroats and robbers that infested the countryside, built up a feudal society that theoretically made possible both food and peace. The two most outstanding figures in this first, or agrarian, stage of the Middle Ages were the noble and the serf. The one fought off the encircling enemies while the other tilled the soil that each might eat. Because he was locked to a land economy that had no faster and no more capacious means of transportation than a plodding horse, neither knew much about the world beyond his own small orbit. Farmers and even villagers for generations might wander no farther than the hills that cut the horizon a few miles away or the forests that pressed hard at the far side of the fields. Localism in fact and in spirit was dominant.

That the great mass of the people were in their uninspiring and uneventful lives bound to lords and to an undeviating pattern of poverty and ignorance did not mean that Europe was barren of hope for the future. The Middle Ages generated astounding powers. Ever did individuals fight against darkness, and ever did the church plod toward the hereafter. Towns in many cases lived on, and ideas, though often restricted, still existed, moving forward by devious ways. The church in particular sought to establish and maintain a universal discipline. Archbishops, bishops, abbots, and priests and the pious members of the various monastic orders as well were inescapable. The pageant they played over Europe occasionally faltered, but it never quite stopped; its influence was profound. In the monasteries each faithful soul toiled at his sometimes meaningless tasks in unquestioning obedience. In the hearts of the humble everywhere was submission. Many even among the upper clergy felt that sin, death, and the judgment were alone the concerns of man. Yet the church was the most potent single factor in keeping alive the love of learning in the centuries that followed the fall of Rome. It brought early in the period a feeling of unity in Christendom. It inspired at the end of the thirteenth century Dante's great *Divina Commedia,* which pictures man in order and faith moving upward to paradise. Neither the soul nor the mind was dead.

The eventual transformation of Europe from the medieval to the modern was wrought not only by the religionists and the intellectuals but also by a host of forces simple in themselves. Improved methods of farming (taught by the monks as they went their spiritual ways) and a growing self-confidence in local communities (sponsored by the military efficiency of feudalism) created enough political security and economic well-being to be reflected in a mounting birth rate. Growth in the population in turn

resulted in further agrarian expansion. As new land came under cultivation, the isolation of other days lessened if it did not disappear. Surpluses began to pile up on farm and in village. The adventurous, freed from the fear of starvation, turned to thoughts of bargains and sales, and a swelling stream of aggressive wealth hunters poured into the rising towns and spread them far beyond their ancient walls. New contacts created new appetites, and new appetites stimulated trade and brought new roads and bridges and other physical necessities in an unfolding commercial structure. As early as the eleventh century the interplay of economic life between Europe and the East had begun to revive. Ferment was stirring within, and both spiritual and temporal forces were pressing outward.

Between 1095 and 1270 occurred a series of fitful expeditions that in at least one case took children as well as adults to the eastern end of the Mediterranean. Inspired by a desire to wrest from the infidel Turks the Holy Land where Jesus had lived and taught his simple lessons of Christianity, these crusades, as they were called, were of little import in dislodging the infidels. At home, however, they had important economic, social, and political consequences. They were in part responsible for the break-up of the manors, for the growth of an active monetary group, for self-government in towns, and for a new demand for eastern goods. Other adventurous journeys not cloaked in religion stirred desires for foreign riches. Some were openly acquisitive and some were merely wanderings, but all gave rise to an endless round of rumors and stories that whetted the imaginations even of simple folk. Few tales have aroused in the hearts of their readers such longings for far-off things as did *The Book of Ser Marco Polo concerning the Kingdoms and Marvels of the East,* written about 1300.

The Lure of the East. As long as Europe was tied to land-bound lines of communication, her economic thoughts—if they strayed at all—were of necessity turned toward the Orient. From that sprawling region between the eastern end of the Mediterranean and the far reaches of China and Japan had always come fascinating things. The literature of the time is filled with references to the products of the East. "Mace, ginger, cardamoms, and galangale," for instance, are mentioned in the dowry of a Marseilles girl of 1224, and an old English record reads, "Matilda de Chaucer is in the gift of the king, and her land is worth £8, 2*d.*, and 1 pound of pepper and 1 pound of cinnamon and 1 ounce of silk." [1] In the fourteenth

[1] Edward Potts Cheyney, *European Background of American History* (New York: Harpers, 1904; vol. 1 of the American Nation series), p. 11. Professor Cheyney in ch. I, "The East and the West," gives many literary quotations concerning eastern products.

century Chaucer wrote of "notemuge to putte in ale" and "poudre-marchant tart, and galyngale" to season chicken boiled "with the mary-bones." The brewster in *The Vision of William concerning Piers the Plowman* offered the glutton pepper, peonies, garlic, and a "ferthyngworth of fenel-seed for fastyngdayes." As late as the seventeenth century Shakespeare's Lady Macbeth spoke of "all the perfumes of Arabia," and Milton stood in awe of the "gorgeous East" with its "barbaric pearl and gold."

Modern refrigeration, fixed-flavor processes, laboratory-controlled methods, and other commonplaces of our food-supplying world make it difficult for readers today to realize the importance of spices to the people of the Middle Ages. Pepper was often sent as a gift from one sovereign to another; for many years the Venetians purchased of the Sultan of Egypt more than four hundred thousand pounds annually. Nutmegs, mace, cloves, allspice, ginger, and cinnamon bark too were bought in large quantities. Items for personal adornment also were in great demand. Diamonds, rubies, pearls, and other jewels—principally from Persia, India, and Ceylon—were sought both by individuals and by the church. Strange woods and plants and medicinal herbs as well as finished goods from the shops of the artisans swelled westbound cargoes. Sandal and aloewood, employed in making beautiful cabinets and for burning as incense, came from India; musk from China; camphor from the lofty camphor trees of Sumatra and Borneo; cubebs from vines in Borneo and Java; cane sugar from Arabia and Persia; and alum from Asia Minor. Especially important were glass from Damascus, Samarkand, and Kadesia; porcelain from China; and fine fabrics of silk, cotton, hair, and mixed materials from hand looms throughout the East. Brocade, damask, taffeta, sendal, satin, camelot, buckram, muslin, and many varieties of carpets, rugs, and hangings are so named from the places of their first importation to Europe, and the origins of chinaware and japanned ware are likewise revealed.

The Changing West. The swelling stream of products that poured out of the East westward over three well-established (though shifting) trade routes profoundly affected the world that centered on the Mediterranean. Italian towns profited greatly from the economic hunger of Europe; firmly astride the highway that brought to the luxury-starved West the wonders of the Orient, they waxed rich, and some amply confirmed their title of city-states. Italian merchants became the middlemen between the East and the West. They maintained quarters, or *fondachi,* in many of the Levantine cities, in the market places of which they bargained and traded with dealers in eastern goods. Special commercial privileges, gained in part during the crusades and in part by later purchase, effectively prevented com-

petition. Though the galleys of Amalfi, Pisa, Florence, and lesser powers were sometimes to be seen in the harbors of the busy commercial towns at the eastern end of the Mediterranean, it was Venice and Genoa that eventually became supreme. By 1400, however, Venice had sent her men-of-war, manned by thirty-six thousand seamen, with forty thousand soldiers as fighters, to crush the Genoese colonial empire in the Levant and gain the rich carrying trade for her merchant fleet of some three thousand ships.

Profits were derived from sales at home or by disposal elsewhere in Europe. Venetian and other traders made their way over the Alps in search of markets, but much of the reexport trade was conducted by foreigners. German merchants from the cities of the Hanseatic League and traders from Bruges and Antwerp in the Netherlands filled the stalls at the huge fairs and supplied itinerant peddlers with the much-prized goods of the Orient. Banking and commercial houses, a leisure class, and a golden age of art made their appearance. Feudalism began to break up, and the church lost its preeminence. The Renaissance with its resurgence of learning and its restless hope for the future was at hand.

The growing trade with the Orient was only in part responsible for the transformations that were occurring in the West. Powerful internal forces had long been stirring. In the towns the guilds with their hampering restrictions were being overthrown by aggressive individuals eager to build their fortunes. The premises of the past were being questioned in the universities, product of the Middle Ages; the "vulgar" tongues, foundation of present-day languages, were being developed; modern literature and art were having their beginnings; and everywhere—on the manors and in the towns—autocratic domination was being disputed. It matters not that the future was frequently to be cursed with absolute monarchs and with dictators; the outstanding fact is that out of these years came the principles of parliamentary government and common law. The flower of knighthood was stripped from the feudal aristocracy by unknown soldiers bearing arms not their own. The national state was in large measure built upon the townsman—sometimes a person of consequence but more often merely one of the great stream of humanity moving onward.

The Turn to the Atlantic. The Europe that throughout its long existence had centered around the Mediterranean and looked chiefly to the East for whatever goods it bought turned in the fifteenth century westward to the Atlantic. Just why is difficult to explain. The motivating forces, as in all great movements in history, were exceedingly complex. The simple explanation that the ruthless Ottoman Turks had swept over the entire eastern Mediterranean region and smothered the flow of goods to the West is not

acceptable, for the infidel conquerors were keen enough to understand that trade meant profits. Economic restlessness, however, was thoroughly apparent. Though the westward-moving cargoes may actually have grown larger each year, it is probable that the supply did not keep up with the increasing demands that accumulating wealth and a growing middle class were bringing. Moreover, the European consumer justly felt that he was paying too much for the articles he purchased, and he held Italian monopoly mostly to blame. Too, since the West had little to sell to the East (Asia buying only limited amounts of woolen goods, leather, furs, arsenic, antimony, quicksilver, tin, copper, and lead from inland markets and small quantities of coral from the warm waters of the Mediterranean), the balance of trade was against the European states, and they were compelled to send eastward gold and silver to settle their accounts. The resulting shortage of the precious metals was sometimes embarrassing. Not without significance also were the decay of the Hanseatic League from internal dissension, the growth of strong national monarchs in the West, and the rise of an aggressive group of thinkers and practical scientists. Religion too was a factor. Prince Henry the Navigator was a doughty fighter against the Moors in Spain, and while his sailors were beating down the African coast, hoping for riches at the end of their journey, he was dreaming of attacking his spiritual enemies in the rear, far to the eastward. Furthermore, destiny and national ambition were involved: the traditional trade structure was bound to collapse eventually because of its utter inability to expand with a progressive world, and each state had a burning desire to establish its own commercial contacts with the East, thus obviating the payment of tribute to foreign middlemen and insuring wealth to its own merchants.

It was only natural that Europe should turn to the Atlantic in quest of the Indies. Daring sailors, convinced by the Renaissance teaching that the world was round, sustained in their attempts by the maps and books that movable type had made possible, and aided by the compass, the astrolabe, and other technical devices that the new learning had either introduced or made popular, began an exploration of the seas that led to the discovery of a new world and started a development that, whatever its effect on actual consumption, was destined to erase from the minds of the people of Europe their acute longing for eastern goods.

The Explorers and the New World. Portugal was first to attempt a new route to India. Her sailors, trained in the nautical school of Prince Henry the Navigator, pushed steadily down the west coast of Africa until they

rounded the Cape of Good Hope. In 1498 Vasco Da Gama felt his way slowly up the eastern coast of Africa to Malindi and then with the aid of an Arab pilot struck boldly across the Indian Ocean in a northeasterly direction until he reached Calicut. The cargo that he brought back paid the cost of his journey sixty times over. In the meantime Christopher Columbus had put out westward into the Atlantic. Though Genoese by birth, he sailed under the flag of Spain, and his expedition was financed in part by the royal treasuries of Castile and Aragon. Whether Columbus was seeking fabled islands nearby in the western ocean or whether he sailed directly in search of the Indies, which Toscanelli, a Florentine astronomer, may have assured him shortly before were not more than four thousand miles away, is uncertain. At any rate, he it was who at a time when the discovery could be made of real use first came upon a new world.

Although Columbus himself never profited from his discovery, the event was indeed significant to Europe. Nations along the Atlantic seaboard, hitherto little known, rose to positions of importance. Portugal, already supreme, was followed by Spain, France, Holland, and England as each in its turn came to dominate the economics and politics of Europe. During the period of Mediterranean ascendancy these states had been on the outskirts of the commercial world. The finding, however, of new territory and new products, particularly gold and silver, captured the attention of Europe. The romantic tales of travelers to the East were now displaced by stories of daring adventurers who had sailed into the Atlantic and found new treasures. The romance of the spices, ornaments, and perfumed woods of the Orient gave way slowly to the glamor of gold, silver, tobacco, and furs from a new Occident.

The age of the open ocean had begun. The toiling horse, the plodding wagon, and the creeping hand-powered boat as the chief instruments in commercial transportation had been replaced by sailing ships that ran before the wild winds of the world. Mariners shed their ancient fears and learned to sail by instrument alone. The Atlantic, once a barrier, became a bridge; it became too a great factor in the growth of nations, of navies, and of merchant marines. Europe turned as on a pivot from the East to the West, and glory came to those heretofore obscure states that were now in the heart of the rising new trade lines. The slow galleys of the Mediterranean, center of trade since the dawn of European civilization, rapidly disappeared, their cargoes no longer the primary concern of European economic thought. Tragedy fell upon Italy, mother of the Renaissance. The arts that had made the Italian city-states famous no longer flourished. The great commercial and banking houses soon fell into bankruptcy, their

personnel wherever possible moving to Portugal, Spain, or the Germanies. Economic wants and economic organization were so fundamentally affected by the shift in trade from the Mediterranean to the Atlantic that the change has come to be called the Commercial Revolution. It might be well to say again, however, that the need for a more satisfactory means of intercourse between the East and the West than that which existed was not the sole reason for turning to exploration and colonization. The search of the seas was inspired by a tangle of human motives difficult to evaluate. Some of the leaders were stirred by the desire to carry the Catholic religion to the unbelieving; others were impelled by the intellectual curiosity that had sprung up during the Renaissance; and no small number hoped to share in the rich commercial profits that Italy had long enjoyed. But whether religious, intellectual, monetary, or purely personal, all motives combined to overthrow the old order and bring into being powerful economic and political empires. Out of the conflicts that marked the frontiers of these organizations came the American nation, product of years of European heritage and of the physiographic influences of the land upon which it grew.

The New America. The people of Europe realized only slowly that an unknown continent had been discovered. Columbus himself was so sure that he had reached the East that he called the natives *Indians*. Nevertheless, it was soon learned that the realm of spices and fabled wealth lay yet to the westward. The states of Europe, intent on a water route to the Orient, continued long after the finding of America to push their boats into every bay and river in the hope that an easy way through the new land—the much-sought Northwest Passage—might reveal itself. At the same time, however, they turned to the wealth that stretched before them and began exploitation and colonization.

Even though Mexico and Central and South America in the beginning yielded rich stores of gold and silver, the North American continent became eventually the chief center of interest in the New World. Here, roughly between the twenty-fifth and forty-ninth parallels, the English, the Swedes, the Dutch, the French, and the Spanish—all claiming privileges by right of discovery—laboriously laid the foundations of what came to be the United States. Here hardy men and women, separated from their mother countries by three thousand miles of turbulent water and faced by an unknown wilderness, fought valiantly to establish in America a new Europe whose chief difference from the old would be freedom from certain persecutions and subjections. But their thoughts, habits, and actions were modified day by day by the physical conditions that they met. Those con-

ditions were both actual and potential. They were actual in that the dangers and problems that the colonists confronted changed them outwardly and inwardly; grim nature took from them for a time their European clothes and put upon them the garb of the wilderness, relentlessly robbing them of their education and their culture and giving them in return only a precarious existence and an insufficient knowledge of the forest. They were potential in that before the hopeful settlers spread a stage upon which could be built through succeeding generations a great nation that would repay posterity abundantly for the labor expended on its establishment. The grave struggles that lay ahead were not all based on human foibles. Some of the difficulties were purely geographic in origin. If they could have looked down upon the New World from a commanding height, the colonists might have comprehended at a glance many of the economic problems that required long years to perceive.

The Physical Divisions of the Continent. The physical features of the North American continent are perfectly clear. Like a great triangular trough, the land mass slopes at either end and is piled high on the eastern edge and still higher on the west. It lies about a third of the way from Europe to Asia. The Atlantic Ocean, the Pacific Ocean, and the Gulf of Mexico furnish international highways, and their currents warm the two coasts. Dense forests stretch like a giant carpet from the eastern shore over the Appalachian highlands and swing along the Gulf, marking the variations in rainfall, temperature, and soil as well as in vegetable and animal life. The rivers emptying into the Atlantic point the way up the slopes of the eastern mountains, and their headwaters lie invitingly close to the sources of the streams that flow down the farther slope into the heart of the continent and finally to the Gulf. It is not strange that the French and the English met in combat in this region. But it required more than a century for the latter to make their way over the mountain tops to the tributaries of the Ohio, for their immediate difficulties made their progress slow.

The Coastal Plain. The United States occupies the major portion of North America. Its geographic sections are easily distinguished. Lying between the Atlantic Ocean and the Appalachians is the coastal plain, which, though perhaps not the most important region economically to the welfare of the nation, has at least been one of the most interesting. The plain reaches from Cape Cod in Massachusetts to the Gulf of Mexico; in the north only a fringe at the edge of the ocean, it widens out to well over two hundred miles in the south. Here along the Atlantic grew Puritanism, Quakerism, and a distinct southern culture. The physical features of the land pro-

foundly influenced the first settlers. Of such consequence were they, in fact, that they modified the Puritans' religious beliefs, caused the eventual submersion of the Quakers, and developed among the southerners outstanding though sometimes inpecunious statesmen. Although the agricultural significance of the area quickly diminished with the settlement of the Mississippi valley, good harbors and other natural advantages enabled the section to retain its supremacy in commerce, business, and finance.

The Appalachian Highland. Just to the west of the coastal plain is the Appalachian region, made up of a series of parallel mountain ranges stretching from the White Mountains in New Hampshire to the pine-studded hills of Georgia and Alabama. This geologically oldest part of the continent is some three hundred miles in width, but the buffets of time have worn the rocks until they are nowhere more than seven thousand feet high. Between the ranges are large areas of fertile farm land; at the southern end the Shenandoah valley, the valley of the East Tennessee, and "the valley," as it was called in the parlance of its settlers, are great granaries. The Appalachian highland, like the coastal plain, is markedly sectionalized. In New England the rapid rivers, the unwasted forests, and the rough soil all tended to turn the people into manufacturing channels, whereas the mineral deposits in the central and southern parts of the area led to the growth of iron and steel mills, notably at Pittsburgh and Birmingham.

In the early days the Appalachian region was not a center either of agriculture or of industry. The mountains, however, were of real importance in the development of the nation. In addition to forming a barrier against the hostile French and Indians to the west, they held the settlers against the seaboard until they had grown economically strong, forcing the colonists into a solidarity that was to help them immensely in their fight against the mother country.

The Mississippi Valley. The third and foremost single geographic division of the continent is the great Mississippi valley, extending from the western edge of the ancient Appalachian highlands to the eastern foothills of the Rockies. Through its center flows the "Father of Waters," the muddy Mississippi, from which giant arms—the most prominent of which are the Ohio and the Missouri—reach out into either slope and drain away the waters from highland to highland. Here lies the agricultural heart of North America. Whoever came to dominate the continent must possess this section. Spain, France, and England approached it from its three possible ingresses, and the English, following the trails of the Indians and the buffaloes through the winding valleys that cut the Appalachian highlands, in the end won the contest.

Economically the vast central region determines to a large extent the products grown elsewhere; cotton, corn, and wheat are here supreme. Eventually, however, industry, nurtured by rich supplies of iron ore from the upper reaches of the valley, grew up along the southern edge of the Great Lakes to challenge the supremacy of the manufacturing regions east of the Appalachians.

The Rocky Mountain Region. Bordering the tablelands that make up the western edge of the Mississippi valley is the cordilleran region. In some places the peaks of the Rocky Mountains, backbone of this area, tower more than fourteen thousand feet above the sea. Geologically the section is young, still having craters in the northern end and even active volcanoes in Mexico. Its chief wealth lies in the mineral deposits of gold, silver, copper, and iron. Silver has been a potent influence in the political life of most of the inhabitants. Agriculture is possible in parts of the region if the land is properly irrigated.

The Pacific Coast. The westernmost section, that along the Pacific Ocean, is made up of a narrow strip of mountains and a slight plain at the water's edge. Spanish settlers early found their way to the Pacific slope, but the first great American migration was the result of the discovery of gold in California in the middle of the nineteenth century. The opening of the Panama Canal, coupled with the new twentieth-century demand for goods of the Orient, enhanced the national significance of the region. Until the recent war mushroomed industrial activities, however, the most important products were fruits (including semitropical), vegetables, timber, and fish.

The Natural Resources of the Continent. Although the colonists used little more than soil, timber, and certain metals, the abundant store of available wealth has been of tremendous value throughout the development of the United States. These assets have determined the location of agrarian and industrial centers. Cities have sprung up because of their discovery and withered away because of their disappearance. Man reacts quickly to economic promises; a few cents a day or even the hope of something better tomorrow has often moved him hundreds of miles. Unfortunately one is never capable of knowing all the natural wealth he possesses until necessity forces him to look about him. Only slowly through the years have the secrets of nature's larder been disclosed.

The Forests. The greatest economic asset of the North American continent to the early settlers was its amount of tillable land, but the forests too offered bounteous gifts. It is estimated that a total of more than eight hundred million acres was covered with trees when colonization began; from the Atlantic Ocean to the Mississippi River there was, with the excep-

tion of the spreading prairie south of the Great Lakes, a vast expanse of lofty trees and low-growing underbrush of astonishing variety. To the north grew pine (both white and red), spruce, hemlock, fir, cedar, birch, beech, and maple and in places elm, oak, and poplar. To the south stretched wide areas of slash and loblolly pines with hardwoods in the fertile valleys and rich uplands and cypress in the river swamps. In the central region, that north of what is now the southern boundary of Tennessee, grew the hardwoods in abundance; oak, walnut, maple, hickory, beech, and birch were particularly plentiful. Except for certain parts of the Rocky Mountain highlands and the Pacific coast, the land west of the Mississippi was barren of trees. The firs, pines, redwoods, spruces, and cedars of the Rockies and the slopes beyond have, however, been of especial importance in recent years.

Though they knew nothing of the modern miracles of chemistry that bring us, for instance, cloth and paper from the forests, the settlers soon found in the woods material for their homes, fuel for keeping them warm, timber for building their ships, pitch and tar and turpentine (the so-called naval stores) for making their vessels seaworthy and for preserving the rope that held their sails in place, dyes for their cloth, many items of food, and, later, logs and planks for road building. Yet the carpet of green that stretched over the land was not an unmixed blessing. The trees had to be cut away and long laborious days spent in clearing ground upon which to grow the food necessary for existence. Too, the forest provided excellent cover for hostile Indians and preying animals. And, most annoying of all, the settler dared not relent his attack upon the wilderness for fear that it might soon reclaim what he had gained.

Iron Ore. The first iron was obtained by scraping bogs, though before the colonial period was over, some rock ore had been mined. The ore was distributed throughout the eastern half of the United States, the Appalachian highlands from Connecticut to Georgia and Alabama and the southeastern edge of the Ozarks proving especially rich sources. The greatest deposit, however, lay along the shores of Lake Superior. Connected with the soft-coal region by excellent water transportation facilities, this section has been of major importance in the development of the modern iron age. Chicago, Gary, Cleveland, and Buffalo on the lakes have for years offered stiff competition to Pittsburgh and Birmingham in the Appalachians.

Coal. The real contribution of coal to national growth came only with the shift from agrarian to industrial economy, long after the founding of the colonies. Deposits are of two types—anthracite and bituminous. Anthra-

cite, particularly desirable for use in homes because it produces little smoke and few ashes, is found almost exclusively in Pennsylvania. Soft coal, on the other hand, is distributed widely over the Appalachian-highland region from Pennsylvania southward to Alabama. Valuable fields are found also in southern Indiana and Illinois and western Kentucky, in Michigan, and in a rather narrow strip stretching from Iowa to Texas as well as in the Rocky Mountain and Pacific sections. Altogether the North American continent possesses nearly half the known coal deposits of the world.

Petroleum, Natural Gas, and Other Minerals. Deep in the earth, unsuspected by the colonists, were petroleum and natural gas. Petroleum, a nonmetallic mineral first used commercially in 1859, has become an indispensable part of the modern industrial system, and gas contributes in many ways to present-day civilization. Other minerals such as gold, silver, copper, zinc, aluminum, and lead have been of substantial value. Copper is exceeded by iron alone in total value, and aluminum, obtained chiefly from bauxite, is coming more and more to serve in the construction of modern trains, automobiles, and airplanes and even buildings. Sand, clay, slate, and stone have been significant in the construction industry, and borax, salt, lime, and similar products are useful in chemistry and diet.

Water Power. Water power has been an important natural resource of the New World. The North American continent is laced with streams great and small whose teeming horsepower is almost inconceivable. The southerners in the colonial period employed the tides for forcing fresh water over their rice fields, and the New Englanders early harnessed their rapid rivers and creeks and utilized their power for turning gristmills, sawmills, and other crude manufacturing contrivances. Modern dams have spread the power of the streams in the form of electrical energy over the countryside for hundreds of miles. Steam, which once replaced water as a source of direct power, is giving way to electricity, indirectly derived from placid streams long unused.

Furs. The wild animals of the forests provided one of the few quick sources of wealth the English found in America. Trading posts grew up for commerce with the Indians, and large shipments of pelts and skins were made to Europe. Though the English never profited so greatly from the furs as did the French, many a colonist strung his traps along the waterways of the Atlantic coast from Maine to Georgia; some who found themselves hard pressed in economic contest with their agricultural neighbors pushed deep into the forests. Daniel Boone, following the valleys of the Carolinas to the foothills of the Alleghenies, struck boldly over the moun-

tain ridges into Kentucky in search of furs and skins with which to meet unpaid bills.

Fish. Because the great shoals for the most part frequented only neutral waters, fish were not a national resource. Nevertheless, they must be included among the riches of the New World. The banks of Newfoundland, invitingly close to the shores of Massachusetts and neighboring states, offered profitable occupation to discouraged rock-bound farmers of New England and supplied a staple commodity for international commerce. There were lobsters, clams, and oysters along the coast.

The Influence of Physiographic Factors. Well-marked geographic regions and outstanding resources have not been alone in directing the economic life of the American people. Other physical and natural forces have played and are still playing a significant part in the course of human activities in what was once a new world.

Nature. The early colonists were particularly subject to the dictates of nature. Human behavior is, in part at least, a product of physical environment; the soil, the rivers, the mountains, the valleys, the minerals, and the seaports determine to a large extent the type of work that man follows, the products that he grows, the food that he eats, the roads that he builds, the foreign nations with which he trades, the society in which he moves, the culture that he fosters, and at times the political opinions that he holds.

Economic existence was the major problem of the first settlers. These pioneers soon learned that they must make a living from a land which offered various bounties according to its physical characteristics. They were not familiar with these bounties, however, and, in addition, they were faced by an apparently never-ending wilderness. Even had they found gold, they could scarcely have bettered their own lot. They had to wrest their necessities with their own hands from the soil, the forests, and the sea. But they knew only certain ways of earning a livelihood, and these they applied to their surroundings with frequently disastrous results. Regardless of the fact that many were well educated, they were sometimes economically helpless. In a land of plenty where game, fish, fowl, and fruit were abundant, the failure of food supplies to arrive from the Old World brought severe suffering and occasionally complete destruction of colonial projects.

The colonists learned from the Indians which natural products were beneficial and which were harmful, which fish were useful as food, which berries and plants and nuts were edible, and which techniques were best in growing corn. The wilderness too was an effective teacher. She taught her lessons through economic rewards and punishments. Unless the colo-

nists labored stolidly and perserveringly, she gave sparingly or not at all; a moment's hesitation in the clang of the axe or the swing of the hoe, and she began to undo what they had done. Weeds cut away one day showed signs of regrowth the next. They "wynd about the corne and hinder the growth of yt.," wrote an observer at Jamestown in 1610, "for by reason of the rankness and lustiness of the ground such weedes spring up very easely and thick, and if not pluckt awaie, the corne would prosper so much worse."

The contest with nature was not ended with the successful fight of the settlers on the Atlantic seaboard for a permanent foothold in America. The expansion of the nation westward to the Pacific forced the advancing pioneers to learn day after day new lessons; physiographic conditions exerted their influence at every step. Life was ever a series of compromises with nature. In the wooded areas, for example, the frontiersman soon learned to build his house of logs, while in the plains region he was forced reluctantly at times to use sod. Settlers on the western prairies found buffalo chips a necessary although poor substitute for the plentiful wood fuel of the eastern seaboard. But always the customs of the past were only modified, never forgotten, for individuals fought desperately to maintain old habits.

Nearness to Europe. In the early years of the colonies nearness to Europe was particularly advantageous. The narrowness of the Atlantic in comparison with the Pacific made it reasonably certain that American civilization would always be closely associated with that of the nations from which the pioneers sprang. Optimistic Richard Hakluyt wrote in 1584 that "the passage thither and home is neither to longe nor to shorte, but easie, and to be made twise in the yere." Europe and America have freely interchanged their industrial and economic ideas; the machines of capitalism are largely international products.

Temperature. Differences in temperature also were significant in the development of the country. Man's physical and mental faculties seem to function best in lands where the temperature is continually undergoing moderate change. His most rapid progress, it appears, is made in a climate that provides a summer of sufficient length to produce ample food for his needs and a winter severe enough to require him to store up a part of his surplus during the production period for the wintry days. "He who does not work shall not eat" may not always be a pleasant law whether enforced by nature or by society, but it is an effective goad.

Climate. The similarity of the climate of America to that of Europe enabled the early settlers to bring with them their domestic fruits, vege-

tables, and animals. Flowers from seeds blessed on the altars of Catholic Spain were blooming in the New World even before the English began their colonial efforts, and horses, horned cattle, sheep, and swine grown wild were spreading northward when Jamestown was established. The English brought to the New World animals, seeds, and plants and recipes for favorite dishes as well. Many of the products indigenous to America resembled those of Europe, and the colonists by means of grafting benefited immediately from the advantages of long development and adaptability to the climate. A great majority of the plants and animals grown today in America are, in fact, native to other countries, tobacco and maize (Indian corn) being two outstanding exceptions. Strangely enough, the *Irish* potato and the *turkey* also are indigenous.

Rainfall. Rainfall too essentially affects the civilization of a country and plays a major part in shaping its economic life. The average annual precipitation in the United States is twenty-six and six-tenths inches. The distribution over the entire country, however, is unequal. In Utah in the Great Plains area, for instance, there is rarely ever more than five inches in any year; in some parts of California and throughout the Gulf states the average is nearly sixty. The water that evaporates or runs off into the gullies and streams has little effect on plant life, but on the whole the quantity that falls during the year determines the industry and growth of any region. Twenty inches is the amount generally regarded as necessary for agrarian production. The results of varying rains are easily observable. Texas offers an excellent illustration in her moist soil and luxuriant growth in the eastern part of the state as compared with the shifting sand and scrawny grass of the western edge. A map of the flora, or plant life, of the country is largely a map of its rainfall.

In addition to determining the kind of growth—both cultivated and wild—of a given area, the rainfall may influence the political thoughts of the people. Western Kansas and Nebraska were settled during years when moisture was abundant. When the annual precipitation decreased to less than twenty inches, normal precipitation for the section, the inhabitants suffered severely. Crops failed, mortgages fell due, and the hot, dry winds literally burned the corn to a crisp. The discontented farmers turned to legislation for assistance. People of the eighties and nineties commonly spoke of the land beyond the ninety-ninth meridian as having no law and no god. They might have added that there was no credit, for in this region sales of farm machinery and other agricultural implements were in many cases made only for cash.

Soil. Soil, most basic of natural resources, is in the United States as

varied as the geographic features of the land. The Virginians began their labor on ground that had been washed down by the rains from slopes or hills in the back country and deposited along the banks of the rivers. This type of soil is called alluvial. Though fertile, it is easily exhausted and generally does not stretch far back from the streams. Between the valleys along the southern coast there are wide reaches of poor sandy or clayey land which can scarcely support human beings regardless of the labor expended upon it. The indigent and the unfortunate were forced back among the straggling pines of these wide expanses, and there they developed a social group distinctly different from that in the lowlands. The inhabitants of the two regions have known only ceaseless conflict.

Another type of soil is merely disintegrated rock. The nature of the original material determines its fertility and value. Occasionally the land is only sterile clay of sundry colors upon which poverty-stricken dwellers eke out a bare subsistence. In some places, however, the earth is known as limestone bottoms, the result of the breaking down of natural limestone rock. Wherever the soil is of this kind, there is found a particularly luxuriant grass that can be seen for long distances. These areas are not large but are exceedingly fertile, and they have always been the homes of the aristocrats. Lexington, Kentucky, with its surrounding countryside, is the best example of a blue-grass community.

Throughout northern and eastern United States as far south as the Ohio River the soil is of a peculiar nature. Over a period of centuries huge glaciers slowly plowed their way from the north across this territory. They scooped out lakes, ground down mountains, and dug out valleys. In the process they mixed the pulverized rock with boulders large and small and then deposited the whole as they melted away. The soil thus created is often rich and deep but difficult to till. This is especially true in New England, where the picturesque rock fences have been dictated not so much by preference as by the necessity of removing the stones from the fields and an imperative need to put everything possible to economic use.

Regardless of the importance of the geographic and climatic features of the North American continent, one must not think of the physical aspects as unvarying. The land, like the people, is undergoing constant change. Man modifies nature quite as much as nature modifies man. In the United States he has tunneled through mountains and under rivers; he has irrigated the dry lands and drained the swamps; he has ruthlessly cut away forests, leaving vast bare expanses to the mercy of the rains and the winds; he has bridled the waterfalls and carried their millions of horse-

power hundreds of miles; he has even chained the restless Mississippi River, thereby bringing thousands of acres of fertile soil under cultivation, albeit terror yearly comes to the dwellers under the levees as the angry waters challenge their handiwork. With the progress of civilization the exploits of man over nature become more and more astounding. Twentieth-century railways, highways, and airways have almost obliterated distances and have practically nullified dependence on local regions for food, shelter, and clothing.

Chapter 2

THE NEW WORLD: COLONIZATION

Prelude to Colonization. The New World was made a reality by the colonizers, but it was the explorer-traders who filled in its outlines in the new geographies. They did more than that: they profoundly affected a Europe that was already in transformation. The Portuguese who tapped the wealth of the East, the Spanish who stripped Mexico and Peru of their precious metals, the French who at the mouth of the Saguenay River in Canada listened to fascinating tales of inland treasures, the English who reached out into the kingdom of Ivan the Terrible and even to the Orient, and the Dutch who sailed in and out of the ports of the world completed the overthrow of old institutions already toppling and brought dreams of riches to all. A monetary economy, long in the making, was soon fully established. Tons of silver and gold flowed into Europe from the Americas, raising prices and bringing hardships especially to lords of the manors whose rents were still regulated by ancient custom. Lending for gain and investing for profit became the accepted manner of doing things in an age when ventures were coming to be planned on a world-wide scale. Individual and partnership undertakings for the most part fell short of the needs of the time. The scope of economic activities expanded so much that cooperative schemes for raising money came into popularity. Joint-stock companies in particular found favor among the English, the Dutch, and others. They were strangely like modern corporations. Stock was owned by many people, management was delegated to a few officials, profits were shared in proportion to ownership, and the life of the company bore no relation to the lives of the investors. Shares rose and fell and money was made and lost, but the organization was for the most part perpetual. Everywhere there was hustle and bustle and disregard for the trifling things of other days. Nothing, however, was wholly new; even the joint-stock company stretched back in one form or another to the Middle Ages, and controversy still exists as to when and where the spirit of modern capitalism made its appearance.

Local political organization too was affected by the dynamic new world

that expansion brought to Europe. Economic interdependence made economic mobility essential. Because commerce had broken its restrictive bands and commercial men had begun to plan on a vast scale, the many tax collectors of small towns and of feudal lords were no longer tolerable. Tobacco, furs, and other goods from far lands, in spite of large outlays of capital in their procurement and their transportation to Europe, would have been almost wholly useless could petty greed have blocked their movement to the market places. Central rulers, supported by the tradesmen, the bankers, the investors, and the business men in general, slowly absorbed local authority throughout their realms. Economic activity came to have an over-all national purpose, and assets, human and material, were carefully considered. Laws such as the English Statute of Artificers of 1563 and the English Poor Law of 1601 spread to the communities and directed their citizenry into economically useful channels. In many places the power of the church too fell before the desire of the rising states to turn all their energies into national greatness. The kings challenged the authority of the Pope, and individuals deserted some of the teachings of the brotherhood of man. Both ruler and ruled, since they accepted the theory that wealth was fixed as to quantity, accepted also the doctrine that riches could be gained only in bitter competition with uncompromising rivals. Colonies would be claims staked over the world; furthermore, they would be offensive and defensive weapons.

Colonizing Motives. *Religious Forces.* The motives that prompted colonization grew out of the soil from which the new national states sprang. They were as varied as those which had inspired discovery and exploration. Some were common to all Europe; others were peculiar to individual nations. Among the general forces that sent permanent settlers into the New World was religion. Spanish, French, and English alike were moved by the urge to save souls or to propagate their faiths. Prominent too was the wish to found an asylum for those who were being persecuted on account of their beliefs. Thousands of followers of churches and sects that were frowned upon or even proscribed in Europe were scattered throughout the English colonies. Separatists and Puritans braved the rigors of New England to establish homes in Massachusetts, English Cavaliers and Catholics took root in Virginia and Maryland respectively, and Quakers, Moravians, Mennonites, Amish, and other sects built up their communities in the land of William Penn. French Huguenots in great numbers sought refuge in Virginia and the Carolinas, and Scotch Presbyterians, mostly by way of Ireland, poured into the valleys of the Appalachians. Religious jealousies also stimulated colonization. Protestant England was particularly irked that

Catholic Spain should lord it over the world with her wealth and glory. In 1584 Richard Hakluyt, unable longer to bear without protest that the galleons of Spain should carry year after year their rich cargoes of silver and gold to the papist enemy, declared that the English must occupy and fortify strategic points along the Atlantic coast. The English sea captains might then prey on the great Spanish fleets with impunity, and there would be "no doubt but the Spanish empire falls to the ground and the Spanish king shall be left as bare as Aesop's proude crowe."

Social Conditions. A second major factor that contributed to the founding of colonies was social conditions at home. Many Europeans felt that their countries were overcrowded and the people indolent, and they welcomed an opportunity to set their idle to profitable work. The population was probably not excessive, though it was disrupted and in places seriously concentrated. Idleness in urban England was understandable. Thousands of people with no means of sustenance had been thrown upon society with the abolishment of the monasteries and the break-up of the manors. Even larger numbers were driven from their fields to the towns as the growing woolen industry brought rapid conversion of farm lands into sheep pastures. Some, crying that "the poor starve in the streets for want of labor," felt that colonization would solve the national problem of unemployment. "It is no new thing but most profitable for our state," wrote the author of *Nova Britannia* in 1609, "to rid our multitudes of such as lie at home pestering the land with pestilence and penury, and infecting one another with vice and villainy worse than the plague itself."

Political and Economic Factors. Desire for great empires on the part of European monarchs also led to colonization, and struggles for sovereignty brought crown encouragement of emigration, for the New World soon became a battlefield on which Old World rulers continued their nationalistic wars. Deeper even than the religious, social, and political causes that underlay the expansion of Europe into permanent settlements in the New World were the economic causes, and everywhere they revolved around the theory of mercantilism. Mercantilism, while it differed from place to place and from time to time, was in general a theory of empire building that sought to turn every conceivable economic asset whether at home or overseas to the glory and power of the state. Society as a whole and each person as an individual owed obedience and service to the statesmen who directed the affairs of nations. Such a philosophy engendered jealousies and conflicts and inspired disregard of human rights, yet it effectively focused national attention upon the accumulation of wealth, the most widely accepted measure of glory and power. Wealth, for the most part,

meant in the money-starved Europe of the time silver and gold. Not everyone, of course, believed that national well-being depended upon a hoard of the precious metals. But there were few who did not know that the grandeur of Spain rested heavily upon the inflow of bullion from Mexico and Peru and few who did not understand that gold and silver in abundance meant great armies and navies, easily paid taxes, and general prosperity. The inordinate respect for money stemmed from the past. Scarcity of currency through the later years of the Middle Ages had been severely obvious and had explained to many their misery in comparison with the opulence of their Italian neighbors.

It is not strange that the states of Europe saw in gold and silver their salvation. Their very heritage of poverty was partially responsible for their narrow concepts of wealth, for their greed, and for their intolerance. That which would stir the nation to economic activity, set the people to useful work, overthrow foreign monopolists, and draw the fruits of the earth to the market places was, if scarce, to be fought for. Only time would bring full realization of the fact that prosperity arises out of free interchange of goods.

Everywhere mercantilists sought a favorable balance of trade. If there was profit to the realm in those goods that went out of the ports at home, it was evident that purchases in foreign lands contributed to the welfare of rivals. The implications were clear: either shipments must be so directed that the dollar value of outgoing cargoes must always exceed the dollar value of those coming in (bullion being brought in in payment of the deficit), or else needed goods must be produced at home. In the first instance a persistent inward flow of money would eventually raise prices. High prices would in themselves encourage imports and discourage exports, thus making necessary compulsory restrictions such as tariffs and navigation acts of various kinds, with all the irritations and conflicts that they imply. In the second instance external expansion and internal conflict were likely to appear. Bounties and subsidies, though seeding grounds for dissension, could be provided to promote the growth of unprofitable crops. Some products, however, could not be grown at home. In that case the only solution was to expand the economic lines of the state far beyond traditional political limits. Colonies and trading posts, shutting out alien middlemen, sprang up over the world to supply their founders with raw materials. As it grew apparent that a favorable balance of trade for all was impossible, these became the destinations of outgoing shipments from the mother countries. Especially did England become the transmuter of colonial raw materials into manufactured goods for consumption by her own colonists,

and it was England that eventually learned how bitter could be the opposition of those who always sold goods that were less valuable than the ones they bought.

Money economy, self-sufficiency, colonization, navies and merchant marines, unemployment, birth rate, emigration and immigration, industry, and centralized control of economic affairs were within the scope of mercantilism, for all were concerned with the prosperity of the state. Sovereigns and the business men about them sought ever to find rich stores of gold and silver or at least some product such as tobacco or furs that could be sold on the European market on a monopoly basis. But mercantilism was characterized by lack of uniformity as well as by ineffectiveness. In Spain, for instance, silver and gold flowed outward in spite of vigorous laws to the contrary. In England the Baltic trade in particular failed to bring specie into the realm, and plans of the state came at times completely to naught. Everywhere the theory that a bulging national treasury was wealth weakened rapidly as commerce, trade, industry, merchandising, and improved agriculture came to employ the people and to raise their standard of living. It was inevitable perhaps that the freedom that for centuries had slowly been releasing Europeans from habit, from custom, from the clergy, from the lord, from ignorance, and from poverty would eventually release them, in part at least, from the dictates of the state in their economic lives. Before laissez faire came into being, however, the New World was to some extent peopled, and many of the conflicts that marked the imperial rivalries of Spain, France, Holland, and England had already been fought.

The Non-English Colonies. The roots of the nation strike deep into English soil; but all of Europe, not England alone, built the United States. Two years after Columbus discovered the Americas, Portugal and Spain by the treaty of Tordesillas divided the world into two parts, marked indistinctly by a line three hundred and seventy leagues west of the Cape Verde Islands. Roughly, Brazil, the African coasts, and the East Indies went to Portugal, while to Spain fell the New World except for Brazil. Such a monopoly was impossible from the beginning. Nevertheless, it was not successfully challenged until the beginning years of the seventeenth century, when England, France, and Holland became the aggressors in America. But permanent or impermanent, the colonies of every nation left their lasting effects upon the land.

Spain in America. The Spanish empire in America began in the islands of the Caribbean. Reports of amazing quantities of gold and silver to be had for the taking, however, soon led to the settlement of Mexico, Central America, and Peru. Explorers pushed into the mainland in search of wealth,

and in spite of prohibitory laws the island population followed close on their heels. Here in New Spain, where the precious metals a dozen years before Jamestown still made up more than ninety-five per cent of the outgoing cargoes, were the welling forces that kept the glory of old Spain alive beyond its time and in many ways changed the course of Europe. The great Spanish dominions were ruled by the Council of the Indies, over which the king himself sometimes presided. The monarch was, in fact, both ruler and chief beneficiary. He derived large revenues from the sale of offices and of monopoly rights to market such products as tobacco, salt, gunpowder, and slaves; from the imposition of tariffs on commerce; and from the collection of poll taxes and church tithes. In addition, one-fifth of all the gold and silver found went into the royal treasury.

Economic life in Spain's American empire was determined by the principles of the mercantilists. Trade was strictly controlled, and efforts were made to prevent any diversion of the precious metals from the homeland. The kings, goaded by the merchants, attempted to limit trade and emigration exclusively to the Castilians. After 1501 severe laws confined Jews, Moors, and Mohammedans to continental Spain. Commerce, especially after the accession of Philip II, was kept in the hands of native Catholics wherever possible. The ships from the colonies sailed directly to the mother country, their cargoes with few exceptions entering only through the city of Seville. When piracy developed after the middle of the sixteenth century to the extent of making individual shipping impractical, the fleet system was introduced. Twice a year the ships set sail from Seville laden with olives, wines, figs, quicksilver, cloth, implements, and other products to exchange for such things as hides, sugar, vicuna wool, cacao, quinine, and the precious metals. Since economic activity was for the most part paralyzed while the ships were away, enormous fairs were held at the ports where the fleets came in—chiefly Porto Bello, Havana, Cartagena, and Vera Cruz. Agriculture too fell under mercantilistic direction. The culture of olives, grapes for wine, tobacco, and hemp, for instance, was entirely forbidden because these products could be grown at home.

The restrictions practiced by the Spaniards, whether justified or not, were not without point. Permitting only a single ship one journey a year to the Philippines safeguarded the silver stock of the empire; otherwise, it was argued, insatiable China could take an unlimited amount. The great difficulty in commerce was that the monopoly was not effective. Other states by use of honest and dishonest means slowly destroyed the closed order. In addition, they wrested from the king the lucrative privilege of supplying Negro slaves for the fields after religious objections against

exploitation of the Indians had grown strong enough to prove embarrassing. But Spain in America, in spite of the vexations involved, produced a remarkable civilization that left a permanent imprint on a large section of the North American continent.

Although Spain and England were enemies of long standing, the Spanish possessions in America were of great benefit to the English settlers. New England in particular took advantage of Spain's inability to prohibit illicit trade within her own oversea empire. The perpetual debt of English colonists to the mother country constantly drained the specie away, and it was through trade with New Spain that the supply was replenished. Spanish pieces were for many years the most prominent money in the English colonies. Even yet economic policies in the United States are decidedly affected by the New World heritages of a once great Spain.

France in America. French colonization began in earnest only after the middle of the seventeenth century. There were many reasons for this tardiness. The experiences of Verrazano, Cartier, and Jean François de la Roche (or Roberval), who between 1523 and 1543 skirted the northeastern coast of North America and attempted settlement along the St. Lawrence, had not been encouraging. Moreover, the crown was more interested in territorial expansion in continental Europe than in aggrandizement elsewhere. The first permanent establishment of the French in America was not made until 1608, when Samuel de Champlain founded Quebec. In 1627 Cardinal Richelieu created the Company of New France or the Company of the One Hundred Associates, an organization that proposed in return for a fifteen-year trade monopoly to plant at least four thousand colonists in the new land by 1643. The organization proved incapable of coping with the problems that it met, and the Company of the Islands of America, which the cardinal founded in 1635 to direct colonial matters in the West Indies, did no better.

Richelieu and his successor, Cardinal Mazarin, were too much absorbed with continental affairs to prosecute vigorously colonial projects. But France produced in Jean Baptiste Colbert, middle-class citizen who came to the financial ministry in 1661, a real empire builder. Colbert was fully convinced that colonies were necessary as sources of raw materials and as markets for manufactured goods. Even he, however, was interested chiefly in domestic affairs, and his colonial accomplishments were in many ways disappointing. By 1700 the total number of settlers did not far exceed twelve thousand. Economically France gained little from her New World dominions. Only from the islands of the Caribbean, from which the Spanish

had fled long before, did she obtain profits. Sugar from Martinique, Guadeloupe, and Santo Domingo competed successfully for markets in all parts of Europe and even as far eastward as Turkey. Tobacco, cotton, indigo, and dyewoods proved valuable assets also. Enterprises elsewhere yielded no comparable riches. Forest, field, and sea to the northward offered economic advantages but never wealth. In New France ship spars, pitch, tar, and turpentine, which were needed at home for the navy and could be had for the taking, were not exploited. Agriculture was of little value. Along the shores of the St. Lawrence, the Richelieu, and other streams lords and tenants, strange in America, tilled their soil and grew their pigs and lived in neighborly peace in their whitewashed dormer-windowed log houses that the gregarious French managed to build close together by keeping their farms narrow—generally less than eight hundred feet. A few individuals fished on the banks of Newfoundland, which hardy crews from the French seaport towns had visited long before colonization began.

Furs were economically profitable, and as a factor in French expansion in America they were exceeded in importance, if at all, only by religion. Their collection and transportation occupied perhaps a third of the population of New France. The trappers in their search for pelts year after year pushed farther into the wilderness; they paddled their canoes as far west as what is now Wisconsin and eventually carried them over the watersheds to drop them into the rivers that led southward to the Mississippi or northward to Hudson Bay and even to the very feet of the Canadian Rockies. Trading posts grew up at strategic locations; among them were such still familiar names as Detroit, Sault Ste. Marie, Green Bay, and Michilimackinac. Foremost among the adventurous expansionists was Robert Cavelier, known as the Sieur de la Salle, who began in 1666 a grandiose scheme of exploration in the Mississippi valley that within two decades took him down the river to New Orleans and eventually to his death while he was attempting to establish on the Gulf coast of Texas an outpost against the Spanish. Louis Joliet, a fur trader, and such faithful missionaries as Father Marquette and Father Louis Hennepin also were indomitable explorers.

But even though the interlocking waterways of the Ohio, the Mississippi, the Winnipeg, and the Saskatchewan took French missionaries and traders into the land between the Rockies and the Alleghenies from the far north of Canada to the Gulf of Mexico, there was in all the vast expanse nothing to build unity and strength. There existed a common church, yet the gray-frocked friars of the Recollect order and the black-robed Jesuit priests who sometimes followed and sometimes led the birch canoes of the trappers

could give only uniformity of religion and social thought.[1] France in America was fundamentally weak. The glories of the nation at home were reflected in the resplendent pageant of Versailles, but the destiny of the foreign empire of the "Grand Monarch" was literally writ in water. The rivers that led inland dispersed the energies of the French, who, like the Dutch and the Spanish, fell eventually before the close-knit economic prowess of the English. Louis XV, when he finally surrendered to his British rivals in 1763, was left in North America only two small islands on the northeastern coast "to serve as a shelter for the French fishermen." New France, however, was never insignificant. Throwing a web of commerce and religion over half the continent was a magnificent accomplishment. Furthermore, the French through their relations with the Indians affected very profoundly the economic situation in many of the English colonies. Too, their soldiers threatened for a time to drive the English from America in the conflict that raged between 1754 and 1763.

The Dutch in America. The period of Dutch colonization in America was brief. Holland, like Spain, profited from the decline in Italian and Mediterranean commerce. Lying athwart the Rhine and the Scheldt, on a tideless sea leading through the English Channel into the Atlantic, she was in an ideal location to become the commercial distributor for northern Europe. Moreover, she was ideally suited to share in the newborn western commerce. Ships sailing under her flag soon appeared over all the seas, carrying their wares and harassing the Portuguese and the Spaniards. They were, said a writer of the day, like bees swarming the world and sucking honey from every port. In 1602 the Dutch East India Company was founded; it was to build in the East at the expense of Portugal a powerful empire that, though no longer intact, still reflects (as the second World War demonstrated) its long relation to the western world. In 1609 Henry Hudson, an Englishman sailing under the flag of the organization, discovered in America while seeking the rumored Northwest Passage to China the river now bearing his name. The Dutch West India Company, organized in 1621 with exclusive trading privileges in African and American lands bordering on the Atlantic, was more concerned with striking at the Spanish in the Caribbean than in establishing colonies on the mainland.

New Amsterdam was founded in 1624, and within a decade posts were planted in the valleys of the Hudson and Connecticut Rivers and on the shores of the Delaware Bay. Since the fur trade of the Hudson showed

[1] After 1632 the Recollects were in general compelled to confine their activities to the maritime districts, generally referred to as Acadia.

none of the fabulous profits of the spice trade of the Indies, the settlers made no serious efforts to encourage growth other than to introduce a patroon system in New Amsterdam and to wipe out the Swedes who had settlements below them on the Delaware. The Dutch colonies were probably destined for collapse from the beginning. The geographic location of New Holland invited conflict with the English, and, with the mother country devoted almost solely to commerce and trade, the ultimate fate of Dutch colonial plans in America could scarcely have been anything but destruction.

The English Colonies. In spite of many other possibilities, it was the English who played the major role in building an American civilization. Although people from over all the earth have contributed to the growth of that civilization, the dominating characteristics still reflect the early origins. England, however, was one of the last of the Atlantic states of Europe to rise to greatness out of the disruptions that brought the Commercial Revolution. Charging interest for the use of money was an offense there long after it had become commonly accepted elsewhere, and the new learning that had stirred ferment in other places created little curiosity in England as to new lands and new wealth. Henry VII, mildly described by Richard Hakluyt as "that prudent prince," did encourage John Cabot's expedition which touched the New World in 1497, but his successor, Henry VIII, was interested mostly in affairs at home, especially those concerning economics and religion.

Only in the reign of Elizabeth did England become a real rival of other colonial nations, and even then her energies were expended chiefly in challenging the fleets of the Catholic Spanish king. The unbounded exuberance of the age sent over the world a galaxy of sea captains whose exploits of piracy, pillage, and slave catching are indulgently covered with a mantle of glamorous romance. John Hawkins, Francis Drake, Humphrey Gilbert, and Walter Raleigh are only the most publicized of the many vigorous seamen who carried the flag of England over the world, bringing wealth to their nation and honor to their queen. They knew what they wanted: national self-sufficiency through colonies that would nurture a great merchant marine, provide a place for Englishmen to live, offer a market for English goods, and tap a source of supply that would in all ways free the mother country from domination by foreign powers that might, especially in time of war, refuse to sell. Nevertheless, colonial ventures to 1600 were complete failures. Even the first of the permanent settlements struggled through long years of uncertainty. English rulers, often severely dependent on Parliament for funds, could do little more than

bestow monopolies, land grants, and royal blessings upon individuals and corporations interested in expansion. Appropriations were in many cases sufficient to meet only the most pressing domestic obligations.

The Period of Individual Effort. The first colonial attempts of the English were made by individuals. In 1578 Sir Humphrey Gilbert, scholar, courtier, and seeker after an unbroken passage to China, was granted permission by Elizabeth to plant a colony in any remote country not within the possession of a Christian prince and to exercise jurisdiction over the territory within two hundred leagues of his place of residence. His first expedition was turned back by the Spanish fleet, and his second, launched five years later, came to grief in Newfoundland. Deserted by most of his crew, Gilbert, whom the queen in her anxiety over his welfare had described as "a man noted of no good hap by sea," was lost in a storm on the homeward journey in 1583. The next year his half brother, Sir Walter Raleigh, began the better-known but equally futile colonial attempts at Roanoke Island. The experiments of Gilbert and Raleigh were significant, for they showed conclusively that initial colonization in England's American possessions was likely to prove unsuccessful unless backed by the great capitalists of the realm.

Joint-Stock Ventures in Colonization. Queen Elizabeth died in April, 1603, and a few months later Sir Walter Raleigh was convicted of treason and sent to the Tower of London. Romantic England was gone. The nation under James I soon settled down to prosaic quarrels over religion and politics. But English business men, mindful of the profits that eastern trading companies had paid and conscious of the fact that the power of Spain had passed its zenith, were tempted by the New World possibilities. Moreover, the advantages of freedom from irritating economic dependence on neighboring European states were ever more enticing. The pressing need for a great variety of goods not produced in England was a constant reminder of the benefits of colonization. Too, merchants saw in American markets an outlet for their woolen cloth, and the landed aristocracy glimpsed an opportunity to escape from the embarrassing pressure of rising living costs by extension of their proprietary holdings. A host of other people, lured by promises of land, freedom of worship, and hopes of wealth, were ready to cast in their lots with empire builders.

Obviously the three primary requisites to successful English colonization in the new America were land, labor, and capital, all properly and wisely administered. Men with money to invest, however, were for a long time hesitant to stake their fortunes in so hazardous an enterprise, and laborers willing to undertake the gigantic task of wresting riches from the virgin

resources of a new continent were not always adequate in number. Indeed, both the laborer and the capitalist came within a few years to be investors in a venture the primary concern of which was the appropriation of American soil.[2] Even though abundant, the land itself was not to be easily had; its possession was challenged not only by other sovereigns but by the powers of undisputed nature as well. Furthermore, organization and administration were sources of endless difficulty. The maintenance of economic lines of supply presented many problems. As Professor Craven has pointed out, the uninterrupted movement of material equipment—including tools, labor, capital, and occasionally even food—from the mother country to the colonial bridgeheads of the New World was an essential but sometimes overwhelming task. The desire for profits and the basic necessity for subsistence came at first often into conflict. As the years went on, experience brought improvisations and compromises and eventually success; but had the inspiration for colonization been solely economic, the outcome would have been doubtful.

The Virginia Colony. The first permanent English settlement in America came as a result of a charter granted by the king in 1606 to two groups of petitioners who desired to colonize in Virginia, which then spread along the major portion of the Atlantic seaboard of North America. The two groups or companies consisted on the one hand of "certain Knights, Gentlemen, Merchants, and other Adventurers, of our City of *London* and elsewhere" and on the other of "sundry Knights, Gentlemen, Merchants, and other Adventurers, of our Cities of *Bristol* and *Exeter,* and of our Town of *Plimouth,* and of other Places." Since the project smacked of profit seeking rather than of hopes for homes, they were admonished to keep within their territorial grants and in the overlapping region not to set up their habitations within one hundred miles of each other.

While the Plymouth group was vainly attempting a settlement on the coast of Maine, the London promoters were busily planning their Virginia venture. Late in December, 1606, Christopher Newport, with instructions to found a New World settlement on some high, dry, treeless point "a considerable distance" from the mouth of one of the many rivers that flowed into the Chesapeake Bay, dropped down the Thames and into the Atlantic with one hundred and twenty men and boys on the *Sarah Constant,* the *Goodspeed,* and the *Discovery.* On April 26, 1607, the little fleet passed the Virginia capes, which were forthwith named Henry and Charles

[2] See ch. 2 in *The Growth of the American Economy,* ed. by Harold F. Williamson (New York: Prentice-Hall, 1944), for a stimulating discussion of "The Early Settlements: A European Investment of Capital and Labor," by W. F. Craven.

for the two sons of the sovereign. A few weeks later construction of a triangular fort was started on the bank of one of the inviting (and at that particular place malaria-infested) rivers, and within were presently built a storehouse and a chapel. Thus was begun Jamestown on the James River, first permanent English settlement in America.

The colonists sailed into the Chesapeake in lovely southern springtime, but trouble came quickly. The Indians fell upon them before they were fairly out of their boats, and nature gave grudgingly to those who did not understand her New World ways. By June the daily ration of food per man was a small portion of "ill-conditioned" barley meal, and the riches that some had hoped to find were nowhere apparent. The first years were unfortunate indeed. Starvation was never far away, and disease took a continuous toll. Out of the swamps came swarms of mosquitoes, spreading the various agues and fevers which for more than two centuries in various sections of the nation were to plague the American pioneers and leech their economic efforts of much of their strength. Whatever individual initiative existed was smothered by the fact that those who produced were for the most part merely company servants who alike drew their subsistence from a common storehouse. Promises of individual economic rewards were missing, and personal ambition was naturally strangled. Moreover, the desire of the financial backers for profit on their investment deterred the settlers—even had they known how to fend for themselves—from devoting their time to the imperative task of producing something to eat. They spent much of their energy in loading English ships with cedar, black walnut, clapboards, and even worthless ore from which it was hoped that gold might be obtained. By the spring of 1608 only fifty-three of the one hundred and four men who had landed at Jamestown the previous spring were still alive. It was clear that administrative reforms were necessary, and it was obvious also that the colonists could not depend on England for maintenance. In that age of poor transportation the food producers were too far away to supply effectively the consumers—basically, in plans at least, industrial workers.

Some of the most pressing problems were met when new charters were granted to the London adventurers in 1609 and 1612. These instruments completed the rough foundations of an economic and governmental structure upon which could be built, with hard work and good fortune, an enduring colony. The boundaries of the settlement were enlarged; reasonably effective machinery for local control was set up; adequate financial support was facilitated (though by no means assured) by the incorporation of the promoters into a joint-stock company in which anyone might become

a shareholder either by the purchase of stock at twelve pounds ten shillings or by migration to Virginia; and some of the strict and incongruous discipline of other days, such as marching to the fields and to the forest to the beat of drums, was relaxed. Nevertheless, prosperity did not come to the little band of discouraged pioneers. Investors did not pour their money into the project, and private property was with few exceptions prohibited until 1616. Conditions, however, were not hopeless. Corn and tobacco—and the faith and persistence of a handful of loyal souls—saved the situation. By 1619 farms spread for twenty miles along the James, individual ownership was encouraged through "head-rights," the population had increased to a thousand people, and detached communities called "hundreds" had gotten under way. In that year a representative assembly was created with power to share in the government of the colony, the first crude step in the long and sometimes rugged march of democracy in the wilderness of America.

In 1624 James I stripped the Virginia colony of its charter and brought it under royal control. The proprietors had received no profits, and the crown had gained no gold or silver. As a business venture the experiment had been a failure, but as an investment in nation building it gave appreciable returns; each succeeding colonial attempt was simpler because of the lessons that had been learned.

The Settlement of New England. The colonial efforts that eventually resulted in the peopling of all New England were in the beginning inspired primarily by the peculiar religious situation at home. The Church of England, headed by the crown since Henry VIII's break from the Pope, had long vacillated between Protestant and Catholic practices according to the personal wishes of the sovereigns. The people, however, were definitely drifting toward Protestantism, and an aggressive Protestantism at that. Loyal subjects in ever-increasing numbers joined the movement to abolish all things Roman and substitute therefor Calvinism with its staidness and its great respect for material progress. They did not like the established church: they were offended by the use of the surplice; they believed that making the sign of the cross in baptism and giving the ring in marriage were manifestations of veiled obedience to Catholicism; and they were certain that to indulge in any amusement was to honor the devil. They desired purity and simplicity—hence the name "Puritans."

There were many types of nonconformists, and they varied widely as to their attitudes toward the religious question. The most radical group, the Separatists, demanded an entirely new church. They were responsible for the second permanent English settlement in the New World. The members of the small congregation of Scrooby in Nottinghamshire, oppressed, as

they thought, by the government and mocked by their conservative neighbors, fled to Amsterdam and then to Leyden in search of freedom. In a few years social and economic conditions and the approach of a possible Dutch war led them to begin plans for founding a refuge in Virginia. Instead of becoming merely dwellers in another southern hundred, however, they became the Pilgrim fathers of Plymouth.

The Separatists possessed neither money nor influence with the king, but through the kindness of Sir Edwin Sandys the little group of self-exiled Englishmen in Holland obtained permission to set up homes on the lands of the Virginia Company. Seventy "Merchant Adventurers" of London, hoping for profits from fishing and fur trading in America, provided seven thousand pounds for financing their expedition. Shares in the project were valued at ten pounds each. Every emigrant was awarded one; two if he put in ten pounds in money or "other provissions." A seven-year communal arrangement similar to that tried at Jamestown was, it was hoped, to repay the promoters and profit the colonists. During that time, read the agreement between "adventurers & planters," "all profits & benefits that are gott by trade, traffick, trucking, working, fishing, or any other means of any person or persons" were to remain in the common stock until the division.

In the summer of 1620 a handful of Separatists under the leadership of William Brewster and William Bradford left Holland for England, where, after suffering many troubles and much delay, they joined other colonists on the *Mayflower*. On the eleventh of November the now historic ship, far north of its original destination, sailed into Cape Cod, and the weary men and women had their first view of the "weatherbeaten face" of New England. Whatever wealth lay inland, the coast was these winter days indeed inhospitable. Governor Bradford wrote that his flock "had now no freinds to wellcome them, nor inns to entertaine or refresh their . . . bodys, no houses or much less townes to repaire too, to seeke for succoure." Near Christmas time the little village of Plymouth was founded on Plymouth harbor, already named by Captain John Smith. The next few years were barren and full of trouble. Half the little company died the first winter, and notwithstanding the thanksgiving celebration in November or early December, 1621, starvation was for a long time ever present. But the Pilgrims possessed almost without exception the courage and faith that had enabled a few at Jamestown to triumph. Before long they won from the Council of New England (the reorganized Plymouth group of 1607) a grant to the land upon which they had settled, and within two decades they attained a reasonably sound economic status.

They remained an independent and assiduous community until absorbed by the more powerful Massachusetts Bay Colony in 1691.

It was the moderate Puritans and not the radical Separatists, however, who were most significant in the settlement of New England. Although they had wealth and a goodly amount of influence at home, drastic changes in the religious and political situation sent them fleeing to the New World, where they eventually swallowed up the Separatists. Charles I, who succeeded his father in 1625, seemed ready to put an end to all churchly differences. In fact, Protestantism appeared at the moment to be losing ground both in England and on the continent, and even the most conservative and loyal Puritans, convinced that their religion and parliamentary government were inseparable, grew restless. Besides, Archbishop Laud, chief ecclesiastical adviser to the crown, continued to irritate the reformers by his High Church practices, and the king, outraged by the criticisms of his arbitrary financial and political actions by his middle-class subjects in Parliament, dissolved that body in 1629 and imprisoned some of the important members. And so the Puritans, taxed illegally by their sovereign, restricted in their political rights, and offended in their religion, sought homes elsewhere that they might build "a bulwark against the Kingdom of Anti-Christ."

Colonization began in earnest in March, 1629, when Charles I chartered the Massachusetts Bay Company, indirect heir to the Dorchester project of a few years before at Salem. In August John Winthrop, Thomas Dudley, and ten other leaders of the faith pledged themselves by the Cambridge Agreement to embark with their families for New England by March 1, 1630, provided that "the whole government together with the patent for the said plantation be . . . legally transferred and established to remain with us . . . upon the said plantation." With the charter—guarantee of their religious liberty and some insurance of economic freedom—safe in their possession, eleven shiploads of Puritans with Winthrop as governor sailed at the appointed time to become the founders of Boston and neighboring towns. For ten years the "great migration" continued. Few times in the history of colonization has such a mass movement of people occurred. Between 1630 and 1640 more than twenty thousand earnest but obscure men and women were sent or led by ministers, scholars, and promoters to the Massachusetts coast, where they became the obedient and solid foundation of the "Bible Commonwealth."

The Massachusetts charter resembled that of Virginia in that it provided for investment in an enterprise that presumably would profit those who ventured their money. Fish in the waters near the New England

coast had long been a source of revenue to Europeans, and timber and furs inland promised riches if properly exploited. Since many of the financial backers were among the migrants and since each migrating unit was, generally speaking, one of long standing (such as a congregation), colonization moved forward with less conflict and with more efficiency than in many other places. Economic as well as intellectual progress may have been closely related to the high educational standards of the Puritan fathers. In some ways tolerance was more real than it was in the settlements to the southward. Dissension, however, stirred sometimes by religious differences and sometimes by economic temptations, brewed always, and the general result was to spread New England ever wider. In the thirties Anne Hutchinson and Roger Williams, each seeking a place where every person might worship as and if he chose, set up Portsmouth and Providence, which later joined with Warwick and Newport to become Rhode Island. Thomas Hooker, lured by rich lands, struck westward to the valley of the Connecticut River and started a settlement that along with the New Haven experiment of Theophilus Eaton and John Davenport formed the foundations of the colony of Connecticut. Even the territory that now makes up Maine and New Hampshire was controlled at one time or another by Massachusetts. The region, known yet as New England, has had a profound effect on the economic and cultural life of the United States; some of its basic principles have come out of its human heritage and some out of the climate and topography of the section.

The Proprietary Experiments. With one exception the proprietary colonies were begun after the overthrow of Cromwell and the restoration in 1660 of the Stuarts in the person of Charles II. Maryland, projected as a haven for persecuted Catholics of the Old World, was carved out of the land of Virginia and transferred by grant in 1632 to Sir George Calvert, the first Lord Baltimore.[3] It extended from the mouth of the Potomac upward along the Atlantic several miles beyond what is now the southern boundary of Pennsylvania. Begun at St. Marys in 1634, the colony escaped many of the difficulties that had beset her hostile neighbor to the south. Fortunately cleared lands were available for tobacco from the start, and the Indians were for several years thoroughly friendly. Economic progress was rapid. Large plantations grew up on the eastern shore and along the Potomac, but, on the whole, Maryland farmers were simple folk. Aristocratic Baltimore with its great merchants and commercial men was not founded until 1729.

[3] The first Lord Baltimore died before the year was out, and the grant was transferred to his son, Cecelius Calvert, the second Lord Baltimore.

It was a quarter of a century after the beginning of Maryland before colonization by individuals really got under way. Within a little more than two decades after the coronation of Charles II in 1660, however, the proprietary colonies of Carolina, New York, New Jersey, Pennsylvania, and Delaware filled up the Atlantic coast northward to New England and southward almost to Spanish territory. Those were important years in the growth of England in America. The period of experimentation was over, and many people were not only willing but anxious to join the colonizing force. Profitable industries of various kinds, mostly extractive, were getting under way. The king, having no longer hope of finding silver and gold in his realm, was willing to repay in land his supporters in the days of his exile for their loyalty.

Land and labor were at last available. Furthermore, the spirit of business was sweeping England, and Charles and his brother, the Duke of York, were vigorous advocates of colonies and of world-wide commercial ventures. Capital and vision were growing also. A political marriage brought Bombay in India and Tangier in Africa under the crown. Charters were granted the Royal African Company and the Hudson's Bay Company, the latter of which long played a significant role in the economics and politics of North America. Order and plan began to appear in the mercantilistic program. Acts of Trade and Navigation slowly shaped England into the hub of the empire with commercial spokes radiating over the oceans to economically profitable outposts from which raw materials could be obtained and to which finished goods could be sent. The new developments promised both profits for the great merchants of London, Bristol, Liverpool, and (after 1707) Glasgow and betterment of the nation. England was building England, but the encouragement of colonies as a part of that program was to create a situation that would eventually stir bitter opposition.

The first land grant of Charles II was made to eight wealthy and aristocratic Englishmen in March, 1663. The princely domain as enlarged two years later stretched roughly from thirty-six degrees thirty minutes north latitude southward to St. Augustine in Spanish Florida. At the confluence of what came to be known as the Ashley and Cooper Rivers grew up Charleston, heart of the Old South. Far up the coast a little settlement on Albemarle Sound had for some time been struggling for existence. From the two eventually arose North and South Carolina. The founders had ambitious plans for Carolina. They hoped to reap fortunes for themselves by the sale of lands, to build up great personal estates, and to bring to the empire of their king such non-English things as wines, silks, olive oil, dye-

stuffs, and naval stores. For the most part the dreams were merely visions, but it was Charleston, home of many plantations and seat of slavery, that long afterwards led the agrarians in a conflict that was at least partially directed against the business economy of the North.

Charles' second lordly grant was no less significant in the story of the growth of England in America than was his first. Made to the Duke of York and signed on March 12, 1664, it included all the region between the Connecticut and Delaware Rivers. On August 18 of that year a small English fleet took over from Peter Stuyvesant the claims of the Dutch to New Amsterdam, destined to become as New York the richest city in the world. The duke, though a good administrator, soon found himself involved in many matters and began giving away some of his holdings. The land between the Hudson and the Delaware he ceded to Lord John Berkeley and Sir George Carteret. These two men out of respect for the wishes of the donor called their province New Jersey. In 1674 the former sold out to two Quakers, and the colony was divided into East New Jersey and West New Jersey. After many other transactions the parts were reunited in 1702, but the confusion that resulted from the various changes remained to plague property owners for a long time. Delaware also was involved in the trades by which the Duke of York dissipated his grant. William Penn, seeking access to the ocean, secured title to the three counties along the lower Delaware that in time came to make up the colony.

Although the Quakers were concerned with early developments in the region of New Jersey and Delaware, their greatest center of influence became Philadelphia in particular and Pennsylvania in general. The "Holy Experiment" resulted from young William Penn's conversion to Quakerism and the fact that the royal family owed his father, Sir William Penn, sixteen thousand pounds. On March 4, 1681, Charles II in satisfaction of the debt granted William Penn, the son, a vast estate that stretched westward from the Delaware. The colony prospered from the beginning, for the Quakers were shrewd as well as religious. Penn himself was rarely the loser in a bargain; the meetinghouse and the countinghouse both thrived as devotees poured in to worship and artisans to labor and ships burdened with economic products from Penn's woods moved out of the Delaware into the stream of empire commerce.

Georgia, founded nearly half a century after the Stuarts had been driven from the throne, was the last of the English colonies to be established. The motivating forces were strangely mixed. The eighteenth-century humanitarian spirit that was growing up was deeply concerned with the poor,

the imprisoned, and the unfortunate. On the other hand, mercantilists were looking eagerly to the fur trade of the southwest and the possibility of obtaining silk, dyes, rice, naval stores, and other needed goods from the undeveloped region originally included in far Carolina. Nationalists saw in the proposed settlement a bulwark against the Spanish. Proprietary grants to individuals, however, had lost popularity because they tended to weaken royal control, which long had been slowly bringing the colonies one by one directly under the sovereign. A board of trustees was set up to manage the colony, and even Parliament was asked to contribute funds for shaping the settlement into an outpost of mercantilism. James Oglethorpe led the first migration in 1733, but Georgia was still a poor and "wretched" colony when, according to the provisions of the charter, it was turned over to the crown in 1752. Morals, national interest, and economics had been so fearfully confused that none was served well.

The Colonial Supremacy of the English. Colonization in America by European nations in their world-wide efforts to gain economic ascendancy over one another lasted for more than two centuries. The English, despite the fact that they occupied the least promising entrance to the continent, emerged eventually the victors. Settled along the Atlantic seaboard, the Alleghenies holding them to the coast, they ploddingly fought the wilderness and laboriously built up a compact economic establishment. But the situation was often discouraging. There was never a powerful unifying force within the colonies themselves. As the eighteenth century wore on, particularism grew stronger. Individual jealousies and hostilities frequently disturbed colonial progress, and determined opposition to empire regulations concerning production and commerce slowly undermined the mercantilistic program of the mother country. Strength came slowly, though settlement moved irresistibly westward. The outcome of the final contest with the French was for a time indeed uncertain; in the soil beyond the Alleghenies at the headwaters of the Ohio still rest the ashes of many a British regular who gave up his life in defense of the colonies.

Colonization was more than mere settlement: it was an endless adjustment to new situations, economic in particular. The first adventurers starved in the midst of plenty—they lacked confidence, knowledge, labor, and capital. Those who survived to become builders of the nation did so as people of a wooded section. When they moved on to the prairies of Illinois, where there were no trees, they were for a time perplexed, and when they eventually invaded the Great Plains, where there were neither

trees nor adequate supplies of water for normal crop culture, they were many times driven back. The struggles with nature at Jamestown were ever repeated in one form or another as the people grew and spread onward to the Pacific, known in the early charters as the South Sea.

Chapter 3

AGRICULTURE AND LABOR IN COLONIAL AMERICA

The Overwhelming Importance of Agriculture. The most important industry of the colonial period in America was agriculture; probably not less than nine-tenths of the population was engaged in tilling the soil. Even those people who devoted themselves to other work spent a part of their time in agricultural pursuits. Few of the first settlers were prepared to follow any different occupation and land was plentiful, but the choice was unmistakably determined by the pressing necessity for food. In the early years of settlement one ate chiefly what he grew in his own fields or foraged from the forest; there was little surplus for sale. This is not strange, for reliance on the soil is always a dominant factor in the life of any nation, particularly when transportation is difficult and inadequate and when the product of each individual's labor is scarcely enough to meet his own physical needs. Only with the coming of comprehensive railway and highway systems and the introduction of laborsaving farm implements and powered machinery have a majority of the people of the United States sought their livelihood in other industries.

The greatest natural resource of the New World in the colonial period was its abundance of tillable soil. Indeed, the vastness of the public domain has been a determining force throughout much of the history of the nation. Frederick Jackson Turner has ably set forth the thesis that it developed democracy, independence, and a distinct national well-being. The lure of easily obtained land not only brought colonists to the new continent but also led them ever westward. Land hunger was universal, free land unbelievable. As late as the last quarter of the nineteenth century Europeans could hardly conceive of fertile untilled acres stretching away to the horizon.

The Distribution of Land. But abundance did not obviate the difficulties of distribution. The mere process of getting land into the hands of the colonists presented many problems. Ownership by the sovereigns of Europe was based on priority of discovery and on effective occupation. Although disputes as to who saw the land first and whether possession was sub-

stantial often required armed conflicts in settlement, little question was raised as to the legitimacy of this basis of claim. Preoccupancy by the Indians was not considered; Roger Williams was twice called before the New England fathers sitting as a court for defending the rights of the aborigines to the land over which they had wandered for centuries.

Through Kingly Grant. The manner of distributing land differed in the various colonies and at various times. Huge grants were given by the king to corporations and to individuals, who in turn as overlords passed the land on to the actual farmers. According to some colonizing plans these farmers were to be tenants of the lords as in England. But the New World had never been in the grip of the feudalistic system that produced lord and tenant. Furthermore, the men and women who came to America were inspired by the hope of independence and freedom, and the great empire that lay before them nurtured their dreams. The tenant system failed miserably; even the efforts to collect quitrents—"one of the most distinctive features of English land-tenure in the sixteenth and seventeenth centuries"—were not completely successful. Quitrents, unlike ordinary rents, bore no relation to the value of the land, and in the colonies they were open reminders of fealty to the crown or obedience to the proprietor. Ranging in amount from a fraction of a penny to four shillings per hundred acres, they were strenuously resisted by the farmers through violence and evasion, though they did not wholly disappear until the Revolution.

Through the New England Town. The quitrent system first collapsed in New England. Here the theory that the local political unit or the colonizing corporation owned the land prevailed. Few direct grants from crown to individual were made in this section; the town was the chief dispenser. As population increased in the settled areas, the economically dissatisfied and the adventurous banded together and asked the legislature for permission to establish new outposts (generally thirty-six square miles in area) in the wilderness. If a town prospered according to the ideas of the Puritan fathers and gave due regard to the establishment of a common, a church, and a school, permanent land title and full legal and political rights in the government were eventually granted.

The New England town was a religious, political, social, and economic institution. Presumably democratic, it was often severely limited in its democracy. The one long street, the minister's house, the farmers' homes with gardens attached, the market place, and the school made every isolated settlement a monotonous repetition of every other one. Ownership was both communal and private. Each individual was given a plot or perhaps several plots of land, according to his need and his investment in

the original enterprise. What was left remained the property of all and was used as meadow, pasture, or woodland as conditions required or as the town meeting decreed. Newcomers to the community and younger sons of the original founders were to receive holdings from this surplus, but often when division was proposed, difficulties came up because of the increased value of the land. As population swelled and new problems arose, the discontented element often withdrew and founded a new town; the growth of New England was, in fact, primarily the result of this cell-like division. With the expansion of settlement the desire for land profits grew, and the original plan was greatly modified. Nevertheless, the ordinary person found it easier to obtain a holding in this section than anywhere else in the colonies. Here too were enjoyed the first privileges of free sale and transfer.

Through Southern Headrights. In the southern colonies landholding was essentially a product of the headrights system. For various reasons, chief of which was bringing new settlers to the region, individuals were given land for private use. The usual amount was fifty acres for each immigrant, yet laxity in the enforcement of the regulations enabled practically everyone involved in each transaction to secure a grant of virgin soil. A freeman paying his own passage was given fifty acres and an additional fifty for every member of his household. But the number of acres per headright was changed by law in several instances, and it varied throughout the region. In general the procedure when one wanted to patent land was to present under oath to the court a list of the people imported into the country. The clerk of the court then certified the list to the clerk of the secretary's office, who, upon investigation, attested its regularity. The surveyor was then required not only to survey the desired plot but also "to take care that the Bounds of his Survey be plainly marked, either by natural Boundaries, else by chopping Notches in the Trees, that happen in the Lines of his Courses."

It was not necessary to bring new settlers to America in order to share in the public domain. Rights not yet executed could by the middle of the eighteenth century be bought for five shillings for each fifty-acre plot. A writer in the *General Magazine* in 1741 commented that "these Rights to Land are as commonly sold, by one Man to another, as the Land itself; so that any one, not having Rights by his own Importation, may have them by Purchase." Moreover, one might petition for "lapsed" and for escheated land. An individual receiving fifty acres of land was required to pay a quitrent of twelvepence and "to clear, plant, and tend Three Acres of Ground for every Fifty, and to build an House, and Keep a Stock

of Cattle, Sheep, or Goats, in proportion to the meaner Part of the Land in the Patent." A person who did not "set or plant thereon" within three years lost his rights, and anyone was at liberty to obtain a new patent on this lapsed land. But until speculation became prominent, southern holdings for the most part were, as in other sections, not large. Farms ranged in size from one hundred to five hundred acres. At times, however, political, personal, and military grants resulted in large estates; certainly those of the Byrds and the Carrolls, for example, were princely.

In the Middle Colonies. Landholding in the middle colonies resembled that both in New England and in the southern colonies. In New York the large Dutch estates were allowed to remain, and new ones rivaling or exceeding them in size were established. Unscrupulous political methods were here employed on a large scale and with an adroitness not equaled elsewhere. It is said that during his term of office Governor Benjamin Fletcher gave away to thirty friends two-thirds of the available land. In the Jerseys both headrights and proprietary reservations were used; in Pennsylvania there was continual modification. Penn reserved a "proprietary tenth" and offered his remaining acres for disposal in various ways. The wealthy purchased estates of five thousand acres or more for specific sums with annual quitrents in addition, but small holdings of two hundred or less could be obtained by the poor on payment of annual quitrents. Bitter quarrels raged in the assembly: Quakers, Scotch-Irish, and Pennsylvania Dutch were an inharmonious group. The colonists everywhere were determined to be lords of their own land, and they did not hesitate even to take up arms in defense of what they regarded as their rights. The rich speculator and the harassed proprietor likewise came into conflict.

Theories of Land Ownership. Variation in methods of disposing of the public domain in colonial America to private owners was due not only to the personal inclination of individuals but also to the attitude of the colonists. Whatever plan was used revealed difficulties and corruption as soon as the increase in population brought a general rise in values. At the same time there was a growing feeling that the land was a gift of nature, whose bounties should be shared by all. Monopoly holdings and preferential sales were early questioned. In Pennsylvania the Scotch-Irish and the Germans, shoved into the back country because there was nothing for them to do along the coast, began indiscriminate settlement wherever conditions suited them. Eviction was all but impossible and when attempted was certain to cause trouble.

Preemption laws later brought some relief; until the unclaimed land was

gone, however, there were always many restless individuals who pushed on ahead of settlement. Even the guns of the militia could not stop the practice. Settlers, needing land in order to earn a living, saw no reason for monopoly and private greed when a continent was beckoning for use. Corruption in distribution was often evident. In fact, speculation and peculation have marked the history of the public domain since the beginning of the nation.[1] Tilling the soil as an occupation has provided a living for many people, but, generally speaking, only through profit on sales has the land ever yielded much more than subsistence to its owners.

Colonial Agrarian Heritages. Agriculture in the colonies was dictated by the simple fact that food was needed. Nevertheless, it was influenced by a host of heritages from both the Old World and the New. Farm methods in Europe had changed little for centuries. The knowledge the settlers brought with them was therefore extremely limited, and even it could be applied only as conditions permitted. Attempts to follow the old ways of the agrarian were frequently unsuccessful, but efforts to learn new methods by experimentation were sometimes equally tragic. Although not all the land was wooded, attacking the wilderness barehanded when the proprietors expected much time to be expended in search of quick riches was a discouraging task. Only simple implements that required back-breaking labor were available. Axes, hoes, mattocks, picks, spades, sickles, scythes, and forks were about all that was to be had, and they were of poor quality. Wooden plows, clumsy and heavy, whose operation required two men and from four to six oxen, were used in England; few, however, were imported into the colonies. New England towns in some instances encouraged manufacture by bounties.

Domestic animals were scarce. The beasts that roamed the forests provided food and clothing, but in no case were they usable as draft animals for lightening the tasks of the farmer. With horses and oxen trees could be dragged away, rough harrows and drags could be improvised for preparing the soil, crops could be hauled to storage, and manure could be used to maintain the fertility of the land. Horses, cattle, sheep, and hogs, as well as chickens and other fowls, were brought into the settlements from England; in starving times, however, they were eaten not only to allay the pangs of hunger but also to save the little stock of grain available. When John Smith left Jamestown in the fall of 1609, there were in the settlement six mares and a horse, five or six hundred hogs, "as many hens

[1] Thomas P. Abernethy, *Western Lands and the American Revolution* (New York: Appleton-Century, 1937) is a valuable study of the subject.

and chickens, and some goats and sheep." Famine swept the colony, and by June the next year all but one lone sow had been destroyed.[2]

Empire plans for encouraging colonization sometimes blasted hopes of better days. With disheartening frequency shiploads of new settlers, their supplies lost or spoiled, arrived to become heavy burdens on the little stores just as surpluses were beginning to be built up. Generally as the larder ran empty, animals were forfeited to conserve grain. Unless confined—and building enclosures consumed much laborious effort—they destroyed the growing crops. Even if kept from the fields, they were consumers of the harvest, though Lord Delaware wrote sometime early in 1611 that "the kine all this last Winter, though the ground was covered most with snow, and the season sharpe, lived without other feeding than the grasse they found, with which they prospered well. . . ." When Indians and wolves and other dangers had disappeared, American livestock became notoriously neglected; protection, however, was necessary in early colonial days.

New World heritages were not all restrictive. While the forests hemmed in the farmers, there were in places thousands of acres already cleared of trees. At Jamestown this land was wrested from the Indians; at Plymouth and in Maryland in particular it was to be had for the taking. Spanish horses, cattle, and hogs rarely wandered from Mexico farther than the Mississippi River, but they were obtainable in reasonably large numbers from islands in the Caribbean. Furthermore, the two great plants upon which early colonial economic success rested—corn and tobacco—were native. One provided food and the other a salable product in the markets of the Old World. Together they made it possible for the colonists through patient labor to build up their homes and at the same time to buy in Europe seeds and plants and implements and to profit slightly from the English experiments of Jethro Tull, Charles Townshend, Robert Bakewell, and others in soil, plant, and animal improvement. The land, however, was habitually neglected, for the tillers soon learned that it was easier to clear new fields than to preserve the fertility of the old. Unfortunately colonial agrarians profited little from the efforts of one another. The many fine harbors were influential in scattering the settlers along the entire coast and turning their interests toward the mother country. Intercolonial shipments of corn and wheat, for instance, were, notably in poor crop years, long prohibited.

The Indians as Agrarians: Their Implements and Their Crops. The Indians were not merely wanderers who foraged upon nature for their

[2] Lewis Cecil Gray, *History of Agriculture in the Southern United States to 1860* (Washington: Carnegie Institution, 1933; 2 vols.), vol. 1, p. 19.

existence. Numerous tribes lived in permanent or semipermanent villages around which spread their fields. They frequently traveled long distances on hunting or warring expeditions, but they generally returned in the spring for planting and in the fall for harvesting. The squaws, although they did most of the work in the fields, were occasionally assisted by the men, especially in preparing the ground for the seed. "The women set or plant, weede, and hill, and gather and barne all the corne, and fruites of the field," wrote Roger Williams, "yet sometimes the man himselfe (either out of love to his Wife, or care for his Children or being an old man) will help the Women which (by custome of the Countrey) they are not bound to do." Community labor also was practiced. A companion of La Salle's noted that when the Indians in the Mississippi valley "design to till the ground they give one another notice, and very often above a hundred of each sex meet together."

The Indians used primitive implements, usually made of flint, stone, wood, or the bones of animals. They cleared their fields by cutting out a strip of bark several inches wide around each tree or by chopping or setting fire to the roots. The trees when dead were sometimes burned, but more often the grain was planted among the gaunt trunks. Crude hoes or sharpened sticks were used for preparing the soil for planting.

The forests and the streams were generous providers. Strawberries grew wild from Florida to New England; one writer declared in 1643, "I have many times seen as many as would fill a good ship within a few miles compasse." Grapes too were plentiful, and also persimmons, groundnuts, Indian rice, cane, pecans and other nuts, prickly pears, and orchard fruits of many kinds, particularly peaches. The sap of the maple tree—processed much as it is today—was the chief source of sugar, although honey was sometimes used for sweetening. The streams were teeming with fish.

In addition to corn and tobacco the cultivated crops of the Indians included beans, pumpkins, peas, squashes, gourds, muskmelons, watermelons, artichokes, and sweet potatoes. The corn served for making bread, mush, and hominy or was eaten as roasting ears. Through long years of selection specific varieties suitable to different climates and uses had been developed. Tobacco was employed in ceremonials and was used besides for smoking and chewing. The Indians, an early English explorer reported, "say that it doth keep them warm and in health." Roger Williams wrote that in New England they used tobacco "first, against the rheume, which causeth the toothake, which they are impatient of; secondly, to revive and refresh them, they drinking nothing but water," and John Hawkins noted that in Florida they "doe sucke thorow the cane the smoke thereof, which

smoke satisfieth their hunger, and therewith they live foure or five dayes without meat or drinke." They "suck so long upon their pipes," said another observer, "that they fill their bodies full of smoke, till it cometh out of their mouth and nostrils, even as out of the tunnel of a chimney."

The Colonists as Agrarians. The English quickly adopted the tillage practices of the Indians. The Puritan cornfield, bean vines winding about the stalks and squash and pumpkin spreading freely on the ground—all protected by scarecrows—was something of a duplicate of the Indian field with children on raised platforms scaring away the birds. Philip Alexander Bruce in his *Economic History of Virginia in the Seventeenth Century* says that "a field of maize on the Powhatan, long before the vessels of the first English explorers appeared upon its waters, was almost the exact counterpart of the same field, planted with the same grain, three hundred years afterwards by the modern Virginia farmer." Little fundamental improvement in tillage procedure has been devised. Corn is still planted in regularly spaced rows or hills, and mechanical cultivators pulled by horses or tractors pile up the dirt at the base of each stalk and keep the surrounding soil free from weeds much as the Indians did by hand. A writer in 1610 commented at Jamestown that the Indians "keepe the hillocks of their corne and the passage between . . . as neat and cleane as we doe our garden bedds." Husking pins, bins, methods of drying corn for seed, and even such dishes as hominy and succotash are directly copied from the aborigines. Tobacco culture too has followed closely that developed by the red men.

In the early years of American agriculture immediate conditions brought something of uniformity. Corn, for the simple reason that throughout the colonies returns for the seed planted and the labor expended were greater than could be obtained from anything else, provided everywhere the most important item of food.[3] Furthermore, because of the hazards of wandering Indians, destructive weather, and marauding animals, production had to be limited to things that required little permanent investment and that were characterized by reasonably short periods between planting and har-

[3] The basic factors that made corn and tobacco the two great crops of early colonial agriculture should not be overlooked. Corn was a preeminently sustaining food that could be prepared in a great variety of ways; investment per crop was limited to a few pounds of seed and the labor expended on the soil; replanting was a simple process that extended over a considerable period; harvest began with the appearance of roasting ears; future crops depended only on preservation of a small amount of seed; and, since the corn was eaten at the place of production, bulk was not a serious disadvantage. Tobacco resembled corn in that investment per harvest was limited to seed and labor. It differed from corn, however, in that it was a money crop that must be sold in markets far from its place of origin; this could be done because its yield was relatively high, its shipping qualities were good, and its weight was comparatively low.

vesting. Grapes were put out in great numbers in Virginia in the hope that wine making might develop in the New World of the English. But even had tobacco not been far more profitable and had the first vintage not spoiled "principally by the mustie caske wherein itt was putt so that it hath been rather of scandall than credit unto us," the industry could scarcely have prospered until order was assured. That fact was demonstrated when Indians fell on the laboriously planted and carefully tended fields during the bloody massacre of 1622 and destroyed the vines and with them the possibility of any further production for several years. Silk culture also was unsuccessful, and even domestic animals, especially sheep, were killed often enough at first to discourage the settlers from attempting to raise them.

The desire on the part of the mother country for certain products to carry out her mercantilistic ambitions was another powerful force in directing the labors of the early colonists. Both legal compulsion and economic inducements were used in turning the farmers to growing raw materials needed in the shops of England or for trading in continental markets. Flax, hemp, and indigo, as well as less significant items, were encouraged by bounties and by other means. Control was exercised also through acts of trade and navigation. Foodstuffs, for instance, could as a general rule not be sent to British ports, yet tobacco, wool, indigo, and similar products needed in the material scheme of empire could be sent nowhere else. Regardless of legislation and bounties of king and colonial governors, however, agriculture made its slow way and shaped itself in general according to the dictates of soil, rainfall, and temperature. From New England to the Carolinas and eventually into Georgia every tiller, whether he owned a great estate or only a few acres, sought to produce what he needed and, in addition, surpluses for sale or export that he might pay his taxes and other charges and purchase goods that he could not grow or make. This search for profitable use of the land through the production of crops that yielded both food and monetary incomes brought sectional differences and sectional diversification as soon as the first trying years had passed.

Agriculture in New England. In New England agricultural procedures were for a long time the concern of the entire town or township. All economic life reflected the agrarian organization upon which the community was based. Every individual owned a strip of land in the tillable field or fields, and as new acres were cleared, he received additional plots as his share in the corporate undertaking. Sometimes the farmers decided in town meeting what major crops should be planted. The pasture and the fields from which the grain had been harvested were open for all to use,

but the number of animals each person might graze on the stubble was determined by the number of acres he possessed. The woodland provided fuel and building material, and even the village green had its economic value. Today a center of beauty and a point of pride in many a New England town, the common in colonial times served a utilitarian purpose; horses and cows browsed over its rough turf, and pigs and geese wandered at will. By the end of the seventeenth century the individually owned but often widely scattered plots of land were being consolidated, and farms were appearing in the open country. The lonely farmstead became a commonplace as soon as external dangers had been removed and economic knowledge as well as economic organization had reached the point where the family unit could survive by its own efforts.

The rugged soil of New England was not particularly adapted to any special crop, and therefore a great diversity of agricultural products was grown. Material needs were wrung from the rocky hills only by unceasing toil. Here as elsewhere corn soon became the most important grain. The Plymouth settlers in their first spring planted a total of twenty acres, and Governor Bradford recorded that they tried also some English seed "as wheat & Pease" but it "came not to good eather by ye badness of ye seed, or lateness of ye season, or both or some other defecte." Squanto, a kidnaped Indian who had spent a few years in England, taught the Pilgrims to fertilize their corn hills with the herring and shad that came up the rivers to spawn. When he died in 1622, the little group of religious exiles lost a valuable friend. The next year, however, the struggling farmers were greatly benefited by the abandonment of communal labor. Corn soon became plentiful, and the European small grains—barley, buckwheat, oats, and rye—were cultivated with reasonable success. Wheat gave only small returns, both because of the climate and because of the poor preparation of the soil.

Vegetables too were important. In addition to the squash, pumpkins, and beans used by the Indians, turnips, carrots, peas, and parsnips were grown from seeds brought from the mother country. Fruits grew in abundance. Apples were perhaps the most popular on account of their many uses; the dried-apple pie of the section soon became traditional. Though little care was taken of the orchards, two new varieties of apples, the yellow sweeting and the Newtown pippin, were developed in Rhode Island in the seventeenth century. Blackberries, strawberries, huckleberries, and grapes were cultivated, and many grew wild.

The same factors that led to the planting of diverse crops also dictated the raising of many kinds of animals. Horses, cattle, hogs, poultry, sheep,

and goats were to be found on most farms. Horses were used for riding and working, but oxen generally did the heavy labor, especially in the forests. Cattle provided milk for cheese and leather for shoes and harness. Hogs, often rangy and always troublesome, supplied hams, bacon, and lard for the heavy meals of outdoor workers. Chickens were valued for their eggs as a complement to the breakfast ham or bacon; surplus fowls soon found their way into the skillet or the pot, particularly on Sunday. The wool of the sheep was not so good as that of English flocks, and the mutton frequently had a strong flavor because of lack of skill in its preparation.

The animals usually foraged for their food during the growing season and were fed corn and hay in the winter. In some colonies the feeding of corn to livestock was prohibited for a long time, and edible indigenous grass that could be cured was almost wholly missing. By the middle of the eighteenth century, however, sufficient hay for winter use was being supplied by English grasses, especially timothy (so named because it was introduced to America by Timothy Hanson) and clover.

But New England was not destined to be primarily agricultural; the great variety of products grown indicates that the land offered little opportunity for prosperity. As soon as surpluses of food products piled up in other regions, the Puritan and his descendants turned to manufacturing and other nonagrarian industries.

Agriculture in the "Bread Colonies." The territory between the Hudson and the Potomac, often referred to as the middle colonies, was bountifully favored for agriculture. Here wheat and corn early won for the section the title "bread colonies." Other grains too, such as oats, rye, and barley, were grown in large quantities, and fruits, though used chiefly in the production of alcoholic drinks, were plentiful. So abundant were peaches in New Jersey that they were often fed to the hogs, and even their voracious appetites could not always consume the surplus.

Horses, cattle, and hogs were important, particularly in the back country of Pennsylvania. The thrifty Pennsylvania Dutch produced large crops on their fertile acres, but they found it troublesome to dispose of their surplus because the roads were all but impassable. Grain that was fed to cattle and hogs, however, literally walked itself to market. In this manner Philadelphia received tons of corn that otherwise could not have been sold. Before the middle of the eighteenth century the industrious Germans, living in log huts but possessing barns as "large as pallaces," were, in spite of the difficulties and the costs involved, carting their produce into the metropolis on the Delaware. "The method is this," wrote Lewis Evans in 1753, "ev'ry Farmer in our province almost, has a Waggon of his own, for

the Service of his Plantation, & likewise horses for Tillage, in the Spring & Fall of the Year (when it is here a Vacation from farming) they load their Waggon & furnish themselves with beasts, & provender for the Journey. The Waggon is their Bed, their Inn, their every thing, many of them will come one hundred & fifty Miles without spending one Shilling." [4]

Southern Agriculture. The first grain the Virginians grew was corn; they learned its value and culture from the Indians. Fruits and vegetables were plentiful, and southern gardens soon came to excel all others in quantity and quality. South Carolina produced even figs, oranges, and pomegranates. Apples became significant only after settlement had reached westward to the flanks of the Appalachians, but peaches grew in the hill country. Although the so-called Irish potatoes were used sparingly, the sweet variety that ripen in the fall rivaled corn in favor. Watermelon, "possum," and "sweet taters" were three kingly dishes much enjoyed by the Negro slaves whose presence was dictated by the physical features of the section.

The Single-Crop Agriculture of the Southern Colonies. *Tobacco.* However similar early agricultural practices in America, wide differences appeared as soon as economic conditions permitted. At the same time that the stubborn soil of New England was driving its settlers to divers occupations, peculiar physiographic fitness was turning the southerners to one-crop agriculture. Tobacco, introduced into Europe by Spain, was the first of these single crops, and much wealth was expected from its cultivation. Robert Harcourt wrote in 1613 that "this commodity Tobacco, (so much sought after, and desired) will bring as great a benefit and profit . . . as ever the Spaniards gained by the best and richest Silver myne in all their Indies, considering the charge of both." [5]

Although sailors under John Hawkins may have been the first Englishmen to use the product habitually, apparently tobacco was taken by Sir Walter Raleigh to England, where it found high favor in romantic Elizabethan society in spite of the fact that it bit the tongue viciously. The demand grew with amazing rapidity. James I, who succeeded Elizabeth, endeavored to stay the growth of "so vile and stinking a Custom," but with little success; in 1613 Harcourt wrote that the plant "is not only in request in this our Country of *England* but also of *Ireland,* the *Netherlands,* in all the Easterly Countries, and *Germany;* and most of all amongst the Turks,

[4] Lawrence Henry Gipson, *Lewis Evans* (Philadelphia: Historical Society of Pennsylvania, 1939), p. 100.

[5] Robert Harcourt, *A Relation of A Voyage to Guiana* ("Printed by John Beale for W. Welby, and to be sold at his shop in Paul's Church yard at the signe of the Swan. 1613"), p. 37.

and in *Barbary.*" Vainly did the king plead with his people not "to abuse and misimploy the soile of this fruitfull Kingdome." Smoking he called one of the "many other Vanities and Superfluities which come beyond the seas," and his *A Counterblaste to Tobacco* set forth arguments still in use.

The objections of the Stuart king were not determined altogether by moral principles. Since Englishmen preferred a milder smoke than that obtainable from colonial tobacco, large amounts were bought from foreign nations; in 1621, for example, importations from the Spanish West Indies amounted to sixty thousand pounds. But protests of the mercantilists and the royal family against the tobacco habit soon lessened, for in Virginia the cultivation of a variety that John Rolfe had started in 1612 from seed procured from the West Indies was becoming important. King James created a monopoly in the product that soon came to pay him annually sixteen thousand pounds, a sum well described by a contemporary as "not a little." Year after year as the Virginia speculators sought to precipitate a land boom in their American colony and planters eagerly pursued pecuniary gain, more and more acres of the New World were given over to the culture of the Indian weed. By 1617 it was being grown in the streets of Jamestown, though laws had already been passed making corn production compulsory. Cultivation rapidly spread from the banks of the James throughout the river valleys of Virginia and Maryland and along the shores of the Chesapeake Bay. It eventually moved into Carolina but did not there become significant economically until after the Civil War. In 1618 Virginia sent to the mother country fifty thousand pounds of tobacco, twenty times as much as had been shipped two years before. By the middle of the eighteenth century the colonies were exporting nearly fifty million pounds annually, and this figure was more than doubled by the time of the Revolution.

Tobacco required less land than other crops. Only the lure of profits, however, can explain its great popularity. The labor involved in its production was enormous. Work began in the spring and did not end until well into the winter and sometimes scarcely before the beginning of the next season. Early in the year the seeds were sown in specially prepared beds in the forests,[6] and the plants when large enough were taken to the field and set in hills some three feet apart each way. A good setter could put out a thousand a day, but the work was back breaking, as was also the subsequent tillage. Weeds were bothersome, tobacco worms were annoying, and suckers had to be plucked repeatedly. Cutting required a hot, dry day so that the leaves might wilt. Properly wilted, the tobacco was

[6] The early settlers probably sowed the seed in the fields directly.

hung upon sticks and stored in the barn in orderly rows that the air might cure it evenly.[7] At last the leaves were stripped, tied in hands, and packed in hogsheads to await the arrival of some English ship beating its way up the broad rivers to the wharves of the plantations.

The planters' first experiment in one-crop agriculture brought unhappy economic consequences. The large financial returns from tobacco during the first few years led to overproduction, which drove prices downward. From the five shillings and more paid in the early years of Jamestown, the price dropped long before the middle of the century to scarcely a penny a pound. Because the product was used as a money base, many unethical practices developed in spite of the minute restrictions laid down by the mother country. Efforts to limit the amount grown were almost complete failures. If one community succeeded in regulating acreage or the number of leaves to a plant, other communities prospered at its loss. Unscrupulous persons often took advantage of mutual agreements in order to make personal gains. By 1682 the situation had become so desperate that rioting occurred, and many fields were completely destroyed. Existing evils, however, were unrelieved, and production was unabated.

The inordinate devotion to tobacco left deep economic marks on both the land and the people. The plant quickly exhausted the soil, and the tillers, clearing new acres, left behind them outworn farms to grow up in weeds.[8] Furthermore, lessening financial returns from the crop engendered bitter quarrels between planters and English merchants and commercial men. Galling debts that seemed ever to grow larger were not insignificant in turning the southerner to the support of the American Revolution. Social consequences too were striking. The more fortunate individuals bought up lands from the less prosperous, forcing them to move into the barrens between the river valleys. Indeed, tobacco helped to build up the miserable group that the South even yet calls its "poor white trash." Entire families, pushed into the unproductive fields and on to the gullied hillsides, struggled in their tobacco patches in the summer and in the winter prepared their "measly" plants by the kitchen fire for marketing. Their only escape from economic servitude was migration to the frontier, for soon the Negro slaves were favored competitors for labor on the plantations of the wealthy. Their hostility toward the planter was no less real than the bitterness of the planter toward the English men of business.

[7] In the beginning the tobacco was piled in the field and covered with hay; the practice of hanging on lines was introduced in 1619. The Indians used artificial heat to cure their tobacco. Only long afterwards did the white man take up this custom.

[8] See Avery O. Craven, *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860* (Urbana: University of Illinois, 1926).

Rice. Another of the single crops of the southern colonies was rice. Contrary to the Chinese method, the seed was generally planted directly in the field instead of in hotbeds. In the beginning the plants were grown on the plantation much as other crops, but it was soon discovered that inland swamps—if sufficient water could be found for flooding—provided ideal conditions for production. Later, coastal swamps were used wherever embankments could be thrown up along the rivers. Complicated mechanisms in great wooden troughs that pierced the banks permitted the fresh water to flood the fields as the tides pushed it back from the mouths of the rivers and then closed the gates as the tides receded. Care had to be exercised, for salt water in the irrigation ditches ruined the crop and often made it necessary for the land to lie idle for several years while the soil leached sweet again.

Rice culture was both laborious and unpleasant. The fields were flooded when the seeds were in the ground, and most growth occurred in eight to ten inches or more of water. If weeds or the dreaded red-seeded wild rice appeared, the "flow" was drained off and the slaves, stooping as they plodded through the stagnant pools and the oozy mud, cleaned the long rows. Sometimes "country fever" swept through the labor force and disabled many of the workers before the task was done. Dangers ever threatened the crop. Floods were frequently disastrous, but the most-feared tragedy was that the water sources of the inland swamps might dry up at a critical time. Crawfish sometimes played havoc with the plants. The bobolink, or ricebird, on his way southward after a summer in Canada or New England, was by far, however, the most destructive of the pests. Stopping off in August in the wild-rice swamps of Pennsylvania and Maryland, where hunters decimated their numbers, the flights reached South Carolina in September, just when the grains were filled with milk. The flocks fattened as the fields grew thin, and no matter how many birds were shot and put into pies according to the favorite recipe of the day, enough survived to lead their broods southward another year. But in spite of hazards, the rice yields were generally bountiful. Harvest time was a time of abundance on the plantation, for, since only the solid grains were marketable, everything ate its fill, including birds, pigs, horses, and cows—and slaves. Rice became the chief economic asset of South Carolina, deerskins being a poor second until the middle of the eighteenth century, when they were displaced by indigo. Total acres under cultivation increased rapidly. By 1750 the planters were exporting annually some hundred thousand barrels of the cereal, and the colony had become the largest mainland importer of slaves.

Indigo. A third single crop of the section, centered particularly in South Carolina and Georgia, was indigo. Its cultivation fit in well with the production of rice, for the same labor force could be profitably used for both. The second cutting ended as the rice harvest began, and after that the slaves could be sent to the woods to split pine staves and headings and cut oak hoops for barrels needed in marketing the grain. The indigo plant, scarcely known in America today, was introduced into the Carolinas by Eliza Lucas, daughter of Colonel George Lucas, governor of Antigua in the West Indies. Experiments had been tried before, but it remained for this young girl in her teens to begin successful cultivation in America at Wappoo, the family home near Charleston. Though grasshoppers and worms (which had to be pulled off by hand much as those that infested tobacco) plagued the growers, the plants could be cut from two to four times a year, according to the climate. More than that, no swamps had to be cleared, and England paid a bounty for production.

Indigo, a legume, resembles asparagus in its general make-up. The coloring material that gives it its value is obtained from the leaves. The plants were cut during the blooming period and carefully placed in vats of water. There they were steeped, and the liquid was drawn off into other containers for fermentation—a loathsome process, millions of flies swarming over the brewing liquid as well as over the sour stalks that after steeping were scattered on the fields. Fermentation was checked at the proper time, generally by the addition of lime, and the suspended matter was allowed to settle and dry. Cut into cubes, the dye that was not peddled in the colonies was sent to England. There it not only supplied home needs but also provided a surplus for sale on the continent, bringing to the mother country a goodly amount of specie. The colonies prospered too. South Carolina alone in a banner year produced a million and a half pounds. In 1775 indigo made up by value about thirty-five per cent of the exports of the colony.[9] The Revolution practically ended the once lucrative industry, but it required some time for the growers, concerned only with the impositions they had suffered, to realize that English bounties had made the crop profitable.

Agriculture on the Eve of the Revolution. Even though differences in temperature, rainfall, and soil in the various sections, the presence of other economic assets besides the land, and both restrictive and encouraging laws of Parliament slowly shaped farming into distinctive patterns in the various

[9] Leila Sellers, *Charleston Business on the Eve of the American Revolution* (Chapel Hill: University of North Carolina Press, 1934), p. 167. Half a million pounds was a good normal yield for South Carolina.

colonies and forced modifications from time to time, the toiler in the field was in 1775 still following fundamentally the same methods that his farmer ancestors before him had used for centuries. Obviously many changes in detail had occurred. The burden of hand culture that had plagued the first colonists had been lessened by domestic animals as plows increased in number and tools improved. The ever present specter of famine had disappeared as surpluses built up to such an extent as to free some of the people from their toil in the earth. The fields had come in part to fulfill the dream of farmers in that everywhere there were some money crops for sale. Manufactured goods, domestic and foreign, found rural as well as urban markets. Completely isolated and wholly self-sufficing agrarians were rare.

The rise of merchant princes and the growth to wealth of manufacturers and industrialists of various types had been accompanied by the movement upward to riches of the masters of great estates, particularly along the Hudson and throughout the fertile tidewater region. The southern colonies, whether they deserved it or not, soon won a reputation for romance. The wide coastal plain with its slow, meandering rivers, its long, hot growing season, its light winters, and its productive soil tended to make agriculture attractive. Here farming was not the mere life-sustaining business that it was in New England. Here wide-spreading acres, tilled by slaves, lost their implication of toil. Here, in retrospect at least, the land was redolent of jasmine and magnolia. Nowhere else in America or in Europe did agrarian aristocrats live in such splendor.

The wealth of the southern planters and of large landowners elsewhere was in part a fictitious wealth built on credit. The owners of great estates made up everywhere only a small percentage of the people. Below them was the mass of simple farmers who planted their seeds and harvested the product of their toil in much the same manner—and lived in reasonably uniform poverty. Whether in New England, in the middle colonies, or below the Potomac, they grew a variety of crops. Even on the eve of the Revolution their labors were still akin to those that long before had been known at Jamestown, for they had no slaves, few horses and oxen, and only the poorest of tools. They nevertheless plodded ahead, grumbling sometimes but generally meeting circumstances as they found them. They turned their hogs into the forest to feed on mast if possible, and they planted their crops among the stumps if unavoidable. Though their prosperous neighbors grew rice and indigo and tobacco and other important crops for export to meet the empire plans of the mother country (or turned to other occupations and evaded the laws), it was chiefly these poor upon

whom rested the slow growth of the nation. They made up the backbone of the population, and it was they who beat back the wilderness.

Labor in the Colonies. Agrarian progress brought into prominence the pressing problem of labor. As soon as the immediate needs of physical existence were met, many of the colonists grew eager for surpluses that could be turned into profits either as raw materials or as finished goods. One individual, however, could create but little beyond his fundamental wants; prosperity comes through direction of the efforts of others and perhaps partial appropriation of the fruits of their labors. In Europe workmen were plentiful because resources were limited, whereas in America, with undeveloped riches everywhere, wage earners were scarce. The ambitious, looking about at the unlimited opportunities for wealth getting, bemoaned the fact that few were willing to hire out themselves at all.

The Solution of the Labor Problem. *Cooperation.* The urgent need for labor was met in three general ways: cooperation, voluntary and involuntary servitude of specified duration, and involuntary slavery of indefinite tenure. In New England the demand for agricultural labor at least was less acute than in the southern colonies. The members of the entire family worked at their various occupations during the day and in the long winter evenings made by hand the tools and equipment required in their trades. Occasionally a whole community assisted in an emergency such as a house raising or a ship launching. Such incidents provided relief from the monotony of existence, though they were never the same rollicking social gathering as the logrolling of the frontier. Throughout the colonies the poorer farmers exchanged oxen, horses, carts, plows, and labor, especially in the sowing and harvesting seasons; on February 12, 1715, for instance, John May wrote in his diary that "about this time I helpt Ep^{h} Child and Benj Each a day and they helpt me a day with thr Oxen." The practice was universal in New England, and many a faded account reveals that the writer each year "reckoned" with his neighbor some winter night and paid or received the few shillings balance. Women too assisted one another at cleaning, soap making, and quilting. Hog-killing day, with liberal distribution of liver, tenderloin, and sausage meat, was often a festival.

Indentured Servitude. Important among the laborers of the colonial period were the indentured servants, who, in return for their transportation to America and certain "freedom dues" at the expiration of their terms, had bound themselves to work for their masters for from three to seven years or even longer. A surprisingly large part of the population of many of the colonies belonged at one time or another to this group. It seems strange that this should have been true in a land bursting with

wealth. The reasons were almost entirely European in origin. England as well as the continental nations was overrun with poverty-stricken creatures who could never hope at home to better their economic condition. Some, it is true, were criminals and some were merely worthless, but many lacked only the opportunity to advance. English laborers rarely received more than their board and a dollar a month for heavy work; a great number toiled faithfully for less than half that amount. A lifetime of earnest endeavor at such compensation could in some cases not provide a surplus sufficient to purchase passage to America. Having nothing else to dispose of, many were therefore willing to exchange their labor for the chance to begin life anew in a world whose riches were cried over Europe by recruiting agents with all the fervor of side-show barkers.

Not all the indentured servants were of the voluntary type. Some, including children, had been kidnaped by greedy traders seeking the profits to be derived from selling laborers in the eager markets of the New World. Others had been released from the overcrowded jails by a society glad to be rid of the burden of keeping them. Imprisonment in that day was a common occurrence. Many people were confined merely because they could not pay their petty debts or because they had joined unpopular political movements. Although the colonies protested against the unloading of jailbirds, paupers, vagrants, and debtors on their shores by the mother country, some towns and counties in America too sold their prisoners into servitude. Furthermore, orphans and paupers and even debtors were bound out by the courts to save community treasuries, and often parents pledged the services of minors in return for apprenticeship training in a particular trade.

The indentured servants were in many instances honest and upright men and women, yet their lot was not always an easy one. Bound by written contracts, they lived pleasantly or unpleasantly according to the nature of their temporary owners. Attempts to flee intolerable conditions brought extension of servitude, as did also the bearing of illegitimate children by women servants. Masters were aware of the fact that their laborers would soon be free, and some attempted to retrieve losses through death or other causes by overworking those who remained. Every owner probably realized that favorable conditions made for efficient work, but actually there were more reasons for being mindful of the slave, a permanent possession, than of the indentured servant. Escape was difficult because self-sufficiency was not a fact and because all communities were economically suspicious of newcomers lest they turn into public charges. The frontier alone offered refuge, and some servants fled to the back country. Fortunately potential abuses were partially held in check by legislation and custom. Generally

speaking, those individuals who were seeking by brief servitude to earn homes and places in the society of which they were a part were treated with consideration. In some cases colonial governments granted them fifty acres of land each when they had completed their services.

Toward the end of the colonial period the indentured servants lost much of their popularity. They were costly to maintain, occasionally they were encumbered with families, and often they lacked in physical strength in comparison with the Negroes. Henry Laurens wrote that some of his were "not worth their hominy." Laws, born of fear of insurrection as slaves increased, nevertheless bolstered the market. South Carolina plantation owners in the seventeen sixties were required to keep one white servant to every ten slaves; boat owners too were required to have some white crew members on board.

Negro Slavery. A Dutch privateer brought the first Negro slaves to Jamestown in 1619. Slavery in America, however, grew slowly in the early years. The natural limits of the system, in fact, soon became apparent. There were in the middle colonies and in New England no simple occupations in which slaves could profitably be employed. The Africans were not suited for labor on small farms; they were not adaptable to sailing or fishing; and few were trained as mechanics or woodsmen. Throughout the section, with the possible exception of Rhode Island and Connecticut, they were used almost exclusively as household servants.

It was the rise of plantation agriculture that was chiefly responsible for popularizing slavery and fixing its locale in the southern colonies. Constantly declining prices of agricultural products and ever-lessening returns from thinning soil made a cheap system of labor necessary for successful large-scale farming. Negro slaves, unlike white indentured servants, were not greatly affected by the dank heat of the rice swamps. Moreover, they could generally be obtained in adequate supply for all needs. In the seventeenth century they cost from fifteen to thirty pounds sterling each, and not only were they slaves as long as they lived but also their children after them were the property of their owners. They filled an economic need in the tidewater colonies, and their numbers rose rapidly. In 1760 the colored population probably exceeded four hundred thousand, three-fourths of whom lived south of Baltimore. In South Carolina that year the blacks outnumbered the whites by more than two to one.

The release of the slave trade from the monopoly of the Royal African Company of England in 1698 and the growth of commerce in New England contributed to the expansion of slavery in America. Yankee captains loaded their ships with rum and other barterable commodities and sailed

for the Slave Coast of Africa, where they bargained with brokers in human flesh whose miserable slave pens were kept filled by native tribesmen through conquest of their less fortunate kin. Sailing then over the "Middle Passage" to the West Indies and the mainland to dispose of their cargoes, these vigorous commercial men stuffed their holds with sugar and molasses for more rum (and sometimes tobacco also) and then headed for their home ports to begin over again the odious journey. The brutal occupation was profitable; Peter Faneuil is said to have made a fortune in such commerce, leaving at his death to the city of Boston its now famous Faneuil Hall, cradle of liberty! The wretched blacks were piled into the ships to suffocation. Often they were chained below, and at times there was not room to stand. The passage, one of slow weeks at best, meant the end of the way for many, and for those who survived there lay ahead an entirely new world of tobacco, rice, and indigo fields.

"Gold Coast" and "Gambia" Negroes were preferred. Whatever their origin, the blacks were generally brought into the southern ports in the spring; winter clothing and care were thereby saved while they were becoming adjusted to their new surroundings. Southerners as well as New Englanders engaged in the traffic. Frequently English slavers too put into ports in Maryland, Virginia, and the Carolinas. Those that sailed into Charleston, for instance, unloaded and then moved up to the "freshes" of the Cooper to escape the worms of the salt water of the bay. There they often stayed two or three months while repairs were being made and while the factors were gathering cargo for the return voyage.

Actually the slaves were not all owned by large planters, and their labors were by no means limited to the fields. Anyone who possessed the price—including free Negroes—could own a slave. That slave might be a household servant, he might be a field hand, he might be apprenticed to someone else to learn a trade, he might be hired out regularly or intermittently as a skilled workman, or he might be permitted freedom to bargain as he chose, giving a part or the whole of the wages received to his master. Furthermore, his services might be let out in lieu of cash payments. Thomas Nelson in December, 1753, replied to an owner who had requested the return of his slaves: "As I have no intention to keep the Negroes a moment longer than I have a right to their Services, so I should not choose to deliver them up 'til they have worked out the debt for which they were pledged to my father. . . . it appears that there is still a Balance in my favor, so that I think I have Yet a right to their labor at least for the year to Come."

Though field hands were always predominant, expansion of economic

activities in the southern colonies in general and diversification on the plantations in particular brought a constantly increasing variety of occupations into which slaves were fitted, especially in the eighteenth century. Expert butchers and sundry provisioners were needed to "victuall the ships" that in ever larger number beat their ways up the slow-flowing rivers. In addition, carpenters, coopers, shoemakers, blacksmiths, bricklayers, tanners, curriers, sawyers, stonemasons, wheelwrights, calkers, and a host of other artisans were in great demand. Skilled and semiskilled Negro workers became, in fact, numerous enough before the middle of the eighteenth century to bring strong protests from free whites and an occasional attempt to prohibit by law their employment. It is evident, nevertheless, that the slaves were important not only in producing export crops but also in enabling southern planters to lessen somewhat their tribute to the mother country by manufacturing needed goods at home. The Negro made a real contribution to southern economy other than agrarian, but always new crops called him back to the soil—indigo in the middle of the eighteenth century, for example, and cotton in the early years of the nation.

Free Wage Earners. While there was no definite wage-earning class in colonial times, there were individuals who worked for wages. Little is known of the life of these people because records are missing. Few, perhaps, had either the time or the knowledge to write letters or to keep accounts or diaries.[10] Moreover, many probably hired themselves out by the job; that is, the welldigger dug a well for a certain price, the wheelwright repaired carriages for a stipulated sum, and the spinner spun thread in his home for a fixed amount per given measure. There were, besides, thousands of simple daily workers. As early as 1620 the authorities of the Massachusetts Bay Colony attempted to regulate wages, but, failing in their efforts to establish "just" prices, they soon turned the task over to the individual towns. In 1658 the burgomasters of New Amsterdam stipulated both the length of the working day and the amount of time to be taken off for meals. Philadelphia soon after its founding fixed the hours of labor. The toilers were called to their tasks by the ringing of bells.

There is ample proof that there were many workmen in the towns, yet it is difficult if not impossible to make any valid generalizations regarding wages. Money varied in value as to both time and place, thus making translations into modern terms unreliable; too, payments were often made in kind rather than in actual cash. The traditional fifty cents a day for

[10] It is worthy of note, however, that the poor in America have throughout the history of the nation been prolific, if illiterate, writers, and their story can be more completely told perhaps than that of any comparable group in the world.

common labor that prevailed until late in the nineteenth century seems to have been current before the Revolution.

Craftsmen, at first wanderers and then shopmen in fixed locations, did not work for wages. Nevertheless, they came under the supervision of colonial and local governments. As early as 1639 Boston began to punish profiteers, and by 1650 a majority of the towns had issued strict regulations concerning the price of bread and other articles. Standards were set up for weight and quality also, and vigorous officials not only destroyed offending products but in addition dragged the makers or owners into court for punishment. Throughout the eighteenth century restrictions grew more severe and more universal. Bakers, meat packers, coopers, and sellers of firewood and lumber were notoriously common defendants at the bar of justice. A citizen of Boston in 1725 complained that bread lacked "nearly a quarter Part of its due Weight" notwithstanding the fact that the weighers "daily seize great Quantities of it." But craftsmen and laborers sometimes united against price setting and other objectionable practices. In 1639 a group of blacksmiths in Massachusetts made a determined protest against the price of coal; in 1734 maidservants in New York clubbed together in an effort to prevent their being beaten by their mistresses' husbands; and a few years later bakers in the same city refused to tend their ovens until the cost of wheat had been reduced. Before the end of the century the new theory of laissez faire was being discussed.

Chapter 4

MANUFACTURING, COMMERCE, AND THE TRADES

Except when directed by England in her efforts to maintain the principles of mercantilism, manufacturing in the early years of colonial America was essentially a part of agriculture. In fact, the same fundamental forces that determined agrarian development guided also the course of industry. The overwhelming need for food governed the types and amounts of merchandise that came from the home and the shop. Manufactured goods at first were almost exclusively those used in growing or processing the products of the soil, for man in primitive surroundings must on the whole restrict his consumption to what he himself grows or makes. Almost every manufacturer was a farmer as well who fashioned the articles he needed in his agrarian pursuits and perhaps a few for sale to his neighbors. Only under compulsion were surpluses created for regular commerce. Sir Edwin Sandys once enjoined all members of the Jamestown settlement to set out a certain number of plants useful in making cordage, and Massachusetts in 1655 passed a law requiring under penalty of fine that every family spin a minimum amount of yarn each week for more than half the year. As time went on, however, the limited scope of manufacturing widened; especially did the appearance of a satisfactory food supply release laborers from the land and turn them to occupations and industries not specifically of a life-sustaining nature.

There were many things besides necessity that encouraged the growth of manufacturing. The mother country itself at the start sometimes lent a helping hand. The Virginia Company sought "blacksmiths, coopers, carpenters, shipwrights, turners, all who work any kind of metal, men who make bricks, architects, bakers, weavers, shoemakers, sawyers, and those who spin wool" for settlement on the banks of the James. Irked by enforced reliance on the Scandinavians for ship masts, pitch, tar, and turpentine, Englishmen longed to see foresters and distillers in the pine woods of America. Many, fearing destruction of the forests at home, hoped to transfer the iron and glass factories to the colonies, where charcoal could be had in abundance. In fact, Dutchmen and Poles were dispatched to

the New World to begin the production of pitch, tar, turpentine, and potash; Hollanders to erect sawmills; Frenchmen and Germans to produce wine and silk; and Italians to make glass. Furthermore, patents and monopolies, both English and colonial, were awarded to enterprising individuals. In 1645 Joseph Jenks of Massachusetts was given the sole privilege for fourteen years of turning out his improved sawmills and scythes. Makers of salt, pipes, tar, Castile soap, duck, linseed oil, glass, potash, paper, corn meal, and other commodities were at one time or another granted exclusive rights of manufacture and sale in the provinces.

The physical features of the land were not unimportant in the progress of industry and trade. Since their rugged fields gave only a meager bounty in return for the labor expended, farmers in New England turned from the soil as quickly as economic conditions would permit. The forests, invitingly close to the rivers, prompted shipbuilding, and fish in the shallow ocean waters nearby offered excellent financial rewards provided the markets of Catholic Europe could be reached. The construction of seaworthy vessels and the catching of fish necessitated the manufacture of lumber, naval stores, cordage, cloth, nets, and a host of other goods needed in fitting and supplying ships for the high seas. Even the southern plantation economy promoted diversification of economic activities and the training of slaves for occupations not purely agrarian and but for the timely introduction of indigo and other crops as tobacco fields grew thin might have brought considerable industrial development.

The Problems of Manufacturing. Regardless of privileges and favors, the course of manufacturing in the colonies was not smooth. Deterrents as well as encouragements presented themselves. The problem of manpower was felt even more keenly in industry than in agriculture. The system of indentured servitude that in part supplied hands for the fields could not meet the demands of the shops. Machines were little more than simple tools with which the workman fashioned completed articles; the worker was an artist whose product directly reflected his artistry. Skilled laborers came to America only in small numbers, for in the Old World their economic situation was reasonably satisfactory. There were some artisans among the Scotch-Irish and the Germans who emigrated, and their selection of homes in America had much to do with the location of certain early industries.

Lack of markets and of transportation facilities also hampered progress. Towns in colonial America were few, and means of conveying goods were extremely limited. In the southern colonies, where many supplies were obtained from England, little encouragement was given either to native

handicrafts or to colonial shippers. To the northward the scattered nature of the settlements and the miserable roads through the wilderness made carriage rates prohibitive except on articles of small bulk and large value. Plows, hoes, rakes, harness, shoes, clevises, and merchandise of a similar nature could be sent long distances only by water; at the end of the eighteenth century it still took a week for a swift coach under favorable conditions to make the journey between Boston and New York.

Capital too was lacking. Land, tools, supplies, and labor were not readily acquired. The problem was partially met by cooperative action. Individual organizations and colonial governments helped in various ways. Schools were established to train workers, mills and shops were exempted from taxation, and manufactured products were sometimes made legal tender. Land grants were widely used as financial inducements, and money was raised by lottery for setting up new industries or for rebuilding those destroyed by fire or other calamities. Bounties and subsidies were offered; Virginia and Maryland, for instance, awarded tobacco gifts to linen and woolen producers, and Massachusetts made direct money grants to growers of hemp and flax and makers of canvas suitable for sails. Consumers were assisted through price fixing. Massachusetts provided in 1633 that no "commodity should be sold at above four pence in the shilling more than it cost for ready money in England," and county tanneries in Virginia, set up by law, were compelled "to sell plain shoes for 30 pounds of tobacco a pair, and wooden heel and French fall shoes at 35 pounds of tobacco a pair."

But the handicaps that existed became as time went on less significant as hindrances to production in shop and mill than the two basic facts, first, that agriculture and land speculation were in many places more profitable than manufacturing and, second, that national economic policies of the mother country turned to mercantilism with some earnestness. Empire regulations appeared and grew more severe as industry developed in British metropolitan centers. The English began to suspect that in encouraging American production they had been raising up a monster that might eventually steal from the great London merchants their colonial markets and rob their own workmen of their jobs. The Board of Trade came to watch carefully the colonial manufacturer.

One of the first industries subjected to regulation was the making of woolen cloth. Having lost to Holland and France in the first part of the seventeenth century a great part of their export trade, Britishers sought a vent for their product in their New World settlements. As early as 1699 Parliament prohibited the shipment of wool, woolen yarn, or woolen cloth from one colony to another "or to any other place whatsoever." Seven years

later efforts were made to compel all colonists to clothe their slaves and their servants in British woolens, but an official observed at the time that almost every country dweller in the colonies wore clothing that had been carded, spun, and woven at home. In 1721 the Board of Trade noted that "some hatters have lately set up their trade in the principal Towns" of New England, and in 1732 Parliament, besieged by London felt makers, passed an act prohibiting foreign or intercolonial trade in hats. In 1750 ironmasters were enjoined from erecting any new slitting or plating mills or other finishing works, though those already in operation were allowed to remain.

Whatever the eventual political consequences of the restrictive laws of the mother country in its attempt to give the empire a single economic purpose, the effects in many instances were of little note. Cloth continued to be woven and hats to be made and iron to be turned out, especially "northward of Virginia." In some cases colonial governments persisted in paying bounties and granting privileges and exemptions for the building of new shops, and assistance from England was always available in the production of a variety of goods such as bar iron and naval stores. Laws relating to manufacturing were as widely evaded as those related to commerce. Not until after 1763 did the regulations imposed stir deeply American tempers.

Colonial Manufacturing. It is difficult to describe colonial manufacturing successfully. The machines of man have so changed existence that we can scarcely conceive of a time when articles now commonplace were enjoyed only by the very wealthy, when the houses of the poor were without floors, and when furniture was made entirely by hand—beautifully wrought pieces at best, but at worst merely the riven or upended cuts from trees that had shortly before stood where the settlers had wanted their cornfields. There were no factories and no wage earners as we know them at present, and production was exceedingly slow. Moreover, while factory workers today shape into usable articles products from every part of the globe (many of which they would not recognize in their natural states), the colonial laborer used only the raw materials that he took from the forest or that he or his neighbors had grown. Goods were made both in the home and in the shop or mill; the domestic or household system and the shop system of manufacturing developed concurrently. There were a few shops even in the earliest days, and home production had far from disappeared when the Revolution came.

Household Production. The home as a manufacturing institution was a genuinely cooperative effort at self-sufficiency. The farmer killed his own meat, usually hogs, and the whole family assisted in preserving it. The

smokehouse, except in the case of the very poor, was an essential part of the colonial homestead, whether mansion or cabin. There on the rafters hung rows of hams and bags of sausage, smoked with hickory or sassafras wood as desired, and on the floor stood great barrels of pickled meat, referred to most often as salt pork or bacon in polite society but called "sowbelly" in the vulgar parlance of the frontier. Much in evidence too were great clay crocks or jars of lard, essential in primitive cooking. Rarely was meat sold fresh, but in cured or pickled form some was marketed, particularly in seaport towns where ships stocked their larders for long journeys.

The skins of both domestic and wild animals were turned into leather by the family for harness, clothing, shoes, or moccasins. The materials for tanning came from the forest. Tallow and bayberry wax were made into crude dip candles. When there were no gristmills, corn was turned into meal by means of hand machines or by patient pounding. Fruits were converted into various toothsome dishes; jams, jellies, and preserves were especially favored. Berries, roots, and plants from the forest and grain from the fields as well as fruit from the orchards were brewed into liquids for medicinal or convivial purposes.

The making of cloth was one of the outstanding household industries in the colonies; the spinning wheel and the hand loom were found by every fireside. Wool, flax, and cotton were the leading textile materials. Particularly were the colonists accustomed to woolen cloth, for sheep raising had long been important in England. British woolens were too expensive for colonial purses, however, and the settlers knew the art of weaving too well to continue for long their dependence on the mother country.

Sheep growing in the colonies began at Jamestown in 1609 but prospered little in competition with tobacco. New England, on the other hand, made desperate efforts to encourage the occupation. Flocks were exempt from taxation, bounties were offered for the destruction of wolves, and in some places citizens were required to devote one day each year to clearing away underbrush for the enlargement of pastures and the elimination of low-hanging boughs that tore the fleeces. In spite of climate, British restrictions, dangers from Indians, and depredations of wolves, the section by 1700 was producing enough wool for its spinning wheels and looms, and sizable flocks of sheep were grazing in reasonably satisfactory pastures as far southward as the Carolinas.

Linen, sometimes woven with a mixture of other threads, was used throughout the colonies. While jean, a combination of cotton and wool, was durable, linsey-woolsey, made of flax and wool, was almost indestruct-

ible. The preparation of flax for spinning was a laborious task. After the plants were cut and rotted in the field, the stalks were broken into bits with a sort of modified flail (called a flax brake) so that the woody portion could be removed with a swingling knife. Next the jumbled mass was combed on a spiked board (called a hatchel) and finally spun into thread. Then came the tedious process of bleaching through many alternate washings in hot and cold water interspersed with rinsings, wringings, and dryings.

Cotton, chief cloth of the world today, was not widely used in colonial times. The fabric was expensive because of the difficulty of preparing the raw material; a hard day's work was required to clean the seeds from a few pounds. But even had there been no other deterring factors, the quick profits from tobacco were sufficient to limit the growing of cotton. Some fiber was imported from the West Indies, and near the end of the eighteenth century cultivation increased considerably in the colonies.

Dyeing cloth was a frequent chore in every home. Dyes were obtained from barks, nuts, and berries, and when brighter colors than the forest offered were desired, indigo from the Carolinas, bought at the local store or of an itinerant peddler, was often used. Household equipment was fashioned by various members of the family; winter days and evenings were passed in repairing tools, whittling or burning out dishes, and making farm implements, brooms, buckets, baskets, and crude furniture. Indeed, the colonists became facile if not proficient in many things.

Production in Shops, Mills, and Yards. The gradual growth in population, the appearance of towns and roads, and the peculiar governmental restrictions of both colonies and mother country eventually destroyed a part of the domestic method of production. Slowly the most difficult tasks and those requiring the most skill shifted to the small shop and mill. In the towns many individuals, impelled by special fitness or hopes of profit, devoted more and more of their time to shop work, while in the open country itinerant workers wandered from farmstead to farmstead plying their trades.[1] The transient candle maker, shoemaker, or tailor not only made a better product than the ordinary householder could turn out, but he brought news of the outside world as well. Not many years later the peddler, walking or riding as his means permitted, carried the surplus of

[1] Diaries and account books of merchants and other small business men indicate the presence of what might be called itinerant town workmen; the shoemaker, for instance, was a permanent resident of the village who in order to obtain additional money went out to make shoes at the call of his neighbors. Sometimes the merchant acted as middleman, charging his customer with a pair of shoes and crediting the cobbler with the amount of the sale. Even in the country the itinerant workman probably never wandered very far from home.

the town worker to the rural home and offered a wider range of goods and fresher gossip than could be supplied by the roving artisan, who often established himself permanently as soon as he found a favorable location.

Colonial mills and shops were generally of crude and inexpensive construction, although substantial stone buildings were not unknown. Unless operated wholly by hand, they were usually located on small streams in order that their primitive machinery might be turned by water wheels. Ingenious devices making use of animals or wind for power were sometimes employed also. The kind of mill prevalent in a region was determined by the local agricultural or natural resources; there were many flour mills, for instance, in the bread colonies, particularly in Pennsylvania and New Jersey. But gristmills and sawmills everywhere followed hard on the heels of advancing settlement. Burrs imported from England or France or made of local sandstone, pudding stone, or soapstone ground the grain while the farmer to whom it belonged talked with the mill proprietor or the keeper of the country store nearby. Tolls, carefully regulated by colonial governments, were charged by the miller for his work.

Though the bulk of cloth was made in the home, some small textile mills and shops sprang up. A group of woolen workers from Yorkshire, England, founded the mill town of Rowley, Massachusetts, in 1643, and other such communities soon followed. By 1700 eastern New York had become noted for its woolen products, and by the middle of the century Germantown in Pennsylvania had gained a reputation for knitted goods that still continues. Other cloths too were made, each new shop bringing further objections from English manufacturers who had expected to find in the colonies unlimited markets for their fabrics. The hat and cap makers were likewise opposed.

The great wealth of timber along the Atlantic seaboard and the many uses to which wood could be put made sawmills, however crude, indispensable to the early colonists. Hewing and sawing by hand were slow and laborious, and the total output was exceedingly small. As there were no circular saws until long after the colonial period had ended, the production of planks and boards presented peculiar difficulties. Many ingenious contrivances were soon developed for drawing the one straight saw up and down at the mills. Of these the most successful—as was generally the case where power was required—was a device using a water wheel. Later a series of saws in parallel arrangement that could turn out several planks in one operation was evolved; by the beginning of the eighteenth century gangs of twelve were being used. Mills were scattered throughout the colonies, the most important ones located on the fall line, especially in New England,

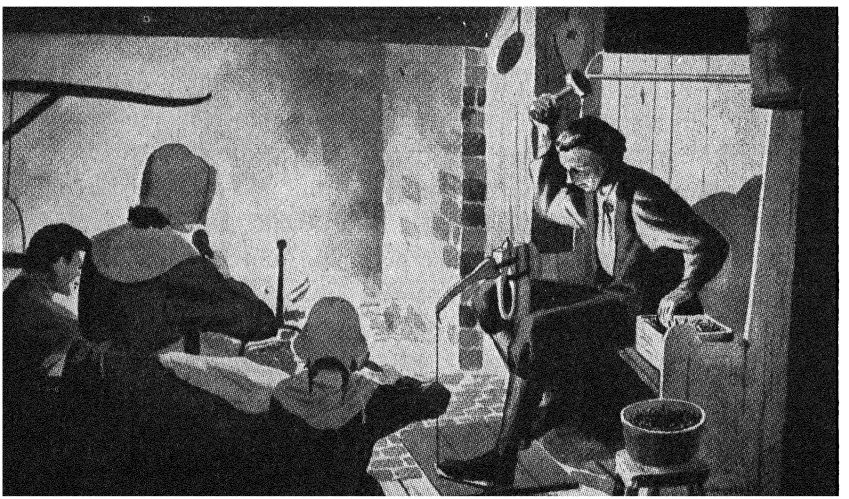
where it pressed hard on the coast. Though many of them were of the toll-charging type run for the accommodation of the farmers, some were concerned purely with the profits of lumbering. Planks, clapboards, and staves, hoops, and heads for barrels, casks, and kegs and other wooden containers were used extensively in the shipping trades. Sizable fortunes were in some instances wrested from the forests by venturesome business men. So great were the inroads upon the timber supply that protective measures were soon demanded, but they did little toward checking the ruthless devastation. By 1720 the coast north of Boston to the Kennebec River had been completely denuded for several miles inland.

Shipbuilding, a major industry in the colonies, was one of the heaviest drains on the forests. Since the magnificent trees along the northern Atlantic coast grew down to the edge of ocean and river, the clang of choppers' and hewers' axes and the sound of carpenters' hammers and calkers' mallets were ever to be heard. The *Blessings of the Bay,* a sloop that slid down the ways near Boston in 1631, began shipbuilding as a continuous occupation. Slowly the yards spread northward to what is now Maine and southward along the shore past Rhode Island, Connecticut, New York, and Pennsylvania and on as far as Georgia. Only Philadelphia and New York, however, became real rivals of the commercial towns of New England. Many of the vessels were small, but some ranged up to seven hundred tons. All were substantially built: white oak for planking and interior timbers, walnut for beauty in railing and woodwork, and white pine, fir, and other lofty conifers for superstructure, especially the towering masts. In some instances in Massachusetts vessels were begun far inland and dragged in the winter on sledges drawn by oxen to some frozen stream, there to be completed when the ice went out. A few were constructed after the middle of the eighteenth century in interior Pennsylvania cities such as Reading and floated down the rivers to the sea.

American ships were cheaply constructed. That fact was significant. It meant that the colonists, owning their own vessels, could, if they felt that it was necessary, evade the commercial restrictions of the mother country by smuggling. It meant also that many communities not endowed with exportable agrarian products could prosper. The output of colonial ways and yards sold to Spain, Portugal, the West Indies, and especially the mother country paid for incoming cargoes of much-needed goods, redressing the economic balance between old England and New England. Sometimes a captain sailed over the world and ended at last by disposing of his ship in London and placing the proceeds to the credit of the New England merchant who had sponsored his journey. Probably thirty per cent of all

the merchant fleet of Great Britain when the Revolution broke out had come from colonial shipyards.

Important subsidiary industries accompanied the growth of shipbuilding. Encouraged by bounties and other inducements, blacksmith shops, forges, sailcloth factories, and ropewalks grew up in favorable locations. The sails that were to swell to the breeze and power the plodding ships were cut to patterns drawn on the smooth floors of huge sail lofts. Except for ropewalks, which were generally banished from towns because of the danger of fire, the shops were located near the yards. In the same vicinity also grew up chandlers' stores for providing lanterns, rope, casks, pulleys, oakum, pitch, and a host of other things. Frequently too there were establishments for provisioning the ships for their long journeys. At the great shipyards and ports the Old World and the New came into intimate contact.



Courtesy American Iron and Steel Institute

FIGURE 1. A COLONIAL NAIL MAKER

Although wood was used by the colonists for ships, houses, furniture, dishes, tools, and even nails, the necessity for iron became more pressing as agriculture and industry developed. Raw materials were abundant. Bog ore needed only to be raked from the swamps and the pools, and there was plenty of wood for the charcoal that was then the only source of adequate heat for smelting. England turned to iron making in America soon after settlement began, but Indian raids soon ended the experiment. Probably the first permanent ironworks was erected at Lynn, Massachusetts, in 1643;

by 1700 many were scattered throughout New England. Early in the eighteenth century furnaces appeared in Maryland, Pennsylvania, New Jersey, and Virginia. On the eve of the Revolution furnaces and forges may have exceeded in number those in the mother country. The Americans were, in fact, producing nearly one-seventh of the iron of the world. Utilization of rock ores in the back region was partially responsible for the rapid expansion in the industry.

The earliest device for iron making was the bloomery. This was merely a forge of some kind that could be heated sufficiently by charcoal to melt the ore, which was then beaten into wrought iron on the anvil. The bloomery was superseded by a regular furnace, a huge square or conical structure of stone or brick resembling our present coke oven, into which was put the ore, together with charcoal and limestone or oyster shells. Draft for forcing the flame was provided by wooden or leather bellows, generally operated by water power. The product was a carbon iron that poured easily but was too brittle for bending. Pots, pans, kettles, and other molded articles were cast from the molten mass, and the surplus was run into troughs in a clay or sand mold that formed short bars called pigs.

Unless sold in rough form for processing elsewhere, the pigs were reheated and beaten by hammers run by water power until the mass was flexible. The metal was then shaped into flat plates and sliced while hot into rods for convenient handling. Actually the iron was merely prepared for its ultimate use. The village blacksmith or the farmer himself at his own hearth beat it into hoes, nails, and other needed articles; plantation owners often kept among their privileged slaves one or more ironworkers. Even some blister steel was made until prohibited in 1750. In general British regulations were ineffective, and the stream of well-made articles that poured from the blacksmith shops throughout the Atlantic seaboard swelled year after year.

Other ores besides iron were processed in small amounts. Some copper was found in Connecticut, New York, and New Jersey. Lead was mined chiefly in Virginia, though a little may have come to the coast through the Indian trade from what is now Missouri. Tin had to be imported, and brass, combination of copper and tin or zinc, was obtained in part at least by reclamation.

Bricks, stone, glass, tile, and pottery, made in more or less permanent shops and mills, were in use in the colonies by 1700. Bricks were first employed in the home in the building of fireplaces and chimneys, although on the frontier the stick chimney remained until long after the nation was established. Boston boasted a brick house as early as 1638, and before the

Revolution there were many handsome brick edifices scattered throughout the colonies; several towns had by 1700 severely restricted the use of wood as a building material. Brick was also sent to the West Indies for the homes of the planters.

Glass manufacturing was early attempted in Virginia, in New England, and later along "Glassmakers Street" in New Amsterdam at the mouth of the Hudson. Production, however, became important only in the eighteenth century after the setting up of works in New Jersey and Pennsylvania. In 1739 Caspar Wistar began to turn out at his shop across the Delaware from Philadelphia what is known today as "Wistarberg" glass. About a quarter century later Henry William Stiegel built at Manheim, near Lancaster, Pennsylvania, a grandiose estate replete with feudal trappings and took for himself the title "Baron." Here he made not only plain glass but also beautifully colored dishes, bottles, flasks, and other items now in great demand by collectors. The frontier soon swallowed up this exotic institution, not so much because of lack of profits as on account of overexpansion in other manufacturing industries.[2] Glass for windows in the homes of the poor did not come into prominence until near the end of the colonial period. Pottery, made at Jamestown as early as 1609, and tile were selling in considerable quantity before the end of the eighteenth century.

Leather making gradually shifted from the home to regular tanneries. Hammers run by water power were used to beat the hides into pliable form. In the northern colonies hemlock bark was employed for tanning, but oak was always preferred in the southern. Leather was used for both men's and women's clothing and often for bed coverings also. The quality of the product was carefully regulated by law.

Liquor was made in the small shop as well as in the household. Rum, traded in frontier Indian posts and in many foreign markets, was particularly significant in New England; its production, in fact, came to be one of the most important colonial industries in the region. Porter, sold to ships' crews along the coast, and beer and ale, consumed mostly at home and in taverns, were brewed in small amounts. The manufacture of whisky not only furnished a good stiff drink for hard-working, rough-speaking fron-

[2] Baron Stiegel owned the famous Elizabeth furnace and the equally well-known Charming forge. His stoves and stove plates are museum pieces eagerly sought today. In 1769 his Philadelphia agent advertised utensils "of all dimensions and sizes, such as kettles or boilers for pot-ash works, soap boilers, pans, pots, from a barrel to 300 gallons, ship cabooses, kackels and sugar house stoves, with cast funnels of any height for refining sugars, weights of all sizes, grate bars, and other castings for sugar works in the West Indies, and are all carefully done by Henry William Stiegel, iron-master, at Elizabeth Furnace in Lancaster County, on the most reasonable terms." *Henry William Stiegel* (Manheim, Pennsylvania, 1937), a brief study by George L. Heiges, contains some interesting photographs of Stiegel iron and glass.

tiersmen but also provided a means of marketing corn when it could not be easily transported otherwise.

Many minor occupations contributed to the industrial life of the colonies. A few bakeries supplied ship bread. Paper making was centered in Philadelphia, and there too were located the leading printing and bookbinding establishments, many of which were sponsored by Benjamin Franklin. Beautiful chairs, tables, chests, and cabinets were made in shops from New England to the Carolinas, and artistic workmen in the larger towns turned out substantial and sometimes graceful items of copper, lead, tin, and brass. Silversmiths, especially in Boston, Philadelphia, and Annapolis, were often outstanding masters of their trade.

The Forest Industries. Unlike manufacturing, the forest trades bore no direct and intimate relation to farming. Commerce in furs was looked upon as a possible source of wealth to be enjoyed without the laborious effort required in felling the trees and tilling the soil. The Pilgrims in their early years at Plymouth shipped pelts sometimes to the value of six thousands pounds annually, and the Massachusetts Bay colony profited no less. All the colonies as they were founded became in one way or another quickly engaged in this lucrative forest traffic. Not all the trapping was done by Indians. Englishmen, like their French neighbors to the north, copied the red man's clothing and habits of life and, trapping as well as trading, trekked through the endless woods or paddled their birch-bark canoes hundreds of miles to the westward. By the end of the seventeenth century adventurers from New York had begun to drain the Great Lakes region, trappers from the middle colonies had touched the upper reaches of the Ohio, and some furs and skins were reaching Charleston after having been passed from Indian tribe to Indian tribe and from trader to trader from a thousand miles inland. Although pushed ever farther into the interior, the wild animals of the forest, particularly beaver and deer, provided a gratifying means of income to the colonists—perhaps two hundred thousand pounds annually by 1775—and proved through sale to the continent a source of wealth to the mother country. The market was insatiable, for fine peltries were in demand for adorning the rich and the distinguished, leather was needed for use in shop and mill, and even the coarsest skins were sought as clothing for the poor.

Furs had their political as well as their economic significance. The rivalry of the French and the English found one of its expressions in the competitive search of the forests. The animals as they retreated from the settled regions drew the hunters and trappers of the two nations after them and brought them into conflict in many places. The Indians were a

dominant factor in the quarrel for riches and empire. The English, offering cheaper and better goods than the French could muster, won the friendship of the powerful Iroquois and with it not only an agent who could reach out from the Mohawk valley, gateway to the west, to the trade of the "Far Indians" beyond but also a decided advantage in the fight for control of the continent. They struck into upper Canada through the Hudson's Bay Company and far below turned westward toward New Orleans through friendly Indian tribes. Interests clashed most sharply, however, at the headwaters of the Ohio River, and it was there that the final conflict began that determined the fate of the French in America, though the fur trade had already declined heavily in many of the colonies.

Timber for ships and naval stores also played a significant part in the mercantilistic plans of the mother country. England depended—as did most of continental Europe—on what today is in general called the Scandinavian countries for the materials needed in the construction of vessels for navy and merchant marine. Parliament in 1705, in an attempt to free the nation from its galling reliance on outside sources, began to encourage through bounties colonial production of pitch, tar, rosin, and turpentine, as well as masts, yards, and bowsprits. Payments equaled roughly the difference in freightage costs between the long journey across the Atlantic and the relatively short passage through the Baltic, thus making competition possible. But Americans never possessed the skill of their Swedish rivals, and apparently they were not above resorting to adulteration; it was sometimes charged that they added sand and gravel to their pitch and that their tar was of poor quality. Neither economic rewards nor restrictive laws produced naval stores in New England or saved the royal forests for the king's navy, but in the Carolinas considerable amounts of pitch, tar, and turpentine were made.

Potash and pearlash, obtained from the hardwoods, added further to the total contribution of the forests. There were other values too, but throughout the colonial period the settlers, primarily agrarian, regarded the wilderness in general as a cumbrous obstacle to progress.

Colonial Commerce. Commerce, like manufacturing, is in its primitive stage likely to be a local affair; exchange between individuals and between communities, however, ceases with advancing civilization to be mere barter and becomes international business conducted on a money basis. The New World offered an abundance of goods that could be exported whenever time, capital, and transportation facilities permitted their preparation and marketing. Furthermore, the North American continent was admirably suited to commerce. The narrowness of the Atlantic Ocean above the

equator facilitated communication with Europe and the important islands adjacent to the two continents. A region in the north unadapted to farming but copiously supplied with materials for manufacturing and trade and one in the south fitted for large-scale single-crop agriculture, coupled with many good harbors and rivers of sufficient depth to accommodate the light-draft ships of the day, made commerce a temptation and almost a necessity. Certainly the mother country contemplated an intimate commercial relationship with her colonies, for she hoped that they would prove sources of raw materials for English manufacturers and buyers of the finished goods of Great Britain. Cargoes at first were usually made up chiefly of provisions, clothing, and tools on the westbound journey and easily obtained raw materials (including some "fool's gold") on the homeward voyage. Only after food supplies became sufficient to meet demand did diversified production appear and commerce begin a gradual and natural rise.

Fundamental Factors in the Growth of Commerce. Two basic factors in the growth of commerce are surplus goods and effective markets. The first colonists were caught between their own desire for food and other things for personal consumption and the demand of their sponsors for products usable at home or salable in foreign places, preferably for gold. The conflict between food and money, in fact, disturbed the colonists themselves, and sometimes, as at Jamestown, money crops were cultivated in the very shadow of famine. Eventually food itself came to be produced in such quantity as to be available for export. The mother country, however, was little interested in foodstuffs, and markets had, as in other instances, to be sought on the continent or elsewhere. Only the southern colonies were ideally fitted to enjoy commerce as envisioned by the mercantilists. Their soil, climate, harbors, people, and wide rivers combined to produce a situation that made them a favorite trading place of British merchants. English ships brought foreign markets to the very doors of the planters, and soon the great mansions began to reflect the economic advantages of the section in stately pilastered doorways, broad halls, and gleaming silver. The economic ties were close; as late as 1765 a Londoner wrote a Virginian that the "new ship I am building . . . will be Launched the beginning of next month . . . Cap^{t} Brigg will sail her for Patuxent to get what Tob^{o} he can Consigned to me and the remainder on liberty. I therefore desire on the receipt of this you will let it be known in the Country that my Friends may reserve some of their Tob^{o} for her."

Effective transportation facilities also must accompany mercantile growth. The impossibility of distributing a large output restricted the size and

production of colonial shops. Because the ocean highways and the deep rivers from the Hudson southward were the only practical means of shipping goods, all early commerce was either definitely local or specifically coastal or international. Roads were miserable affairs; animal and Indian trails widened for carriages were almost impassable. Deep mudholes in the winter defied all but the bravest or the most foolhardy, and dried "chug holes" made summer travel an ordeal to be undertaken as few times as possible. Pack horses could carry only small cargoes, and carts or wagons floundered along at a snail's pace. Whatever method was used, the costs of transportation for any appreciable distance increased the prices of goods to such an extent that no market could be found among a people whose buying ability was extremely limited.

Money too was necessary for commercial development, for even when trade was merely an exchange of products, the exchange was made on the basis of some monetary value. Throughout the settlements business was conducted in the English terminology of pounds, shillings, and pence, but there was little actual purchase by money. One paid his bills in his own community with whatever he possessed that was acceptable to his creditor. Produce was exchanged at the little stores for cloth and other simple needs, and staples such as wheat and corn and skins of various kinds were frequently used in general transactions. One Harvard student paid his tuition with an "old cow" and another with a goat, "which died." Wampum was used in some instances. In Virginia warehouse receipts for tobacco circulated freely, though they occasionally brought serious disputes. Corn and beaver skins were legal tender in Massachusetts and tar and rice in the Carolinas. Everywhere whatever was available was used, but because of quick variations in quality and in demand the results were often confusing. What little Spanish coin found its way to the mainland from the West Indies was soon lost to the mother country in payment of the unfavorable balance of trade. Moreover, the smallest Spanish piece was the real, worth about sixpence, and that was too large for petty transactions.

There was perpetual conflict between America and England regarding the currency. The colonists persistently overvalued English money on the theory that scarcity of specie kept prices exceedingly low and business dull. This practice, however, raised prices abnormally without materially increasing trade. More trouble was added by the fact that the various colonies gave different values to their pounds, shillings, and pence. In their desperate search for a money that would stimulate business and trade and at the same time remain in America, the perplexed settlers turned to a nonmetallic currency of their own and began a discussion still heard in

the nation. In some cases taxes were anticipated and "bills of credit" issued to circulate until redeemed by collections—an event that frequently never occurred. "Loan bills," backed by land or other security and printed in large amounts by "land banks" and similar institutions, eventually brought serious depreciation and bitter recrimination between debtor and creditor and between colonist and British merchant.

The measures that were taken, whatever their evils, helped the immediate situation. But there was no royal road to monetary relief. Arguments and disagreements were perpetual. Such articles as tobacco and beaver skins when made legal tender were often priced by the assemblies at much higher rates than those that prevailed in the market. Furthermore, in commodity barter each planter had it within his power to debase his medium of exchange. Courts would rarely convict a culprit; at least the men of substance were convinced of that point. "The vulgar in these parts," wrote Governor Spotswood of Virginia in 1713, "reckon him only the honest man who inclines to favour their interests . . . and him they call a poor man's friend who . . . never judges his tobacco to be trash." Paper too, whether bills of credit, loan bills, or some other form, brought troubles. Governor Thomas of Pennsylvania warned his assembly in 1740 that he had been commanded to carry out the provisions of an act of the days of Queen Anne "for ascertaining the Rates of foreign Coins in her Majesty's Plantations in America." In 1751 Parliament forbade the further issue of legal-tender bills of credit in New England, and in 1764 the restriction was extended throughout the colonies.

Hindrances to Colonial Commerce. Trade was essential to the progress of the fringe of settlements along the Atlantic. The economic success of the various colonies was, in fact, reflected in the cargoes of incoming ships. But other factors besides a pressing need for food and an acute shortage of money restricted the flow of goods. British regulations, while they were perhaps more important in the political course of events than in economic development, were in the minds of many of the colonists a galling hindrance. The acts, however, were intended not as coercive measures but rather as a means of creating a great self-sufficing and wealthy empire for England. They required that commerce be carried on only by English ships and English sailors through English ports and also that English subjects refrain from indulging in occupations of a competitive nature. In the scheme of the mercantilists the American colonists were to supply raw materials for finishing in the shops and mills of the mother country in order that the great merchants, manufacturers, and men of business of London and other towns might draw in gold through selling

their wares over the world, the state in the process deriving revenues for maintaining adequate military and naval forces for the protection of the producers, the fabricators, and the distributors. Goods flowing into the colonies followed a reverse procedure; whatever their origin, they poured through England and on to America.

The commercial regulations did not profit the mother country alone. Colonial shippers enjoyed all the benefits that the empire possessed on the high seas and in the ports of the world, and colonial producers were encouraged by bounties and monopolies. Furthermore, the former received drawbacks when products were sent on to other markets from England, and there were many exceptions to the prohibition on direct trade to the continent. Obviously goods were not always bought in the cheapest market and sold in the dearest. The burden was borne both by the colonists and by the people of England. In America there was always relief through disobedience, for smuggling was a simple matter. Actually local laws were often more oppressive than any enacted by the mother country. There was no uniformity anywhere, and fines for petty offenses were frequently heavy.

Far more of a direct hindrance to shipping and trading than restrictive legislation were the pirates that infested the waters along the Atlantic seaboard. Favorably located islands provided havens of safety for the pillagers, and conniving officials on the mainland surreptitiously supplied protection for a price. Merchants sometimes profited from the sale of stolen goods, and wars in Europe made it possible for privateers to seize rich cargoes under cover of legal maritime rights. Neither colonial nor English law seemed capable of checking the abuses; not until the eighteenth century, when moral objections and the growth of the royal navy eventually brought an end to the ruthless robbing, were merchant ships free to abandon convoys and sail at any convenient time.

The Nature and Extent of Colonial Commerce. Commerce in the different geographic sections varied greatly as to amount and character of goods traded. New Englanders, compelled by their niggardly soil to turn their hands to any occupation that would augment their earnings, derived more than fifty per cent of their commercial income from fish. The outgoing cargoes of the middle colonies, on the other hand, were primarily agrarian. In either case competition with the mother country was keen, and there were many complaints on the part of the British that New England and its neighbors were economically merely imitators of old England. The exports of the southern colonies, mostly agricultural, fit in well with the ideas of the mercantilists. Below the Potomac were grown in

large amounts much-desired tobacco, rice, and indigo, and the meandering rivers, deep enough for the shallow boats of the time, provided an excellent means of transportation to the very doors of the mansions that lined their banks. Moreover, the planters spent their surplus cash in the busy shops of London or put it into more land and not into ships that would sail the seas and offend the British merchants. The forces that made for friendship, however, were deceptive, for the plantations produced crude materials with crude labor that bought goods turned out by skilled hands; debts and disagreements were therefore inevitable.

As to extent, the commerce of the colonies spread itself over three distinct markets—ocean, coastal, and internal. Eastward the ocean trade stretched along the shores of the Old World from northern Europe to the slave markets of western Africa; southward it reached only to the West Indies and the northernmost coast of South America. The whaling fleets had not yet swept into the Pacific. Coastal trade embraced the entire Atlantic seaboard of North America and penetrated inland as far as the bays and rivers would carry the light-draft ships of the day. Internal exchange was confined to the regions served by watercourses and roads. The internal market, which time was eventually to make the great consumer of the nation's goods, was in the colonial period the most restricted.

The Ocean Markets. Dominant among the ocean markets was, of course, England, for the mother country not only provided an outlet for many of the products of colonial America but regulated the over-all flow of commerce as well. Tobacco, which constituted a fourth of all exports, was sent almost exclusively to the mother country, and deerskins, indigo, and more than half the rice of the Carolinas were also sold chiefly in British markets. Commerce was an essential part of the existence of the southern colonies. Even though the plantations boasted Negro carpenters, wheelwrights, blacksmiths, weavers, and cobblers, the planters relied almost solely upon the English for their manufactured goods. Furniture and household equipment, carriages, clothes, and an infinite number of other articles came to the tidewater ports in exchange for southern products. Annually near Christmas time English trading vessels appeared at the local wharves and unloaded a medley of goods ordered a full year before. Weeks later the ships, laden with tobacco, rice, and indigo, set sail for home. The outgoing bottoms carried more than they had brought to the river landings, but the plantation owners rarely profited from the venture; surpluses were eaten up by sundry shipping and selling charges, among which were freights, drayage, storage, commissions, interest, and insur-

ance. By the time of the Revolution the planters were heavily in debt to the metropolitan traders.

Furs, fish, naval stores, lumber for ships, whale fins and oil, raw hides, potash and pearlash, wheat, flour, iron, and many products of lesser importance at one time or another swelled the cargoes of the northern colonies to the mother country. Oak and pine planks and boards as well as oak staves, barrels, and hoops were sold in small quantities both in England and in Ireland. But the commercial ties that bound New England and the middle colonies to the homeland were never strong. The fish, the manufactured goods, the wheat and flour, the ships' provisions and supplies, and a host of other things commonly traded in by the two sections came into competition in the British Isles, on the continent, and in the West Indies, as well as in other markets, with the products of England. The mercantilists, displeased, invoked the corn laws (occasionally suspended in times of poor crops) against incoming grain, levied duties on fish, and forbade the entrance of salted beef and pork. "Yankee ingenuity" generally ran counter to the economic plans of the English lords of trade, and Yankee merchants cut into their profits. The Puritans, moreover, were the most consistent of colonial lawbreakers. Small wonder, then, that the bitterness that arose between the colonies and the mother country had its seat in the northern colonies.

The markets of southern Europe rivaled those of the mother country. Though England often prohibited through "enumeration" the shipment of certain goods to these competing centers, wise exceptions were sometimes made in permitting direct trade with Latin Europe. The trading ships of New England, New York, and Pennsylvania in great number sailed to European ports south of Cape Finisterre, and even the southern colonies disposed of some of their products in these profitable markets. Materials for barrels, kegs, and casks were sent to Portugal, Madeira, and the Azores to be made into containers for wines. Rice from the Carolinas reached Spain, Portugal, and the countries of the Mediterranean both by direct trade and by reexport from New England. On the eve of the Revolution the middle colonies were shipping annually to southern Europe over a half-million bushels of wheat and more than eighteen thousand tons of bread. Large amounts of fish specially prepared for the trade by New England fishermen were sold in Catholic Europe. Spain bought lumber and ship timbers. Wine, salt, and other goods of the Latin countries made up the return cargoes. Africa provided Negroes in exchange for rum. In the middle of the eighteenth century Rhode Island alone obtained from

the rum-and-slave trade forty thousand pounds a year for remission to England in payment of debts.

There was in the West Indies, nearest of the ocean markets, a perpetual demand for colonial products of every conceivable nature. Complete devotion to sugar growing made it necessary for the island planters to buy practically everything they needed, and about half the exports of the northern colonies were absorbed by this island group off the American shores. Here, as well as in southern Europe, New England found a lucrative sale for the goods proscribed by the mother country. Although the West Indies were adapted to diversified agriculture, the plantation owners, like their neighbors in the southern colonies on the mainland, preferred to give their entire time to one crop because of the large money return. Colonial traders reaped a rich reward in supplying the needs of both planters and slaves. Millions of feet of timber from the great American forests of oak and pine provided building material for the plantation homes and slave quarters. Complete houses, cut out and ready for assembling, were sometimes loaded on the Yankee ships. Barrel heads and staves of oak and hoops of oak or hickory for making containers for sugar, rum, and molasses were sent in enormous quantities. Horses, oxen, sheep, and hogs, along with leather, tallow, shoes, soap, candles, iron bars, and a miscellany of other articles, were crowded into the small ships and traded about the islands.

Foodstuffs too were sold in the West Indies in large amounts. Corn, wheat, flour, and bread had their greatest outlet here. Peas, beans, and other vegetables from throughout the colonies added variety to the planters' diet, and many hogsheads, barrels, and kegs of meat (both dried and pickled) were readily disposed of. The New Englander found in supplying food for the slaves on the islands a convenient market for his inferior fish.

In return for their varied cargo the colonial shippers obtained from the West Indies an almost equal diversity of products. Sugar and molasses were the most important items, slaves, cotton, tobacco, rum, wine, salt, and dyestuffs making up the rest. Most of these imports were used within the colonies, but molasses, turned into rum, formed the basis of the slave trade of New England. Because of the favorable balance of trade the islands also furnished the colonists with currency and bills of exchange, which were used in canceling some of the ever present debt to England. In addition, the fact that the Spanish and the French owned islands in the "American archipelago" was of great advantage to the New World traders. American shippers found in these foreign ports no restrictive taxes, and

therefore their profits were frequently large. The French islands offered an enticing market; their tropical products were cheaper than those in the British ports, and they were glad to see molasses move northward because it could then not become a competitor of French brandy. Though a source of continued irritation between American shippers and British mercantilists, commercial intercourse with the non-English islands grew through the years; in 1750 it exceeded legitimate trade in spite of restrictive legislation such as the Molasses Act of 1733.

The Coastwise Markets. The coastwise trade of the colonies was always varied and sometimes petty, but it was nevertheless significant. Indulged in chiefly by northern merchants and traders, it possessed characteristics of both internal and ocean commerce. Year after year the number of ships from Massachusetts, New York, and Pennsylvania that wandered along the Atlantic coast increased. Few of them had any regular sailing schedules, and those that did were rarely able to maintain them. The Yankee skippers of these often tiny vessels greatly resembled the itinerant traders of the mainland. They bought wherever they could find a bargain and sold wherever they could turn a penny. They usually disposed of their goods to the business men of the port towns, yet they were not averse to shoving up the rivers whenever they provided inland highways. Gathering breadstuffs from Pennsylvania in general and leather, iron, stoves, and starch from Philadelphia in particular, the New England masters traded them, along with the woodenware, rum, provisions, and imported cloth from their own section, to whoever had money or raw materials with which to buy. Gradually they forced their way into the trade of the southern colonies, though they could not displace their English rivals. Imports and exports were everywhere carefully regulated, but even in the face of restrictions and annoying levies commerce along the coast developd rapidly. Always, however, there was considerable hostility between southern buyer and northern seller. New England merchants could take only one small cargo a year to the somewhat inaccessible markets south of Virginia, for there rivers were not open highways inland. Prices were therefore high; in North Carolina, for instance, goods were often fifty to a hundred per cent dearer than they were in Philadelphia. Besides, there was a deep suspicion that the trader was not concerned with local commodities but merely sought to strip the community of its hard money that he might pay his balances to England.

The Combination of Ocean Markets: "Triangular Trade." It must not be supposed that Europe, the West Indies, and the coastal towns were distinct markets limited to certain ships and traders. The colonial skipper,

regardless of the smallness of his craft, frequently combined all three in one journey. So common was this practice, in fact, that it led to the designation "triangular trade." Ships from New England and the middle colonies often sailed to southern Europe, where they exchanged their products for wines and other commodities; these were taken to England and sold, and manufactured goods were returned to the colonies. Sometimes the ships first sailed to the West Indies and there traded their cargoes for sugar, molasses, and fruits or for bills of exchange on England and then moved on to London, where manufactured goods were bought for the return voyage. A third journey was to sail directly to Africa with a shipload of rum to be bartered for slaves, who were in turn taken to the West Indies and sold for money or traded for products, including sugar and molasses for distilling into more rum for trading for more slaves. As time went on, increasing numbers of Negroes were disposed of on the mainland for work on the southern plantations and as servants in northern households. The general trade was stimulated by the handsome profits to be obtained. Whatever main course it took, the sea journey generally had many digressions. The New Englander was even better at bartering his wares in strange places over the world than along his own coast. His ship, much like a modern tramp, nosed in and out among the islands of the seas without schedule and crowded its way into strange ports in search of sales.

The Internal Markets and Trade. Internal commerce, while it faced as many obstacles as ocean trading, lacked the glamor of traffic on the high seas. There are few records with which to tell the story of the growth of uninspiring exchange on land between individuals and between colonies. Advertising columns of the newspapers of the time point unerringly to the rising demands of inland town dwellers for goods imported from the West Indies, England, southern Europe, and more distant places. But newspapers did not appear in the colonies until the beginning of the eighteenth century, and even then their circulation was severely limited to their own communities. That trading had been in progress since the first years of settlement, however, is apparent; laws against exportation of foodstuffs—whether effective or not—are found among the earliest colonial statutes. In addition, the mere fact that agricultural people must buy implements and tools whose weight in relation to their value precludes long shipment demonstrates either universal home manufacture or considerable neighborhood trading.

There was less local exchange in Virginia, the Carolinas, and Georgia than in the colonies to the northward. Slaves and indentured servants

produced with their own hands the primary requisites of the vast southern estates, and whatever the planters lacked reached their wharves on English boats. But the largest single class in this section was made up of yeoman farmers without slaves or servants. The poorest of this group had little to sell other than a few pounds of tobacco, a pig or two, or perhaps some clapboards, staves, or hoops from the wooded hills. Their small surpluses were sometimes exchanged at nearby plantation stores for the simple essentials of life. When the population had crawled beyond the fall line and passable trails had been established, tobacco from the small upland farms was still hauled the long miles down to the towns of the coastal plain, as is so well depicted in Carolyn Miller's *Lamb in His Bosom.* The rickety wagons that creaked under their loads when bound for the coast went back to the hills with a few notions, some dress goods, and a handful of necessities tucked under the makeshift seats.

In Maryland and Pennsylvania and northward, community trading expanded rapidly. Markets, intended chiefly for the benefit of householders, provided opportunity for local exchange; and small fairs, which were held from one to four times a year, drew buyers from outlying communities. Mills sprang up. The all-purpose country store made its appearance also, its owner both a factor for distant merchants and a buyer and seller at his own risk. Though water was used as a means of transportation wherever possible, the pack horse did service for the inland communities. Light carriages of sundry description were sometimes seen; more often, however, the itinerant peddler, in spite of legislative efforts to prohibit his trade, served as the commercial link between farm homes. Some regular wagon traffic was begun by the end of the first quarter of the eighteenth century, but as late as the Revolution the communities that lined the rivers stretching back from the Atlantic were still unconnected by serviceable roads. The stout round-bottomed canvas-topped Conestoga wagon that carried sometimes more than two tons of cargo did not come into common use until after the war was over. New England had few easily navigable streams, and so her commerce flourished most when snow covered the frozen ground. The magnificent highways that today beckon rural folks to distant cities lay beyond the dreams of the colonial farmers.

The Ocean Trades: Fishing and Whaling. The ocean trades, fishing and whaling, were wholly dependent upon commerce. The colonies themselves did not consume enough fish to make the industry a profitable one; indolent individuals with a liking for the quiet of river or ocean shore could often supply local demand. But the catch from the famous banks that stretch southward from Newfoundland to Long Island was sold over

the world by Yankee skippers. New Englanders were the leading colonial seafarers. The lack of agricultural assets that impelled them to shipbuilding and commerce turned them also to fishing. Moreover, certain religious dietary restrictions made the occupation invitingly lucrative; Catholic Europe bought eagerly of the Americans. The legislature of Massachusetts early in its existence paid tribute to the importance of sea trade in the economic life of the colony by voting to "hang a representation of a codfish in the room where the House sits." The memorial is still there, and even yet the codfish aristocracy of New England is real.

Boston and Salem, the chief fishing centers during the seventeenth century, were exceeded in the eighteenth by Gloucester and Marblehead. Every coastal town, however, joined in the work. By 1700 New England exported annually over ten million pounds of fish; in the decade preceding the Revolution the ships going out to the fishing grounds from Massachusetts ports alone averaged more than six hundred each year. A cargo of fish, it is said, sometimes returned a profit of a hundred per cent. But the industry had its troubles. English fishermen did not relish colonial competition, and the crown looked with disfavor upon an American trade that made it impossible for the mother country to rely longer upon her fishing fleets for trained sailors for the royal navy. British treaties with the French, notably that of Ryswick in 1697, often brought severe economic handicaps to colonial fishing; nevertheless, the industry long ranked second to agriculture.

Whaling had its beginning in colonial days. At first it was limited to salvaging whales washed ashore. But water spewing up "like smoke from a chimney" soon lured enterprising whalers out to sea in small boats, and "Thar she blows!" came to be the alarm cry of the hardy fleets. Towns provided regular watchers to call their local seamen to the chase. The development of more wieldy vessels, particularly the schooner, led to an ocean industry that spread over all the Atlantic and eventually into the Pacific. Whale oil was especially valuable for illumination, in both candles and lamps. Whalebone found many uses, and ambergris, an internal secretion produced by some varieties of whale when in a diseased condition, is still highly valued by makers of perfume. The harvest of the fleets, like that of the fishing crews, was sold over the world.

Colonial Economic Progress. Manufacturing throughout the colonies and trading on land and sea increased with remarkable rapidity during the colonial period, and many Americans achieved wealth as measured by the standards of their time. The greatest fortunes on the eve of the Revolution, however, probably did not exceed a half-million dollars. Furthermore, both

industry and commerce lacked organization and direction. Shops were for the most part small; though there were in places numbers of workers gathered under one roof, the factory system of later days was wholly missing. Compasses guided ships on the open seas, but for a long time there were no lighthouses or buoys to mark the dangerous coasts and narrow passages. The first lighthouse in America was erected at Boston in 1716, and there were scarcely more than a dozen at the end of the colonial period. Port restrictions and petty regulations contributed further to making ocean trading a leisurely and uncertain occupation, and English mercantile laws often led to surreptitious journeys. There were no means of obtaining information concerning markets. Often letters were six months in arriving at their destination. Whatever cargo unloaded at an opportune time reaped the benefits of immediate demands. Only the fact that all merchant captains were equally handicapped made it possible for this exciting if somewhat unsystematic international trade to maintain its profits and its followers. But the colonists, despite their handicaps, built soundly the foundations of a great industrial nation.

Chapter 5

MATERIAL AND CULTURAL GROWTH IN THE COLONIES

One of the most interesting and outstanding things concerning the colonists is the quickness with which in the wilderness of America they threw off the task of producing each for himself the basic necessities for existence. Nowhere else among the colonizing peoples of the earth did the economic structure round into a reasonably completed whole with such rapidity. Agriculture, while it tended to concentrate on particular products in certain regions, was extensive. In the fields that stretched from farther Massachusetts to Georgia grew by the middle of the eighteenth century a greater variety of crops than could be found in a single geographic division anywhere else in the world at the time: tobacco, corn, indigo, rice, wheat, fruit, and a host of other edible or salable items. In dreams that did not fade for a century there were to be also silks, spices, olives, dyewoods, and tea. But agriculture, important as it was, was not the sole occupation of the people. The Americans before the Revolution possessed a merchant marine that in spite of restrictions competed successfully with that of England; their great shipbuilding yards were busier than those in the mother country; their iron smelters were more numerous than Englishmen at home could boast; and their shops and mills, though their output could not be exported, turned out cloth, hats, shoes, nails, and an infinite variety of other goods needed to insure security, competence, and progress. Nothing evidenced more clearly the self-sustaining abilities of the settlers than did the growth of towns—Boston, Newport, Providence, Philadelphia, Baltimore, Richmond, and Charleston were only the most obvious of the material monuments to a diverse economic activity. Leaders in commercial and business life built their establishments and sometimes their fortunes in these busy centers of buying, selling, and trading. Lesser towns and villages fed the products of field and forest into the shops and mills and on to the wharves of the large metropolises and acted as distributing agents for the finished goods that poured back into rural and semirural regions.

The waterfronts were bustling places. In 1754 "out of Boston harbor alone over one thousand ships sailed loaded with the bounty of America

and destined for various seaports on either side of the Atlantic, while from Quebec, then the port for the whole of Canada, sailed in that same year but fifty-two ships and from New Orleans, then the port for the whole of the province of Louisiana including the Illinois country, but twenty-six."[1] As wealth grew, schools appeared, cultural institutions sprang up, and leisure became prevalent enough to warrant the printing of newspapers and magazines and the opening of libraries, museums, theaters, show houses, dance halls, and social clubs. Notwithstanding the remarkable overall progress, however, economic growth was in detail marked by uninspiring and frequently bitter struggle. But the American colonists, with the exception of the earliest venturers, lived as comfortably as did people of comparable economic groups in Europe.

Colonial Life. Life in the colonies, like occupations, varied from place to place and from time to time. Everywhere hours of work were long and toilsome. On the farm the day began in the cropping season at four-thirty or five o'clock; only the smallest children were allowed to remain abed after the fire had been started in the great open fireplace. Each person in the household had his duties: there were countless pails of water to carry, cows to milk, hogs to feed, and horses to bring in from the dewy fields. While the horses ate whatever the farmer's granary offered, the family gathered at the kitchen table to consume a heavy breakfast much like that of every other day in the year. At sunrise the men and boys were in the field, to be joined in the busier seasons by the women when household duties had been completed. With only a brief stop at noon in which to eat a meal similar to breakfast but larger in amount, the day ended at sundown. Supper was the same as dinner with the exception that some of the food might be cold. Winter days did not begin so early as those in summer, but the same chores had to be done, and snow and winter slush did not make the work more pleasant.

Urban existence was little different from rural; the life of the wheelwright, the iron maker, the cobbler, the trader, or the merchant was little less arduous than that of the farmer. Village lads and lasses, however much they may have hated the irksome tasks, brought in water from the well or spring, chopped wood and kindling, carried out refuse from the kitchen, took the ashes to the lye pot, and in the smaller hamlets even "slopped" the pigs and milked the cows. Townspeople, though their social life was not limited entirely to churchyard gossip or an occasional political gathering, as that of the agrarians was likely to be, felt the press of necessity as

[1] Lawrence Henry Gipson, "Some Reflections upon the American Revolution," *Pennsylvania History*, vol. ix (January, 1942), p. 11.

keenly as did their country neighbors. Only the very wealthy escaped the worries of economic insecurity.

Colonial Homes. The few brave souls who led the vanguard of Englishmen to the American shores occupied for a time painfully crude habitations with even cruder furniture if any at all. Caves, huts, wigwams, tents, and wattle-and-clay hovels were used when nothing better was available. The members of the Virginia assembly once declared that their houses and churches were so "meane and poor" that they lasted no more than one or two years. As time went on, however, substantial log buildings, copied from those of the Swedes, replaced the temporary makeshift structures of the first settlements. By 1700 the various economic and social groups had come to live in homes of enough distinctiveness to be described as typical.

Southern Homes. The "great house" of the Chesapeake and southward emerged with the increasing prosperity of the planter at the end of the seventeenth century. Containing a dozen rooms or more, it reflected the real or presumed English aristocratic origins of the owner as well as his continued economic contacts with the mother country. Beautifully finished oak, walnut, or mahogany chairs, tables, settees, highboys, lowboys, chests, and bedsteads from the best of the London cabinetmakers lent grace and dignity to the enormous rooms. Imported wallpaper, tapestries, and portraits complemented the paneling of cedar or walnut. The dining room was abundantly stocked with English silver and pewter plate, silver candlesticks and goblets, china, and glassware, and the kitchen was liberally fitted with every culinary need.

The homes of the small farmers, most numerous single social group in the southern colonies, stood cheek by jowl with the plantation mansions. In them one found no silver plate or carved woodwork. The houses were a varied lot. Some pretended to sumptuousness, but most of them were plain log or clapboard structures whose inner walls were neither plastered nor whitewashed and sometimes not even daubed. Bedrooms were unheated, and windows were few. Household equipment was chosen because of its utility. A chair, for instance, not only served as a seat but also held a washtub when necessary. The dining-room table was often merely planks laid upon temporary wooden supports. Plates, bowls, and spoons of wood (the poor in colonial days seldom used forks), an iron pot to hang over the fire, and a legged skillet to place in the hot ashes constituted the cooking equipment. No wines graced the crude shelves that served as sideboards, although the men often sought solace in a good strong drink of straight whisky. The kitchen with its huge fireplace was both eating and working room. In winter when tobacco was "in case," the stalks were often

"stripped" before the burning logs; there, too, harness was greased and shoes were repaired. Because drifting snows and wintry blasts were unusual in the section, however, poets have seldom sung of this southern fireside scene.

The poor whites lived at best in houses much like those of the economically hardest-pressed yeoman farmers and at worst in miserable shacks with dirt floors and no windows. Even yet one needs only to travel through the section or to look through Erskine Caldwell's *Southern Portraits* to see the poverty that was theirs.

Northern Homes. The homes of the landed aristocrats in the middle colonies and New England were scarcely less elaborate than those to the south. The estates of the Van Rensselaers, the Van Cortlandts, the Livingstons, and the Beekmans along the Hudson ranged upward in size to more than half a million acres. As was true elsewhere, the houses were without plumbing and other present-day conveniences. They were, nevertheless, elaborate and beautiful. But they were matched, and toward the end of the colonial period even exceeded, by the mansions of the thriving business men of the port towns. "Here," it is often pointed out, "lived the prosperous merchant princes, the Whartons, Pembertons, Willings, and Morrises of Philadelphia; the Amorys, Faneuils, Hancocks, and Boylstons of Boston; the Lows, Livingstons, Crugers, and Waltons of New York; the Redwoods, Lopezes, and Wantons of Newport; [and] the Browns, 'Nicky, Josey, John, and Mosey,' of Providence."[2] They were great men in the life of the colonies. They owned shares in many ships that sailed the seven seas; they sent their fishing and sailing vessels after rich catches to be sold over the world; they held town lots in the certainty that prices would rise; and they lent at good profit money to their less fortunate neighbors.

The northern farmer possessed a better house than did his small-farmer neighbor to the southward. The most common structure was two stories in front with a steep pitched roof that sloped to one story in the rear. Ceilings were low, walls were thick, and the floors were often of different levels. The farmer's furniture, generally made at his own or a neighbor's workbench, had some grace and was always substantial. Sometimes hollows carved out in the edge of the table planks served as dishes, and wooden plates ten or twelve inches square, called trenchers, were extensively used. Two people often ate from the same trencher; a Connecticut woodworker was once reproved for extravagance for having provided each member of

[2] See, for instance, Harry J. Carman, *Social and Economic History of the United States* (New York: D. C. Heath, 1930; 2 vols.), vol. 1, p. 170; and Charles A. and Mary R. Beard, *The Rise of American Civilization* (New York: Macmillan, 1934; 2 vols. in one, revised and enlarged ed.), vol. 1, p. 99.

his family with an individual plate. Forks were rare, and one cup or gourd for water served the entire family. Here, as elsewhere in the colonies, the fireplace was significant. Even though one might, as Benjamin Franklin said, be "scorched before, and, as it were, froze behind" while sitting in front of the blazing logs, still around the fireplace centered the economic, cultural, and social life of the family. Some homes were kept neat and tidy, but colonial godliness did not rest upon cleanliness.

Colonial Food. The tables of the southern planters and the northern aristocrats alike reflected the abundance that land and sea could produce. The farmers and the town poor, on the other hand, ate a simple fare. Contrary to tradition, most agrarians throughout the history of the nation have lived upon a lean and monotonous diet. The food of the poorest of the nonplanter class in the southern colonies was salt pork, rice, corn bread, and hominy with scarcely a variation, and many people to the northward lived little better. But even yeoman farmers and poor workmen could on occasion load their boards to overflowing, for the soil yielded a diverse and bounteous harvest. A writer in 1698 listed among the food assets of Pennsylvania chickens, ducks, geese, curlew, turkeys, pheasants, partridges, and pigeons; oysters, crabs, cockles, and mussels; shad, "cats heads," sheepsheads, herrings, smelts, roaches, eels, perch, and "many other sorts of Fish which would be too tedious to insert"; rabbits, squirrels, deer, elk, buffaloes, and "vast Numbers of other Wild Creatures"; walnuts, chestnuts, filberts, and hickory nuts; grapes of five varieties, hartleberries, mulberries, raspberries, strawberries, cranberries, plums, peaches, apples, quinces, cherries, gooseberries, currants, squashes, pumpkins, watermelons, muskmelons, "and other *Fruits* in great Numbers, which seldom fail of yielding great plenty"; wheat, rye, peas, oats, barley, buckwheat, rice, Indian corn, Indian peas and beans, turnips, potatoes, carrots, parsnips, cucumbers, artichokes, "with many others"; and "most sorts of Saladings." In addition, there were roots and herbs to use in flavoring and preserving and hogs, cattle, and sheep to butcher. The variety in New England was sometimes quite limited, but south of Virginia there were even semitropical fruits.

In spite of nature's generosity the food problem was sometimes acute. The farmer was compelled to divide his energies between mere food growing and such more permanently profitable activities as raising money-getting crops, building barns and outhouses, fencing fields, and clearing new acres. With the exception of livestock and grain production (for meat, flour, and meal) he—as his farmer descendants for a century or more—often left the task of filling the family larder primarily to his wife and

daughters; as a result winter days sometimes brought scanty meals. The townsman occasionally found his table pinched either because there was no food to buy or else because he possessed no money. Although wars and poor crops were chiefly responsible for famine in the cities, the hungry usually blamed greedy exporters. Demonstrations of violence occurred at one time or another in several colonial towns. After two hundred people looking for corn had rioted on the common, Boston in 1713 bought up grain and sold it to the poor throughout the winter months at less than cost.[3] During emergencies prices were often regulated by law, but in normal times life flowed on, so far as food was concerned, simply and easily for both the agrarian and the urban dweller.

The dining room was customary only in the homes of the colonial wealthy. Many moderately well-to-do people and most of those referred to at the time as "the meaner sort" ate in their kitchens. But everywhere whatever was eaten was grown in the family garden or bought in its raw state by the housewife or servant in a nearby market. Shed roofs from far Massachusetts to Georgia served as drying places for apples, corn, and peaches, and in the kitchens jars and crocks were in season filled with pickles, jams, jellies, and preserves of sundry kinds. Early in the fall vegetables were stored in cellars or spring houses or placed carefully in pits dug in the earth and covered with straw and dirt. The first crisp days that foretold winter brought butchering, packing, lard rendering, and sausage grinding. Cider making, especially in New England, was an annual task never overlooked; twenty barrels was not an unusual amount for an ordinary farm family. Yellowed diaries of these years show that the farmers who complained of poor seasons grumbled most about the cider shortage.

Colonial Society. *The Upper Class.* Society in colonial America was infinitely diverse. Generally speaking, the population was divided into four vaguely separated but clearly distinct groups: an upper class, a middle class, a lower class, and indentured servants and slaves. In the northern and middle colonies the upper class or gentry was made up chiefly of wealthy merchants and commercial men, prosperous lawyers, influential clergymen, and important empire officials. Their word was law not only at home but also in the local affairs of their communities. They dominated too the legislatures and the courts, and their sons enrolled as "gentlemen" at Harvard or Yale or went abroad to attend the venerable and respectable schools of England.

Social life in the urban centers north of the Chesapeake was far from

[3] Carl Bridenbaugh, *Cities in the Wilderness* (New York: Ronald Press, 1938) is a careful study of New York, Newport, Philadelphia, Boston, and Charleston between 1625 and 1742.

dull. Dancing, hunting, and sleighing parties, along with plays and "elegant Vaud-ville," offered diversion and opportunity for ostentatious enjoyment for those who had the leisure to indulge in frivolities. "People live handsomely here and without fear of anything," wrote Thomas Amory of Boston society in 1719, and certainly the godly agreed that the rich everywhere had ceased to tremble at the word of the Lord. "Blue laws" in New England and Quaker soberness in Pennsylvania discouraged but could not prevent the "riotous" social extravagances of the upper class. In staid Philadelphia dancing masters advertised in the papers that they taught children and young ladies by day and "grown gentlemen" by night; and there just at the end of the colonial period John Adams described a dinner at the Powel mansion as "a most sinful feast again! Everything which could delight the eye or allure the taste; curds and creams, jellies, sweetmeats of various sorts, twenty sorts of tarts, fools, trifles, floating islands, whipped sillibub, &c., &c., Parmesan cheese, punch, wine, porter, beer, etc." Small wonder that gout and "belly-ach" plagued the well-to-do in colonial days!

In the southern colonies the upper class was, but for a few business and commercial men in Charleston, made up almost exclusively of the landed gentry. Keeping their great estates intact from generation to generation through primogeniture or entail or both, the southern aristocrats completely dominated social and political life throughout the colonial period. Yeomen from the hinterland, says Professor Beard, sometimes came down to the provincial capitals to tilt with the "well-born," but all in vain because the society of the plain could not be unhorsed.[4] Whether branched from the Cavalier or from the tinker who had cheered for King Charles at home, the southern gentry lived a courtly life. Loving leisure and good living, they cultivated impeccable drawing-room manners and made a fine art of appearing indolent. Nevertheless, they gambled, drank, rode after the hounds, played their politics, and fought their duels and even upheld their Anglican Church with vigor. When troubles came to the colonies along the Atlantic, they furnished a goodly supply of leaders, and their children were significant in the councils of the new nation that appeared in 1789.

The Middle Class. The largest social group in the colonies, referred to most often as the middle class, was composed of ordinary (generally, as in England, referred to as "yeoman") farmers and the lesser business, professional, and commercial men of the towns. Neither exceedingly rich nor miserably poor, the members of this group did the laborious work and spent the blood that brought national independence and came in time to

[4] Beard, *The Rise of American Civilization*, pp. 126-127.

be the foundation stones upon which the Republic rested. Energetic, restless, democratic, sometimes illiterate, and always prolific, they built and sowed and reaped and spread the nation ever westward. Their social life was never the gay carnival that amused the periwigged gentlefolk of the southern colonies or broke the countinghouse monotony of northern merchants. They lived simply and plainly. Whatever economic hardships came their way they bore with fortitude, certain that soon they would be among the fortunate wealthy.

The Lower Class. The lower class, composed chiefly of poverty-stricken agricultural freemen and poor town laborers, was spurned and ignored by both planter and merchant. In spite of their handicaps, however, some of the more aggressive of this numerous group were destined to become independent farmers or substantial citizens of the towns. But many, only faintly ambitious and mildly energetic, were to remain always among the indigent; possessing no political rights and few means of improving their lot, they were, according to the aristocracy, living examples of indolence. Indentured servants and slaves were of no importance as social and political beings in the colonial period. The most liberal democrats in speaking of "the people" referred only to freemen, and then with profound reservations.

Colonial Dress. The various economic (and social) groups in America were definitely distinguished by their dress. In the first years of colonization necessity, backed by restrictive legislation, enforced a rigorous simplicity upon all the people. But in the eighteenth century, and particularly in the twenty-five years immediately preceding the Revolution, the aristocracy dressed handsomely and expensively. Silks, satins, velvets, and laces bespoke not only gentility but freedom from physical toil as well. The planter with wig and cane or ornamented sword made an impressive appearance. In addition to rows of boots and shoes, trimmed with brass, silver, and steel buckles, he owned many suits of the best cloth and fit that the English tailors could supply. The wardrobe of the mistress of the plantation was even more elaborate than that of her husband. The landed gentry in Pennsylvania, along the Hudson, and elsewhere did not suffer in comparison with the southerners, and they were no less "elegantly turned out" than the gentlemen and their ladies in the commercial towns along the coast. Even the Quakers in Philadelphia bought the finest fabrics and were not always able to suppress their worldly yearning for a bit of display.[5]

[5] In 1772 William Dillwyn, a Quaker, noted in his diary the following items taken on a business trip to South Carolina:

20 shirts, 18 stocks, 6 muslin cravats, 3 red spotted bandanna hdks. 3 yellow & bar hdks., 5 old bandano hdks. 4 night caps, 3 napkins, 6 towels—17 pr stockings (4 silk) 1 Persian striped gown, 1 . . . jacket, 2 damascus striped jackets, 1 pr striped trousers, 3 pr

Middle-class townsmen rarely indulged in finery except on Sundays and holidays, and then only according to their means. The clothes of the northern farmer and his family were usually made of thread spun at home or of leather from skins of animals grown on the farm or killed in the forest; patches prolonged the usefulness of shirts, trousers, and dresses as they passed from child to child in rapid succession. In the southern colonies the small farmer had garments of the poorest sort, which were worn until completely threadbare; his numerous progeny put on whatever came to hand, patched or unpatched. As in all the rest of the colonies, few children wore shoes except in very cold weather, and adults often went barefoot in summer.

Colonial Amusements. Social diversions in the first century of colonial life were few; constant labor was imperative in the business of making a living, money was scarce, and idleness was frowned upon by church fathers and community political leaders. Amusements, however, were not wholly lacking. In the rural regions hunting and fishing, while economically profitable, provided some relaxation for restless boyish youth; too, physical contests such as wrestling and running and an occasional surreptitiously attended horse race lent gayety to what was otherwise a drab existence. Girls found their entertainment severely restricted. Unlike their sisters of today, they slipped quickly from girlhood into marriage and motherhood and thus inspired little expenditure of money in the economic society of which they were a part.

Town dwellers in particular discovered many ways of spending "unprofitable" hours in spite of many laws to the contrary. They hunted for pleasure, played cards, kept "bad" company, drank scandalously in "ordinaryes & taverns," and (most sinful of all!) began in the middle of the seventeenth century to dance. The appearance in Boston in 1681 of Monsieur Henri Sherlot, French dancing master, brought from Increase Mather, worthy divine, a tract entitled *An Arrow against Profane and Promiscuous Dancing, Drawn out of the Quiver of the Scriptures.* The aristocracy sometimes drove in the country on weekdays and even visited mineral springs under the pretense of restoring health. Only among the Dutch was Sunday a day of pleasure. At New Amsterdam bowling and dancing on the green were indulged in freely at any time, but even here, says Professor Briden-

linen drawers—2 woolen; 4 pr shoes, coat, jacket, breeches of . . . drab cloth, 1 of superfine light broadcloth, coat of Wilton cloth, Jacket of dark broadcloth, 1 breeches of dark everlasting, 1 of leather, cloth cloak & great coat, 1 pr boots 3 Indian blankets.

Women everywhere among the wealthy were sorely tempted by the mantuamakers, "enthusiastically welcomed dressmakers who came chiefly from Ireland, carrying with them their fully dressed 'fashion babies' [dolls] from London."

baugh, tobacco smoking and gossiping were "probably the most generally enjoyed amusements the village afforded."

Eighteenth-century colonial America abounded with opportunities for enjoyment, to the Puritans merely temptations to waste one's substance. The aristocrats especially lived a gay and interesting life. Rich merchants and commercial men owned summer homes in the country or at the seashore, and the well-to-do planters spent the "season" at their Charleston houses or at some watering place nearby. The wealthy both north and south rode after the hounds, drank fine wines, and attended elaborate parties. The men gambled and played cards and were inordinately fond of betting on the races. George Washington, although he wagered only small amounts, followed the horses consistently and often recorded in his diary: "Bad weather, at home all day over cards." Planters of the Old Dominion were the most socially inclined of all southern aristocrats. "I lead a Life very different from your Elegant Virginians," wrote Horatio Gates from his farm in Maryland in March, 1774, "as I seldom see Company Drink little, and never Game."

Middle-class citizens and even the very poor found many amusements available. There were games of great variety, dances, races, frolics, and such events as cockfighting and bear baiting; and side shows, curio and waxwork museums, rope performances, and, most appealing of all, exhibitions of camels, lions, bears, and other animals from strange lands could be seen for trifling sums.

Colonial Culture. *Education.* Cultural development depends in part upon the amount of leisure to be had, and until late in the colonial period few people could "squander" time in purely cultural pursuits. Especially in the first half of the seventeenth century did the English in America find their educational horizons shrinking. Early legislative attempts in New England to force every community to maintain a school were not wholly successful. New York, New Jersey, Pennsylvania, and Delaware were not greatly concerned with the problem, and south of the Potomac the scattered nature of the population made a general school system economically difficult if not impossible. Throughout Maryland, Virginia, and the Carolinas the wealthy hired private tutors or sent their children to England; the middle class relied on community or church schools. Harvard was founded in 1636, and William and Mary College, long delayed by official objections, was established at Williamsburg in 1693. There was some training for the poor, notably in connection with apprenticeship to a trade.

Stimulated by accumulating wealth and increasing opportunities for leisure, culture made rapid progress in the eighteenth century. Seven new

permanent colleges appeared in the first seventy years: Yale in 1701; the College of New Jersey, now Princeton, in 1746; the Philadelphia Academy, now the University of Pennsylvania, in 1749; King's College, now Columbia, in 1754; Rhode Island College, now Brown, in 1764; Queen's College, now Rutgers, in 1766; and Dartmouth in 1769. Only men were admitted to the institutions, and they were ranked according to the economic and social standing of their parents. Confined at first to religion and the classics, curriculums had by 1750 begun to widen materially. Mathematics, science, and other practical studies came into prominence. The first medical school in the colonies was established at the University of Pennsylvania in 1765, and two years later a similar department was begun at King's College in New York. Benjamin Franklin was a particularly urgent advocate of courses that would be of aid in making a living.

Private and public schools continued to grow apace, and as their secular interests expanded, education ceased to be monopolized by clerics and "gentlemen." Traditional subjects prevailed,[6] though some city boys and girls, joined by rural youngsters who lived in boarding houses, were taught the ways of business as well as surveying, bookkeeping by double entry, and shorthand. Indentured children were frequently instructed in evening schools. A great part of the population, however, remained illiterate; as late as 1787 the *Pennsylvania Mercury,* conscious of the economic costs involved, was vigorously repeating the oft-spoken complaint that the children of the humble and indigent "polluting the streets with profane and indecent language" would grow up to be "useless or pernicious members of society."

Books, Newspapers, Magazines, and Almanacs. There were few books in the colonies before 1700. Soon, however, shops in every colonial town were selling European and American volumes to eager purchasers. Newspapers too became popular and quickly began to play a part in colonial life. The first one, the *Boston News Letter,* appeared in 1704. It had no competitors for fifteen years, but starting in 1719, new publications sprang up in rapid succession; among the most important were the *Boston Gazette* (1719), the *American Weekly Mercury* (Philadelphia, 1719), the *New England Courant* (1721), the *New York Gazette* (1725), the *South Carolina Gazette* (1731), the *South Carolina Weekly Journel* (1731), the *Philadelphische Zeitung* (1732), the *Rhode Island Gazette* (1732), the *New*

[6] Girls from wealthy families were educated at female academies; a "well-turned-out female was expected to read, speak, spell, and write correctly so as not to betray vulgarity in training, know enough of figures and bookkeeping to be able to assist her husband, and have enough of a smattering of history, biography, travels, poetry, and moral essays to be able to converse with her husband and the world."

York Journal (1734), and the *Pennsylvania Journal* (1742). News was meager but varied; commercial information, "foreign intelligence," stories of pirates on the high seas, travelers' descriptions of the western wilderness, advertisements, and a profusion of verse vied for the readers' attention. At first the newspapers, carefully watched by church and colonial officials, rarely interested themselves in questions of public interest. In 1733, however, Peter Zenger published in the *New York Public Journal* an attack on the royal governor. In the libel suit that followed, Andrew Hamilton convinced the members of the jury that the statements were true and persuaded the jury to declare Zenger innocent. The decision was an important step in the freedom of the press, and it marked the initiation of an aggressive editorial policy which perhaps hurried greatly the coming of the Revolution.

Literary periodicals had their beginning with the almost simultaneous appearance in 1741 of Andrew Bradford's *American Magazine* and Benjamin Franklin's *The General Magazine.* Both died within a short time, and similar projects launched elsewhere in the colonies met with little more success. Almanacs exceeded both newspapers and magazines in economic influence. Containing full astronomical information, they dictated the daily work of many people; few were the farmers who did not, among other things, sow, reap, cut their fence posts, and rive their shingles by the phases of the moon. Many of the almanacs gave accounts of the latest developments in agriculture and science and stories of interesting events over the world. Preeminent among them was *Poor Richard's,* first published by Franklin in 1732, whose homely lessons in economy promised wealth to all who would heed its teachings.

Letters, Music, Painting, and Drama. Although little literature of outstanding importance was produced in the colonies, many volumes of prose and poetry came from American presses in the eighteenth century. Philadelphia, home of colonial, English, Dutch, and German scholars, contributed to the knowledge of the sciences; New England, ever faithful to the Puritan church, was concerned mostly with theology and history. The first public concerts were held about 1730, and, nurtured by such organizations as the celebrated St. Cecilia Society of Charleston and the Moravian group at Bethlehem, Pennsylvania, interest in music flourished, particularly toward the end of the period. *Flora, or Hob in the Well,* given in Charleston in 1735, was perhaps the first musical play presented in the colonies, and *My Days Have Been So Wondrous Free,* written by Francis Hopkinson in 1759, was probably the first native musical composition. Painters were neither significant economically nor noteworthy artistically, but on

the eve of the Revolution Benjamin West, John Singleton Copley, Charles Wilson Peale, and Gilbert Stuart enjoyed well-earned reputations.

One of the first plays in the colonies was written and staged in Charleston in 1703 by Tony Aston, just arrived from Jamaica. By 1730 many crude buildings in towns from Williamsburg to Boston had been turned into temporary playhouses. The Southwark, earliest permanent theater in America, was formally opened in Philadelphia on November 12; 1766, and there the next year was presented *The Prince of Parthia,* by Thomas Godfrey, Jr., first production by an American ever publicly acted in the colonies. The churches, especially in New England, objected to the theater, and the critical conditions that accompanied the approach of the Revolution prompted the Continental Congress in 1774 to discourage all extravagances. In many towns plays, along with horse racing, cockfighting, gaming, and other "expensive diversions and entertainments," were banned. The last pre-Revolutionary play in Philadelphia was given in 1773 by the Hallams, husband and wife, who had arrived in New York with their English company in 1750. But in spite of prohibitions, Thespians still trod the boards as "moral" lecturers; thus *The Gamester* became "a serious and moral lecture in five parts on the vice of gaming," *The Tempest* an "Opera," and *Hamlet* "a moral and instructive tale, called Filial Piety Exemplified in the History of the Prince of Denmark." How much money was spent in cultural pursuits is difficult to estimate.

Colonial Towns. *Lack of Planning.* For nearly a half century after the founding of Jamestown the little clusters of houses that marked the points of settlement in America were scarcely more than villages. Increasing population, however, brought rapid physical expansion and many accompanying difficulties. Throughout the last half of the seventeenth century the various towns, led by Boston, groped their way through a maze of growing urban problems. Little thought was at first given to such fundamentals as streets and roads, for few realized their importance in the future economic life of the community; only in Philadelphia and Charleston were streets and highways laid out before building began. Sam Walter Foss has in *The Calf-Path* strikingly pictured the resulting losses:

> One day, through the primeval wood,
> A calf walked home, as good calves should;
> But made a trail all bent askew,
> A crooked trail as all calves do.
> Since then two hundred years have fled,
> And, I infer, the calf is dead.
> But still he left behind his trail
> And thereby hangs my moral tale.

* * *

The forest path became a lane,
That bent and turned, and turned again;
This crooked lane became a road,
Where many a poor horse with a load
Toiled on beneath the burning sun,
And traveled some three miles in one.
And thus a century and a half
They trod the footsteps of that calf.

The years passed on in swiftness fleet,
The road became a village street;
And this, before men were aware,
A city's crowded thoroughfare;
And soon the central street was this
Of a renowned metropolis;
And men two centuries and a half
Trod in the footsteps of that calf.

Each day a hundred thousand rout
Followed the zigzag calf about;
And o'er his crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuries dead.
They followed still his crooked way,
And lost one hundred years a day; [7]

* * *

Seventeenth-Century Problems. Fires, plagues, and other disasters that burdened the people economically soon made apparent to colonial town fathers the necessity for effective local government. The tidy Dutch of New Amsterdam were the first to attempt compulsory public sanitation; in 1657 the authorities forbade the casting of rubbish, filth, oyster shells, dead animals, "or anything like it" into the streets. A few years later Boston enacted similar prohibitions and instructed the inhabitants to bury their garbage. Legislation, however, was ineffectual, and pigs, presumably always impounded, grunted as contentedly in the public slop and filth of these towns as anywhere else in the colonies. In some places efforts were made to establish regular street-cleaning services, but they generally failed because of indifference on the part of the householders. The realization that cooperation, order, and obedience were basic principles in community progress came slowly. Quarrels, economic and otherwise, were frequent;

[7] Quoted by permission of Lothrop, Lee and Shepard Company.

many an irate complainant appeared before the courts declaring that he had been "greatly damnified" and demanding damages because stray pigs or calves had broken into his garden, orchard, or fields.

Eighteenth-Century Growth. Throughout the eighteenth century colonial urban centers developed rapidly. Material changes were particularly prominent. Street paving began in earnest, harbors and wharves were improved, adequate markets were established, fire-preventive legislation was passed, and, in Boston at least, wood as a building material for houses was banned. Philadelphia, home of Benjamin Franklin and his "forward-looking projects," installed street lamps in 1756. At about the same time the town began to employ a night watchman, and Franklin, hiring a "poor, industrious man" to sweep the pavement in front of his and "all the neighbours' doors" twice a week and carry away the trash, soon convinced the townspeople that taxation for public betterment was justified. Volunteer fire companies were organized also; the members, using the leather buckets that householders were required to own, effectively lessened the losses involved in the inordinate number of blazes that broke out by day and by night.

By the late seventeen seventies New York had established a regular garbage- and trash-disposal system and had forced some respect for the hitherto disregarded law that no one "shall cast or lay in any street, dock or slip any oysters, clams or other shell fish, shells, ashes, manure, rubbish or other dirt whatsoever." The requirements that all footpaths be paved with brick or flat stone and that every street "have a gutter or kennel on each side thereof" brought some improvement. Perhaps, too, the oft-repeated legislation that "no person or persons shall permit his, her or their hog, pig or swine, to go at large in any of the streets or highways of this city under the penalty of twenty shillings for each hog, pig or swine for every offence" was partially enforced. Boston was the first town to restrict traffic in the public interest. In 1727 an ordinance was passed prohibiting the use of two-horse wagons on the street and limiting loads to a maximum of one ton; moreover, no cart longer than sixteen feet was to be used, and tires were to be not less than four inches wide.

Philadelphia had before 1700 begun to forge rapidly ahead of all competitors; by the end of the colonial period the Quaker City, with a population of something more than thirty thousand, was the chief metropolis of British America. New York, Boston, Newport, and Charleston also were important. All but the last were surrounded by smaller villages significant as local centers of commerce and business. On the eve of the Revolution the towns were bustling places, their streets resounding with the rattle of merchants' carriages and farmers' carts on the rough cobblestones, the

strains of the charcoal venders' horns, and the cries of the woodmen, the chimney sweeps, the soft-soap venders, the milkmen, the sand men, and the drug peddlers. New York and Charleston possessed house numbers and street markers; taxation for civic purposes had been accepted; and urban problems had been comprehended though by no means solved. But such conveniences as public water systems awaited the inventive genius and the scientific knowledge of the next generation. Throughout the colonial period public and private pumps everywhere provided the townsmen with water. In New York water was often brackish, and for several years after independence "Tea Water Wagons" continued to supply a majority of the housewives with water for tea from Anthony Rutger's "Fresh Water Pond" at a trifling daily charge.

Social Problems. *Crime.* Urban growth brought many costly social problems into prominence. Of these crime and poverty led all the rest in their obstinate refusal ever to be solved. Society so far as crime was concerned was interested almost entirely in protecting morals and restoring economic losses to the wronged. The community did not feel obligated to establish decent prisons, nor did it regard reform measures as necessary—hence the popularity of quick and inexpensive mutilating, branding, and selling into bondage. In addition to refusing to spend their money on prison welfare, the colonists vigorously demanded restitutions. Indentured servants paid for their misdeeds in additional service to their masters.

Poverty. In spite of the many opportunities in America for making a living, not all the colonists were self-supporting. The presence of some of the idlers, vagrants, trouble makers, and criminally indolent individuals that plagued colonial society was a direct result of the English colonial policy of ridding the mother country of "rogues, vagabonds, and beggars" who had already, says Professor Nettels, "acquired a distaste for work which did not forsake them in the New World." But fires, Indian ravages, epidemics, colonial wars, and, especially among New Englanders, hazards at sea were chiefly responsible for swelling the ranks of the destitute. Whatever its origins, poverty in the colonies was a crime against the economic order; except in the care of the afflicted, welfare work among the indigent was inspired more by fear of future burdens in the way of material upkeep than by any feeling of humanitarianism. By 1690, however, some philanthropies had begun, and ordinary town dwellers had accepted in part the moral duty of ministering to their unfortunate neighbors.

Poor relief in the colonies was, as in England (and as in the nation until the great depression of the nineteen thirties), a matter of local responsibility. Each community raised its own funds and disbursed through

temporal or secular officials its own doles as it wished. In the seventeenth century the needy were few, and they were often cared for in turn by the various families of the towns and villages where they resided; when their increasing numbers made this plan impracticable, they were given pittances directly or boarded permanently in private homes at public expense. Almshouses, later to become known as "poorhouses" and in the nineteenth century as representatives of the nadir of economic failure, appeared before 1700. At first they sheltered not only the righteously poor but also criminals, minor offenders, and the perversely lazy. Soon, however, most of the colonies began wherever possible to confine their convicts exclusively in prisons and their indolent in workhouses.

By the middle of the eighteenth century some free hospitals for the care of the indigent sick had been erected. But everywhere paupers found existence miserable at best. The life of those whose worldly goods were few or whose habits did not meet with the approval of society was cast into a more restricted mold than that of the pigs that roamed at large in the muddy streets. Idleness at home meant confinement and labor under the lash if necessary, while to wander away brought arrest and quick return to one's place of regular abode. The poor were charges of their own communities, and they had no escape except to the frontier; town fathers sent roving human beings back to their homes (with bills for damages) as readily as they did straying stock. By 1750 strangers were required to offer satisfactory evidence that they would not become economic burdens. Furthermore, no shipmasters were allowed to unload immigrants without first posting bond that no losses would result therefrom to the citizens of the port; no servants might be brought in from outlying places unless their masters agreed to become permanently responsible for their welfare; and no innkeepers or householders were permitted to harbor strangers for more than a few days without notifying the authorities. Because means of travel were limited, these static regulations hampered economic life but little, and they helped in the control of poverty.

Public Health. Although medical knowledge was almost completely lacking in colonial days, public health was a matter of some concern. Town records show that the laws prohibiting the casting of garbage, filth, offal, and other offensive matter into the streets were among the first enacted. Steps were soon taken also to require the building of sidewalks and the removal of the gutter from the middle of the roadway. Slaughterhouses, often "very Noysom and Offensive to ye Inhabitants," were in many towns before 1700 banished to the unfrequented environs. Tanneries too were forbidden in various places. The most serious problem was the

disposal of human waste, and modern plumbing has brought only a partial solution.

Many of the early sanitary regulations were passed merely to make living conditions bearable, but the colonists had some realization that the spread of diseases with its consequent economic penalties could be to an extent prevented. In 1712 Boston authorities isolated smallpox sufferers and ordered the nurses to air their clothes and "to use the most proper means to prevent ye Spreading Infection in ye Town." Slowly it became apparent that there was some connection between the merchant ships that sailed into port from the West Indies and the devastating scourge of yellow fever that shut up shops and set the few well to "carrying medicines, digging graves, [and] carting the dead." Early in the eighteenth century towns along the coast from Boston to Charleston established hospitals and pesthouses to which all incoming sick were sent; regular medical inspection was provided, and masters were forbidden under heavy penalties to enter their ships in the harbors without proper license from the health officers. The fight against disease was expensive, but the cost was infinitely less than the losses involved in paralyzed business and swelled poor-relief rolls that pestilences left in their wake. Instigators of public-health measures were, like the sponsors of most other progressive legislation, primarily concerned with economic welfare.

Chapter 6

CONFLICT AND REVOLUTION

In spite of a remarkable growth that appeared to have neither room nor time for controversy, conflict marked distinctly and unmistakably the colonial period. The theory of monarchal oppression by a narrow-minded king has long ceased, however, to be important in the discussion of the events that brought American independence and, after several years of experimentation, the creation of the Constitution, one of the oldest —young as it is—of the continuously functioning instruments of government in the world. Within the colonies and among the colonies there were ever disagreements as to defense, money, commerce, democracy, and other matters of profound significance. As time went on, these disagreements were but repeated on a larger scale and with perhaps greater intensity between the colonies and the mother country. A progressive and nagging hostility between classes and interests in the various sections of America and a persistent and ever-growing (though often submerged) discord between the colonies and the mother country concerning imperial regulation and control accompanied the slow transformation of the colonies into states. To say that quarreling among Americans began at Jamestown and appears perpetual does not nullify the fact that the forces of unity were stronger than those of disunity. It is indeed one of the signs of democracy seen too rarely in the world today that it still continues within the framework of majority rule. Disagreement with the mother country also began on the banks of the James; with the first shipload of pitch, tar, and iron ore that dropped down the river in December, 1608, on its journey to England, went a querulous letter from John Smith in which it was frankly stated that "it were better to give £500 a ton for pitch, tar, and the like in the settled countries of Russia, Sweden, and Denmark than send for them hither till more necessary things be provided, for in overtaxing our weake and unskillful bodies, to satisfie this desire of present profit, we can scarce ever recover from one supply to another." [1]

[1] Quoted in Lyon Gardiner Tyler, *England in America, 1580-1652* (New York: Harpers, 1904; vol. 4 of the American Nation series), p. 57.

For a long time the differences between the outposts of the empire and its center were, though real, not alarming. This was true because the English colonists came to possess representative government and individual rights in theory and—to a larger extent than any others—in fact: they were free to a remarkable degree to worship as they chose; they had in their assemblies and in their control of the purse the power to modify if not to nullify empire regulations; and they contained within the limits of their own energies, however restricted, the ability to progress economically, for the unprecedented growth of city, farm, and shop in the wilderness that was the New World of the English denies the existence of ruthless material suppression. It was true because the English, more than any of their colonizing contemporaries, were left to their own devices—so much so that the two or three decades before the middle of the eighteenth century are often referred to as a period of salutary neglect. And, lastly, it was true because the struggling colonists were beset by many dangers, including possible destruction by Indians, French, and Spanish; "for more than a century," says Professor Gipson, "the British lion stood watch over his colonial cubs in the days of their early weakness and gradual growth, now and again lashing his tail and striking out savagely when their safety was menaced." [2] The wars that swept the world in 1689-1697 (King William's War), 1702-1713 (Queen Anne's War), 1744-1748 (King George's War), and 1754-1763 (Old French and Indian War) washed over the colonies, and British regulars were foremost in the bulwark of defense.

The irritations that set the Americans against the English were, like the quarrels that arose among them at home, of slow and continued development. But it is difficult if not impossible to explain in a brief compass how the two were brought to war upon each other. The causes of the Revolution were indeed complex; tangible and intangible factors were alike involved. Differences of opinion concerning manufacturing, commerce, money, speculation, expansion, frontier defense, taxes, debts, religion, and colonial administration paved the way for serious argument, and time, distance from the mother country, ambitions for gain, a frontier-encouraged democracy that clung unswervingly to the theory of the inalienable right of man to liberty and self-government, a justified feeling of self-reliance, and perhaps a dash of pure obstinacy dimmed the bonds of affection and loyalty that held the colonists to the homeland and gradually made even those of English origin alien to the people from whom they sprang. Many of the same factors were involved in the quarrels and even open physical outbreaks that occurred in the settlements

[2] Gipson, "Some Reflections upon the American Revolution," p. 15.

along the Atlantic. The overtones of the controversy between the colonies and the mother country did not become dominant until the eighteenth-century colonial theory of local or dispersed sovereignty grew (after the middle of that century) strong enough to dispute effectively not only the seventeenth-century English theory of the unity of national sovereignty but also the doctrine of the economic primacy of the central government. The colonies from the simple fact that they had been free to grow had reached the point where they were ready if prodded too severely to deny that they existed chiefly for the benefit of the empire, as the mercantilists who founded them had asserted a hundred years before. They had no thoughts of separation, but they did differ from empire thinkers regarding their rights, their dignity, and their importance.

Some historians feel that it was the clash of social, religious, and especially political philosophies that split the Americans from the English. Others believe that the core of the conflict was the desire for material advantage. The economic determinists assert with much justification that by 1763 the contest had come to center around the question of whether American or British economic welfare should be paramount. They say too that economic interests were of overwhelming significance in arraying local determination and central authority—under different circumstances —against each other on the battlefields of the nation in the years 1861-1865. Serious human disagreements, however, are always complex, and quarrels that lead to the separation of one people from another are generally of long standing. It might be well to examine in as much detail as possible the main outlines of the colonial controversies that in one phase at least broke into the open flame of recognized war in 1775.

Intercolony Conflicts. The same forces that disputed the fulmination of the Reverend John Cotton that democracy was not a fit government for either church or commonwealth and that finally stayed the hand of the hangman in Salem Village when witches were abroad brought other evidences of tolerance and intellectual freedom in the colonies with the passage of the years. There was, however, never an ending, for liberties engendered always demands for new liberties as classes and groups fought for what they regarded as their rights. Aristocrat and democrat were ever in conflict; strife between the privileged and the nonprivileged, in fact, is a central theme throughout colonial history. Quarrels differed from section to section but varied little as to intensity. In New England in particular members of the same family were in many instances compelled either to engage in rival enterprises or to search out new fields of endeavor. But the best soil was already taken by others, and even in church

the seating arrangements told vividly of class distinctions. Economic, social, and religious inequalities were primary factors in the perpetual separations that brought new towns in the section.

The people of the middle colonies were less fervently religious and not so hard pressed economically as their neighbors to the north; nevertheless, they were plagued with dissensions. The rich merchants and commercial men of the section saw no reason why they should shape their laws so as to assist the poor among them. But the poor, using the cudgels of liberty that as time went on began to be hurled from the seaboard against the British, fought viciously under able leadership for their rights.

South of the Potomac the planters, small farmers, indentured servants, and slaves were, though interdependent, all economically antagonistic in one way or another. The planters, struggling against falling tobacco prices in the English market and diminishing returns per acre from their fields, were forced into competition with their less opulent neighbors. This competition expressed itself chiefly in the purchase by the rich of available surrounding land, and as a consequence lordly estates grew up. Slowly those who owned but a few acres were pushed into the barrens or driven to seek new opportunities on the frontier, and the indentured servants at the end of their periods of servitude fled to the back country or to the towns. Even the plantations moved ever westward.

Certain economic and financial questions, while they differed slightly from place to place, were uniformly throughout the colonies sources of irritation. Money in particular brought endless controversy. The now familiar arguments concerning "cheap" money and "honest" money, "inflation" and "deflation," were getting their first hearing in the American political arena. That money was scarce could not be disputed. Because they purchased what finished items they bought with the crude products of their fields or the crude labor of their hands, the poor farmers, small planters, and humble workers possessed little if any. The perpetual debt of the colonies to the mother country (resulting from the fact that in the scheme of empire the outposts for the most part produced raw materials and bought manufactured goods) drained away to England whatever currency the towns managed to accumulate. Both rural people and the townsmen suffered from the unfavorable balance of trade, and everyone quarreled with those who seemed to deprive him of his money.

Many solutions of the perplexing problem were attempted. Commodities were widely used: lumber, corn, wheat, peas, barley, rye, pork, beef, and cattle in New England, the middle colonies, and the Carolinas and tobacco in Maryland and Virginia. But they consumed a part of their own

value in the expense of transportation and, since if not properly cared for they might become valueless altogether, in the outlay involved in their storage. Furthermore, the question of grade or quality had endless ramifications and behind it a history of bitter disputes that date from the time man began to buy in terms of money. Where commodities were used (though it was generally only warehouse certificates that actually circulated), the agrarians in particular had it within their power to inflate the currency to the extent of their ability to grow and include in the medium nonacceptable as well as acceptable goods. Townsmen always suspected the worst. What happened in most cases was that the farmers, pinched by fixed interest rates and inflexible taxes, sought to escape the necessity of turning over most of their crops in payment of their obligations by putting in, for example, tobacco that otherwise might have been discarded. The farmers need not be the only suspect. It was possible too for the creditors to demand an unwarranted standard of quality because it profited them more than the grade usually accepted. Colonial courts pondered the matter frequently, especially in Virginia, but the basic problem of justice in the payment of dollar debts in goods remains still unsolved.

Paper money, almost universal in the world today, stirred no less irritation than did commodities. The simple explanation is that the agriculturist who was accused of debasing the goods he offered in payment of his debts was also the individual who in the colonial assemblies advocated ever-increasing issues of paper. Real controversy first broke out in the early eighteenth century in South Carolina. There bills of credit, backed by taxes, had been issued to finance military campaigns against the Spaniards and the Indians. They were augmented by other bills, backed by land, until silver, eight shillings an ounce in 1710, rose to thirty-six shillings in 1730.[3] The debtors cared little how much silver really was worth. They wanted only some means of paying what they owed, and when rich merchants and planters, dominant in the aristocratic council, declined to vote further issues of paper, they merely refused to pass any legislation at all in the lower house. A compromise that checked inflation but provided that there should be no reduction in the existing quantity of bills was passed in 1731. In the Massachusetts elections, ten years later, the farmers marched on Boston in challenge to the merchants. The victory they won, however, was short-lived, for the governor overthrew all their gains with an arbitrary ruthlessness intolerable in England itself. Troubles appeared also in little Rhode Island, though there such action as had

[3] See Curtis P. Nettels, *The Roots of American Civilization* (New York: Crofts, 1938), pp. 532 ff.

occurred in Massachusetts was impossible since the agrarians dominated the governor as well as the legislature and their acts were free from disallowance by the royal will.

The paper-money fire raged in one form or another over all the colonies. So too did differences flare up concerning means of obtaining land and of securing political representation. Everywhere in an expanding society debtor and creditor quarreled with each other, but to see in the conflict only a question of honesty or dishonesty is to miss the real significance of the disturbances. The main point is that means of growth were being denied a virile America; that progress was being held in check by the leading strings of conservatism and privilege. Those responsible for ordering the monetary, social, and political structure learned new lessons as new conditions arose less readily than did the tillers of the soil as they moved on to new fields. Money was wholly insufficient, land that could be had with the assets available to many of those who wished to make it fruitful was inadequate, and political representation was restricted. The three counties of Bucks, Chester, and Philadelphia dominated Pennsylvania, and the tidewater aristocracy of Elizabeth City County in eastern Virginia with only fifteen hundred and seventy-four inhabitants had the same representation as Berkeley County in the Shenandoah valley with a population of sixteen thousand seven hundred and eighty-one. There was no equality before the courts in many cases, and arrests for political reasons were not unknown. The aristocrats in calling on the mother country for assistance, particularly in defeating demands for paper money, merely diverted some of the hatred of the democratic (frequently called "rabble") group from themselves to England.

The constant irritations in seaboard society—often intimately connected with economic progress—combined with other forces to produce what is known as the American frontier. The frontier, geographically speaking, was the western edge of settlement at any given time. That it was in addition to this physical identification a seeding place for democracy is sometimes disputed; certain it is, however, that in the sparsely peopled regions that marked the successive steps of the westward movement of the nation the lessons of self-reliance and defiance were ever freshly learned. But the frontier was always moving, and the successful in the newly established outposts of civilization became in turn defenders of the conservative principles that had been instrumental in producing their own former discontent.

Though some hardy souls were always on the move, the westward exodus generally swelled and subsided in direct relation to periods of depression

and prosperity in the settled coastal region. Usually the plodding stream was headed by the trapper, who first felt the impinging pressure of neighbors; after him went the herder or the rancher, whose cattle demanded ever-widening instead of contracting pastures; and last followed the farmer, who held to his barren fields as long as there was hope of life. At times all three poured simultaneously into the same sections, and with them may have gone many who, regardless of their occupations, were merely tired of their quarrels with those in power. Scotch-Irish and Germans too, finding on their arrival in America that they were not welcome in the closed society of the seaboard, pushed westward. "Stubborn," "ignorant," and "proud," and poverty-stricken as well, they early challenged the right of William Penn's government to raise money by selling them farms; they merely squatted on the land they wanted.

The conflicts that were forever stirring in the settlements along the coast were mild in comparison with those that arose between the frontier and the stable seaboard. The western settlers, generally debtors, objected to domination by a small and distant group of aristocrats; they were incensed by the fact that privileges were reserved to the wealthy; they hated the "justice" that permitted them to be stripped of their means of livelihood in payment of debts they felt they did not owe; and they resented being called "a pack of savages" by the easterners and retaliated by labeling their oppressors "swindlers." Furthermore, they frequently discovered that the lands they desired were already owned by eastern speculators who not only demanded exorbitant prices for them but also sought through their control of the legislature to levy obnoxious taxes payable only in specie. Often too the settlers on the far fringes of the frontier found that they could get little assistance in fighting off the attacks of the Indians. Once the bodies of murdered citizens of western Pennsylvania were hauled in a cart through the streets of Philadelphia in an effort to distract the assembly's attention from its argument with the king long enough to do something in regard to the Indian dangers. In the back country of North Carolina the farmers, having failed in all their efforts to abolish corruption in the sale of land and in the collection of taxes, finally turned to force. They applied the lash and the torch to their enemies; they opened the jails and released their friends. Vengeance was not theirs, however. The governor's army fell upon a small group of the "Regulators," as they were called, at the Alamance River in May, 1771, and put them to rout. Justice was stern and unforgiving.

Thus throughout the colonies the poor and the dispossessed, the farmer and the townsman, the laborer and the business man, were fighting a revo-

lution of their own long before the break with the mother country. But underneath the forces that culminated at Lexington were building up, and for the most part the opponents of conservatism were ready to support any attack that promised to destroy privilege. Only the embittered Regulators of North Carolina among the poor refused to join the fight against the mother country.

Colony-Mother Country Conflicts. Until the middle of the eighteenth century, when the "old" colonial policy began to come to an end, the welfare of the empire as a whole was deeply imbedded in the principles of mercantilism. Conflict was born of that fact, for mercantilism meant, to a degree at least, control of national effort and of personal action for immediate material empire gains. Resentment was almost certain at one time or another to flame not only in the hearts of the colonists but also in the hearts of Englishmen at home. Raising up industries that would free the nation from dependence on other states for essential goods, erecting an economic system that would draw gold and silver into the royal coffers, and creating a navy and a merchant marine that would tie the empire together and maintain its pulsing commerce in safety—to name no others—were tasks that would bring as the years went on unwelcome restrictions on the colonists and heavy taxes on the people at home. Some of the dissensions that eventually arose in the empire were, as those that came up specifically in the colonies, less the result of deliberate oppression than of the failure of the powerful to realize the needs of the weak. Others, as those between the merchants and the industrialists in England, were collisions between opposing forces that could not easily be avoided. That revolution came turned upon many factors, all of which might under different direction have had other consequences.

The philosophy of the mercantilists in the founding of colonies and the part of mercantilism in the progress of industry and commerce have already been discussed, but even at the risk of repetition the role of this economic plan must be presented among the things that in one way or another led to the Revolution. The direct connection is often indistinct, yet many of the events before the Old French and Indian War were, if nothing else, conditioning factors in preparing the way for the quarrels that marked the years between 1763 and 1775. Some economic control was, of course, an inseparable part of the establishment of the colonies. Certain provisions relating to government and the allocation of any gold or silver that might be discovered were included in the first charter. Too, James I, though the use of the weed offended him morally, kept a careful watch over tobacco revenues. Tempted by the profits to be obtained, British merchants also

were concerned with Virginia's primary crop. They secured before the downfall of James' successor, Charles I, in 1649 legislative and royal restrictions on shipments to any place other than England. The colonies in return were granted monopoly privileges on production, violations by farmers at home being punishable by fines and destruction of plants. Generally speaking, however, control of commerce and other economic activity through acts of trade and navigation began in the days of Oliver Cromwell and had its real growth in the early years of the Restoration.

Powerful Puritan merchants, pillars of strength in the regime of Cromwell, sponsored in 1650 legislation prohibiting foreign ships from trading with the English, and the next year the great business men of London, striking out at their Dutch rivals, obtained through their dominance of Parliament a navigation act of wide scope. No goods produced in Asia, Africa, or America were to be imported into England or the colonies except in English ships commanded by English captains and manned "for the most part" by English sailors. Products from continental Europe might be carried across the channel or over the Atlantic to the colonies only in English ships or in ships owned in the countries that produced the goods.[4] Englishmen, save for those trading in the Mediterranean or the East Indies, might pick up foreign cargoes over the world only at the place of origin or at the sole exporting outlet. No alien was allowed to own shares in or be master of any of the vessels of the coastal fleet of England, and no salted fish, fish oil, or whale fins that had not originated with English fishing fleets were to be taken into empire ports. Empire commerce had come within the purview of government, but the regulations brought no drastic changes. Moreover, the favors given English ships were in part counteracted by restrictions, and privileges taken from the colonies were counterbalanced by advantages.

The collapse of the Cromwell government and the restoration of the Stuarts made enactment of new commercial laws necessary. Dedicating their work to *"the increase of shipping and encouragement of the navigation of this nation, wherein, under the good providence and protection of God, the wealth, safety and strength of this kingdom is so much* concerned," the king and "the lords and commons" began with the passage of the Navigation Act of 1660 a vigorous period of mercantilistic control of the economic life of the empire. The limitations that Cromwell and his Puritan merchant followers had set up were reinstituted, and new ones were added. Every ship carrying goods in and out of English ports must

[4] In case of landlocked countries the ships might be owned by men of those ports that were the only outlets for such goods.

"truly and without fraud belong only to the people of *England* or *Ireland,* dominion of *Wales* or town of *Berwick* upon *Tweed,*" be of English build, and have not less than two-thirds of its crew English. The policy of restriction through enumeration was set up; after the first day of April, 1661, "no sugars, tobacco, cotton-wool, indicoes, ginger, fustick, or other dying wood, of the growth, production or manufacture of any English plantations in *America, Asia* or *Africa*" were to be "shipped, carried, conveyed or transported" to any land "other than to such other *English* plantations as do belong to his Majesty."

By additional legislation in 1663 requiring that all European goods pass through England, the markets of the colonies were bent to the service of the empire. With the exception of salt "for the fisheries of New-England and Newfoundland," wines from the "Madera's" and the Azores, and certain items from Ireland and Scotland, colonial traders were allowed no longer to sail with finished articles from the country of production to their Atlantic ports directly. The "vent of English woollen and other Manufactures and Commodities" was somewhat enlarged as a result of the restrictions, and purchases of foreign goods by the colonists benefited the royal treasury as well as shipping agents, customs officials, and others in the English ports.

In spite of rising hostility in the colonies, additional laws were enacted. A comprehensive act was passed in 1696, and throughout the years until the Revolution new additions were made. The list of enumerated goods lengthened: naval stores (pitch, tar, turpentine, hemp, and masts), rice, and molasses in 1706; copper ore and certain furs, including beaver, in 1722; and potash and pearlash, pig iron and bar iron, hides, whale fins, and lumber in 1764.[5] New levies were placed on specified goods moving into British ports, though the exactions were for the most part remitted when (as was often the case) the products were sent on from England to continental markets. In 1733 a Molasses Act, which taxed molasses sixpence a gallon and placed a heavy duty on sugar, was aimed at New Englanders, who for a long time had been an economic thorn in the side of London merchants. Instead of mining copper and lead and growing hemp and taking naval stores from their forests for the mother country, the shrewd commercial and business men of the section developed home manufacturing to such an extent that it began to an alarming degree to supply colonial needs and an external trade that ran even more contrary to the hopes of the

[5] Until 1766 nonenumerated articles might be freely disposed of in places other than the mother country, but after that year all exports to Europe north of Cape Finisterre (northwestern Spain) were entirely prohibited.

mercantilists than did their industries. But, convinced that the sole purpose of the tax was to enrich a handful of West Indian sugar growers at the expense of two million Americans, the New Englanders carried on their rum making unperturbed; they smuggled with easy conscience and with little resentment until a second act in 1764 stirred them to protest.

Other restrictions were instituted. The white-pine acts of 1691, 1711, and 1729, the woolen act of 1699, the hat act of 1732, and the iron act of 1750, along with similar measures, convinced some of the colonists that the interests of Englishmen at home were being "most peculiarly attended to." Especially irritating was the question of money, a significant source of intercolony and intracolony conflict as well. Few problems were more complex, and few involved greater possibility of provoking hatreds and of engendering permanent conflict. The colonial wealthy, although they pinched the poor among them when they sought means of buying the things they wanted or of paying off their galling debts, sometimes fought bitterly against stabilizing measures that England sought to enforce. Quarrels in the seventeenth century centered largely around the efforts of the colonists to maintain their local money supply by such expedients as creating special lightweight coins (the famous Massachusetts pine-tree shilling, for example) that would not be drawn quickly to England and by arbitrarily overvaluing silver. During the eighteenth century the controversy came more and more to turn on the single question of paper currency. The hatred of the debtors mounted as land banks and other issuing institutions were forbidden. Paper money became a major cause of discontent and a wellspring of ill feeling toward England.

The story of British restrictions in the development of colonial economy before 1763 is not primarily one of exploitation. Not all smugglers were colonists, nor were Americans the only persons who felt aggrieved. British merchants frequently evaded the laws as unjust, and the poor of England in the mercantilistic scheme struggled under heavy taxes in the maintenance of empire defenses. There may have been some tribute involved in the shipment of goods through London and neighboring ports regardless of their destinations, but the laws that limited the commerce of the realm to English and colonial vessels greatly stimulated shipbuilding in New England. Other economic activities continued apace. The axmen took whatever they wanted from the "King's Woods," the spinners and weavers kept at their wheels and their looms, the hatters still made hats, and the ironmasters turned out in an ever larger stream their pigs and plates and bars for the blacksmiths, the molders, and the forgers.

Frequent and justified grumblings, however, were heard in the northern

and middle colonies as farmers, manufacturers, and traders found their hopes dampened at times. They were heard south of the Potomac also. There the tobacco planters, for example, consigned their crops to English merchants and bought in return finished goods from British shops. The transaction was a constant source of irritation. The feeling prevailed generally that weights were unfair, that brokerage and multitudinous other charges were too high,[6] and that agents paid too much for the articles ordered. It is probably true, as is often charged, that English creditors pressed hardest when crops were bad, yet the tobacco men were frequently in arrears in their accounts even in good seasons. "There was," says Professor Andrews, "scarcely a large merchant or planter or storekeeper below the Pennsylvania-Maryland line who was not in debt to his correspondents in England or Scotland." But a host of things besides the exactions of London merchants (overproduction, for instance) were responsible for the fact that returns from the tobacco fields became less each year. Furthermore, fees were not peculiarly British; the great rice growers around Charleston often chartered ships and loaded them directly in order to escape the levies of their own capital city. At all times there were plantation owners who made money from their labors, whether in tobacco, rice, indigo, or some other crop, and in the eighteenth century the Virginia tobacco planters could sell directly to representatives of Glasgow firms at their own landings.

It is true, nevertheless, that even though there arose a wealthy aristocracy in the towns and on the plantations along the Atlantic coast that was not exceeded in all the New World, there was an underlying hostility between the colonies and the mother country. Self-interests were in aggressive conflict, and it was too much to expect the parties concerned to work out in a mercantilistic age a solution of the problem that would involve dissemination rather than concentration of legislative authority. Political freedom too had come to have its price, and many were convinced that empire protection if it had to be bought with cash and with human rights was too dear.

By the middle of the eighteenth century it was clear that the period of the "old" colonial policy that had prevailed since the early settlements was coming to an end. During the years of mercantilistic domination the colonists each in his own way had developed courage and independence, certain

[6] Professor Andrews cites one case in which tobacco worth £1062 paid duties amounting to £625. Charles M. Andrews, *The Colonial Background of the American Revolution* (New Haven: Yale University Press, 1924), p. 99. Professor Gipson lists more than twenty different charges to which a shipload of tobacco sent from Nomini Hall in Virginia in 1764 was subject. Lawrence H. Gipson, *The British Empire Before the American Revolution* (Caldwell, Idaho: Caxton Press, 1937), vol. ii, p. 133. See also Nettels, *Roots of American Civilization*, pp. 252-258.

political heritages brought by the first pioneers had thrived in the New World while the same ideas were withering in England, and hope of immediate economic gain had directed whatever course was taken. Many regulations had been promulgated, some of which were needless—either because they conformed with the natural course of events or because they were made ineffective through smuggling on the part of the Americans or through indifference as to their enforcement on the part of the mother country. The period had been one of colonial separatism. There had been no common cause to unite the colonies, and they had remained distinct units little interested in the welfare of one another. But once started, changes came rapidly. Members of Parliament, perplexed by the astounding rise in the cost of empire, began to insist that Englishmen everywhere must bear directly a part of the burden. The colonials also turned to thoughts of concerted action. Their attempts at unity in the Albany Congress of 1754, however, failed completely. "Every Body cries, a union is absolutely necessary," said Franklin, "but when they come to the Manner and Form of the Union, their weak Noddles are perfectly distracted." Strangely enough, it was the dispatch of British ships and British regulars to the New World to fight a war the colonists themselves had stirred that brought a crisis in empire affairs.

Even before the great war that raged from 1754 to 1763 in America began, the policy of the mother country had shifted profoundly in that it had become concerned chiefly with imperial government rather than with commercial management. No immediate economic gains were to be had from a conflict with the French. The money that was spent and the lives that were lost were sacrificed for the primary purpose of maintaining the empire and building an imperialistic structure without regard to the material returns. It looked for a time as though the fight might be lost, but, as it happened, what was lost was that part of the empire that had inspired the conflict.

Imperial Reorganization, 1763. The Old French and Indian War drove the French from the mainland of North America, and the crown, seeking to gather its territorial gains into manageable administrative units and to strengthen the colonial system in general, chose a course that within a dozen years brought the protesting Americans into martial array on the greensward at Lexington. There was no intention on the part of the mother country to prod the colonies into open opposition, but bringing the far-flung empire that emerged from the conflict of 1754-1763 into an orderly unit and providing for its maintenance were tasks that could hardly be accomplished without the creation of strong opposition in the hearts of

Americans who had learned self-government and self-reliance and who had at the cost of much labor cut out of the wilderness of the New World their homes. When political leaders, directed by George III to defend the royal will and urged by English merchants to protect their economic interests overseas, sought to tighten the reins of control, colonial tempers among the radicals flamed into burning words. Many were convinced that their riches were to be drained to England and their liberties wrested from them.

The merchants in particular were keenly aware of their debts and their inability to obtain means of paying them. The wave of buying that had struck the colonies at the beginning of the war had collapsed before the conflict was over. By the end of the decade unwanted goods had begun to pile up in warehouses, and money had become "prodigious scarce"; depression struck hard in the early years of the seventeen sixties. One Philadelphia business man declared early in 1762 that remitting to London at one hundred and eighty—to which the exchange had risen by that time—"vexes my soul." In October, 1763, James and Drinker of the same city wrote of the situation: "There are very few Bills of Exchange to be had at any rate, and the greatest part of them spoken for. Our Silver and Gold sent away within these 8 months last, what little is left the people in Trade are collecting as fast as they can to send to England and we see no way of being supplied from any Trade we can carry on." [7] Englishmen, on the other hand, were not unaware of their own lack of wealth or of the fact that the Americans had during a war for their own safety traded and bartered with the enemy to their own enrichment and the poverty of the mother country.

It is probably true that economic opportunities were growing less able to support the continued independent growth of both English and American investors, but more than a conflict in political philosophy and more than a disagreement as to whether the resources of the colonies were to profit the colonial or the British business men was involved. The recently acquired territory was yet unorganized, the fur trade was a source of perpetual trouble, the French were unassimilated, France at home still dreamed of empire, the Spanish looked longingly at the two Floridas and other territory recently lost, and the Indians, stripped of their hunting grounds and no longer bribed by annual gifts such as they had received from the French, were seething with anger. The redskins, under the leadership of aggressive individuals such as Pontiac, chief of the Ottawa, swept down upon the

[7] Harry D. Berg, "Economic Consequences of the French and Indian War for the Philadelphia Merchants," *Pennsylvania History*, vol. xiii (July, 1946), pp. 185-193, is a brief presentation of the troubles of the merchants of the greatest city of the colonies during the war.

colonial frontier in 1763 from Niagara to Virginia; they were eventually driven back by the British. The crown took up the problem of the American frontier and with it a host of other things. Some of the ensuing legislation brought real hardships to the colonists.



FIGURE 2. A COLONIAL TAX GATHERER BEATEN OFF

The Proclamation of 1763. In issuing the Royal Proclamation of October 7, 1763, forbidding "all our loving subjects from making any purchases or settlements whatever" beyond the crest of the Alleghenies, the ministry of George Grenville inaugurated the series of legislative measures that led directly into the Revolution. Although Grenville may have wished merely to prohibit migration over the mountains until peace could be made with the Indians and effective government established, the decree provoked considerable opposition in the colonies. A similar proposal had been made at the Albany Congress, but delegates were present only from New England, New York, Pennsylvania, and Maryland. Furthermore, the intervening years had brought heavy investments in western lands as well as the question of ownership by the various colonies. Speculators saw in the measure a threat to their profits and possible loss of capital, and simple

farmers could not understand why traders were permitted access to the land from which they were barred. Other Americans too resented interference with the free movement that had been a cherished treasure of the colonists. "Wandering about seems engrafted in their Nature," remarked Lord Dunmore, "and it is a weakness incident to it, that they Should for ever imagine the Lands further off, are Still better than those upon which they are already Settled." The Quebec Act of June, 1774, granted religious toleration to the French Catholics and permitted them to continue their established political institutions, but it was not intended to interfere with the just land claims of any of the colonies. It nevertheless caused dissension.

The Revenue Measures. Raising money for putting into effective operation the administrative machinery that had been in part projected for the new American empire was not a simple matter. Englishmen, declaring that they were already heavily taxed "not only upon the luxuries and conveniences, but even the necessaries of life," insisted that the burden was not wholly theirs. Parliament during the war had both financed the British military expeditions and assumed a part of the debt of the colonies. Many Englishmen welcomed the suggestion that the Americans be made to contribute to the royal treasury. But the Americans were not unaware of the fact that under the old mercantilistic system indirect tribute in the form of port duties and commissions and other payments had substituted for direct exactions. They argued, moreover, that since they were unrepresented in Parliament, they were not subject to taxation by that or, indeed, any body except one of their own choosing.

In spite of colonial objections, the Grenville ministry proceeded to tighten customs enforcement by turning ships of war into patrol boats, by ordering armchair collectors out of their easy seats to do the work in America that they had been hiring others to do, and by instructing the colonial governors to enforce vigorously the navigation acts. Furthermore, it passed in 1764 a revenue measure, commonly known as the Sugar Act, which, though it increased the levy on sugar and such luxuries as silks, linens, wines, and coffee, actually reduced the duty on foreign molasses from the sixpence of 1733 to threepence. The obvious intent of the lawmakers was to help fill the depleted royal treasury. Whether the new enactment if strictly carried out would have ruined the rum business of New England and stopped the inflow of currency from the West Indies can be argued. There is no question, however, that it made some of the colonists political philosophers. Though the right of the mother country to control trade through taxation was not disputed, acts that had as their chief purpose the raising of revenue

in the colonies for the support of the empire were denounced as violations of a basic constitutional principle. Yet the protest against "taxation without representation" was less concerned with seats in Parliament than with local representative bodies, each made up of members from its respective constituency and each possessed of certain exclusive powers that could not be assumed by external authority except by the will of the people. Grenville's second revenue measure, the Stamp Act of March, 1765, quickly consolidated opinion on this point.

The Stamp Act required that all newspapers, bonds, notes, commercial bills, legal documents, insurance policies, almanacs, advertisements, pamphlets, leases, and similar papers bear stamps costing from a halfpenny to twenty shillings sterling. It was hoped thus to raise at least sixty thousand pounds annually, and since all the money was to be spent in the colonies, there was some justification for the query at home, "Will they [the colonists] grudge to contribute their mite to relieve us from the heavy load of national expence, which we lie under?" But in America indignation, once under way, spread rapidly. Stamps were burned and the agents driven from their homes; the mansion of Lieutenant-Governor Thomas Hutchinson of Massachusetts was ravaged and his library destroyed; nonimportation agreements among business men and orders based on repeal of the act even from backwoods storekeepers lessened the trade with England by six hundred thousand pounds within a few months; and political organizations, inspired by such fiery radicals as Sam Adams and Patrick Henry, quickly arose in defense of the rights of the colonists. In Parliament such men as Colonel Isaac Barré and William Pitt were especially outspoken in opposition to the measure, and British commercial men, pinched economically by the loss of American orders, urged reconsideration. Robert Morris sent word from London on January 7, 1766, that "Merchants Trading to America had a meeting About a month ago & Appointed a Committee and made a Subscription to Apply to Parliament for a Repeal of the Act." In March, 1766, the ministry yielded and withdrew the obnoxious legislation. Great was the rejoicing. "Thanks be to God!" wrote Nathaniel Ames in his almanac, "the snare is broken and we are escaped [from the fowler]." The fact that the Stamp Act had stirred the most vocal of the colonists into opposition was partially responsible for the fervor of the protest movement, but it must not be forgotten that there was in many places actually little money with which to pay levies of any description.

Relief from obnoxious tax legislation was only temporary. Charles Townshend, Chancellor of the Exchequer and one of the many British politicians brought to the surface in the kaleidoscopic changes that characterized the

ministry in the ten years after 1766, proposed and secured in 1767 the enactment of a measure levying import duties in the colonies on English glass, lead, paint, paper, and tea. Along with the law went a bureaucracy for its enforcement and a specific authorization for writs of assistance that officials might pry into every home to see that obedience was real. Colonial objections to internal taxes had been cleverly avoided. But the basic question of the rights of the colonists still remained. With the arbitrary dissolution of colonial assemblies for acts contrary to the royal will, it broadened out far beyond mere taxation.

Except for the tax on tea, the Townshend duties were after vigorous protest repealed in March, 1770, and returning prosperity brought reasonable compliance with the regulations of the mother country. The irritations that had produced the Boston "massacre," the burning of the *Gaspee,* and other acts of violence had lessened. Trouble, nevertheless, still brewed. The East India Company, having secured because of strained financial circumstances a monopoly on all tea exported to America, provided a chain-store case for the colonies when it decided to sell its products at low prices (lower even than the smugglers could afford to sell for) through its own agents. The argument that such a procedure would eliminate independent merchants, deprive honest citizens of a living, and eventually destroy all private economic activity sounds strangely modern. The colonists, however, were in earnest. The ships that sailed into Charleston, Philadelphia, and New York were turned back or quietly seized. Only in Boston did trouble occur; there on the night of December 16, 1773, a small band of citizens disguised as Indians threw overboard three hundred and forty-two chests of tea valued at some eighteen thousand pounds. The economic loss was appreciable, but far more significant were the political consequences. Sam Adams, Patrick Henry, and other radicals were in the ascendancy, the merchants of moderate views were now ready to join in vigorous action, England was burning for vengeance, and colonial obedience was no longer obtainable.

Between March 31 and June 22, 1774, the punitive "intolerable" acts were inflicted on the colonists, and on September 5 the delegates of twelve colonies met in Philadelphia at the call of Virginia to consider "the unhappy disputes between Great Britain and her American colonies." The battles at Lexington and Concord on April 19, 1775, the Second Continental Congress shortly thereafter, and the Declaration of Independence on July 4, 1776, were in part the results of fundamental conflicts that had existed since the founding of the first colony, but they were in part also the fruits of the course of events since 1763, when England in her turn toward modern

imperialism had begun to deprive the Americans of economic and political rights already well developed in what strongly suggested a federal system.

The Revolution. The colonists during the Revolution were far from united, and decisions for or against the mother country were frequently made with difficulty. Important economic forces influenced choices everywhere, yet they were not alone in determining the final action of the people. South Carolina, for instance, had been a compliant and profitable colony. Always it had manufactured little in competition with industrialists at home; it had sent out great cargoes of raw materials and crude products badly needed in the mother country; and it had bought throughout the years large numbers of slaves to the profit of British merchants. There had been little smuggling, for smuggling was unnecessary when laws and actions were compatible. Charleston, however, was the last of the great ports to give up enforcement of the nonimportation agreements by which England through the closure of American markets was to be coerced into repealing her tax levies. Her business men, irked more by the ineptness and arbitrariness of petty local empire officials than by material oppression, took up the cause of revolution. Southern planters in general, long irritated by annoying fees and levies connected with sales and purchases in England, angered by British political administrators who appeared to be foreigners in their midst, burdened with heavy debts from which there seemed no escape, and checked in their land speculations beyond the Alleghenies by the command of Parliament, joined the revolters.

Northern merchants, not so aggressive as the commercial men among them, were at first uncertain as to what to do. Sam Adams was not an inspiring figure to men of wealth and property, for his followers were not always desirable companions for people of substance. Moreover, the poor, who had for years been disputing the financial and political domination of the rich, might turn upon countinghouse and vessel alike and tear them to pieces. But, driven to decision by British actions, by a decline in accustomed profits, by an increase in financial burdens, and by a growing philosophy of liberty, many of the merchant group threw in their lot with the continentals.

The frontiersmen, though long in virtual rebellion against the aristocracy of the seaboard, were divided also. They were particularly concerned with throwing off the shackles of authority. In such places as Virginia they became the spokesmen for human rights and bitter opponents of England. In the Carolinas, however, the situation was far different. There the poor farmer more than anywhere else in the colonies felt his inferiority. He hated the planter for his slaves and his dominance of the market place, he hated

the merchant for his low prices for farm goods and high prices for manufactured items, and he hated the politician for his favoritism of the wealthy. British blunders, however, lost for the empire these potentially loyal friends; local officials of one kind or another stirred resentment among them by such actions as criticizing the Presbyterian Church of the frontiersman. Yet the poor in general opposed the mother country, and the backcountry farmers were poor. And so throughout the colonies, with the exception of the Regulators in North Carolina, these humble tillers of the soil, being tied by no bonds of affection to any order and having little to lose but much to gain, shouldered their rifles and beat the British at Bennington and Oriskany, at King's Mountain and the Cowpens, and even at far-away Vincennes on the Wabash.

The rapid progress of the war split the two differing groups ever further apart and came to label one the "tories" and the other the "patriots." The latter grew rapidly, but they were always outnumbered by the indifferent and the openly hostile.

The Economic and Financial Aspects of the Revolution. The Revolution, though fought on a small scale, brought, as wars always do, economic activity. The depression that had followed in the wake of the Old French and Indian War and that had helped drive the Americans into rebellion was dissipated by orders for military supplies. Subsidies were provided by some of the colonial legislatures for the encouragement of iron manufacturing and gun making. Blast furnaces were set up throughout the colonies, and Connecticut, Rhode Island, and Lancaster County in Pennsylvania became especially important centers for the production of rifles and other fighting equipment. Women seamstresses made uniforms for the soldiers who could afford them; the army, however, was always poorly dressed despite the fact that the Continental Congress in June, 1776, called on the states for specific amounts of clothing. Economic life on the whole was little disturbed by the intermittent battles that raged, generally only in one section at a time. Food was scarce in some quarters, and the fishing industry was temporarily abandoned. In some of the larger towns the gold dispersed by British and French soldiers brought gayety, selfishness, and even "gross extravagance." As time went on, inflation, speculation, and profiteering made men wealthy out of the troubles of others, and there were repercussions on even the poor and ignorant. Though tons of supplies (some of which made rich catches for privateers) poured into the ports held by the British, regular transactions between the business men of America and those of England came to a virtual halt soon after the outbreak of hostilities. Samuel Flagg of "Salem in New England" complained

on the eve of the war that "the Courts of Justice in this Province do not sit since the new regulating of the Government," and six days after the battles of Lexington and Concord he wrote his English creditors: "At present situation of affairs is such, that it's out of my Power to let you know when I can send you another Bill, as nobody pretends to pay me any money—the reason of which you will perhaps have heard ere this reaches you."

The financial situation was distressing throughout the colonies. That the attempt to raise money was characterized by ineptness, by corruption, and to a large extent by failure is under the circumstances not surprising; financing the war at all was a magnificent accomplishment. There was no central government with power to act; there was no uniformity of acceptance of the revolutionary cause; and there was not—as there had been before the "embattled farmers" fired their now famous volley at Concord—even a propaganda machine in functioning order to stir the people to action. Still more serious, there was no money. Altogether the amount of silver and gold in the colonies on April 19, 1775, perhaps did not exceed ten or twelve million dollars. Certainly no small part of that sum was owned by individuals whose sympathies were with the English and who in some cases refused to lend to the "patriots" and in others took themselves and their currency into the British lines. To speak of collecting taxes in terms of the needs of the time in the revolutionary crisis is to speak of the impossible; adequate power to collect could not have created the means with which to pay.

The printing of paper money was in the beginning a logical as well as an inescapable means of raising funds for prosecuting the war. Borrowing, confiscating, and taxing were possibilities, but each presented many difficulties. Domestic borrowing depended on the interest paid and the whims of the few who possessed money; foreign borrowing was governed almost wholly by political factors. Confiscation of homes and businesses of the royalists stirred up bitterness and, except when fortunate stocks of coin were discovered, was effective only after property was turned into some expendable form. Taxation, unless goods were accepted, was not feasible until after the spendings of the British and the French had stimulated business and built up the supply of specie. The failure of the financial program was based on something much deeper than a few cries for the printing press.

Paper money was first authorized by the Continental Congress in June, 1775. Succeeding issues both by the nation and by the various states flooded town and country and pushed prices rapidly upward. By the end of four

years forty emissions had been made, and paper of all descriptions totaled somewhere between four hundred and five hundred million dollars, probably half of which was continental currency. Early in 1780 old bills were called in and new ones put out at the ratio of forty to one, but the spiral of inflation continued to move upward. Counterfeiters and speculators joined in the mad scramble, and, in spite of efforts to control prices and fix values, the ratio by 1781 had reached one hundred to one. As flour, for instance, jumped to fifteen hundred dollars a barrel, the phrase "not worth a continental" came to have real meaning. Levies on the states even when they could be collected yielded mostly worthless paper. Direct requisitions for supplies might have proved helpful had there been proper



FIGURE 3. CONTINENTAL MONEY

machinery for collection and distribution. The army in some cases took what it needed, but both farmers and manufacturers preferred to sell to the British, who carried hard money in their pockets.

Fortunately the rebelling Americans had friends in Europe, for France, Holland, and Spain longed to see England defeated. Soon after the war opened, France began to send guns and other supplies to the colonists through a private commercial organization called Rodriguez Hortalez and Company, founded by Pierre de Beaumarchais, a French playwright and litterateur. After the treaty of friendship and alliance in 1778 money, ships, and troops were provided. Total loans amounted in terms of gold to some six million three hundred thousand dollars from France, a million

three hundred thousand from Holland, and a hundred and seventy-four thousand from Spain. Most of the money was spent in Europe in the purchase of supplies.

Foreign aid not only cheered the struggling continental soldiers but also made it possible for the leaders of the Revolution to order their financial house to some degree. Early in 1781 the office of Superintendent of Finance was created, and Robert Morris was put in charge. Although attempts to systematize accounts and to create a sound currency system were not wholly successful, the Bank of North America, with borrowed specie to support its notes, was quickly established. Hard work on the part of Morris and many other individuals bettered the monetary situation, yet when the British surrendered at Yorktown in October, 1781, the financial question was still acute. It remained so for many years. In fact, it was a source of constant conflict and one of the shoals upon which the government under the Articles of Confederation was wrecked.

Chapter 7

CONFLICT AND CONSTITUTION

The end of the Revolution brought difficult and sometimes heart-rending tasks of readjustment. The victory of the colonists was not the result of an overwhelming massing of economic, financial, and military power. The war, in fact, had been financed on the traditional shoestring and fought on a small scale. French soldiers and the French navy, along with the European situation in general, had been powerful factors in bringing the contest to a favorable conclusion for the patriots. Altogether the cost in terms of gold ranged somewhere between seventy-five and a hundred million dollars. Gold figures for the period, however, are merely academic; the real indebtedness involved reached nearly a half billion when measured in the paper currency of the time. That tremendous sum fell, as deflation began, in one way or another with crushing weight upon all the people. Moreover, it fell on them when a host of other troubles were plaguing rich and poor alike. Shops and mills that had started up during the emergency closed down, the hustle and bustle of speculation and extravagance of the early seventeen eighties quieted, and creditors began to think of striking back at the debtors, who had been in the supremacy during the period of inflation. Money that had come in with the British and French soldiers or as loans began a familiar and irritating outflow to England in payment of an unfavorable balance of trade as long-established buying habits reasserted themselves. Everywhere there was fuel to feed the fires of dissension. The problems of government, of democracy, of human rights, of taxation, of defense, and of other significant matters that had vexed the colonists long before the break with the mother country were, unfortunately, still unsolved. Conflict raged throughout the newly formed states and in a few instances broke into open violence. Though the Revolution had been primarily political, there were many economic consequences in the disquieting years that preceded the adoption of the Constitution.

The Economic Influences of the Revolution. The confiscation of loyalist property was of no little import in the early development of the nation,

for in many sections it dissipated the great estates and put land in the hands of simple farmers, beginning what George Bancroft a century later called democratic doctrine: "the plough in the hands of the owner of the soil." Large holdings did not, of course, disappear; only the coming of the modern city robbed the country place of its aristocratic significance. But the amount of property taken over by those who had only recently come to authority was large. Claims filed after the war reached more than forty million dollars, and the British government paid out in restitutions and in resettlement probably half that amount. Crown lands as well as the vast domains of the Penns and the Calverts in Pennsylvania and Maryland and of the rich throughout the colonies felt the heavy hand of the new order and occasionally the power of the mob. The "Jessups, De Lanceys, and Morrises" were indeed stripped of their possessions, as were also Sir William Pepperrell of Maine, John Wentworth of New Hampshire, Sir John Johnson of New York, and many others. Some of the estates were of princely size; Lord Fairfax's, for example, embraced more than five million acres, and Lord Granville owned a third of North Carolina; the Pepperrell place in Maine stretched thirty miles along the coast.

Spreading manors that could not be crossed at the time in a long day's journey were incongruous things in a society that was struggling toward democracy, and they were certainly a temptation to a hard-pressed group that desperately needed quick resources. There was for the most part, however, no brutal overrunning of the old by the inexperienced and the lawless.[1] In fact, the leaders of the patriot confiscators before long became scarcely less exclusive than had been those who were overthrown. What had happened was that the various states had obtained means of paying some of their debts and of rewarding their soldiers, and the people had broken the trappings of feudalism—all in part at the expense of those who had remained loyal to the mother country. Quitrents, fruitful source of irritation throughout the colonial period, disappeared; titles of nobility, reminders of royalty, were abolished; and entail and primogeniture, chief instruments of preserving lordly family seats, were declared illegal in many of the states. While daughters in North Carolina were permitted no share whatever if there were sons and in New Jersey could receive only half portions, inheritance during the Revolution came to some extent to be based on equality, and the laws through the years tended to further just distribution. But in spite of the fact that democratic philosophers felt that

[1] There were many instances of violence, especially by such organizations as the Sons of Liberty, but they were directed more toward individuals than toward any general class. In some cases loyalists accepted the situation; they were merely bled by taxes and other means.

the ax had been struck deep into the roots of aristocracy, the wealthy, notwithstanding frequent challenges, continued to dominate the economic and political life of the Americans.

Speculation was little checked by the war. It was unlikely that people who had fretted because of English restrictions on land purchases beyond the mountains would regard ownership of vast frontier tracts held for profit as a symbol of privilege. Eager buyers sought out impoverished soldiers and traded them out of their warrants, they sent persons hired for the purpose (and sometimes their own servants) to take up preemption claims, and they turned paper certificates of indebtedness that states had issued during the Revolution into land. Organizations as well as individuals joined in the rush to convert the unexploited wilderness into private property. But the poor, deprived of opportunity to acquire farms cheaply, continued to take as squatters the land they desired.

Slavery too among colonial institutions was struck a real, though temporary, blow by the Revolution. Between 1776 and the end of the war most of the states had either abolished or severely restricted the slave trade. Emancipation was not such a simple matter. In most of the region stretching northward from Mason and Dixon's line slave labor was unprofitable and soon virtually disappeared. Below Pennsylvania, on the other hand, economic factors not only outweighed moral convictions but also made change difficult. Southern leaders in the democratic movement in some cases freed their slaves; for the most part, however, even they saw no practical way of escape from what they then considered a necessary evil. Staunch New Englanders were sometimes tempted by gains to supply illegally the slaves that were needed.

The revolt against England was a powerful agent in leveling economic and social distinctions and in giving form and direction to ideas and ideals that had long been growing. But it was also a disturbing force that broke accustomed commercial habits, necessitated rebuilding the economic structure, threw the people upon their own resources as to defense and other important matters, accentuated in some respects the hostility to authority that had grown rapidly after 1763, and made new general administrative machinery imperative.

The Confederation Government and Its Critical Problems. It is not strange that those who had fought the Revolution found the problem of government a difficult one. The currents of the past had carried them into a federalism that was characterized by a strong and perhaps an exaggerated conception of the powers of the individual units. Suspicion of central executives, whether kings or governors, had in the years of the British

attempts at reorganization of the empire developed a spirit akin to particularism, and Tom Paine and others had pressed deep into the thoughts of the people the idea that government was to be tolerated only as a closely circumscribed necessity. General unity and specific localism were under the circumstances difficult to reconcile. Obviously the thirteen states would not give to a central body even of their own creation powers that they had emphatically refused to Parliament, and, equally obviously, they would not surrender bitterly won and closely guarded sovereignty for the idea of union, of which they were and had long been skeptical.

The two Continental Congresses had only the exigencies of the moment to justify their existence. A regularly constituted confederation of the states was proposed by Richard Henry Lee in June, 1776. A committee of thirteen reported a plan a week after the signing of the Declaration of Independence, yet a year of debate and discussion ensued before its adoption. Because Maryland refused ratification until the problem of the western lands had been settled to her satisfaction (and, as it proved, to the benefit of the nation), the new administrative machinery did not begin to function until 1781. It was therefore chiefly the problems of peace that fell to the lot of the men who represented the states under the Articles of Confederation. No government could have met those problems successfully.

The Confederation was in many ways peculiarly unsuited to cope with the complexities of the time. There was in theory no lack of authority. It was specifically stated in the Articles that the "united states in congress assembled" should have "the sole and exclusive right and power" of "determining on peace and war," of "sending and receiving ambassadors," of "entering into treaties and alliances," of "establishing rules for deciding in all cases, what captures on land or water shall be legal, and in what manner prizes taken by land or naval forces in the service of the united states shall be divided or appropriated," of "granting letters of marque and reprisal in times of peace," of "appointing courts for the trial of piracies and felonies committed on the high seas," of finally deciding "all disputes and differences now subsisting or that hereafter may arise between two or more states concerning boundary, jurisdiction or any other cause whatever," of "regulating the alloy and value of coin struck by their own authority, or by that of the respective states," of "fixing the standard of weights and measures throughout the united states," of "regulating the trade and managing the affairs with the Indians, not members of any of the states," of "establishing and regulating post-offices from one state to another," of "exacting such postage on the papers passing thro' the same as may be requisite to defray the expenses of the said office," of "appointing all

officers of the land forces, in the service of the united states, excepting regimental officers," of "appointing all the officers of the naval forces, and commissioning all officers whatever in the service of the united states," and of "making rules for the government and regulation of the said land and naval forces, and directing their operations."

In addition the central government possessed authority to appoint "a committee to sit in the recess of congress" and "to adjoin to any time within the year, and to any place within the united states, so that no period of adjournment be for a longer duration than the space of six Months." This committee, made up of one delegate from each state, was empowered to "ascertain the necessary sums of Money to be raised for the service of the united states, and to appropriate and apply the same for defraying the public expence," to "borrow money, or emit bills on the credit of the united states," to "build and equip a navy," to "agree upon the number of land forces, and to make requisitions from each state for its quota, in proportion to the number of white inhabitants in such state."

There were restrictions and obligations as well as authorizations in the new instrument of government. Each state retained its "sovereignty, freedom and independence, and every Power, Jurisdiction and right" not "expressly delegated" to the congress; each bound itself in "a firm league of friendship"; each pledged to the citizens of other states (excepting paupers, vagabonds, and fugitives from justice) the privileges and immunities enjoyed by its own free citizens; and each promised "full faith and credit" to the "records, acts and judicial proceedings" of the others. In the congress the executive committee, when functioning, could exercise no jurisdiction over matters which required "the voice of nine states in the congress of the united states assembled," and the congress itself could take no action except adjournment from day to day "unless by the votes of a majority." The government placed itself squarely behind all "bills of credit emitted, monies borrowed and debts contracted" and did "plight and engage the faith of our respective constituents, that they shall abide by the determinations of the united states in congress assembled" and "that the articles . . . shall be inviolably observed . . . and that the union shall be perpetual."

Had the document come into being at a time when the economic and political situation was less disturbing than in the years immediately following the Revolution, the Articles of Confederation might have become the basic law of a successful nation. Conditions could scarcely have been more trying, and conflict hardly less bitter than that which had marked the colonial period was probably unavoidable. The Confederation possessed all the powers it needed and perhaps even more; what it lacked was

effective power to put its will into force. The states did not keep their solemn vows to "abide by the determinations of the united states in congress assembled," and the people, fearing despots and tyrants as typified by the kings and governors of the colonial period, had profound mental reservations. Thus the practical problems of money, commerce, and trade in a period of economic stress soon made it clear that there was danger in a government that had no executive department, that could act only upon the states and then without ability to enforce compliance, that had no authority to regulate tariffs or to control internal trade, that could only ask the states for money with which to carry out its duties, and that could raise directly no military force even to preserve its own life. Never had the stark reality of existence come so boldly into variance with the philosophy of individual liberty and local sovereignty as it did in the years between 1781 and 1789. Only in the administration of the public lands was there a substantial degree of success. Ordinances in 1785 to 1787 provided for a rectangular survey of what came to be known as the Old Northwest and for its eventual admission—without slavery—into the union as states. It was upon domestic and foreign economic questions that the frail craft of government was wrecked.

Economic Depression. The successful termination of the Revolution ended the usefulness of many of the shops and mills that had sprung up during the war to provide military supplies, and peace brought competition from abroad that smothered some of the industries that had newly come into being. Everywhere economic reaction fell heavily upon the states. With the departure of British and French soldiers a fruitful source of specie disappeared, and as old customers began once again to buy goods from England and the continent, the balance of payments shifted heavily against America. Imports in 1784 were valued at three and a half million pounds; exports at only three quarters of a million. Industry in the northern states was plagued by problems of readjustment and a temporary glut in the labor supply, and southern agriculture needed additional slaves because of the great number carried away by the British.

Commerce too was seriously disrupted. Stripped by independence of all the privileges and monopolies the people had formerly enjoyed as British colonists, the Confederation found itself unable either to open the closed doors of hitherto profitable markets or to protect its citizens at home from foreign sales. The lucrative trade of the West Indies was forbidden, and the ports of the world that had once welcomed the triangular journeys of colonial ships were shut. Earnest efforts of Pitt to secure parliamentary approval of free intercourse with the new nation failed completely, and

the spirit that had dominated the mercantilists in other days rose under the leadership of Lord Sheffield to limit empire shipping either by the use of discriminatory duties or by restriction altogether to vessels owned and manned by Englishmen. Even France and her recent ally, Spain, as well as Holland refused to enter into reciprocal commercial privileges, though many favors were granted. Unfortunately little could be done to remedy the situation. John Adams and others in Congress threatened retaliatory measures, but prohibitory tariffs could not be enacted because the central government had not the power to regulate commerce. Cooperative action could not be expected from thirteen disunited and mutually suspicious states, and taxes that varied from place to place merely drove the incoming ships into the harbors where duties were lowest. However oppressive the exactions of some of the states, only uniformity of levies could check the swelling inbound cargoes.

The situation was not altogether hopeless. The shrewd New Englanders had smuggled before, and trading with the British West Indies through neighboring colonies of other countries was an old, old story. That the commerce of the nation grew rapidly in spite of the discouraging conditions is evidence of the fact that many opportunities for gain were open. American ships entered British ports on an equal basis with those from European countries, and tobacco, lumber, and other raw materials enjoyed much the same privileges as they had in colonial days. Furthermore, Sweden and Prussia welcomed the trade of all the states, and most of the major continental powers, particularly France, Spain, and Holland, granted concessions both at home and in their colonial possessions. Yankee skippers wormed their ways into the commercial marts of Europe and, more than that, spread out to the ends of the earth. The *Empress of China* returned to New York "fresh" from Canton in May, 1785, and in August the *Pallas,* carrying such varied items as tea, china, silks, satins, gauzes, velvets, umbrellas, and paper hangings, put into Baltimore with its unhappy crew of lascars. Before long other vessels were unloading their eastern cargoes in many ports. In 1792 Captain Robert Gray sailed up one of the rivers of the upper Pacific coast, naming it after his ship, the *Columbia,* and then on to China. Politically the incident established one of the claims to Oregon; economically it began a lucrative trade in which the manufactured goods of New England were exchanged for the furs of the Northwest Indians and the furs in turn traded in many places of the Far East for Oriental goods. Americans, nevertheless, were always conscious of the fact that they were supplicants in the economic world and that a few merchants of Boston, Philadelphia, and other large towns were the

chief gainers in the new commerce. The great mass of the people saw only their poverty, and that they blamed in part upon the inflowing stream of British goods and the British agents and factors among them who acted as distributing agents.

Financial Anarchy. The monetary situation was fundamental in the dissensions that spread over the nation during the years of the Confederation. The paper money issued by the Continental Congress during the war had already lost its value; specie brought in by foreign military forces flowed outward rapidly as the same forces that had dominated its movement during colonial days reasserted themselves; scrip used by the patriot army in payment of its officers sold at heavy discounts; and securities of all descriptions dropped to disastrous levels. Everywhere as prices fell and debts piled up at frightening speed, both money and property faced a forced market. In the absence of a powerful government there seemed nothing that could stop the downward spiral. Contraction had by 1785 reached such proportions as to bring vigorous demands for more paper money on the part of indebted farmers and small-business men. Credit all but disappeared, and in many places barter became one of the chief means of exchange. Rich and poor suffered alike. Yet it was only the latter who took aggressive action; they badgered the legislators of the various states into proposing and sometimes passing paper-money laws.

Only in Rhode Island, known at the time as "one of the most fluctuating Governments in the Union," did the advocates of the printing press gain complete control. There they dominated financial affairs to such an extent as to enable them to take the second logical step in the establishment of a paper-money system: making acceptance by creditors obligatory through legislative edict. Since, however, there was no common agreement among all the parties involved and since there were no provisions for meeting payment due elsewhere, trouble was inevitable. Some business men shut up their shops and mills, thereby confirming the worst suspicions of the poor. Merchants, especially those who bought goods in other states, were severely embarrassed. Clark and Nightingale of Providence wrote a debtor in July, 1786: "If you could in any way assist us with a little money you would greatly oblige as we are much in want of it to discharge debts due in Hartford [Connecticut] & we find it impossible in the present circumstances of the Laws of our State to collect a Single farthing." So scarce was acceptable money that it was a common practice to begin collections weeks in advance of expected payments to distant cities. Typical of many communications sent out from Rhode Island mercantile houses was a letter written by Joseph and William Russell on April 28, 1786: "We are

now advising our Friends that the last of next week we shall have Occasion to make up a Sum of money to pay away, Shall thank you for what Assistance you will then give us." Holders of mortgages, notes, and other time obligations sought desperately to transfer them to friends in distant places where "the mighty Power of a Patriotic legislature" would not force their owners to take payment in irredeemable currency that was extremely limited in the geographic range of its acceptance.

The courts of the state ruled in the case of *Trevett* v. *Weeden* in 1786 that it was not a punishable offense to refuse at face value the paper in circulation. Control of the government was eventually wrested from the agrarians and small-town workers. Nevertheless, the "Brand of Paper called Money" continued to plague the people for many years, and "honest minds" for an even longer period persisted in upbraiding the "ignorant," who, they said, had sought to "pay their Debts by One Act of Fraud." But the seven states that during the worst years of the depression resorted to paper were not, as charged by General Knox and others at the time, lacking in honesty and decency, nor does the evidence sustain the accusation that those who were praying for relief were seeking only an easy means of paying their debts. However unwise the proposed remedy may have been, the hardships of the simple people were real; their fight was in essence a continuation of that which had helped to bring on the Revolution. That there was no economic equality is evidenced in the heavy taxes on land, in the fact that new commercial and manufacturing enterprises were ever on the increase, in the eager rush in Philadelphia, New York, and Boston to buy bank stocks, and in the building of bridges, turnpikes, canals, and other material aids to commerce and industry. The prosperous were too much concerned with their shouting of "thief" and "robber" and too little interested in the general welfare of all.

Economic Protest. The discontent of the Confederation period was limited to no particular section. From New Hampshire to Georgia fading letters that remain from these days picture a discouraged people. Everywhere prices of agricultural commodities were low and taxes heavy.[2] War-

[2] The poor fought vigorously in state legislatures against what they regarded as impositions by the wealthy. A New England journalist in 1784 declared that many members of the Massachusetts house had been elected solely to oppose an increase in taxation—on, he should have added, their land. Dull and lifeless, these guardians of the liberties of the people, as the correspondent described them, could be aroused only by one subject. "If," he wrote in a London journal, "in the midst of a drowsy harangue, the word *taxes* should be mentioned, the sound electrifies them in an instant, like sleeping geese; when alarmed, every head is elevated, every eye is opened; all is bustle and attention; and no sooner has the speaker sat down, but twenty of these no-tax men will rise together, to let fly a volley of objections." Allan Nevins, *The American States During and After the Revolution, 1775-1789* (New York: Macmillan, 1924), p. 517.

rants demanding that sheriffs produce the money or "the body" clogged the courts and filled the prisons with those who could not pay their obligations. The mighty and the humble began to blame each other for the troubles they were suffering; creditors demanding justice were on a few occasions answered by debtors with the very rifles that a few years before had spoken for liberty against the British.

One of the first open expressions of discontent occurred in June, 1783, when eighty soldiers stationed at Lancaster, Pennsylvania, marched upon Philadelphia and demanded their long-due pay. Congress, discredited, was unable to meet the situation and fled to Princeton, New Jersey, taking up temporary quarters in the college buildings. The most serious uprisings occurred in Massachusetts, where in 1786, under the leadership of Daniel Shays, armed men closed the courts of justice, liberated their friends from the debtors' prisons, and demanded redress of grievances from the legislature.

The farmers and poor town dwellers in Massachusetts were indeed in a deplorable condition, and the forces of opposition seemed to combine to push them ever downward. Debts of a few dollars became heavy burdens when the debtors were taken to court, and the only balm that justice had to offer was a long term in jail. The man from the fields, who a century later became the "hick" and the "hayseed," toiled the long miles down to the roll call at muster time, while his wealthy neighbor merely paid his fine and went about his business. The land bore an exceedingly heavy share of the fiscal burden of the state—the great men of Boston and other commercial towns saw to that. Poll taxes, however, fell upon all equally, regardless of their economic standing.

For several years the people in the interior region around Worcester and Springfield in particular had protested bitterly against heavy taxes, against exorbitant charges of lawyers, against slow and expensive court procedures, against governmental extravagance, against the privilege of creditors ruthlessly to drag honest men to jail, and against their poverty in general. The citizens of one town submitted a petition that the legislature "pay attention to the situation of the holders of old continental Money which lays dead on their hands without interest while they are taxed to pay the annual interest of Securities the Holders of which are exempted from taxes thereon." "We pray," they continued, "that the [time] for payment of the first part of the interest tax may be prolonged. We further pray that the Probate courts may be Regulated so as to be more expeditious & decisive . . . as in the present mode many small estates are nearly swallowed up by the expenses & time of travel in attendance. . . . we con-

ceive the creditor has too great advantage of the debtor by reason of the great scarcity of money." Inhabitants of another town declared that "the people in general are extremely embarrassed with public & private debts." "No money," they asserted, "can be obtained either by the sale or mortgage of real Estate—the produce of the present year & the remains of our cattle even were we to sell the whole inadequate to the present demand for money. Such has been our situation for a long time past. An amazing flood of lawsuits have taken place & many industrious members of [our] community have been confined in gaol and many more are liable to the same Calamity . . . without relief we have nothing before us but distress and ruin."

In the year 1784 more than two thousand suits were entered in the courts of Worcester County alone by "men of interest" against unfortunate debtors; many a poor householder, unable either to pay his obligations or to employ a lawyer, both lost his property and went to jail. From 1781 to 1786 farmers in the town of Greenwich paid annually in taxes an amount equal to the entire rental value of their land. Forced sales often took farms at one-third their value. General Henry Knox, blusteringly contemptuous of the poor and of the unlettered in the ways of strict discipline, wrote to Washington that the discontented "feel at once their own poverty compared with the opulent, and their own force, and they are determined to make use of the latter in order to remedy the former." The evidence refutes the assertion. There is more than a touch of sincerity in the letters that are still to be found in the files of Massachusetts creditors of those years. Extracts from several may illustrate the point more clearly than the quotation of one or two in full: "It is not in my power to pay the little sum of three pounds that I owe you and am driven to the Necessity of Shutting my Door against my Creditors by reason of the Scarsity of a Circulating medium"; "I expected the money for keeping school but I cannot . . . get the money . . . I have it due from others Sir if you will take carting or take my Property that I have in my hand, I shall Be very glad to Settle But to get the money at Present is out of my Power . . . I have got some pigs which I hope to turn to money which you Shall have if I could Beg such a favor of you and I will give Double the Interest of the money till the first of January next Rather than be sued"; "I shall pay you interest up to now, and as much more as I can git"; "The motive that induced me to keep my doors shut was to get an opportunity to settle with my Creditors justly, whom I do not wish to wrong or injure. I am sorry it is not in my power at present to indorse any Notes or give you that security that you request, when it is I shall gladly comply. I am in hopes & prospect to

sell my Farm in the Spring which I trust will enable me to do justice to all whom I am indebted to"; "All I can say is I will pay you as soon as I possibly can, that that I have not, or cannot obtain I cannot pay"; "But should you and my other Creditors push me at this Time the jail undoubtedly will Become my Habitation and they all be obliged to take Land in lieu of Cash, as it is not in my Power to pay you . . . at this Time in Money if my Eternal Salvation Depended Thereon"; "I have been Stript of almost every thing once possessed and have been Imprisoned for Debt better than Eighteen months . . . I obtained my Liberty since which I have laboured as hard as any man to provide for a weakly wife and a Number of Small Children hope to get comfortably through the winter and if I and my son have our health and I am not put to any cost or taken of from Labour have the pleasing prospect of paying you all I owe you in the course of 12 months. Nothing that I can Honorably do shall be left undone to avoid the Horrors of a Dolorous Jail, the Pitious Cries of a tender family and make you Satisfaction. Pray have Pity upon and passince with your most unfortunate but very Humble Svt."

Shay's Rebellion was put down by force of arms, and the ragged participants, having thrown down the staves and pitchforks that for the most part made up their armament, "scattered into the barren hills of central Massachusetts, where they were hunted in the heavy snow like game."[3] Influenced, perhaps, by such warnings as that given by the people of Lunenburg that "a military Force may kill, capture or desperse the Body in Arms against Government; but will it restore their alienated Affections? Chains may restrain a Madman from Acts of Violence & Outrage; but they will not remove the Cause of his Insanity," the legislature happily made effective reforms in the economic conditions that had given rise to the trouble. Democracy, though it was functioning crudely, was nevertheless functioning; that some individuals under long provocation resorted to violence is less surprising than that under trying circumstances tolerance among the great majority was so marked and respect for law and order so strong.

Internal Commercial Controversy. Conflict among the states was little less bitter than that within the states. Quarrels over land, over money, and over contributions to a central government that to many appeared impotent both at home and abroad seemed endless. Frontiersmen beyond the Alleghenies toyed with tempting promises of the Spanish to provide economic outlet for their products through New Orleans, and in the region of the Great Lakes England blocked a valuable fur trade by refusing to get out of the

[3] Samuel E. Morison and Henry S. Commager, *The Growth of the Republic* (New York: Oxford University Press, 1937; 2 vols.), vol. i, p. 275.

posts she had agreed to abandon. Domestic commerce, hampered by lack of transportation facilities and by the absence of a uniform currency, was a particular source of controversy. The tariffs with which the various states fought foreign competition brought troubles at home. British ships, for instance, generally unloaded their cargoes in the cheapest ports, but arguments and sometimes retaliatory taxes resulted when merchants attempted to sell the goods outside their own boundaries. Interstate sales of domestic products too brought troubles. Rhode Island and New Hampshire farmers and craftsmen stirred resentment by pouring their commodities into Massachusetts. Connecticut struck at Massachusetts products coming into her towns but at the same time endeavored to dodge restrictions at the Hudson and sell in the shops and stalls of New York City. Farmers from the orchards and buckwheat fields and truck farms of New Jersey seeking to dispose of their harvests in the markets of New York City were halted as they left their boats and made to pay heavy levies. New Jersey retaliated by exacting tribute from New Yorkers on a lighthouse they had built on Sandy Hook. The quarrels that grew out of Maryland's ownership of the Potomac, important commercial highway, and Virginia's control of the entrance to the Chesapeake Bay initiated the movement by which the forces that were demanding a strong government came to produce the Constitution.

The Making of the Constitution. In 1785 Maryland and Virginia decided to appoint commissioners to talk over their mutual problems of trade. When these men met at Alexandria, Washington sent his carriage to "fetch" them to Mount Vernon. There in the home of the military leader of the Revolution it was agreed to invite Pennsylvania and Delaware to join in a second discussion to be held in Annapolis in September, 1786. Actually all the thirteen states were asked to send representatives, but the delegates from only five appeared. The momentous decision was accordingly made to call for a general convention to assemble in Philadelphia on the second Monday in May, 1787.

The action taken by Maryland and Virginia was not the first that sought to shape the Confederation into an effective instrument capable of handling the problems before it. The movement for a strong government had been growing rapidly. At least two attempts had been made (1781 and 1783) to empower the congress to collect duties on imports; since, however, unanimous consent was necessary, they had both failed. Outstanding leaders in the life of the struggling young nation had become convinced that the structure of government was flesh without bones—a body of their own making which, though pleasing philosophically, possessed no offensive or

defensive ability. Alexander Hamilton, John Adams, Pelatiah Webster, Noah Webster (of dictionary fame), Governor Bowdoin of Massachusetts, and even Washington himself were among those who pleaded for revision. They knew that debts must be paid, that the national treasury must be filled, that Indians must be controlled, that trade must be safeguarded, and that foreign powers must be made to respect the dignity of the nation, but they were far less motivated by economic factors than were the bankers and the commercial and business men of the new America. Shay's Rebellion and other outbreaks of violence, as well as the monetary laws of Rhode Island, New York, Pennsylvania, New Jersey, North Carolina, South Carolina, and Georgia, frightened the rich, but not enough to make them realize that discipline is bred in justice. Too often they merely cried out for punishment, and unfortunately they sometimes dragged the offenders off to jail, thereby making impossible the material progress they desired.

In reality many of the difficulties of the Confederation period were only indirectly connected with government. Economic depression, while it may have been intensified by the political situation, did not arise wholly from political weakness. Neither was the meeting at Philadelphia called merely to remedy a patent evil created in the clamor of war. The two chief problems that faced the people were old. They were, first, to balance law and order against liberty and, second, to maintain sovereignty locally while establishing it nationally. One was human and one was political; both were perplexing. The years under the Articles were critical years indeed. They were critical not so much because there was danger of a collapse of government as because it was then that the severe trials of the times shaped the minds of the great mass of the people to *accept,* graciously or ungraciously, workable compromises and challenged the minds of a few to *create* acceptable ones. The outstanding brilliance of the men who met in Philadelphia in the spring of 1787 may in part have been the result of the fact that for many years there had been momentous problems that in some way had to be solved.

Philadelphia, then the largest and most important city in all English-speaking America, was a fitting meeting place for the fifty-five men who wrote the Constitution.[4] There in the simple two-winged State House on Chestnut Street between Fifth and Sixth that has since come to be known as Independence Hall, the gentlemen of the convention, presided over by Washington, deliberated five hours daily (except Sundays) from May 25

[4] For a description of the city and its economic and social life in 1787 see "A 'Faire Greene Country Towne' Plays Host: Philadelphia, 1787," by Elinor S. Barnes, in *The Social Studies,* vol. xxviii (November, 1937), pp. 291-302.

to September 17. No radio announcers or eager newspaper reporters, plagues of modern assemblies, disturbed the deliberations, and the cobblestones of the street in front of the building were covered with dirt to deaden the noise of passing carts. No one noted whether at the end of the day any of the weary delegates made their way across the street to Clark's Inn, known by the sign of the Coach and Horses, "to drown the heat of discussion as well as that of the day in cooling draughts of porter and ale." An injunction of secrecy so successfully kept the sometimes stormy proceedings from the public that it was proposed to call the room where the "long and peaceable session" was held "Unanimity Hall." No official records were kept other than a skeleton journal. Careful notes of a few individuals provide the most important sources of information concerning the work of the convention. Generally not more than twenty-five or thirty of the members were present at any one time.

The seriousness with which the people viewed the problems that faced the nation was reflected in the quality of the men who were convened at Philadelphia. Two were university presidents, three were university professors, several had been schoolmasters, more than half were college graduates, and all were distinguished men. There were, says Professor Morison, only three other statesmen who might have offered real contributions: John Jay, Secretary of Foreign Affairs, and John Adams and Thomas Jefferson, both on foreign missions. Certainly the roll was an impressive one. Among the most outstanding names were George Washington, James Madison, George Wythe, George Mason, and Governor Edmund Randolph of Virginia; Benjamin Franklin, Thomas Mifflin, Robert Morris, James Wilson, and Gouverneur Morris of Pennsylvania; Elbridge Gerry and Rufus King of Massachusetts; Roger Sherman and Oliver Ellsworth of Connecticut; Alexander Hamilton of New York; William Paterson of New Jersey; John Dickinson of Delaware; Luther Martin of Maryland; and Charles Cotesworth Pinckney, Charles Pinckney, and Pierce Butler of South Carolina.

The delegates were inspired by various motives. For the most part, however, they had been specifically instructed to remedy the defects of the government and to take, as Georgia expressed it, whatever steps were necessary "to render the *Federal Constitution* adequate to the exigencies of the Union." There was little doubt that property would be protected and that stability would be provided for. Many were thoroughly disturbed by what they felt to be the "excess of democracy," and some professed a willingness to accept a monarchy in order to escape from "the people." But all that was wanted was a government that would work; it is doubtful

that anyone really believed that a crown would rest easy on a republican head in a nation born of long years of democratic struggle. It is true, as Dr. Charles A. Beard has pointed out, that the members of the convention were practical men of affairs who could "speak with knowledge and feeling about the disabilities they had suffered under the Articles of Confederation." [5] That the poor were unrepresented is not surprising. It was hardly possible that the destitute farmers and the impoverished city laborers would appear with pen in hand to write a Constitution; though they could work and they could fight and they could judge the fruits of the tree of politics, they were not themselves versed in the art of statecraft.

While many of the delegates had long before by their sacrifices and their unselfish deeds placed themselves above the charge of mere personal interest, economic factors were unquestionably of profound influence in the writing of the Constitution. Speculators in western land were fully aware of the benefits to be had from a strong central government; holders of continental securities of various kinds, including paper money, knew that a strengthened credit structure would aid them substantially; manufacturers and commercial men, especially in New England, realized that their shops and their ships could be consistently profitable only if there was power to safeguard competition at home and to protect trade in the ports of the world; creditors throughout the colonies understood the value to be derived from the ability to collect their debts without the legislative and judicial hindrances that the poor had learned to use long before the Articles were written; and everywhere the economically ambitious were concerned with the maintenance of a stable currency, for on that, they were sure, rested the progress of the nation. These aggressive groups were heavily represented in the membership of the convention.

Similarity of economic viewpoint among the writers of the Constitution resulted in reasonable uniformity of opinion concerning basic principles and easy agreement as to paper money, tender laws, and other matters that touched the purse. Nevertheless, a great deal of controversy arose. The material interests of the various sections differed greatly; moreover, the poor were not wholly without spokesmen. Political as well as economic disagreements appeared. Even before the meeting opened, some of the representatives of the large states, particularly those from Virginia, had not only decided to discard the Articles completely but even written a new plan. This plan, introduced by Edmund Randolph four days after the sessions began, contained no provisions for safeguarding the rights of the

[5] See Charles A. Beard, *An Economic Interpretation of the Constitution of the United States* (New York: Macmillan, 1913).

weaker states and, for that matter, no guarantee that any of the states would be more than mere administrative units in a national structure. After two weeks of debate William Paterson came forward with a proposal that, though it contained the seeds of federalism, was in reality meant only to give much-needed power to the existing government. The eventual compromise of a house with proportional and a senate with equal representation made it possible to turn to sectional economic questions.

The southern states wanted to count their slaves when the number of congressmen to which they were entitled was established but to forget them when direct taxes were levied. It was finally agreed that in both cases five slaves should equal three white persons. The southerners insisted also that control of commerce be hedged about by a two-thirds vote lest some of the impositions of colonial days be revived. They agreed to a simple majority vote, however, in return for the stipulations that no export taxes would be levied and that the slave trade (the word "slave" being avoided by substitution of the expression "such Persons as any of the States now existing shall think proper to admit") would not be prohibited before 1808. Though other compromises were made, many controversies, especially between the settled seaboard and the sparsely populated frontier, were not dissolved. Nevertheless, on September 17 the Constitution was finally signed by the "unanimous consent of the States present."

The finished instrument of government that emerged from the convention had to go to the people, and the people who were to ratify the document were in far less accord in their beliefs than were those who had written it. Political philosophers and lovers of liberty were alarmed that human rights were forgotten; the advocates of state sovereignty feared the dominance of a president and a congress that possessed more power than ever the king and the parliament had wielded; and the simple democrats who even before the Revolution had been fighting for their rights—rights that sometimes found expression in stay laws, paper-money legislation, and other measures designed to relieve them of their galling burdens—felt that after all the years of conflict they had lost completely. Some of the delegates, notably Luther Martin of Maryland, left before the proceedings were over and went back to their states to fight against surrender to a central power. Everywhere, unless it was in the port towns, where the effects of varying tariffs were reflected in unemployment, the poor in general opposed adoption.

The influence of economic factors was, if possible, more clearly discernible among the advocates of the Constitution than among its opponents. Men of wealth, holders of national securities of whatever nature, specu-

lators in western lands, lenders of money, and eager seekers for riches tomorrow were the main pillars of support. They were ably backed by the press and the pulpit and by the Society of the Cincinnati, aristocratic organization of former army officers that was meeting in Philadelphia when the Constitution was being written and that was soon to call forth the Society of St. Tammany in defense of republicanism. The tide was with them: the depression was lifting; the physical protests of the debtors in Massachusetts in particular had, regardless of the issues involved, produced a general yearning for law and order; and returning material hopes made indecision and inaction intolerable. Furthermore, George Washington, hero of the Revolution, had agreed to serve as head of the new government.

The task of turning a majority of the people to follow after a minority along a road that seemed to lead to something from which Americans had recently revolted was, however, a monumental one. For the first time since Sam Adams, Patrick Henry, and others had stirred the colonists to opposition before Lexington and Concord, propaganda came into powerful play. Editorials, pamphlets, and handbills and a series of articles by Hamilton, Madison, and Jay (called the *Federalist* when bound together) were important; so too were the appeal to national emotions, the playing up of the disturbances of recent years, and the picturization of the dangers of foreign aggression, physical and economic, under the weak government of the Articles. After a great deal of hard work, some coercion, and considerable political manipulation that sometimes touched close to trickery, the Constitution was approved by the ninth state in 1788 and by its own proviso became thereafter, even though New York and Virginia, critical states, were yet to ratify, the basic law of the land. On April 30, 1789, on the balcony of the remade City Hall of New York—much to the disgust of Philadelphia—George Washington was inaugurated. All the states except Rhode Island were in the Union, and, regardless of the fact that individuals such as Senator Maclay of Pennsylvania reserved the right to speak out in bitterness against those with whom they did not agree, all had accepted the Constitution as their own.

The Constitution, while the struggle that accompanied its formulation and adoption was probably not, as some have suggested, a great rehearsal for meeting crises in world order far in the future, gave real physical meaning to government. Executive, legislative, and judicial departments were provided for; the rights of the states on the one hand and of the central government on the other were specifically determined; national citizens who could be taxed, arrested, punished, rewarded, and honored by national agencies were created; and power to act to meet any emergency

was called into being. Time has demonstrated the ability of the instrument to adjust itself to conditions vastly different from those at the time of its writing. That flexibility, however, may in no small measure be credited to the people. Ever have Americans reshaped the document in letter and in meaning, and ever have they repeated the arguments that accompanied the fight for adoption. Ever have they kept the balance between the lovers of liberty and the lovers of order and between the propertied and the non-propertied within the bounds of tolerance, though sometimes bitter conflict has arisen.

The new government actually ended few of the evils that had plagued the people during the Confederation period. The states continued to issue paper money for nearly three-quarters of a century after Washington's inauguration, and counterfeiting grew so prevalent in the eighteen thirties and forties that special guides were issued as aids in detection. Moreover, the political and economic issues involved have been perennial subjects of discussion on the American campaign stage ever since. But government under the Constitution still stands, tribute to the men who wrote it, to the people who in uncertainty and doubt accepted it, and to the millions, each with his own reservations, who have lived under it.

Chapter 8

THE BEGINNINGS OF NATIONAL ECONOMY, *1789-1816*

The years between the inauguration of George Washington in 1789 and the signing of the Treaty of Ghent in 1815 were for America years of transition economically as well as politically. During that period the old was slowly modified or discarded and the foundation stones of the new were cut. This did not mean radical departures from accustomed habits of doing things, it did not mean drastic changes in consumption, and it certainly did not mean material independence from England; it did mean, however, that foreign administrative direction of the economy as in the colonial era and purely local control as in the Confederation decade were gone. A national economic philosophy, inspired by the sometimes contradictory dreams of Alexander Hamilton and Albert Gallatin and a host of other outstanding statesmen, was growing up. Although later conflicts dimmed the accomplishments, it was in these beginning years that an understandable credit structure was established, that manufacturing in its modern sense got under way, that the obligation of individuals to the central government was made clear, that the Gordian knot of western discontent was cut by agreement to secure at national expense a trade outlet for the products of the region, and that transformations in many other fields were wrought. The War of 1812 made the United States a nation both at home and abroad.

The Constitution had merely provided effective machinery for meeting the multitudinous and burdensome tasks that faced the Republic. Decisions as to the course of government were beaten out on the anvil of adversity, albeit the major forms were perhaps already determined. Unfortunately economic difficulties and political differences were everywhere apparent. General Washington, who had written in 1786 that there were "combustibles in every State which a spark might set fire to," was to realize fully in his years of the presidency the extent of the discontent that prevailed. The poor felt that their rights had not been properly regarded by the makers of the Constitution, westerners believed that they were being asked to bear heavier burdens than anyone else in the maintenance of the government, business

men and merchants and manufacturers fretted at monetary and tariff uncertainties, and prosperity did not come to many who had hoped to throw off their poverty. Furthermore, the nation was about seventy-seven million dollars in debt, the newly established treasury was empty, there was little money in the country, and the credit of America in Europe was at low ebb.

The Creation of a Financial System. Some two weeks after the new government under the Constitution was launched in 1789, a resolution providing for the office of Secretary of Finance was introduced into the lower house of Congress. James Madison suggested that three departments—a Department of Foreign Affairs (later changed to Department of State), a War Department, and a Treasury Department—be created. The office of Attorney-General and that of Postmaster-General were added. Thus the cabinet was in the beginning made up of five men. Chief interest for a dozen years at least centered on the Secretary of the Treasury, for the most pressing and troublesome problem of the time, as had been true since the beginning of the Revolution, was that of finance. Maintenance of a powerful central authority as advocated by the Federalists, now in control, depended, in fact, upon the institution of a successful fiscal policy. A plan for stabilizing credit must be worked out, a satisfactory currency must be devised, and means must be found for furnishing funds with which to pay the salaries of all government officials and civil servants, for supporting a military force with which to put down internal disorder and beat off external dangers, and for meeting promptly every financial obligation, particularly payments on the national debt. The wealthy everywhere were interested in the last, and they kept closely in touch with events as Washington pondered his first appointment.

Robert Morris, the most outstanding financier in the country, refused the treasury post and recommended that Alexander Hamilton be appointed. The quick-tempered Hamilton saw economics in terms of material progress and never in terms of human welfare and was inordinately flattered by the attentions of the rich and the well-bred. He never, as Daniel Webster oratorically suggested, brought forth "abundant streams of revenue" or touched to life "the dead corpse of public credit," but he did demonstrate the fact that funds could be collected for the government, and he did convince the dubious with capital to invest that the period of trial-and-error financing in the democracy was over. The time was indeed critical; the nation, if it expected to survive, must strike deep into stable rock. The young Secretary (only thirty-two years old, if the records are correct, when he took office) called to his aid by enlisting their financial assistance the rich of America, and he inspired Europeans to help build through loans an

economic structure that would hold against the winds of adversity. Ever have investors in time of trouble prayed for his return.

Before ending its first session on September 29, 1789, Congress requested the Secretary of the Treasury to prepare a plan for the "adequate support of the public credit." Hamilton, in addition to organizing and putting in operation his department, made within little more than two years four reports; these concerned the public debt (January 14, 1790), an excise tax (December 13, 1790), a national bank (December 13, 1790), and the growth of manufactures (December 5, 1791). Congressmen refused to permit the Secretary to appear in person before them lest he sway their judgment, and as each communication arrived, they exercised in full measure their right to condemn his proposals. The technical language and confusing figures used were especially disparaged; they were, said a Virginian in commenting on the statements as to the public debt, calculated to keep everybody but those "who thrive on speculation" in the dark. John Fenno jibed poetically:

> The Secretary makes reports
> Whene'er the House Commands him;
> But for their lives, some members say
> They cannot understand him.
> In such a puzzling case as this
> What can a mortal do?
> 'Tis hard for One to find REPORTS
> And understanding too.[1]

Whatever the injustices involved, Secretary Hamilton's plan of handling the debt that had been incurred since the beginning of the Revolution was simple. He would merely assume the whole as a federal obligation. Thus the foreign debt of eleven million seven hundred thousand dollars, the domestic debt of forty million four hundred thousand, and the state debts of twenty-five million if funded into a uniform type of security bearing a uniform rate of interest (and protected by a sinking fund to insure regular and orderly retirement) would become actually not a burden but a circulating capital for the people and a means of prosperity. The future, which would share in the fruits of sound economy, said Hamilton and his friends, would pay the costs with ease and with profit. There were doubters nevertheless. James Madison pointed out that much of the old security was in the hands of speculators who had purchased it at far less than its face value. Redemption, though few doubted that it would bring unearned profits to a handful of wealthy, was approved. Furthermore, the state debts, despite

[1] *Gazette of the United States,* February 23, 1793, quoted in Nathan Schachner, *Alexander Hamilton* (New York: Appleton-Century, 1946), p. 246.

the opposition of many individuals, were, after much uncertain bargaining between Hamilton and Jefferson as to the location of the capital, finally assumed.

Hamilton with a little ruthlessness had set the nation on its feet financially and had made its success a matter of concern to men of property. The future benefits were tremendous. Criticisms, however, were justified. There was unwarranted speculation, and relations between government and individuals were sometimes too intimate. Business men had watched with more than casual interest the creation of the Treasury Department and the appointment of its administrator. Madison's objections (though they were accompanied by no practical alternative) were not without legitimacy, as many realized when it was learned afterwards that financiers and congressmen, knowing the course of legislation, had unbecomingly hurried their emissaries to the farm regions and to the frontier to buy up the depreciated government securities in order to reap a happy harvest of undeserved riches. Senator Maclay of Pennsylvania wrote in his diary on January 18, 1790: "Hawkins, of North Carolina, said as he came up he passed two expresses with very large sums of money on their way to North Carolina for purposes of speculation in certificates. Wadsworth has sent off two small vessels for the Southern States, on the errand of buying up certificates. I really fear the members of Congress are deeper in this business than any others."

A second, though ephemeral, triumph achieved by Hamilton was the establishment of a national bank. The Secretary's recommendations were in keeping with the ideas of the business men in the Constitutional Convention, who had written into the law of the land the stipulation that the states should not "coin Money; emit Bills of Credit; [or] make . . . any Thing but gold and silver Coin a Tender in Payment of Debts." The new institution, however, was only an instrument and not a possession of government. Only one-fifth of the capital stock of ten million dollars was subscribed for by the treasury; the remaining four-fifths was owned by private individuals, including Europeans. Gouverneur Morris reported from Paris that speculation was rife there. Indeed, the clamor for stocks became so rampant that it assisted in bringing in 1792 a financial crisis. Secretary Hamilton, dismayed by the tumultuous course of events he had made possible, began to purchase the securities at substantial prices from those who had bought with a profit motive. He relieved the financial pressure by injecting money into the business world, but he also began a practice which was to bring upon the government a century later especially vigorous criticism.

The bank was not established without much argument and some bitter-

ness. "What a damnable villain!" exclaimed Senator Maclay in describing Hamilton after a strenuous day of controversy. To Jefferson and his strict-constructionist followers such an establishment was distasteful because it was unconstitutional, because it would encourage financial monopoly in the urban centers along the seacoast, and because it might prevent the rise of banking facilities in the states. Yet the Bank of the United States for the most part served the nation well. It did not create a national currency, but it did lend stability to the disordered private note structure. Since its books were subject to inspection by the Secretary of the Treasury at any time, it kept its paper issue always within a safe ratio to the specie it possessed. Other banks were of necessity compelled to keep their notes on a reasonably sound basis or be driven out of existence. That was important, for the statement that the Constitution prohibited the states from issuing money is misleading. But for a few gold and silver coins,[2] the circulating medium until the Civil War was made up for the most part of local paper over which the government had little control. With the exception of greenbacks, national money in its real sense is a product of the twentieth century.

The bank served in other ways. It provided a safe place for keeping public funds, though it possessed no monopoly as a governmental repository. It acted as a fiscal agent in the sale of bonds, and it even loaned the treasury money in time of need. It (with its branches) greatly enlarged facilities badly needed in transactions incident to the growth of commerce, manufacturing, and trade. Before 1800, however, the bank question had been drawn into politics, and in 1811, when the charter expired, the institution closed its doors amidst the rejoicing of its enemies.

Proposals for an excise tax that Hamilton suggested to Congress along with his recommendations for a national bank brought a not unwelcomed opportunity for the Secretary to demonstrate the power of the government. Assumption of the public debt had made it obvious that new revenues must be obtained. Even before the creation of the Treasury Department Congress had levied a mild tariff, but the chief result had been only to cause the merchants to increase the prices of their goods months before the tax went into effect and thus begin an unending argument as to the privileges entailed in a tariff system. At any rate, revenues were inadequate, and in March, 1791, duties of from eleven to thirty cents a gallon were levied on

[2] The currency act of 1792 fixed the value of the gold dollar at twenty-four and three-quarters grains of gold and the silver dollar, on the theory that one grain of gold was worth fifteen grains of silver, at three hundred and seventy-one and one-quarter grains. Since new discoveries of silver soon reduced the value of silver, gold, according to Gresham's law, was not turned into the mints. Actually silver was not used greatly either; only eight million dollars had been coined when the Bland-Allison Act was passed long afterwards.

incoming rum and from nine to twenty-five cents a gallon on domestically produced whisky. The "Whisky Rebellion" that welled up beyond the mountains in the region of Pittsburgh belongs to the story of western economic discontent (see p. 166); it is sufficient here to say that enough opposition developed along the coast by 1802 to cause the repeal of the tax. Hamilton in the meantime had taught the embattled farmers their first lesson in economic behavior. His financial system, still intact in many aspects, had been completed.

The Rise of Manufacturing. Although there was a dearth of capital, labor, and skill, it was unthinkable that the new nation, once firmly established, should return to the position of economic subservience that had in part brought the Revolution. Having obtained political independence, it was inevitable that the people of the United States should seek material independence as well. British goods were cheap. Yet to continue to buy

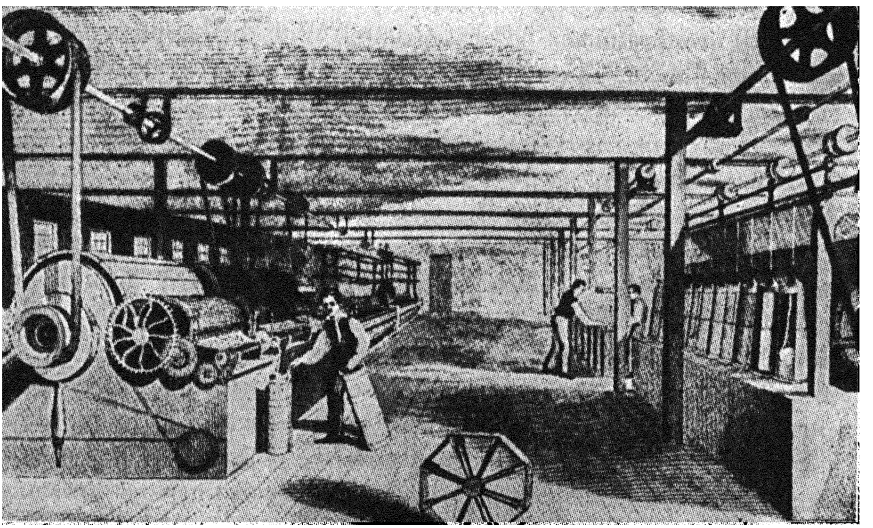


FIGURE 4. A SCENE IN SAMUEL SLATER'S MILL
(From *Memoirs of Samuel Slater* by George White.)

finished articles from abroad would mean that the nation could not escape the hampering and irritating limitations that always plague a strictly agrarian nation. In addition, it would mean that whatever money was accumulated would flow out to foreign business metropolises as it had done in colonial days. Furthermore, England's efforts to smother the plants that had grown up during the Revolution, coupled with her laws to prohibit under heavy penalty the outflow of skilled workmen or mechanical models and plans, smacked of the oppressions of the past—so much so, in fact, that

Americans in high office occasionally justified to themselves attempts at evasion.

That most of the settlers in a young country where land was cheap were interested in farming needs no emphasis; moreover, the ledgers of the time show that shipping and other occupations were profitable enough to discourage new and doubtful ventures. Many private citizens and public officials, nevertheless, were deeply concerned with the creation of an industrial structure. The Secretary of the Treasury was one of the most eager among them, but the fourth of the economic documents he submitted to Congress, his *Report on Manufactures,* was more a philosophic discussion than a proposal for immediate action. After all, little could be done except to create a favorable situation for the growth of factories, and any action in that direction was bound to bring strong opposition. Thomas Jefferson and his agrarian friends had already begun a crusade against the distaff and the loom that was to continue until long after the Civil War.

Though it was economically questionable in places and certainly was socially discouraging, Hamilton's *Report* was important. The Secretary, with the aid of Tench Coxe, presented a striking picture of the needs of the people and of the demands of those who were endeavoring to compete industrially with England; he pointed out the fact (without reference to its human consequences) that machinery enabled the British to employ women and children, many of the latter "of a tender age"; and he vigorously recommended the institution of protective tariffs, bounties, and material encouragement to inventors and urged an aggressive program of road building and canal construction. Only then, he asserted, could the nation throw off its subservience and reach a bargaining position in world exchange of economic goods.

In spite of the fact that Hamilton's program was enacted only in part, manufacturing made some progress. Ironmasters, chandlers, glassmakers, hatters, and initiators of other new industries were helped by the revenue acts of 1791, 1792, and 1794. Cotton and woolen mills sprang up; President Madison wore a suit of American-made broadcloth at his inaugural in 1809, and a few months later Albert Gallatin, Secretary of the Treasury under both Jefferson and Madison, optimistically reported that many of the essentials of life were being adequately supplied by domestic workmen. The peddler, harbinger of Connecticut industrial specialization, was already wandering the highways. An observer wrote of Berlin in 1806: "This town is the focal point of the Con[necticut] tincarts. Thither they depart & thither they return from all directions, like the radii of a circle." Industrialization, with its accompanying social and economic disturbances, was clearly in the offing.

Foreign wars, however, were more influential in shaping the material life of the young nation than was the work of the planners.

Labor in the New Nation. The labor movement as such did not actually begin until later, but some organization of wage earners was attempted in the nation's formative period. The Carpenters' Society of Baltimore, founded in 1790, provided for cooperative buying and for loans to needy families in the group. It also maintained reasonably strict discipline; members were required to adhere to an established price scale and were fined for hiring nonunion helpers. The Philadelphia shoemakers were first united in 1792, and two years later the Typographical Society of New York was formed. Many protests were made against existing conditions. The practice of wage cutting arose with the growth of wholesale business. Factory owners on the northern Atlantic coast, for instance, had, because they sought orders as far away as Georgia, to put set prices on their products in a competitive market. If raw materials went up, they could maintain profits only by reducing wages or by lengthening the laboring day. Long hours frequently brought objections from workmen. In 1790 the Journeymen Carpenters of Philadelphia complained that they were compelled "to toil through the whole course of the longest summer's day" and declared "by the sacred ties of honour" that "in future, a Day's work, *amongst us,* shall be deemed to commence at six o'clock in the morning, and terminate, at six in the evening of each day."

Strikes were not uncommon. A "disturbance among the Riggers" along the Hudson who "wanted higher wages" sent a number of the workmen to jail in the spring of 1799, and that same year the Philadelphia cordwainers quit their jobs for ten weeks. On November 1, 1800, Elizabeth De Hart Bleecker of New York recorded in her diary that "the Bakers stopped baking to day on account of the orders passed by the Corporation to increase the weight of the loaves ten ounces." Four days later she noted that "the Bakers have commenced baking but their loaves are the same." Few gains, in fact, were made. Wages remained about what they had been before the Revolution. Common laborers in the fields were seldom paid more than thirty to fifty cents a day, and fifty cents was good compensation for a day's toil in the towns. Bricklayers and other skilled workers sometimes got as much as a dollar. A Massachusetts wheelwright between 1800 and 1807 averaged, according to his account books, nearly seven hundred dollars a year.

The Beginnings of a Transportation System. Most of the leading men of the nation, especially those who had made the plodding journeys to the Constitutional Convention in Philadelphia in 1787 and the inauguration in

New York two years later, were aware of the miserable conditions of the roads and the paucity of facilities on the rivers and bays. It was obvious that national progress was impossible without a reasonably satisfactory transportation system. Limited improvements were soon begun. Lighthouses were erected at the most dangerous places along the coast, and some harbors were cleared. Several people began experimenting in the construction of steamboats. A paddle-wheel vessel demonstrated by John Fitch as early as 1787 was within three years making regular runs between towns on the Delaware Bay. The *Clermont,* however, which made the trip from New York to Albany in 1807, earned for Robert Fulton the title "father of steam navigation." Four years later Fulton and his associates completed the *New Orleans* at Pittsburgh and descended the Ohio and the Mississippi to the Gulf. When the *Enterprise* in 1816 puffed laboriously upstream from New Orleans to Louisville at the falls of the Ohio, the relentless Mississippi current, which had proved a barrier to inland traffic since the discovery of the continent, was at last partially subdued. Even some ocean-going sailing vessels were built at Pittsburgh or neighboring towns and floated down the Ohio and the Mississippi and out to the ocean markets of the world with their cargoes from inland America.

Land transportation presented peculiar problems in that more than mere conveyance had to be developed. Frontiersmen, finding road building far too expensive for their puny purses, began insistent demands that the government come to their aid. Easterners, on the other hand, saw no reason why national funds should be expended for the benefit of the small western population. The question of constitutionality was involved also. The power of Congress "to establish post roads" and to "provide" for common defense and "promote" the "general welfare" was a source of endless controversy between the "strict" and the "loose" constructionists. As early as 1796 the national government took some action that might be regarded as a precedent for federal aid, and in 1802 Congress sanctioned the expenditure of five per cent of the returns from land sales in Ohio on road building. Jefferson and Gallatin, no less concerned with national planning than had been Alexander Hamilton, sponsored internal improvements. The former in his second inaugural advocated the spending of the surplus revenue on roads, canals, art, manufacturing, and education in particular, and the latter in 1808 recommended a unified transportation system by which the various sections of the country might be tied together. Gallatin urged with especial vigor not only the development of a continuous inland waterway along the coast, with canals to connect the existing network of rivers and bays, but also the construction of highways to facilitate the move-

ment of freight to and from the frontier. The Cumberland Road, between Cumberland in Maryland and Wheeling in what is now West Virginia, was chartered by Congress in 1806 and started in 1811. While often in miserable condition, it was an important link between the East and the West; it crawled eventually as far as Vandalia in Illinois.

TABLE I

TURNPIKE ROADS OF THE SUSQUEHANNA VALLEY*

Mi.	*Date*	*Name*	*Letters Patent*	*Finished*
62	1792, Apr. 9	Philadelphia and Lancaster	1792, June 21	1794
10	1794, Apr. 22	Lancaster and Susquehanna	1796, Feb. 24	1803
60	1803, Feb. 11	Easton and Wilkes-Barre	1803, Dec. 28 (47½ done)	1815
67¾	1803, Mar. 24	Downingtown, Ephrata, and Harrisburg	1803, June 21	1819
26	1804, Mar. 5	Lancaster, Elizabethtown and Middletown	1805, Apr. 1	1812
11½	1804, Mar. 19	Susquehanna and York	1808, May 16	1810
30	1804, Mar. 19	Susquehanna and Lehigh	1804, May 16	1806
50	1804, Mar. 29	Coshecton and Great Bend	1805, Apr. 22	1811
75	1805, Mar. 25	Centre (leading from Reading to Sunbury)	1808, May 10	1814
80	1806, Mar. 28	Susquehanna and Tioga	1806, Oct. 10	not yet
18	1807, Mar. 31	York and Maryland Line	1807, June 3	1809
7	1808, Feb. 22	Hanover and Maryland Line	1808, June 27	1809
11	1809, Mar. 2	York and Conewago	1809, July 27	1812
30	1809, Mar. 25	Hanover and Carlisle	1812, Feb. 29	not yet
9¼	1810, Mar. 19	Middletown and Harrisburg	1815, June 14	1818
10	1811, Feb. 6	Berlin and Hanover	1811, Sept. 23	1817
41	1805, Mar. 2	Berks and Dauphin	1816, Feb. 16	not yet
48½	1814, Mar. 9	Harrisburg, Carlisle and Chambersburg	1816, Feb. 8	1818
63	1819, Mar. 16	Philadelphia and Great Bend	1820, Dec. 21	....

* From James W. Livingood, *The Philadelphia-Baltimore Trade Rivalry* (Harrisburg: The Pennsylvania Historical and Museum Commission, 1947), p. 53.

States too were interested in better transportation. Work for the most part, however, was limited to ventures undertaken by private corporations, the first of which was approved by the General Assembly of Pennsylvania on April 9, 1792, with authority to construct a turnpike between Philadelphia and Lancaster. Many New England states, notably Massachusetts and Rhode Island, soon began to develop excellent facilities for travel. Traders who could afford the tolls were helped immensely, and the socially minded were pleased. A young Yale student in 1806 driving toward Hart-

ford in a yellow gig with "a calash top, horizontal springs, and plated harness" declared in a diary entry that his equipage was the best that "has lately appeared on that road." By 1811 one hundred and thirty-seven chartered companies with a combined capital of seven and a half million dollars had built in New York fourteen hundred miles of road. Pennsylvania before 1821 had chartered a hundred and forty-six companies, eighty-four of which actually obtained letters patent. Seaboard cities as far south as Baltimore fought for the commerce of the West.

The Problems of Trade. Only in modern times have roads proved economically satisfactory in sectional domestic trade. In spite of improvements, it still cost on the eve of the War of 1812 one hundred and twenty-five dollars a ton to send freight overland from Philadelphia to Pittsburgh. Both tolls and the inordinate time required for hauling kept costs everywhere excessive. Canals were planned in many places, but few materialized notwithstanding rich gains to be had in feeding war-torn Europe. Engineering problems and regional jealousies seriously hampered progress. Philadelphia and Baltimore each spent large sums of money in competitive attempts to tap the wealth of the Susquehanna valley by waterways. Fully six months before authorization of the Philadelphia-Lancaster turnpike in 1792 the Pennsylvania legislature chartered the Schuylkill and Susquehanna Company, which was to bring into the Quaker City from as far away as the Genesee country of western New York wheat at fourpence a bushel instead of the prevailing shilling. The Delaware and Schuylkill Company, approved one day after the creation of the organization that was to build "an artificial road from the City of Philadelphia to the Borough of Lancaster," was in dreams to put the mouth of the Delaware in touch with the headwaters of the Ohio and the shores of the Great Lakes. Although much construction was undertaken, the project was never completed. Maryland, blocked in part by Pennsylvania, was equally disappointed in her efforts to grasp the grain and other products of the rich valley stretching northward into New York from Havre de Grace at the head of the Chesapeake Bay. New York, ultimate victor in the race for the traffic of the trans-Appalachian region, was even now concerned with its natural passageway to Lake Erie.

Ocean transportation, unlike that on land, was relatively cheap, and when the Constitution, with its national control of commerce, was adopted, American trade, profiting from European disturbances, began a rapid growth that lasted nearly two decades. The per-capita value of exports and imports between 1790 and 1810 was not to be exceeded until after the Civil War. The ports along the Atlantic hummed with activity. By 1793 only

England carried more tonnage than the United States. Everywhere along the upper Atlantic it seemed indeed as though the streets led "down to the sea." The ways in the great shipyards of colonial days were still busy. Even the boats that plied inland rivers contributed to the outgoing cargoes. "Grain, lumber, pot and pearl ashes" from upstate New York and from Vermont were floated down the Hudson to New York harbor from Albany, which then owned thirty sloops and several sail-rigged scows that could carry "each two thousand bushels of wheat." Only eight years old, the little town of Hudson, twenty miles below Albany, possessed in 1791 "four ships, fifteen brigantines, and twelve sloops" that departed periodically for the West Indies loaded with lumber, horses, hay, grain, and fish. Ships from every seaboard town put out to the islands with bulging cargoes; the *Polly,* for instance, carried on one trip in February, 1807, thirty-six thousand feet of sawed lumber, three thousand red-oak staves, one thousand white-oak staves, twenty-five thousand feet of boards, ten thousand feet of scantling, and more than a hundred and forty-one thousand shingles. Codfish, beef, flour, hoops, beans, pickled fish, potatoes, apples, ship bread, onions, beets, and cheese were shipped in large quantities.

The West Indies trade, while it offered an enticing market for America's surplus products, was obstructed by the restrictions and the belligerent attitude of the English and the French. Certain commercial privileges obtained by treaty in 1795 by John Jay were sparingly and grudgingly given. The French were particularly hostile, and for several years they engaged in what amounted to an undeclared war upon the United States. Often ships were seized in the island ports, and even if they were not condemned, the losses entailed were sometimes considerable. A captain detained in St. Lucia in 1794 reported to the New England owners of his craft that "at present our Sails are absent and carried on Shore and nothing permitted to go out of the Vessel and what they mean to do with us I cannot determine." "I have the greater part of my Cargo on board," he sorrowfully added, "which I expect will spile before it can be sold."

Commercial troubles were being encountered elsewhere too. The Barbary pirates of northern Africa, tolerated by European countries because they discouraged young commercial upstarts such as the United States, began to take a heavy toll, and the rise of Napoleon brought disastrous restrictions, which led eventually to the War of 1812. In the meantime the foreign as well as the domestic situation was being complicated by the sweep of the nation westward, for expansion, regardless of complexities, was ever in progress.

The Westward Movement. The migration over the mountains was stimulated by a desire for land and by a hope of gain on the part of individuals and companies. Land speculation, in fact, had brought the English and the French into conflict in the Ohio valley long before the American Revolution. The roads that General Braddock and General Forbes had cut to the forks of the Ohio for purely military purposes during the Old French and Indian War led many an ambitious family into the wilderness. The British proclamation of 1763 forbidding settlement beyond the crest of the Appalachians had not stopped the irresistible onward movement of the people.

The first outposts across the mountains had been founded mostly by Virginians because of their easy access to the interior. Yet Carolinians and far-away Pennsylvanians traveled the four highways that led westward; it was often a medley of pioneers who met at "the forks" at Fort Chissel (built in 1758 to hold the Cherokees in check) and took the Wilderness Road to Cumberland Gap, two hundred miles away. Day after day the pioneers had toiled up one mountain slope after another, only to find at the tops more forbidding walls before them. Deflecting to north or south in search of passes, they had plodded forward on their laborious way. "But" says Ellen Churchill Semple, "in spite of dangers and hardships, the trail through the wilderness had its joys,—the charm of the wondrous Appalachian forests, the flicker of sunlight through the high-reaching trees, the plunge into a tunnel of green through the tender spring underbrush, the sense of strong, pulsing life with the upward climb, finally the deep-drawn breath on the summit before the outstretched billows of land, and the hope of opportunity beyond." [3] And "beyond" lay the smiling blue-grass country, rich even today. It must not be imagined, however, that the westward movement was inspired solely by the hope of joyous adventure. Many migrants were fleeing their worn-out tobacco fields in the Carolinas and Virginia, unprofitable crops throughout the established agrarian region, or blasted hopes in northern commercial towns. Always ahead lay health and wealth. The "luxuriance of the soil exceeds everything to be met with in eastern America, whilst it is a stranger to the cold winters and the sickly falls of the Genesee country," wrote Harry Toulmin in 1793 from Kentucky. "The high lands of Kentucky seem to be a collection of the river bottoms of the rest of America. The produce of an acre is double that of the Shenandoah Valley." [4]

[3] Ellen Churchill Semple, *American History and Its Geographic Conditions* (Boston: Houghton Mifflin, 1903), p. 70.

[4] Marion Tinling and Godfrey Davies, eds., *The Western Country in 1793: Reports on Kentucky and Virginia by Harry Toulmin* (San Marino: Huntington Library Publications, 1948), p. 132.

Daniel Boone, James Robertson, and John Sevier are the most noted of the early leaders who sought out fertile spots on western rivers. Their followers contributed freely to the revolt against England. George Roger Clark's expedition into the Northwest was launched from Louisville at the falls of the Ohio in Kentucky, and the ranks of the marchers held many "long-knives" from the region. Only Vermont preceded Kentucky and Tennessee into the Union.

Turmoil marked the frontier long after the Revolution. Indian hostility roused by expanding settlement made necessary punitive excursions against the tribes, with generally temporary and sometimes tragic results. International complications also were involved. The British provided the redskins with guns and ammunition and may have incited them to war on the American outposts. Long-neglected frontiersmen rejoiced when the government began aggressive action against the Indians in 1790. General Josiah Harmar, who led the first attack, was defeated on the Maumee in the fall of that year. The next spring General Arthur St. Clair took the field, with little more success. In 1792 Anthony Wayne was commissioned by President Washington to punish the Indians and bring peace to the Old Northwest. Wayne trained his army well and then marched into the Indian country with military precision and determination. The Indians were awed by the discipline of the troops, and the British were alarmed by the evident earnestness of the new commander. Though the English leader at Detroit warned the American general against further penetration, Wayne pushed sternly on to the Maumee and built Fort Defiance. Moving down the Maumee toward the head of Toledo Bay, he met the Indians under Little Turtle at Fallen Timbers in 1794 and completely overwhelmed them. On August 3, 1795, the Treaty of Greenville was concluded, by which a large part of Ohio was released from Indian control. Subsequent agreements pressed the Indians back beyond the present boundaries of Indiana. Relative quiet came with General William Henry Harrison's victory in the Battle of Tippecanoe in 1811.

The Trans-Appalachian West and Its Problems. During the years the Indians were being subdued, settlement was progressing rapidly under the guidance of speculators. Purchase of vast empires by large land companies had begun during the period of the Confederation, when the Ohio Associates, many of them members of Congress, bought a million acres of the public domain in the Old Northwest at a dollar an acre. Payment was made in worthless continental money that the government had issued and therefore could not well refuse to accept. Marietta, the organization's first settlement in the Ohio country, was established on the Muskingum in

May, 1788. Already, however, John Cleves Symmes, leader of another speculative group, had built on the Ohio at the mouth of the Licking the village of Losantiville, the name of which Governor St. Clair arbitrarily changed to Cincinnati.

Other towns followed in rapid succession. In the spring of 1790 a forlorn group of French immigrants arrived at Alexandria, Virginia; lured to the New World by Joel Barlow, who had been sent to France as special agent by the Scioto Associates (a coterie of speculators who had forced concessions from Congress before the Ohio Associates were permitted to secure land grants), they discovered on their arrival that the land they had been promised was not forthcoming. They eventually founded Gallipolis on the Ohio. Six years later Moses Cleveland began on Lake Erie in the Connecticut Reserve a village bearing his name which has grown into a modern industrial metropolis.

While the plowmen who were within a few years to become important factors in the economic and political course of the nation were slowly filling up the Old Northwest in an orderly and predetermined manner, other agriculturists were moving into the territory south of the Ohio to lay out their zigzag-bounded farms with only their own whims and the restrictions of previous claims to guide them. Like the pioneers of the southern coastal plain who had set up a frontier of England on the banks of the James and its neighboring streams, these settlers beyond the southern Appalachians spread the frontier of the new nation in the Old Southwest along the banks of the inviting rivers. Unfortunately the waterways led not into the commercial centers of the country but into the heart of the Spanish empire in America, and unending trouble resulted.

Of the problems that faced the administrative officers of the new government, few were more acute than that of the Old Southwest. None were more purely economic in nature. Dwellers in the blue-grass sections of Kentucky and Tennessee and the land drained by the upper reaches of the streams that pour their waters into the Gulf of Mexico found their material lives hemmed in by mountains that lifted their parallel ranges between them and the industrial centers that bought and sold for the infant Republic. Transportation facilities were almost totally lacking. The Wilderness Road was scarcely more than a trail, its traffic to a large extent the westward passage of eager pioneers.

Spain and the Commerce of the Old Southwest. Only light commodities could be profitably freighted over the miserable roads that led to the commercial centers along the Atlantic seaboard. Beckoning rivers, however, tempted the trans-Appalachian dwellers to pole the products of their virgin

farms down the peaceful currents to the Mississippi and on to New Orleans, quixotic and sinful American capital of decrepit Spain. Abundant forests of oak, poplar, and pine provided lumber for the rafts and rude boats of western trade. While the Revolution was in progress, Spain had offered no objections to the cargoes of American products from the north, but during the period of the Confederation she had closed the route. The frontiersmen looked to their government to secure them economic freedom, and its failure to do so immediately began in the forests on the farther slopes of the Alleghenies a series of diplomatic intrigues that spread even to the courts of Europe.

Administrative officials were fully conscious of the anomalous position of the frontiersmen in the Southwest and acutely aware of the slenderness of the thread by which the section was held to the nation. Washington openly expressed the belief that the westerners stood as on a pivot; "the touch of a feather," he said, "would turn them any way." And indeed, though they had fought for the nation in the Revolution, Kentuckians and Tennesseeans were for the moment guided wholly by the economic assurances they received. Their spirit of self-reliance exceeded their loyalty to a government that could neither save them from Indian depredations nor secure for them the trading privileges necessary for their existence. Their thoughts therefore drifted southward with their streams. Alexander McGillivray, renegade leader of the southern Indians, had written Spanish officials at New Orleans as early as April, 1788, that "Cumberland and Kentucky are determined to free themselves from their dependence on Congress, because that body cannot protect either their persons or their property, or favor their commerce." A few months later a Spanish agent had reported from Kentucky that the citizens of that state believed "that the direction of the current of the rivers which run in front of their dwellings points clearly to the power to which they ought to ally themselves."

The Confederation government, realizing the precarious situation on the western border, had made persistent efforts to obtain commercial privileges from Spain. Some diplomats had argued that the Mississippi River from source to mouth was open for navigation purposes to the people of the United States since Spain had granted such rights to England in 1763 and England had transferred them to the American nation in the treaty of 1783. Others had based their contentions on ancient sea-to-sea charters and the "natural law" that dwellers on the upper part of a river have full access to the ocean regardless of ownership at the mouth.[5] But

[5] See Samuel Flagg Bemis, *A Diplomatic History of the United States* (New York: Henry Holt, 1936), ch. v. More detailed treatments of the entire Spanish question are to be found in

navigation would have been of little value without the privilege of a place of deposit where boats might be broken up for sale and cargoes loaded on ocean-going vessels. Spurred on by the impatience of easterners, who felt that their commercial problems were being overshadowed by western demands, Congress had authorized diplomatic negotiations with Spain; in 1786 John Jay, Secretary of Foreign Affairs, and Diego de Gardoqui, representing the Spanish ministry, had begun preliminary discussions. A short time afterwards Jay had requested permission to sign an article forgoing navigation privileges of the Mississippi for thirty years. The proposal had been defeated by the vote of the southern states alone, and westerners, convinced that their government was interested only in the commercial welfare of the northerners, had plunged deeper into intrigue.

President Washington continued the efforts that the Confederation government had begun to obtain economic relief for the Old Southwest. The Jay treaty with England of 1794 helped the section but little. It did, however, alarm Spain to such an extent that she was willing to negotiate. In 1795 Thomas Pinckney, then in London, was dispatched to talk terms with the power whose American possessions on the Gulf of Mexico were smothering the economic life of the transmontane people of the United States. Typical Spanish dallying was brought to an end in October by Pinckney's announcement that he was returning to London. The bluff succeeded, and an agreement, subject to renewal, was drawn up and signed at San Lorenzo providing for free navigation of the Mississippi and a three-year right of deposit at New Orleans.

The Purchase of Louisiana. The Spanish commercial compact was short-lived. When the French, whose revolution the American government had refused to support, came into possession of Louisiana in 1800, the privilege of deposit at New Orleans had already been withdrawn. The smoldering discontent of the frontier was stirred again. Thomas Jefferson, strong partisan of the revolutionists in France, on coming to the presidency in 1801 took up anew the problems of the westerners and eventually sent a special mission to Paris to arrange for the purchase of New Orleans. It was not merely the city that the commissioners bought; it was the whole of Louisiana. The acquisition made it possible for the frontier farmers to send their products unhampered to the sea and gave the United States its chief claim to the territory beyond the Mississippi River whose agrarian problems were long before the end of the century to plague the nation. Napoleon sold

Samuel Flagg Bemis, *Pinckney's Treaty* (Baltimore: Johns Hopkins Press, 1926); A. P. Whitaker, *The Spanish-American Frontier* (Boston: Houghton Mifflin, 1927) and *The Mississippi Question, 1795-1803* (New York: Appleton-Century, 1934); and T. M. Green, *The Spanish Conspiracy* (Cincinnati: R. Clark and Company, 1891).

Louisiana for fifteen million dollars; he would have taken less, but the purchase was nevertheless a bargain.

Western Economic Problems: The Whisky Rebellion. The Southwest was not alone in its troubles. From Canada to the Spanish border the frontier section was always in economic uncertainty and tumult. The Jay treaty by providing for the evacuation of the northwestern forts held by the British did something toward establishing harmony. Furthermore, agrarian discontent was somewhat lessened by a new law, passed in 1800, that reduced the price of public lands to such an extent that with an annual outlay of one hundred and sixty dollars a settler could obtain title to three hundred and twenty acres in four years. Difficulties, however, were persistent. Western farmers, who because of the poor transportation facilities were unable to market their corn except in distilled form, vigorously opposed Hamilton's excise tax on whisky. The impost, said many, meant discrimination against the poor, English tyranny of taxation without representation, and subjection to distant government officials and federal judges. It was perhaps the spirit of frontier democracy that gave the agriculturists beyond the mountains courage to speak out against national legislation, but they rose in protest primarily because the law they were attacking modified a means of livelihood dictated by the economic organization of which they were a part.

Only among the people of western Pennsylvania did resentment find physical expression. Farmers in the neighborhood of Pittsburgh called mass meetings and intimidated the revenue collectors. "Whisky Boys" in disguise often destroyed the stills of those who were inclined to obey the law, and placards and letters signed by "Tom the Tinker" helped to stir the seething discontent. Resistance took much the same course as had that on the seaboard twenty years before to the taxation and imposition of England. President Washington finally ordered the government forces to move upon the disaffected region. Hamilton accompanied the military on its slow march, and the President reviewed the troops at Bedford. Detachments of soldiers were sent into the disturbed area to receive the submission of the disbanded rebels, whose leaders were arrested and paraded in the streets of Philadelphia amid the jeers of their economically more fortunate fellow countrymen.

Agrarian Economic Adjustments in Other Sections. The southerners as well as the frontiersmen were sorely troubled. Although the Constitution provided that the slave trade should not be prohibited before 1808 and guaranteed the return of fugitive bondsmen, the labor supply, which had been decidedly disrupted by the Revolution, was still unstable. Moreover, the

war had destroyed at a blow the subsidies and monopolies that had been enjoyed under British rule. The cultivation of indigo rapidly disappeared, and rice fell in importance. Tobacco, no longer holding a monopoly in English markets, ceased to be common currency among the southern states, and its production declined for many years. Planters condemned the government for giving assistance to commerce while entirely neglecting agriculture. In fact, the region below the Potomac was in 1789 on the eve of a great change in its agrarian system. Cotton awaited only some method of removing the seeds to become the dominating crop. The long-fibered variety had been grown for many years, but its culture was limited to the islands along the shores of South Carolina and Georgia. The upland or short-stapled product, destined to become "King Cotton" in the economic annals of the nation, began its rapid spread soon after the invention of the cotton gin by Eli Whitney in 1793. Its development carried the germs of a tariff controversy that long perplexed the statesmen.

Agriculture everywhere, many believed, had fallen into low esteem. Samuel Deane, publisher of the *New England Farmer,* regretted "that the most complicated of all the arts, in which the brightest genius may find sufficient room to exert and display itself, should be slighted and neglected, by a people not wanting in ambition." Not only, he explained, had "those who have embraced the profession" too frequently "failed of rapidly increasing their estates by it, but too many have had the mortification of making but an indifferent figure in life, even when they have used the strictest economy, and worn out their constitutions by hard labour." Many poured into the towns, but simple farmers when they had exhausted their fields moved, as they always had, westward.

The War of 1812. The forces that threw the nation into armed conflict with England in 1812 found aggressive expression beyond the Alleghenies, but they were not all products of that section. A host of complexities—political rivalry between the Federalists and the Jeffersonian Democrats, trade on the high seas, a desire to be wholly free from foreign influences, the conquests of Napoleon in Europe, depression at home, the burning desire of American expansionists for Canada, Florida, Cuba, and perhaps parts or all of Mexico—were in one way or another involved. Commercial troubles were always significant. Before many years of the nineteenth century had passed, it was obvious that the merchants of the seacoast towns were on the verge of losing the trading profits which the neutral position of the nation had, despite many difficulties, enabled them to enjoy. In 1805 Sir William Grant ruled in the Essex case that "broken voyages" were illegal, thereby endangering about half the American exports.

Napoleon added to the difficulties when in 1806, in an attempt to smother England, he announced his continental blockade. The British promptly replied by issuing orders in council, and thereafter neutral ships, whatever their destinations, were fortunate if they escaped seizure. Americans, unable to obey the contradictory commands of the contending powers, sought through nonimportation, nonintercourse, and embargo to force recognition of their rights as an independent nation. The chief result was strangulation of shipping at home. Flourishing seaports became idle towns with grass growing up among the cobblestones of the wharves. New Englanders were especially offended, and to them Thomas Jefferson became an evildoer. One poet complained that the ships that had once whitened the ocean, each with its cargo, had fallen prey "To Jefferson, worms and EMBARGO."

The British, suffering from the fact that her sailors were frequently tempted by the high wages paid on American merchantmen to jump ship, added further insult by searching the vessels of the United States for deserters. Since the doctrine "once an Englishman always an Englishman" prevailed, naturalized citizens were sometimes impressed. Continued provocations, including three broadsides thrown into the warship *Chesapeake* by the *Leopard,* eventually brought congressional demands for justice. It was across the mountains and in the back country of the southern states that real clamor arose. There a young group of "War Hawks," whose most noted members were Henry Clay and John C. Calhoun, demanded vigorous action—action that would bring Canada and Florida into the nation, that would end western depression, and that would put a stop to Indian troubles. Clay, frontiersman from Virginia who had settled as a penniless lawyer in Lexington, Kentucky, in 1797 and who had served several months in the Senate in the winter of 1806-1807 before he was old enough to meet the constitutional requirement, was an aggressive leader. Already concerned with economic planning for the nation, he knew whom he wanted to fight, and before long the unhappy Madison was driven into war with England.[6]

Economically America was unready for war. Congress, having the previous year refused to recharter the Bank of the United States, adjourned in 1812 after declaring hostilities without voting the much-needed taxes recommended by Gallatin. Furthermore, the army was miserably officered, and New England, to state the case as mildly as possible, was openly unsympathetic. With the exception of Andrew Jackson's victory at New Orleans after peace had been declared, the land campaigns are tolerantly described

[6] J. W. Pratt, *Expansionists of 1812* (New York: Macmillan, 1925) is an interestingly presented account of the reasons why the western and southern states desired war with England.

as "inglorious." But American ships were brilliantly successful in a number of individual engagements, and Captain Oliver Hazard Perry won renown on the Great Lakes.

The negotiations at Ghent in Belgium, which ended successfully in 1815, clearly revealed the regional jealousies in the country. Adams of New England and Clay of Kentucky fought vigorously for their respective causes, and when their work was completed, there was no reference in the pact to the commercial questions that had brought on the war. The nation, however, emerged from the contest a free and self-reliant power, capable of demanding and securing its rights on the highways of the world. The period of awkward adjustments incident to growing childhood was over. Confusion was giving way to sectionalism; the North, the South, and the West had come into distinct being.

Chapter 9

THE PHYSICAL GROWTH OF THE NATION, *1816-1860*

The New Nation. The America that emerged from the War of 1812 knew its own mind; it had come to manhood. The people were filled with hope. Men no longer faced the wilderness with fear. They plunged eagerly into the woods, knowing that they had training and experience behind them and a fixed goal before. That goal was an economically as well as a geographically complete nation. The previous generations had struggled almost literally uphill, but now that the government was firmly established and ready to defend its citizens against foreign or domestic foes, the new pioneers stood on the tops of the Alleghenies and with joy and unbounded optimism poured down the westward slopes through the transmontane settlements and on into the fertile valleys of the Mississippi. Expansion took on a vigor possible only in the presence of a national dream and an illimitable vista of economic opportunity; every step onward opened fresh sources of wealth.

The Westward Movement. The dream of national greatness that came into particular prominence after the War of 1812 was only a part of the vast westward movement that had long been in progress. The trend to the west, in fact, can claim no certain time as its own. It began with the earliest settlement and continued until there were no longer opportunities, real or imaginary, to lure the explorer, the trapper, the land speculator, the farmer, or the industrialist onward. The restless population was always on the move. Of the fifty soldiers who at one time or another between 1775 and 1783 served in the Revolution from Mifflin County in central Pennsylvania, only nine lived out their lives in their wartime homes; nine died in western Pennsylvania, thirteen in Ohio, nine in Kentucky, four in Missouri, two in western New York, two in Illinois, one in Indiana, and one in Tennessee. In 1847 Solon Robinson, Indiana pioneer, wrote of his frontier community that "of the 249 persons who were assessed here only ten years ago, *eighty only remain* and twenty-seven have died here—so that 142 have rolled on in that irresistible wave of Western emigration, that never will cease till it meets the resisting wave of the Western ocean which will cause

the mighty tide to react upon itself until all the mountain sides and fertile plains of Mexico & Oregon are teeming with the Anglo Saxon race." [1]

Land as a Factor in Frontier Advance. Although various factors have contributed to national expansion, both the impetus and the results have been outstandingly economic. For many years no single element was more important than the presence of a bountiful store of land. The first settlers who debarked upon the Atlantic coast of the New World were thrust precipitately from a land-poor society into a society of land abundance. The significance of that change cannot well be overemphasized. Land was the measure of wealth. It is not strange that the newcomers sought eagerly to grasp large holdings from the great store of unmeasured acres and that they moved ever westward as the frontier receded across the mountains and the Mississippi and on toward the Rockies. Nor is it strange that conflicts marked their progress.

But hunger for soil was not altogether responsible for the westward trek. There was an economic push as well as an economic lure. One is likely to forget that the rich earth was a fleeting wealth, soon consumed, and therefore in itself a temptation and a goad to continual movement. Peter Kalm observed before the Revolution that the Americans when they had "converted a tract of land into fields which had been a forest for many centuries together, and which consequently had a fine soil, they use it as such, as long as it will bear any corn; and when it ceases to bear any, they turn it into pasture for the cattle *(that is, leave it to whatever spontaneous growth of weeds comes)* and take new corn-fields in another place." Southern tobacco planters, because poor soil would not yield sufficiently profitable crops to buy slaves for the fields and luxuries for the "great house," were particularly subject to the forces that ever shoved the population westward. "Many of them," said a writer in 1775, "have very handsome houses, gardens, and improvements about them, which fixes to one spot; but others, when they have exhausted their grounds, will sell them to new settlers for corn-fields, and move backwards with their negroes, cattle, and tools, to take up fresh land for tobacco; this is common, and will continue so as long as good land is to be had upon navigable rivers: this is the system of business which made some, so long ago as 1750, move over the Allegany mountains, and settle not far from the Ohio." Thus it was that conservative family groups followed the adventurous to the West. In addition, some of the young men of each succeeding generation were unable to obtain either agrarian or industrial employment at home, and they were forced into the unoccupied

[1] *Solon Robinson, Pioneer and Agriculturist, Selected Writings,* ed. by Herbert A. Kellar (Indianapolis: Indiana Historical Bureau, 1936; 2 vols.), vol. i, p. 63.

territory by the sheer necessity of making a living. "The annual class of young people seeking work is common to society," says Frederick Logan Paxson; but, he adds, "the call of the western lands is the peculiar American note."

The Order of the Frontier Advance. Neither in colonial times nor in the early years of independence was there any preconceived system or order in the advance of the frontier. Always, however, there were certain recognizable stages of movement. The tramping army followed unerringly the courses marked out by nature, and the time of passing of each individual in the general group of pioneers indicated his occupation. Frederick Jackson Turner has with much truth and some poetry described the colorful pageant:

> The Atlantic frontier was compounded of fisherman, fur trader, miner, cattle-raiser, and farmer. Excepting the fisherman, each type of industry was on the march toward the West, impelled by an irresistible attraction. Each passed in successive waves across the continent. Stand at Cumberland Gap and watch the procession of civilization, marching single file—the buffalo following the trail to the salt springs, the Indian, the fur trader and hunter, the cattle-raiser, the pioneer farmer—and the frontier has passed by. Stand at South Pass in the Rockies a century later and see the same procession with wider intervals between. The unequal rate of advance compels us to distinguish the frontier into the trader's frontier, the rancher's frontier, or the miner's frontier, and the farmer's frontier. When the mines and the cow pens were still near the fall line, the trader's pack trains were tinkling across the Alleghenies, and the French on the Great Lakes were fortifying their posts, alarmed by the British traders' birch canoes. When the trappers scaled the Rockies, the farmer was still near the mouth of the Missouri.[2]

The Significance of the Frontier. The frontier was a significant factor in American history until the twentieth century. While not alone in shaping the character, thought, and habits of the nation, it nevertheless questioned the right of the propertied to profit at the expense of the non-propertied. It challenged the theory of the wealthy that the great mass of the people was destined to remain always poor. It denied the prevailing belief that only the "established" were capable of making good laws. It demanded political and financial concessions at variance at times with the ideas of stable government. It demonstrated, often with brutality and ignorance, the equality of all.

Manifest Destiny. The frontier of the nineteenth century, unlike that of the seventeenth and eighteenth, was built with the approval and assistance

[2] Frederick Jackson Turner, *The Frontier in American History* (New York: Henry Holt, 1921), p. 12.

of the national government. Americans in general were convinced that not only the vast Mississippi valley but also the western coast from Puget Sound to Lower California as well as Cuba and perhaps Hawaii was destined to become a part of the United States, and it was not beyond belief that even Canada might ultimately cast her lot with the Republic.

The Old Northwest. The first wave of migration in the generation that spoke glibly of "Manifest Destiny" flowed into the area long before roughly marked out by the Northwest Ordinances. Settlers had been pouring into the region since the beginning of the century; Ohio, in fact, had become a state in 1803. The "Great Migration," however, did not swell to flood tide until after 1815, when the term "Ohio fever" was applied to the eagerness that made emigration little less than a mania. As succeeding treaties removed the Indian dangers, eastern pioneers pushed on into Indiana, and southerners moved up the romantic Wabash and neighboring streams to found their towns at favorable locations. By 1816 the settlers exceeded the sixty thousand necessary for statehood, and the "Hoosier" commonwealth entered the Union. Illinois, hugging the eastern shore of the Mississippi River, followed two years later, although its population was less than the law stipulated.

Except for an occasional lull, migration continued apace. From Virginia, Kentucky, Tennessee, the Carolinas, Pennsylvania, New York, and all New England, families with their household goods and their flocks plodded westward. It was not unusual for travelers on the mountain roads in 1817 to pass a hundred a day "steering to the first navigable waters of the Ohio River and its branches." An estimated five hundred emigrants a week crossed the Hudson at Albany during the last months of that year. "We are," noted Morris Birkbeck, European visitor and colonizer extraordinary, "seldom out of sight, as we travel this grand track toward the Ohio, of family groups behind and before us." Well indeed might a wanderer of the time write that "Old America" seemed to be breaking up and moving westward.

Since there were no overland trails, settlers in Indiana and Illinois at first kept persistently to the rivers. Soon, however, they began to spread over the prairies. The completion of the Cumberland Road to Wheeling in 1818 provided a connecting link between the Ohio country and the East, but population forged on ahead of local highways and local organization. In the early thirties the streets of Indianapolis were described by an observer as "one moving mass of men, women and children, carriages, wagons, cattle, horses, hogs and sheep all joyously wending their way to their new habitations in the Wabash country." "You cannot imagine the tide of

emigration into this country," wrote an Illinois pioneer. "As I mentioned in my last I saw 35 trains in one company. I have since seen within the distance of one mile 47 teams and each with families going to Rock river."

As early as the twenties migrants began to invade the upper Mississippi valley. The "Suckers"—so called after the river fish of the same habit—moved up the streams in the spring and returned to their homes in the fall; with them went the "Badgers," who dug into the hillsides and began permanent settlements. It was said at the time, though perhaps with some exaggeration, that ten thousand people entered Michigan Territory by way of Detroit alone in the spring of 1831. In 1832 Black Hawk, incensed by the whites who had squatted on the cornfields of his tribesmen, took to the warpath, but he was defeated in a brief and inglorious campaign, and the last Indian barrier in this section was thus removed. Population increased with surprising rapidity, and in January, 1837, Michigan became a state. Wisconsin, created a territory some months before, was not admitted until 1848.

Migration into the region along the northern reaches of the Mississippi was especially heavy in the decade of the fifties. Minnesota grew from six thousand people to more than one hundred and seventy thousand, and Iowa gained close to half a million. Even Ohio, Indiana, and Illinois contributed to the swelling tide that flooded Michigan, Wisconsin, Minnesota, Iowa, and Missouri. The crude ferries that crossed the Mississippi were overworked; miles of anxious immigrants with their household goods, their implements, and their cattle, horses, and sheep impatiently waited their turn at every crossing. In the land-office towns hundreds idled for weeks before the clerks could file their claims. By 1860 the advancing line of settlement had bulged out across the Mississippi beyond Iowa and into what is now Kansas, and in the flatlands east of the river, towns and cities were springing up. Fifteen of the thirty-five states that have come into the Union since the adoption of the Constitution were admitted between 1816 and 1860.

The moving population was not entirely native. Propagandists effectively imbued the discontented of Europe with the American vision and thoroughly intoxicated them with the economic optimism of the nation. Handbills, circulars, newspaper advertisements, and personal agents spread the story of wealth without limit and riches with little labor. Various states appointed commissioners of immigration and bid over the world for settlers to people their spreading acres. Land companies outdid one another in their glowing promises of an easier life in America's new West. English,

Irish, and Germans in particular poured in on every ship. Lacking money and having little interest in agriculture, the Irish and the English stopped in the cities, but the Germans pushed over the Alleghenies and bought farms in Ohio, Indiana, Illinois, Wisconsin, and Michigan. Though isolated groups of immigrants settled in Kentucky, Missouri, and Texas, there was on the whole little influx into the South. Wherever they stopped and whether they obtained riches or not, the Europeans of these years soon became enthusiastic exponents of the spirit that had by the middle of the century prompted Daniel Webster to write the Austrian minister that the possessions of the Hapsburgs were "as but a patch on the surface of the globe" when compared with those of the United States.

The Old Southwest. While the several parts of the Old Northwest were growing into statehood, the area south of the Ohio was slowly filling up. Kentucky and Tennessee had long been states, but migration into the region west of Georgia, whose rivers flow directly into the Gulf, did not flourish. Unsavory land speculation, Spanish opposition, and Indian dangers were responsible for the delay. With the end of the War of 1812, however, real settlement began. Thereafter planters shoved the "Cotton Kingdom" around the Gulf and into Texas with as much eagerness as that with which the farmers to the north pushed their grain empire toward the Mississippi.

Cotton was an important factor in southern expansion. Year after year the planters in the seaboard states grew the same crop on the same land; year after year they made new clearings or purchased other fields from impecunious neighbors. But soil wore thin, and nut grass and other pernicious weeds smothered the cotton. The hardest-pressed plantation owners, whenever they could find buyers among their more opulent friends, sold their holdings and moved westward, where once more they bought up the acres of the small farmers who had by necessity preceded them. The process continued until there was no longer rich soil to be had. Mississippi and Alabama were admitted into the Union in 1817 and 1819 respectively, and the movement into Texas began a few years later. A drastic decline in cotton prices and a lack of opportunity at home kept the South in motion. In the twenties and thirties the "almost uninterrupted line of emigrants" struggling toward the West reminded some of "patriarchal times." Mrs. Basil Hall, outspoken English visitor, recorded at Columbia, South Carolina, on February 20, 1828, that she had that day passed a party of fifty, "black and white, . . . scattered along the road in groups seated on the ground, numbers of little children among them," having their noonday meal. "They had come," she added, "from near Cheraw and were travelling

on into Georgia." [3] Eight years later another English observer noted in his diary while journeying through Alabama: "In the course of the day we met a great many families of planters emigrating to Alabama and Mississippi to take up cotton plantations, their slaves tramping through the waxy ground on foot, and the heavy waggons containing the black women and children slowly dragging on, and frequently breaking down. . . . We passed at least 1000 negro slaves all trudging on foot, and worn down with fatigue."

Poor land and lessening financial returns were not alone responsible for the never-ceasing migration. Hope of economic betterment sprang eternal in the hearts of Americans. Whatever their acres yielded, the cotton growers of Viriginia, the Carolinas, and Georgia knew that afar lay fresher fields. "A cotton crop in western prospects became a golden fleece," says Professor Phillips. "From Maryland to Mississippi, from Virginia to Alabama, from Missouri to Texas, every whence every whither, people took ship or flatboat, or set forth in carryalls or covered wagons, with tinkling cattle and trudging slaves if they had them." [4]

The small farmers in the South were as restless as the cotton-planting aristocracy. Some merely sought a change in their miserable existence; one North Carolinian replied when asked where he was going: "No where in pertick'lar, me and my wife thought we'd hunt a place to settle. We've no money, nor no plunder—nothin' but just ourselves and this nag—we thought we'd try our luck in a new country." [5] Others, however, unable to resist the attractive prices their wealthy neighbors offered, sold out as they had done many times before and moved on to clear new fields. These destitute pioneers, often referred to as the "boorish poor," led the vanguard of the Cotton Kingdom in its march across the Mississippi. "I met many of them," wrote Solon Robinson in 1845 after a day on the muddy roads of southern Missouri, "in wagons, in North Carolina carts, and on pack horses—the latter being generally packed with a most liberal supply of children and their mothers— . . . and as it 'takes all sorts of folks to make a world,' I am constrained to think that some of those I met are some of the 'all sorts.' 'The ladies' . . . , riding in a very primitive way, such as was common before the invention of side-saddles, looked a good deal 'sorter

[3] From *The Aristocratic Journey,* by Dame Una Pope-Hennessy. Copyright, 1931, by Dame Una Pope-Hennessy. Courtesy of G. P. Putnam's Sons. Further extracts from the letters of Mrs. Hall, "Written during a Fourteen Months' Sojourn in America, 1827-1828," that make up *The Aristocratic Journey* are through the kindness of the publishers quoted in chapter 16.

[4] Ulrich B. Phillips, *Life and Labor in the Old South* (Boston: Little, Brown, 1929), p. 100.

[5] Emory Q. Hawk, *Economic History of the South* (New York: Prentice-Hall, 1934), p. 215. The word "plunder" is still used among the poorer people of the South to mean personal possessions.

like' the coarse filling with which the great western web of wilderness is woven."

Growth in the eastern half of the nation was completed by 1850. The states stretched without territorial break from the Atlantic to the Mississippi; Wisconsin, last to enter, was admitted in 1848. But there was no halt on the banks of the great river. In fact, Louisiana, Missouri, Arkansas, and Texas preceded Wisconsin into the Union.

Texas. Migration into Texas began in the early twenties under the leadership of Stephen F. Austin. By 1830 thirty thousand Americans, tempted by cheap lands and promises of liberal government, had moved into Mexico's northern territory. Spanish customs and habits, nevertheless, found no place in their lives. Their schools were English, as were their social, political, and economic ideas. They took lightly their promises to join the Catholic Church and to forswear slavery, yet they remembered tenaciously their objections to "illegal" taxes. It was soon apparent that conflict was inevitable; the observation of a Spanish official in 1828 that "Texas could throw the whole nation into a revolution" was soon demonstrated. The Americans, incensed by the efforts of Mexico to curtail further settlement, revolted in 1836 and won their independence.

Texas did not become immediately a part of the United States. Cotton planters in the new republic, still regarding themselves as Americans, looked askance at the tariff policy of the nation that a few years before had driven South Carolina to nullification, and slave owners viewed with alarm the antislavery storm just blowing up in the North. Moreover, the question of admission brought a perplexing problem. The antislavery forces, led in the House of Representatives by ex-President John Quincy Adams, fought annexation with all the strength of aroused moralists. Political parties, fearing the blight of internal quarrels, avoided the issue in their national campaigns.

It was unlikely, however, that the Lone Star Republic should long remain independent. In spite of sectional controversies, Manifest Destiny was irresistible, and the economic opportunities that the state offered were enticing. Too, financial investors, says Professor Beard, longed for the protection of the United States flag. Furthermore, there was a possibility that England and Texas might form an economic and political alliance. In 1844 the Democrats, with James K. Polk as their candidate, won the election on a platform demanding annexation. Then, even before Polk could take his seat, admission was hurried through Congress by joint resolution in February, 1845. War followed; but feeble Mexico was no match for the Ameri-

cans, and thus another state was added to the cotton empire of the expanding country.

The Pacific Slope: Oregon and California. In the meantime, settlement had begun on the Pacific coast. The plains beyond the first tier of states across the Mississippi River did not hold for the American farmer the attraction of the lands between the Alleghenies and the Mississippi; for years, in fact, it was believed that the region was a great desert unfit for agrarian occupation. Notwithstanding English claims to the territory, however, many individuals were interested in the economic possibilities of the fur trade in the Oregon country. John Jacob Astor, defiant young immigrant fur dealer, established Astoria in the basin of the Columbia River in 1811 and was soon trading over a wide area. But, opposed by Canadian fur companies and neglected by the government at Washington, he was unable to resist the British in the War of 1812 and before the end of the conflict was forced to sell his trading posts and move east of the Rockies.

Although the American flag was restored to Astoria by the Treaty of Ghent, the powerful Hudson's Bay Company and its subsidiaries continued to dominate the region for many years despite mutual agreements for joint occupation made between England and the United States in 1818 and 1827. Migration was slow indeed. Industrialists in the East, believing that the loss of workmen might force wages upward and restrict the growth of factories, did what they could to prevent settlement. Many people scoffed at the idea that such a distant land could ever be populated. Yet incessant labor by the fur interests, publicity, promises of free farms, and religious enthusiasm had by 1840 combined to start a stream of migrants across the plains. Disgruntled easterners faced by hard times, hardy frontiersmen from the western slopes of the Alleghenies and the southern uplands, Methodist and Presbyterian missionaries, and trappers and traders made up the queue that plodded toward the Columbia valley. But it was the farmers among them with their families, their oxen, and their plows that struck economic roots in the country.

Encouraged by a growing interest on the part of the nation in their struggles, the Oregon pioneers founded a provisional government in 1843 and defied the British by claiming all the region. The following year the Democrats joined "Reoccupation of Oregon" with "Reannexation of Texas" in their platform and demanded as a boundary "Fifty-four forty or fight!" The quarrel with England ended, however, in 1846 with the mutual acceptance of the forty-ninth parallel as the dividing line between the two countries. Organized as a territory in 1848 and admitted to the Union as a state in 1859, Oregon long remained a detached and relatively unimportant

agrarian commonwealth. Her significance as an economic unit in the nation awaited the development of transcontinental transportation.

Even before the dispute with the British over Oregon had been settled, the Americans challenged the frail hold of Mexico on California. Forty-eight Missouri frontiersmen set out across the plains in 1841 to find the land that Robidoux, a French trapper, had described as "a perfect paradise, a perpetual spring." Year after year other migrants braved the appalling dangers that lay between the Mississippi valley and the Spanish coast. They were welcomed and given much-needed help by Johann August Sutter, naturalized Mexican, whose ranch lay on the south bank of the American River. By 1845 California had won a place in the public mind, and the trails to the Sacramento valley were crowded. Caravans, which a few years before had plodded doggedly northwestward toward Oregon alone in one long line, now split in two at Fort Hall.

Fertile farm lands and cloudless skies were not altogether responsible for the invasion of California. Reports of rich profits in trade no doubt influenced the migration, as did also the attitude of the government at Washington. Presidents Tyler and Polk were not unmindful of the value of Pacific ports in the China trade and the whaling industry,[6] and Calhoun, Webster, and Buchanan as Secretaries of State were eager advocates of agrarian and industrial expansion. Congressmen and military officials too were keenly interested. Indeed, the army and the navy were important factors wherever Manifest Destiny came into conflict with Mexico. They had, with presidential sanction, been impatiently awaiting the revolt of the Americans in California for months before the Bear Flag Republic came into being in 1846. Meanwhile the expansionists were for the moment fighting on the plains of Mexico, hoping, said the New York *Sun,* to "see the Aztec and the American eagle clasping wings, and our Yankee boys swapping knickknacks with the Americanized Rancheros for gold."

Abundant economic inducements as well as trouble with Mexico hastened the independence of California, but it was the discovery of gold in the mill race on Sutter's ranch in 1848 that brought rapid growth of the territory to statehood. Hushed for a while, the cry "Gold! Gold!" soon echoed over the United States and spread throughout the world. The precious stores of silver that the mines of Potosi poured into Old Spain created only mild excitement in comparison with the commotion on land and sea that followed news of the presence of the yellow metal in California in the

[6] Otter skins were gathered along the California and Oregon coast for shipment to China, and the whalers in the Pacific equipped their boats in California ports. Adventurous Yankee business men also built up considerable trade in hides and tallow along the coast.

middle of the nineteenth century. In spite of hardships, thousands of people turned their faces toward the Pacific coast. With a song on their lips the hosts moved westward by caravan and ship; many an Argonaut was heard chanting the myriad verses of "Oh, Susannah."

> I'll scrape the mountains clean, old girl,
> I'll drain the rivers dry.
> I'm off for California, Susannah, don't you cry.
> Oh, Susannah, don't you cry for me.
> I'm off to California with my washbowl on my knee.

The five or six thousand straggling traders and ranchers of 1840, less than four hundred of whom were Americans, grew to ninety-two thousand before the end of the decade. The congressmen who gathered in Washington in December, 1849, to settle the slavery question were greeted by a delegation of Californians with a constitution in their hands. The state was admitted to the Union as a part of the Compromise of 1850.

While the first adventurous settlers were pushing across the mountains into Oregon and California, the Mormons, having been driven westward state by state by their unsympathetic neighbors, decided to escape possible further interference. Early in 1847 a selected group of church members took the Oregon Trail westward; the migrants, however, were diverted by their leader, Brigham Young, to the edge of the Great Salt Lake. The alkali wastes that lay before the little band were far from encouraging, yet Young was convinced that the need for irrigation would prevent the general settlement of the region and thereby enable him and his church to live in peace. But before the colony was well established, the United States reached out and took political control. Utah Territory was created by the Compromise of 1850.

The Gadsden Purchase. The westward course of empire before 1860 ended with the Gadsden Purchase in 1853. The land, a small strip that now makes up the southern tip of Arizona and a part of New Mexico, was bought from Mexico in the belief that it was necessary as a portion of a proposed right of way for a southern transcontinental railroad. Although the march to the Pacific was now completed, the Great Plains from north to south remained still to be populated. It was not until after the Civil War that the farmers invaded these arid acres and built them into commonwealths.

Chapter 10

AGRARIAN EXPANSION NORTH AND SOUTH

The Moving Agrarian Frontier. The slow but persistent movement across the Appalachians and the Mississippi and the plains beyond, the planting of the American flag on the banks of the Rio Grande and the shores of San Francisco Bay and in the basin of the Columbia River, and the erection of commonwealths with democratic instruments of government were accomplishments in keeping with the optimism and hope that had created the spirit of Manifest Destiny. But fully as significant as the growth of the political nation was the growth of the agrarian empire. Although the trapper, the speculator, and the adventurer generally preceded him in the westward march, it was the farmer who welded the new territory firmly to the Republic. His fields, his herds, and his flocks—with railroads, markets, cities, and towns in their wake—carried the agricultural frontier from the slopes of the Alleghenies onward across the Mississippi.

Agrarian Expansion North of the Ohio. The trans-Appalachian farmer north of the Ohio River found at first a situation similar to that which had confronted his ancestors along the Atlantic. The blanket of trees that covered the region east of the mountains stretched over the highlands and into the foothills beyond. Pioneering was much as it had always been; the task of clearing the land was easier than in previous times only in the fact that experience had given knowledge. There was little apparent difference between a tiny farm beside any river in eastern Ohio and one that might have been seen in colonial America. The log cabin, the girdled trees, and the corn patch were replicas of those of an earlier day. The settler as he pushed westward, however, emerged into a partially treeless area; when a few years later he reached western Indiana and northern Illinois, he discovered "a vast unbroken plain, relieved by delightful groves of trees, . . . interspersed over the prairie like islands in a lake."

The flat lands of the Middle West did not at first, it seems, thrill the pioneer agrarian. His two centuries of incessant conflict with the forest had made of him a man of the woods. In addition, the soil was difficult to till, water scarce, and the sun insufferably hot. Moreover, evidences of

civilization were almost completely lacking, for the miles that lay between western farms and the cities of the Atlantic seaboard were in effect greater than those that had stretched between the colonies and the metropolitan centers of England. Furthermore, the economic outlook was thoroughly discouraging to the debt-burdened settlers. "A few years ago," wrote an Ohio farm woman in 1825, "our prospects were surely dismal. Tho our lands were fertile and our Country handsome, our crops were rotting or



Courtesy the New York Public Library

FIGURE 5. WILDERNESS HOME IN THE WEST
(From the Diary of T. K. Wharton.)

resting on our hands, no market except our own home consumption, foreign goods could not be paid for in the products of the Country, no incouragement to industry, none but mere vagabonds came to settle among us, almost all our young men of any enterprise were leaving us, a large portion of our people were in debt and scanty means to pay, a bushel of wheat would not pay for a quire of paper, or our merchants would not take it in exchange—none but a few officers and speculators were thriving." Too, the farmers faced a troublesome period of adjustment. New methods of cultivation were necessary; even new plows were needed because the old would not turn the tough, heavily matted topsoil.

Conditions slowly improved. Villages and towns, roads, bridges, mills, and eventually canals came as natural parts of material progress. Financial hardships, however, were chronic. A medium with which to pay landholders, merchants, and peddlers long remained inadequate, and money for meeting taxes and interest was hard to obtain in spite of legal efforts to make the task easier. Tradition has it that tax collectors in the early years sometimes accepted skins or furs; certainly pelts were used as currency in

payment for small purchases at country stores. A few dollars filtered into the frontier communities with each newly arriving company of immigrants. Sometimes individuals and groups printed bills that circulated with reasonable satisfaction. A settler in western Ohio declared several years later that "after the paper got ragged and not passable it threw the people badly in the lurch." But, he recalled, "our Legislature . . . undertook to act fealingly for their constituents if not for themselves and passed an act which had the effect to stop the payment of debts and of course the circulation of money and banished the Pedlers. It also racked the merchants and stopped payments to the landlords and leveled the prudent, industrious and economical with the profligate, the idle and imprudent." Happily, the farmer ended his recollections on a cheerful note. "These times," he concluded, "have gradually worn away and I believe it has learnt us to do with but a little money, and a little we are now able to get for oxen, horses, cheese, sugar and a few other things, and we are in hopes that when the Grand Canal gets through to the Lakes, some other things will bear transportation, but we are not to expect that every bodys pocket will be full of money and indeed it is not necessary. Our roads are as good as could be expected, many of them excellent and others fast improving. Stages run daily in almost every direction and good hansom and permanent buildings both Public and private have been erected and are erecting in all parts of our community. The Harbours and light houses at the mouths of Cayahaza & Grand rivers and other plans have made the navigation much more safer and the Canal has already given a spring and activity to business beyond our expectations."

And in fact, the frontier agrarian by the time he reached western Indiana, Illinois, and southern Wisconsin in the late thirties had become a confirmed optimist, convinced that he had found at last the farmer's Garden of Eden. He rejoiced when he saw the rolling lands where "no plough or spade has broken the sod of ages; no magician has appeared with the husbandman's magic wand and said to the coarse and useless grass that has grown for centuries, 'Presto, be gone,' give place to the lovely Ceres with her golden sheaves." "It is as handsome a country as ever man set eyes on" was repeated in numberless eastbound letters. New Englanders were especially impressed by "the vast rolling prairie, adorned with islands of timber and not a stone or rock but lies in handsome quarries," and they were certain that with little economy and only a reasonable amount of labor they could "roll in an overwhelming abundance" without "toiling and sweating over rocky hills." "It was about noon of a beautiful October day, when we emerged from the wood," commented a Connecticut migrant, "and for miles around stretched forth one broad expanse of clear, open land. I stood alone, wrapt

up in that peculiar sensation that man only feels when beholding a broad prairie for the first time—an indescribable delightful feeling. Oh, what a rich mine of wealth lay outstretched before me."

Throughout the region the prosaic and the poetic alike reveled in dreams of wealth and relief from grinding toil. In the early forties George Howison in northern Illinois painfully scratched out a message to a friend in New York: "Alexander if you and your Wife was hear you Could have a good living if you was farely Starrted by working half of your time that you work in Greenwich." At about the same time, after having that season grown and harvested two thousand bushels of corn, seven hundred and fifty bushels of oats, one hundred and fifty bushels of potatoes, and hay for five head of cattle and six horses and having helped his father cut and put in marketable order "rising of six hundred bushels of wheat," Samuel R. Paynter wrote to a childhood playmate in Connecticut: "I would rather rove the broad prairie and chase the bounding deer with my unerring rifle than wallow in all the wealth of the Indies without this enjoyment. O could you but once see this fairie land you could then say with me 'On the hills of thy beauty my heart is with thee.' I think it a doubtful case whether I ever come east or not and if I do I shall make but brief stay as my home is in the west, my heart in the prairie land."

The land was indeed rich, and its fruits were bountiful. Thirty bushels an acre for wheat was not unusual, though in the South the harvest was scarcely half that amount. The waving grain in the flat fields soon made the section the greatest consumer of farm machinery in the nation. As canals and railroads expanded, the output of the plants of Deere and McCormick and others could hardly keep up with the demand. Hogs and cattle rose astoundingly in number. By 1855 fully half the beef killed in New York City had been driven overland or shipped in cars (at a cost of two hundred dollars for fifteen heavy steers) from the fields of the West.[1] Before 1861 the stockyards of Chicago had become busy places. The winds that sometimes swept over the city reeked with the smell of offal, blood, manure, and sweat; but the people did not mind, for here was the greatest meat-packing center in the world. Unfortunately within less than half a century the song of the prairie, so far as the farmer was concerned, had dropped to a bitter wail as poverty spread over the agrarian lands.

Agrarian Expansion South of the Ohio. Expansion south of the Ohio River changed agricultural habits only slightly. It was, in fact, merely the

[1] Allan Nevins, *Ordeal of the Union* (New York: Scribner's, 1947; 2 vols.) is an outstanding study of the decade of the fifties. Economic material is particularly abundant; for a discussion of agriculture see vol. 2, ch. 5.

growth of the Cotton Kingdom. As lessening returns from worn-out eastern fields drove the cotton grower slowly across western Georgia, Alabama, Louisiana, and Mississippi and on into the valleys of the Cumberland and the Tennessee, the glamor of the plantation reached its height. The planter moved his household and his slaves to new acres with hope though with little joy. Manifest Destiny was, whether he knew it or not, intimately connected with the thinning soil that sent him ever westward.

The Westward Movement of Grains. Stretching always in great fields toward the Mississippi, the grains traveled over the Alleghenies and onward with the farmer. Wheat expanded more rapidly than corn. From western New York and Pennsylvania and the upper half of Ohio it jumped abruptly across the river to conquer the arid plains of Kansas and Nebraska after the Civil War and, before the end of the century, swing northward into the Red River valley of North Dakota. Between 1850 and 1860 the total yield of wheat increased more than one hundred and twenty per cent, and the center of production shifted from Zanesville in Ohio to Indianapolis in Indiana. Corn followed in general the river bottoms of southern Ohio, Kentucky, and Tennessee, but it soon appeared in Indiana and Illinois and by 1860 had crossed the Mississippi into Missouri and Iowa. In the decade before the Civil War the center of production moved from southeastern Ohio to southern Indiana, and the prairies wrested primacy from the upper South. The "bread colonies" of earlier days—New York, New Jersey, and Pennsylvania—gave way to the "bread basket" of the upper Mississippi valley. Domestic animals accompanied the farmer and his grains.

Ante-Bellum Agriculture in the North. Northern agriculture in the region east of the Appalachians was decidedly affected by the growing fields of the West. As prairie competition beat down prices, New Englanders often enlarged their acreage in attempts to maintain their former incomes, but yields of wheat, corn, and rye declined. Livestock too decreased in number; there were fewer beef cattle, hogs, sheep, horses, mules, and oxen in the section in 1860 than in 1840. Some farmers near the factory towns turned to truck gardening. As a rule, however, those who refused longer to stick to their rocky hills and ancestral ways either fled to the textile mills or pulled up stakes and migrated to the West. Farming in New York and Pennsylvania, except near the larger cities, continued to flourish, and vegetable gardens expanded rapidly in New Jersey and Delaware. With improvements in transportation facilities the dairy industry also began to thrive. Throughout New England and the Middle States farmers added to their herds in keeping with swelling urban demand. When the railroads

pushed into the hinterland of New York City, it became possible to send milk "warm from the cow, to the city, fifty miles distant, to be used for breakfast the same morning." In 1850 freight receipts on that one product shipped on the Harlem Railroad sometimes amounted to two hundred dollars a day. The state of New York in 1860 produced more than a hundred million of the nation's annual output of four hundred and fifty million pounds of butter and almost half of the hundred million pounds of cheese. Dairy farmers took much pride in the production capacity of their animals. Blossom, Mr. Canby's celebrated Durham cow that was exhibited at the Wilmington agricultural fair in 1841, held a record of thirty-six quarts of milk a day and seventeen pounds of butter a week.

Over the Alleghenies wheat and corn were supreme. Indeed, a part of the optimism of western agrarians was the result of relief from the medley of agriculture along the Atlantic coast, especially in New England. The prairie soil was in the beginning hard to till; several oxen and a sturdy plow were required to turn the stubborn sod. Crops for the first few seasons were poor. But once the grass roots were rotted, the earth was mellow and rich, and year after year the waving fields of grain grew with luxuriance. The census tells unmistakably the story of the spreading farm in the upper Mississippi valley in the twenty years before the Civil War. While the wheat yield more than trebled between 1840 and 1860, the corn harvest increased from eighty-eight million to over three hundred and twenty-five million bushels. Production jumped from thirty-three million to seventy-three million in Ohio, from twenty-eight million to seventy-one million in Indiana, from twenty-two million to one hundred and fifteen million in Illinois, and from one million to forty-two million in Iowa. Iowa alone produced in 1860 nearly half as much corn as all New England and the Middle States combined. The less important cereals—oats, barley, rye, and buckwheat—also showed decided gains.

But prosperity was not universal on the prairies. Often only wheat was profitably marketed over the wretched roads of the prairies. In remote villages it frequently brought less than twenty-five cents a bushel, although in Chicago the price occasionally rose to a dollar or more. "If it were not for the fact that farmers who haul produce to market, live in the cheapest manner on the road," wrote Robinson in 1848, "their loads would often be insufficient to pay expenses." "What," he continued, "would a New-England farmer think of hauling produce 200 miles to market; and during the whole trip sleep in his wagon and eat his cheerless meals by his camp fire, along the roadside?" Corn because of its bulk was difficult to transport even thirty or forty miles, and the financial returns from a wagonload

at ten or twelve cents a bushel were miserably small. It was not easy to find mills to grind the grain into meal, for streams were shallow and uncertain and dams of dirt were almost impossible to maintain. Millers were in many instances "about half the time without water, and the other half without a dam."

The lack of a satisfactory transportation system caused the pioneer agrarians on the prairies to turn to stock growing and led them to make avid—and sometimes reckless—efforts to secure canal and railroad expansion. Hogs in particular became the marketing medium for corn; they could be driven over the bottomless roads and sold alive in distant packing towns or converted into bacon, hams, and lard and floated southward to supply plantation needs. The rangy swine of the region were poorly cared for and brought small profit to their owners. They ate voraciously and trampled as much grain into the mud of their feeding lots as they consumed. In contrast to eastern hogs, which often reached a weight of two hundred pounds in less than a year, western "land pikes"—sometimes locally called "alligators"—rarely weighed more than one hundred and seventy-five pounds even after fattening for two years. A few agricultural leaders urged the corn growers to try Berkshire and other improved breeds, and in the forties great numbers of pure-bred pigs were shipped on lake steamers from the East by way of Buffalo to Chicago for distribution to inland farmers.

Cattle at first were raised on grass (pasturage for a calf could be rented for a year for a dollar and a half) and driven over the mountains to eastern markets. As river and rail transportation grew, however, packing houses sprang up in the farm lands and grain feeding began. Corn-fed beef soon came to demand a premium; its alternate layers of fat and lean made incomparable steaks. Between 1850 and 1860, cattle for the slaughterhouses increased in Iowa, Wisconsin, and Minnesota from a hundred and forty-five thousand to more than half a million. Sheep required more shelter and care than the hurried westerner was willing to give them, and accordingly the flocks grew slowly. The total value of livestock on the prairies rose by more than one hundred and forty-three per cent in the decade before the Civil War.

While corn and wheat and cattle and hogs were the backbone of the economic structure, farmers in the region north of the Ohio spent considerable time in experimenting with other things. Numerous fantastic schemes were proposed. Mulberry trees were to dot the prairie (silkworms were furnished free with the plants); alpacas were to roam the plains beyond the Mississippi; Chinese sugar cane was to bring sugar mills south of Chicago; and Osage orange and Cherokee rose hedges were to fence the farms of the

West. Fencing was indeed a serious problem. Effective barriers are essential when livestock and grain are grown in the same section. But timber was scarce and distances were great. The financial burden of enclosing prairie fields was so heavy, in fact, as to impede settlement, and yet the westerners knew that an increasing population was necessary to economic progress. The European practice of herding sheep, cows, and swine was impossible for many reasons, one of which was that in a land of opportunity where hope of riches was universal no one would waste his time in trivial labor. Although practically everyone raised both animals and grain, much needless argument was spent on the question whether the stockman should fence in his cattle and his hogs or the farmer his corn and his wheat. Many people vigorously advocated the adoption of laws making it obligatory for every individual to control his own stock; such a system would, said a farmer, "invite every poor man who had nothing but a spade to help himself with, to come and settle along side of us, and plant and eat, and no man's hog should make him afraid." In spite of efforts to use ditches, embankments, sod walls, and hedges of sundry description, wooden rails continued to protect the agrarian's crops from his own and his neighbor's animals until wire became available.

Some consideration was given to scientific study, particularly by the large landowners. The Union Agricultural Society began in 1841 the publication of the *Union Agriculturist and Western Prairie Farmer,* which in 1843 became the *Prairie Farmer.* Other journals appeared in profusion, and state fairs, where the products of both farm and factory could be seen, became annual events. By 1860 diversification of crops, with some attention to total profits and economic well-being, was being practiced, yet wheat, corn, and hogs remained "the idols of the prairie." Farms rivaling in size the plantations of the South grew up in western states, but they were surrounded by the simple holdings of yeoman farmers. Altogether the people of this section more than of any other were preparing the way for an urban nation. Here beyond the Alleghenies was developing a great food granary as corn and wheat and oats and kindred products came to find a permanent location, and here the dairy industry with its milk and butter and cheese was soon to win dominance; here too iron and other basic materials of the factory were before long to pour from the mills in quantities large enough to dwarf the old eastern centers, and here, as if to make more obvious the pending change, rose up lake cities that swept from the long-established agrarian and river-bound metropolises such as Cincinnati and St. Louis their ancient glory.

Ante-Bellum Agriculture in the South. Southern agriculture in the three decades preceding the Civil War was outwardly characterized by the glamor of great estates. But, as in colonial days, the wealth of the lordly was an uncertain wealth, and the major part of the people were poor. Both the rich and the poverty-stricken stripped their soil of all they could get in the shortest possible time. The results were tragic, for the thin upper layer of earth from which plants draw their nourishment was quickly washed away from the slopes and soon exhausted, even in the bottoms, by the excessively depleting crops that were grown. The westward movement of southern agrarians—no less marked than that of their fellow tillers to the north—not only pushed the fields toward the Mississippi and beyond but also carried with it the institution of slavery, just then being concentrated in the South. Slave labor, argued the planters, was a crude labor and was therefore best suited to raising cotton, tobacco, hemp, and other crude products. The moral and social aspects of the slave question cannot be discussed here. It may be said in summary, however, that human slavery was a passing institution and that cotton culture without an inexhaustible supply of new land was a costly venture. Furthermore, by 1860 prices paid for Negroes had reached skilled-labor levels. This meant that if the rising abolitionists were successful, a telling amount of invested capital would be destroyed. Though only a small percentage of the southern people owned slaves, the system dominated the South. In spite of much contradictory evidence, it was widely argued that the economy of the section was a stable economy capable of prospering all if not hampered by northern laws and northern exactions.

The Primary Single Crops. *Cotton.* Cotton was supremely important in Dixie between 1816 and 1860. "No branch of industry probably ever rose to such magnitude in so brief a time," wrote D. J. Browne of the Bureau of Agriculture in 1857. "Producing a very large annual supply above the actual wants of the country, and of a material superior in quality to the yield of any other land, the United States possesses by virtue of this crop an interest in the commerce of the world which could not be secured by means of a product less peculiar in its nature, or less intimately connected with the social condition of civilized Europe." Cotton was the key to America's economic relations with the rest of the world, and the southerner was not unmindful of the significance of his one great crop.

Cotton culture on the plantations was everywhere the same. The seeds were sown in the spring, and throughout the summer slave gangs hoed and sang in rhythm under the watchful supervision of overseers. When the bolls began to burst in late August or early September, men, women,

and children moved up and down the rows with trailing bags into which they dropped the ripened cotton. Ginned and baled near the fields, the product was ready for sale at one of the down-river towns of the Atlantic or the Gulf. The planter sold his crop to a commission merchant, generally a northerner resembling in many ways the English agent of colonial days who had bought tobacco at the wharves on the slow-flowing rivers. Charges were high, and in many instances the grower found himself grievously indebted to the factor. Always hoping with one big crop to wipe out his debts and free himself from the burdensome interest rates which he paid, the southerner planted more and more acres, only to find too often that because of falling prices his total returns decreased rather than increased. The planter could neither shift his capital assets (slaves) into more profitable employment nor control his market through lessened production.

But cotton was not limited to the great estates alone. The small farmer of the region was tied even more inexorably to the growth of the fiber than was his lordlier neighbor. Lacking capital to finance his planting, he borrowed from his local merchant in the spring and contracted to deliver in the fall a specified amount of lint. Plagues and bad weather frequently made it impossible for him to carry out his contract, and heavy penalties threw him into abysmal debt from which no amount of labor could extract him. His cotton—usually only one or two bales—was eaten up on account long before it was picked, and further credit was dependent solely on his agreement to plant the same crop the next year. Unlike the planter, he could not hide his economic plight; his miserable house revealed his poverty.

Rice. Although limited quantities were grown in North Carolina, Florida, Alabama, Tennessee, Mississippi, Louisiana, Arkansas, and Texas, production of rice was centered chiefly in the coastal regions of South Carolina and Georgia. The rice planters suffered still more troubles than the growers of cotton. Climatic conditions made absentee ownership almost universal for a part of the year at least, and competent overseers were few. Cultivation was tedious and harvesting slow and complicated. Moreover, storms and floods ruined the irrigation ditches, and disease took heavy toll among the slaves. While some plantations were profitable, the total value of the crop in 1850 did not exceed four million dollars.

Sugar. Sugar cane is a semitropical plant that in the United States grows well only in a small part of southeastern Louisiana. Even there its cultivation requires far more labor and many more plantings than in the West Indies. The Jesuits brought the grass to New Orleans from Santo Domingo

in 1751, but it was without commercial value for years because no one knew how to crystallize the juice. Great was the rejoicing when in 1795 Étienne de Boré succeeded in turning the liquid into sugar. He sold his crop for twelve thousand dollars. Equipment was costly and propagation was slow, however, and so production increased but little until after 1822, when steam was first used for running the mills. The wealthy alone could afford to engage in the industry; establishments ranged in value from around fifty thousand dollars to half a million or more. There were on the Ormand plantation some hundred miles of leading and cross ditches, sixty mules, forty yoke of oxen, and forty carts, wagons, and drays. "I counted in one 'quarter,'" wrote a visitor to the mansion of Colonel Preston in 1848, "upwards of 30 double cabins, all neatly whitewashed frame houses, with brick chimneys, built in regular order upon both sides of a wide street, and which is the law, must be kept in a perfect state of cleanliness. Feeding the force on this place is not quite equal to feeding an army, but it takes nine barrels of pork every week, which, at an average of $10, is $5,680, per annum, cash out, for that item alone." [2] Fuel for the mills was expensive. Some bagasse (cane from which the juice has been pressed) was used; only wood, however, was thoroughly satisfactory, and so enormous was the consumption that by 1850 timber was being imported from as far north as the hills along Green River in Kentucky. The sugar output in 1860 amounted to more than two hundred and thirty million pounds.

Tobacco. Tobacco, like cotton, was a crop of the rich and the poor alike. Grown on the sloping hillsides and the flat lands of Maryland, Virginia, Kentucky, North Carolina, Tennessee, and Missouri, it brought much-needed cash to the planter and the small farmer. Whether tended in a tiny patch behind the house on a hilly farm or in a vast field of a hundred thousand plants, as on William Bolling's plantations in Virginia, tobacco was a hard taskmaster. Bolling recorded in his diary in August, 1827, "Worming and suckering tob with all hands, which at this season of the year is the burden of the planter's song." [3] Heavy tariffs in Europe and competition from cotton greatly reduced the crop for many years after 1816, but the introduction of heat curing in 1843 and the appearance of the "lemon-colored" leaf nine years later brought vigorous revival. Between 1850 and 1860 production increased one hundred and fifteen per cent. Unfortunately the habit of "skinning" the land and moving on to new acres persisted.

[2] Kellar, *Solon Robinson*, vol. ii, p. 172.
[3] See Phillips, *Life and Labor in the Old South*, pp. 237 ff.

Diversification in Southern Agriculture. Contrary to tradition, cotton, tobacco, rice, and sugar were not the sole products of the ante-bellum South, nor was agriculture in the section wholly a plantation occupation. Diversification was widely practiced on the great estates, and a majority of the population was made up of poor farmers who were economically compelled to attempt self-sufficiency. The planters, unless the records have been misinterpreted, were less guilty of one-crop sins than were the tillers of simple farms. The fact that large amounts of food products were brought into the Cotton Kingdom was to a great extent due to peculiar dietary habits and unfavorable climatic conditions. Although the Negro was, according to common belief, happy only when amply supplied with "fat pork and corn bread," it was unwise to try to cure large amounts of bacon in the region along the Gulf. Days cold enough for slaughtering were few, and spoilage was common. The use of beef as an alternative presented still more difficulties. The hot summer sun destroyed the pastures, and the meat was hard to preserve. Furthermore, the same money and energy devoted to more suitable activities brought greater financial returns.

Corn. Tons of corn were shipped into Dixie, and yet in 1840, when the first agricultural census was taken, six of the ten leading corn states were south of the Ohio River. Tennessee, Kentucky, and Virginia ranked first, second, and third in the nation, with North Carolina, Alabama, and Georgia sixth, eighth, and tenth respectively. Together these six states grew more than one hundred and eighty-five million bushels, or approximately half the corn grown in the United States. By 1849 the prairies had begun to forge ahead, but the same six southern states still retained their position among the first ten. Their rank, however, had changed decidedly; Kentucky, Tennessee, Virginia, Georgia, Alabama, and North Carolina now stood second, fifth, seventh, eighth, ninth, and tenth respectively, producing only about forty per cent of the entire crop of the country. Ten years later the amount had fallen even more; nevertheless, corn remained an important item of food for man and beast from the Potomac to the Rio Grande, and the section still raised more than half the total crop.

Wheat. Wheat too was a significant crop in the South, especially on the level lands of Maryland, Virginia, Kentucky, and Tennessee. Production practically doubled in the ten years between 1850 and 1860, and the yield of the section was exceeded only by that of the prairie West. Virginia, although its harvest increased by almost two million bushels during the decade, dropped from fourth to fifth place.

Miscellaneous Crops. Oats, barley, rye, and buckwheat were grown in

many southern states, and hemp and flax were raised in the blue-grass region of Kentucky. In 1850 the people of the South dug and ate about thirty million bushels of sweet potatoes and nearly a third as many white or Irish potatoes. Vegetables were not so popular as they were in the North; the "law of indolence," said some, prevented their use. They were not fed to the slaves, partly because they were difficult to carry to the fields where the Negroes were fed at noon and were troublesome to prepare in the evening for supper when tasks were done. But many of the planters' tables were loaded with lettuce, asparagus, squash, and other succulent foods from the soil, and certainly the small farmer had in addition to his truck patch his beans, pumpkins, and cowpeas in the cornfield. The slaves too planted their little gardens behind their cabins. Fruits, of little commercial importance, flourished everywhere, and the value of the honey crop was half that of the rice harvest. Only the very poor lived literally on bacon, corn pone, and greens.

Livestock. On the eve of the Civil War the South possessed by value about forty-five per cent of the livestock of the nation. Out of the blue-grass section of Kentucky came the best saddle horses in America, and the state led in the production of mules also. Virginia, Tennessee, Missouri, Alabama, Georgia, South Carolina, and Texas contributed large numbers of both. Hogs were plentiful. Though the mountainous regions, notably eastern Tennessee, were referred to as the "hog and hominy" districts, "po'k chops" were prized everywhere east of the Mississippi. Milk cows were scarce, but cattle were numerous, especially in the Southwest. And southerners earned their reputation for fried chicken; flocks ranging in size from a dozen to a hundred or so scratched in every barnyard.

The South, in fact, had in 1860 more livestock of every kind except sheep than did any other single section in the country. Even in comparison with the rest of the United States, including the Pacific coast area, it ranked well. Southerners owned slightly less than three-eighths of the milk cows, more than half the cattle, about half the oxen, eleventh-twelfths of the mules, more than one-third of the horses, and almost two-thirds of the hogs.

Scientific Study. By the beginning of the thirties the thinning soil of the South, particularly along the seaboard, had made careful study of the agrarian problem an obvious necessity. Edmund Ruffin, John Taylor, James H. Hammond, and M. W. Philips were the best known of those who encouraged improvements in agricultural methods. The *American Cotton Planter,* the *Southern Agriculturist,* the *Southern Planter,* the *Southwestern Farmer,* the *Southern Cultivator,* the *Farmers' Review,* and *De Bow's*

Commercial Review were the most important journals that appeared. Scientific study helped some of the declining planters, but it brought little change in the agricultural life of the small farmer and none at all to the poor whites in their wretched cabins (little better even today), whom their more prosperous neighbors derisively called "clay eaters," "hillbillies," "red necks," and "wool hats." Nor did it lessen the obeisance of Dixie to cotton.

The Agrarian and His Problems. Although there were variations according to sections, agricultural problems and practices were strikingly uniform throughout the nation. Pests, disease, droughts, and erosion were universal evils, as were also poverty and ignorance. In many places in Virginia the houses were rotted down "or tumbled into piles of ruins, and all the fences gone, and fields covered with trees"; in western Kentucky, Tennessee, and Missouri homes were poor, and stables were without doors, farms without gates, "and whole neighborhoods without a good head of cattle, horses, hogs or sheep"; in upper Georgia and Alabama thousands of woefully poor whites, described by Fanny Kemble as "the most degraded race of human beings claiming an Anglo-Saxon origin that can be found on the face of the earth," eked out a living on worn-out fields; and in the cotton lands abandoned plantations, "where buildings and fences are tumbling in ruins, and beautiful gardens grown up in briars and bushes, and large fields covered with broom sedge, the whole making a scene of desolation that is painful to pass by," revealed the penalty that southerners were paying for overproduction.

In other sections too there were evidences of agrarian destitution. Solon Robinson found in 1849 "within the sound of the City-Hall bell" of New York City land "covered with bushes, or miserable little half-starved patches of cultivation" with shanties "a degree, at least, below the western log cabin," and a few weeks later near the splendid mansion of P. T. Barnum he noted a "gambrel-roofed, unpainted structure" hemmed in by a duck pond, chicken coops, cow yards and stables, a swill barrel, an open drain, and an outhouse and separated from the road by a crooked rail fence with a rickety gate, "without a single shade tree to hide its hideous nakedness, nor a flower to charm away the offense offered to the sense of smell by all the horrid things" that surrounded it.[4] Yankee farmers continued "to pole out the hay from their old bog meadows" as their fathers had done for more than a century, when a few drains would have saved much time and labor. There were some well-kept estates in the West, but on the whole the crudeness of the frontier marked the section until after the Civil War.

[4] Kellar, *Solon Robinson*, vol. ii, pp. 423-424.

Soil-improvement and crop-rotation programs were nowhere consistently followed. Some commercial fertilizers at thirty to sixty dollars a ton were used in New England, the Middle States, and Tidewater Virginia, and occasionally fields were limed and such humus-providing crops as peas turned under. But, wrote D. J. Browne in a government report in 1857, farmers everywhere neglected "to return to the land an equivalent in manure for what had been abstracted by the plants. The result has been, instead of full and abundant crops, the older cultivated fields do not yield at present half as much as formerly, and in many localities, not a third, nor even a quarter as much, without the application of extra supplies of manure. To carry the evil still further, many of the farmers and planters of the present day, along the Atlantic seaboard and on the Mexican Gulf, are still exhausting the fertilizing matter of their lands by adding thereto large quantities of Peruvian guano, or other concentrated manures, which, when their immediate effects are over, will generally leave the soil in a poorer condition than it was in before they were applied." The Peruvian government soon restricted its exports of nitrogen, and the first acquisition of foreign islands (Howland, Baker, Jarvis, and others) by the United States was a result of the search for guano.

With few exceptions little attention was paid to the soil west of the mountains. In Ohio, Indiana, Illinois, Missouri, and Iowa when the manure became so deep that there was danger of "losing the old red cow in the dung pile," said an observer, the barn was moved to a new location; straw, cornstalks, and other refuse were burned. Farmers throughout the Mississippi valley were interested primarily in the few products that would give the greatest financial returns for the labor expended. Cotton and slaves were no more characteristic of the South than were corn and hogs of the prairie states north of the Ohio. Both sections can be excused for their restricted agricultural practices, however, for, except in the truck-gardening districts around cities, a variety of crops is grown only on poor land where one or two will not yield a livelihood.

Erosion, while its baneful effects were less apparent than in the twentieth century, was everywhere the enemy of agriculture. Millions of tons of soil each year washed away into the rivers of New England, the Middle States, the South, and the West; sometimes before the stumps of the original forests were gone, the land was practically worthless. A visitor in Tennessee in 1845 noted that he had seen in one field "20 one horse, or one mule plows, skinning the surface of the light, loose, fine, sandy soil, and sending it on a voyage of discovery to the gulf of Mexico." In spite of hillside ditches and concentric plowing, upper Mississippi was known

by 1850 as "Gullyville." Cheap and fertile land in the nation was too plentiful for farmers to spend time and money on its preservation in any particular place, though a majority of the states possessed flourishing agricultural societies and several boasted agricultural and mechanical colleges.

Yet whatever their troubles, agrarians were unperturbed, and agriculture made rapid progress between 1816 and 1860. The cash value of farms in actual cultivation increased from three billion to six billion dollars in the ten years before the Civil War. Investment in implements and machinery in 1860 exceeded that in 1850 by ninety-four million dollars, and the harvest swelled year after year. The East expected new profits from the growing demands of the industrial cities, the West looked with confidence upon its fertile fields, and the South had faith that the reformers could not shake the slavery foundation upon which its one great crop was built. Knowing that the North would hear him, Senator Hammond of South Carolina said in 1858 that the world could not make war upon his homeland because cotton was one of the keystones of civilization. He was sitting then on the volcano. He was soon to learn that war could be made upon Dixie—that cotton as king could be challenged and that the "great house" that had symbolized the section could be replaced by the far less elegant "forty acres and a mule."

Chapter 11

THE DEVELOPMENT OF A TRANSPORTATION SYSTEM, *1816-1860*

The Significance of a Transportation System. While Manifest Destiny was carrying the flag of the nation westward to the Pacific and the farmers were slowly spreading their empire over the Alleghenies into the Mississippi valley, other momentous developments too were in progress. A transportation system was being worked out; factories were growing up; cities were appearing in hitherto unimportant places; national and international commerce was flourishing or lagging in direct relation to financial stress or prosperity over the world; agrarian democracy of the trans-Appalachian region (supported by urban labor everywhere) was struggling with the aristocracy of the East for national supremacy; and the North and the South were slowly being forced into hostile camps. However interesting, it is impossible to discuss these concurrent happenings at one and the same time; the only solution is to treat each in its turn, with the hope always that he who reads will bear in mind that none took place wholly before the others but all combined to make the years between the War of 1812 and the Civil War a challenging period in our economic history.

Outstandingly significant in the growth of the United States was intersectional exchange of economic goods. Effective means of transportation are fundamental in the material progress of a nation. Much of the history of the country is to be seen in the highways, canals, and railways as they have crawled their slow and painful way over the land. Political organization and control can move forward even where there are no roads, but social progress and economic advance have always been inextricably tied up with some reasonably satisfactory system of travel.

In the early days the hunter and the trapper and even the squatter-farmer pushed through the trackless forests without thought of dependence upon neighbor or friend. The wilderness closed behind them with scarcely a single evidence of their having passed. Except for the few struggling settlements on distant rivers and dimly marked trails over

mountains, uplands, and spreading valleys, life flowed on as it had done for timeless ages. The appearance, however, of roads and other transportation facilities in any section, regardless of its isolation, brought not only continuity of civilization but also unity in economic progress. As Professor Schmidt has well said, "the introduction of steamboat navigation on the Western rivers, the construction of canals, and the extension of railroads into the region beyond the Allegheny mountains made possible that territorial division of labor which fostered the growth of a mutual economic dependence between geographic sections and the establishment of a predominant type of industry in each." Furthermore, "there was developed a rapidly growing tendency for each section to restrict its economic activities more exclusively to the production of those commodities for which it was best adapted. In this way each section produced a surplus of given commodities which were offered in exchange for the surplus commodities of other sections." [1]

Highways, canals, and railroads often dictate political opinions and direct the course of economic existence. They may change fundamentally the outlook of an entire region. They may even alienate old friends and build up new alliances; railroads in the Northwest were instrumental in sending invading soldiers in blue against the southland, where those same soldiers as farmers had once sold their grain.

Growth in the transportation system also brings modifications in social and cultural life. Localisms, homespun clothes, handmade tools, and sectional differences are greatly altered by the impact of people and goods from other places. Even names are changed by intercommunication and social interrelations; "drawers" as an article of clothing and "dishrag" as a cloth for washing or drying dishes are only two examples of expressions long abandoned. Economic life in a community often undergoes complete transition, and the economic activities of a distant section may be affected. Agriculture and stock raising in New England fell away under competition from the lands west of the Alleghenies as soon as roads, canals, and railroads were sufficiently developed to warrant the freighting of farm products eastward. The rise of Chicago as a railroad center quickly smothered Cincinnati's hopes of becoming a great industrial metropolis.

Steamboats on Eastern Waters. Rivers, chief reliance of the colonial period for transportation, remained important in American history until the Civil War. Freed from the staying hand of monopoly by John Marshall in his decision in *Gibbons* v. *Ogden,* steamboats plying eastern rivers and bays

[1] Louis Bernard Schmidt, "The Internal Grain Trade of the United States, 1850-1860," *Iowa Journal of History and Politics.* vol. xviii (January, 1920), pp. 96-124.

increased in number rapidly after 1824. On the Hudson they soon attained such speed as to be compared to eagles, "cutting the Water as the Bird does the air." Nightly out of New York steamers departed for Albany, Hartford, and various points on the Jersey coast. There was hustle and bustle at every wharf. "Men, women, Boys, Girls & even children," wrote an English visitor in 1829, "are to be seen in motley groups & parties in every direction from the numerous Stages, Steam Boats, Canal Packet Boats, &c. which disgorge and load at the Hotels and Quays." Fortunate were the passengers who obtained berths; often the men cast lots for those remaining after the women had been accommodated. As early as 1830 vessels one hundred and sixty feet long carrying up to three hundred passengers each were in service. By the middle of the century these were dwarfed by "magnificent floating palaces" whose service and appointments were beyond reproach. The *Isaac Newton,* built in 1845, which boasted a ladies' saloon, a stateroom saloon, a bridal stateroom, and woodwork and brass that never grew dingy, exceeded three hundred feet in length and had a capacity of more than five hundred passengers, and the *New World,* launched soon afterwards, was larger and even more elaborate. John Ericsson's *Iron Witch,* put into use in 1846, was the first iron-hulled boat to appear on the Hudson.

The steamboats were the most cosmopolitan of all means of transportation; business men, pleasure seekers, immigrants, professional gamblers, and freight were mixed with democratic indifference. Every landing and every meal was a social occasion; sometimes as many as three hundred people sat down to eat at the same time. Danger for the shouting passengers, however, lurked always in hidden snags and overexerted boilers. Though not so tragically numerous as on western rivers, boat skeletons rotting in lapping waters were frequent reminders that death rode with the milling crowds of the "floating towns." The timid preferred "safety barges," towed far behind where exploding engines could do no harm.

Among the men chiefly responsible for the rapid development of steamboat transportation along the Atlantic seaboard were the Stevens brothers (whose famous engine shops were located in Hoboken, New Jersey), Jacob and Cornelius Vanderbilt, George Law, Nelson Robinson, R. W. Kelley, H. Bailey, Isaac Newton, and Daniel Drew. Their rivalries mergers, dissolutions, and manipulations thrilled the public even when fares were affected. Under normal conditions the price of a passage from New York to Albany was one dollar, but if competition disappeared through consolidation or disaster it jumped to three. Freight charges too varied according to facilities. Steam towboats of the Union Transport Line,

the Merchants' Transportation Line, the New Jersey Steam Navigation Company, and others fought desperately on the rivers, canals, and bays of eastern New York, New Jersey, and Pennsylvania. Six boats, two by day and four by night, were carrying more people between New York and Albany on the eve of the Civil War than ever before. Yet it was evident that the days of the passenger boats were numbered; for a decade financiers had been diverting their investments into railroads. Many splendid vessels were forced to spend their postwar days as towboats.

Steamboats on Western Rivers. It was across the Alleghenies that real water romance was found. While floating craft powered by human hands continued important until 1860 at least, the boatman's horn on western streams gave way rapidly in the thirty years preceding the Civil War to the "shrill yet often musical" whistle of laboring engines. Proud palaces of luxury and utility (their sleeping rooms, it is said, named after the states) as well as more commonplace boats with flat, substantial bottoms were built at Elizabeth (Pennsylvania), Pittsburgh, Marietta, Wheeling, Cincinnati, Louisville, and lesser towns along the rivers. Although they kept severely to the Ohio and the Mississippi in the first years of steam navigation, bold captains soon began to push up unexplored streams whose banks were in many cases still covered with primeval forests except where the newly arrived settlers had made their clearings.

The waterways of the trans-Appalachian region were always dangerous. Planters (tree trunks standing rigidly upright or oblique in the beds of the streams, ready to smash a bow or puncture a hull) and sawyers (anchored trees or limbs rising and falling with the surging current) were only two of the numerous hazards that menaced inland vessels. Shifting sand bars so changed the depth of water that it was often necessary to send a man forward, leaded line in hand, to sing out the fathoms; the refrain "mark twain" (two fathoms) from the bow gave Samuel Langhorne Clemens inspiration for a pseudonym now famous in river literature. But dangers were not all external. High-pressure engines, stoked with wood sprinkled with rosin, shook the boats from stem to stern and not infrequently exploded when pressed too hard in the heat of a race to beat a rival vessel to the landing. The wreck of the *Ben Sherrod* in 1837 and that of the *Moselle* in 1838 were frightful catastrophes among many in the annals of river tragedies.

In spite of lurid posters warning people of the perils of water travel, however, passenger traffic on western rivers was heavy. Business men, merchants, plantation owners with their families and servants, immigrants, and "smooth-looking gentlemen . . . of the gambling fraternity" crowded

the boats from Pittsburgh to New Orleans. Crimson curtains, gilt mirrors, carpeted saloons, richly paneled cabins, and abundant food lent glamor to the crafts, and changing scenery made enticing leisurely journeys. A trip from Cincinnati, Queen City of the West, to New Orleans, Crescent City of the South, was indeed an experience. The entire economic life of the region was revealed in the tons of freight that "deckaneers" loaded and unloaded as the endless procession of boats plied up and down the rivers, taking the products of field and forest to market and returning the manufactured goods of far-away cities to the towns and farms of western agrarians. Neither train nor ocean liner has yet matched in romance the steamboat as it majestically breasted the currents or swung downstream around the bends of inland waterways.

Only on the rivers of the Old South were western boats unpretentious and uninspiring. Here they operated "more for the conveyance of cotton than of passengers," and, from most accounts, a miserable lot they were. Beginning their freight collections at the upper reaches of the streams, they gathered day after day from along the banks their increasing cargoes until with bales piled high in galleries, windows, and even doors they reached Gulf ports veritable floating masses of cotton. Smaller craft carried mail and passengers between towns unconnected by roads.

By the middle of the nineteenth century the glory of the steamboat on the Mississippi and other western rivers had reached its height. Two economies were coming into conflict. One was the leisurely downstream commerce to the Gulf (broken at St. Louis, dividing line between deep-water and shallow-water navigation in the great inland valley, and at New Orleans, southern gateway to the nation); the other was the mass-movement commerce, largely by rail, to the East and the Atlantic. Even water traffic on the lakes before 1860 had become a factor in the growth of industry and therefore an abettor to the final triumph of rail over river and lake city over river metropolis.

Steamboats on the Great Lakes. Steam navigation on the Great Lakes began about 1818 and grew rapidly thereafter. Filling the local hotels to overflowing, migrants waited impatiently at the eastern end of Lake Erie for passage westward. Buffalo in 1829 constructed a basin where canal boats and lake vessels could interchange their freight, and soon steamers were sailing daily out of the port on their hazardous journeys to Cleveland, Ashtabula, Huron, Portland, Detroit, and neighboring towns. The outgoing boats were crowded with a medley of goods and pioneers. Yankees, Englishmen, Germans, Swiss, and a host of other people fought for space for themselves and their possessions. Immigrants from the British Isles and con-

tinental Europe whose treasures had cost them laborious years in the restricted economy of the Old World were heavily burdened with their belongings. "Mark that quaint-looking wagon which lumbers up a dozen square feet of the deck," wrote Charles Fenno Hoffman on a trip from Cleveland to Detroit. "You may see a portrait of it among the illuminated letters of a vellum-bound edition of Virgil's Bucolics. It was taken from an Helvetian ancestor that transported Caesar's baggage into winter-quarters. It might be worth something in a museum, but it has cost five times its value in freight to transport it over the Atlantic. What an indignity it is to overwhelm the triumphal chariot with the beds and ploughs, shovels, saddles, and sideboards, chairs, clocks, and carpets that fill its interior, and to hang those rusty pots and kettles, bakepans, frying pans, and saucepans, iron candlesticks, old horse-shoes, and broken tobacco-pipes, like trophies of conquest over Time, along its racked and wheezing sides. That short man yonder, with square shoulders and a crooked pipe in his mouth, is the owner; . . . His eyes are but now just opening to his new condition; nor will he sacrifice a particle of his useless and expensive trumpery until they are completely open. That man has not yet a thought in common with the people of his new abode around him. He looks, indeed, as if he came from another planet. Visit him on his thriving farm ten years hence, and, except in the single point of language, you will find him (unless he has settled among a nest of his [German or Swiss] countrymen) at home among his neighbours, and happily conforming to their usages; while that clean-looking Englishman next to him will still be a stranger in the land." [2]

The wave of lake-borne migrants moved onward to the prairies of Indiana and Illinois and into the forests and mineral lands of Michigan and Minnesota. Hardy captains braved the dangers of the upper lakes, where storms were sudden and relief ports far apart. They sailed down Michigan to Milwaukee and Chicago and soon built up a flourishing commerce as the farmers of the section began to pour their products into the new markets. In 1846 fourteen hundred ships departed from Chicago in a single season. The eastbound cargoes had not yet become the stuff of American industrialism; they were for the most part made up of corn and wheat and oats and other products of western fields bound for the Erie Canal and the eastern seaboard. Before the Civil War iron ore had begun to flow down the lakes to the industrial cities on the southern shores.[3]

[2] *A Winter in the West. By a New-Yorker* (New York: Harpers, 1835; 2 vols.), vol. 1, pp. 107-108.

[3] Some good economic material is to be found in the volumes devoted to Ontario, Erie, Huron, Superior, and Michigan in the *American Lake Series*, ed. by Milo M. Quaife (Indianapolis: Bobbs-Merrill, 1944-).

Roads. Transportation facilities on land were woefully lacking, and the bustling and ambitious generation that saw the beginnings of the industrial nation gave no effective support to the development of a comprehensive highway system. The mild congressional and administrative enthusiasm that shortly after the turn of the century had led to authorization of the Cumberland Road and had inspired some appropriations for other great projects as well as improvements in rivers and harbors evaporated as sectionalism arose. States' rights were obviously involved in the objections to national sponsorship of highway development, but the fact that the rich did not care to contribute to the poverty-stricken sections or to the frontier was important. The question was settled for a time when in 1830 Andrew Jackson, through his veto of the Maysville Road bill that Henry Clay had proposed, definitely established internal improvements as the duty of local political units. Federal aid did not completely cease. Jackson himself, even after his veto, occasionally endorsed federal assistance for community undertakings, and Clay, supported by many of his Whig friends, secured in 1836 the passage of his much-cherished distribution bill for dividing the treasury surplus among the states.

Many national statesmen, backed by business men in the growing cities, continued to urge adequate transportation facilities; overland travel, however, long remained difficult. Social communication, as in colonial days, was severely hampered, and the transfer of raw materials and finished goods was sometimes almost impossible. Sickles for the reapers manufactured at Walnut Grove, Virginia, had to be carried horseback from the forge forty miles away; the first shipment of machines for western farms went by wagon to Scottsville, down the canal to Richmond, out the James into the Atlantic, and around Florida through the Gulf of Mexico to New Orleans and from there up the Mississippi and Ohio Rivers to Cincinnati, where they were distributed.

Wealthy towns along the central and northern Atlantic seaboard were often connected by splendidly built macadamized roads. Because toll charges and ferry rates were exorbitant, however, many people preferred to struggle through mud with half loads or less rather than contribute to the "monopolies." In the poorer regions of the West and the South the dimly marked and stump-studded trails through field and forest presented more hazards than steamboat travel at its worst. A rural southerner had aptly commented early in the history of the nation that the settlers "just cut a right of way through the woods, and trust to God for the rest," and Tench Coxe in 1792 had complained that farmers spent from one-fifth to one-half the value of their crops in getting them to seaport towns. The few main turnpikes that linked East and West (the Cumberland Road,

the old Forbes Road from Philadelphia to Pittsburgh through Lancaster and Carlisle, the Albany-to-Ohio road by way of the Mohawk valley and the Genesee Turnpike, and the Catskill Turnpike to the Allegheny River) were entirely inadequate to the needs of the day, and even they were permitted to fall into disrepair.

Although there was little interest in an extended and unified system, states and communities built highways whenever necessity dictated and finance permitted. The type of road depended chiefly upon the amount of money available for construction. Mere dirt, graded and drained, was the most common. At times, however, gravel from streams nearby was scattered thickly over the top. Corduroy roads were used extensively; they were made by throwing whole or split logs or slabs from the sawmills athwart the dirt trails at the most difficult places. The plank roads that came into popularity in the thirties were excellent when kept in good condition. They consisted of heavy thick boards nailed at right angles upon logs or sills, with sometimes a dirt or gravel covering to prevent horses from slipping on the grades. Their smooth surface enabled teamsters to haul immense loads and passenger vehicles to attain great speed. Seventy thousand wagons arrived in Chicago over these roads in 1847, and the legislature of Alabama alone in its 1848-1850 session chartered twenty-four construction companies. Growth was even more rapid in the decade of the fifties.

In spite of improvements, agrarians and small-town dwellers throughout the nation continued, as they do even today, to plod the dirt lanes and byways that their own hands or meager purses had built. Local roads on the frontier were often wholly lacking, and main highways were in many places all but impassable. A traveler described the military road connecting Detroit with Fort Dearborn at Chicago as "sometimes as beautiful as man could wish; sometimes bad enough to have been created by the infernal devil himself."

The Stagecoach. All roads, good and bad, were burdened with traffic. Although by 1860 canals and railroads had limited them to local business, heavy Conestogas and clumsy freighters of other description still served as distributors of "boughten goods" to inland villages. But everywhere farmers in their heavy wagons and townsmen in their lighter carriages disputed the highways with swearing teamsters and hurrying stagecoach drivers. The stage was omnipresent; carrying from eight to a dozen or more grumbling passengers as well as the United States mail and averaging not more than four or five miles an hour, it taxed sorely the patience and optimism of the generation. Aristocrat and plebeian suffered its miseries together. Except on the main turnpikes, passengers were fortunate if they

arrived at their destinations with no more serious troubles than aching bones and bruised flesh. Accidents were common, and not infrequently travelers found it necessary not only to get out and walk but also to lend their assistance in extracting the vehicle from stubborn mudholes. Even the strongest carriages made the corduroys with difficulty, and some "broke down . . . in the middle of the road." Springs—generally leather straps—were repaired with fence rails when nothing better could be found.[4] Intersectional travel was not so difficult as might be supposed; at least one group of lines maintained a coordinated schedule from Pittsburgh to New England.

Stage companions were not always desirable. An Englishman wrote of his journey to Schenectady in 1829: "And a famous Jolting we had, the road is horribly bad, such in fact as our English coaches could not travel over with safety, and I was stuck between two thorough going republicans one of whom for the sake of coolness just popped one leg out of the window. They evidently belonged to the anti-temperate Society and at every stopping place felt as thirsty as ever." The wealthy could hire for about three times the regular fare "Extra" or "Extra Exclusive" carriages and thus avoid the pother of the sometimes too democratic public but not the annoyance of wretched roads.

Stagecoach days at their height, however, were not wholly without drama and romance. There were often comfort, glamor, and beauty on a journey through the blue-grass country of Kentucky, for instance, or over the eastern end of the great Cumberland Road. Between Baltimore and Wheeling two competing lines in particular—the Good Intent and the June Bug—fought for general favor. Their "elegant" silk-lined coaches, some of them costing several hundred dollars each, proudly bore individual names. The drivers were expert horsemen, and their rivalries were as spectacular as those of Mississippi steamboat captains.[5] Indeed, competition had since colonial days been exceedingly bitter, and sometimes disastrous losses were incurred through price cutting. But it was the canals and the railroads that stilled the lumbering coaches and closed up the inns that dotted the highways.

[4] Stage lines were operated by individuals, by companies, and, particularly in New England, even by communities. Diaries and town records reveal the difficulties and discouragements of staging. More taciturn than most operators was Jonathan D. Mariam of Connecticut, who wrote in his account book on November 19, 1832, "Dull stageing this day sorrey," and on December 20, "Good stageing to day. I am glad."

[5] Pete Burdine was a particular hero among the partisans of the Good Intent line. One could hear his friends along the road from Baltimore to Wheeling singing of the June Bug line, owned by Stockton:

"If you take a seat in Stockton's line
You are sure to be passed by Pete Burdine."

Canals. The demand for canals began early in American history. Canal construction, in fact, was a more natural development than road building, for both colonial and trans-Allegheny settlements were made with reference to natural water highways. Although a great deal of money was spent in improving harbors and deepening channels, no amount of work could make the rivers fill the pressing need of an east-west commercial trade route. Roads might have solved the problem, but they could not meet the one fundamental requirement of extensive commerce—cheap freight rates. The result was a mania of canal building between 1820 and 1850 that often entailed the fruitless expenditure of millions of dollars.[6]

Canal projects were divided roughly into three groups: those connecting the seaboard with the trans-Appalachian region, those tapping local eco-



Courtesy Historical Society of Pennsylvania

FIGURE 6. CANAL BOATS

nomic assets or uniting nearby rivers, and those joining the waters of the Great Lakes with the streams of the Mississippi basin. The three presented distinctly different financial problems in their construction.

Several canals had been operating in America before 1800; they had been for the most part, however, supplements to river navigation or merely means of avoiding transportation handicaps such as the Dismal Swamp in Virginia and North Carolina. The Erie was the first important canal to connect two significant and widely separated economic regions—the East

[6] In spite of general public approval, many people objected to canal building at the expense of highway development. After a freshet had washed a canal out of commission in western Pennsylvania in 1834, William Robinson wrote a friend: "We must give up the cannal and better the condition of our roads or we must imploy men of more sound judgment on our cannals; my opinion is that we ought to go to work in earnest on our roads and make them permanent without delay."

and the new West. While many individuals, especially George Washington, Gouverneur Morris, and Elkanah Watson, had thought of such a waterway during the Revolutionary period, nothing had actually been done. Disappointed in not obtaining assistance from the national government or neighboring states and irked by the commercial growth of New Orleans, De Witt Clinton, governor of New York, undertook the canal as a state project. Work was begun in earnest in 1817, and, although construction was carried on by small contractors of limited financial assets, the part between Rome and Utica was completed two years later. Much still remained to be done on Clinton's "Big Ditch." Plows and scrapers, tree pullers and root cutters, straining horses and sweating men inched the various sections toward their respective goals in spite of many jeers, and on October 25, 1825, cannon announced along the way from Buffalo to Albany that the huge task was finished. Great was the rejoicing that at last the opposition of "ignorance, prejudice and malice" had been overcome; and indeed, as predicted at the time, the work long remained "an unfading chaplet on the brow of those men who first conceived it."

The completion of the Erie Canal brought fundamental changes in national commerce. No longer did the Mississippi River enjoy a monopoly of the western grain trade. As new fields came under tillage, the allegiance of the Northwest slowly shifted from the southland, and the port at the mouth of the Hudson was ready to become the outstanding commercial center of the nation. Freight charges between New York and Buffalo dropped from one hundred dollars to ten dollars a ton, and the returns from increasing traffic repaid within scarcely more than a decade the entire cost of the canal.

New York's success led to sometimes frantic efforts on the part of other eastern states to rival her accomplishment. Pennsylvania in particular was fearful that her ambitious neighbor might capture the commerce of the West. Notwithstanding much controversy concerning the location of the proposed route and lengthy argument against the project by those who profited directly or indirectly from turnpikes, the state began in 1826 the building of a canal to Pittsburgh. The difficulties of this undertaking were far greater than those which had delayed construction of the Erie. The most formidable obstacle to overcome was the Allegheny Mountains, rising to a height of some twenty-three hundred feet at the lowest crossing. The job was attacked, nevertheless, with optimism and hope. The horse railroad from Philadelphia to Columbia made up the first unit of the system. From Columbia the Union Canal, following the general course of the Susquehanna and Juniata Rivers, led to Hollidaysburg. Here some thirty-two

miles of mountain intervened, but the builders were not deterred. Tracks were laid up the slopes, and stationary engines at the crests pulled the boats, floated on to railroad trucks below, up the mountain sides and let them down into the valleys beyond.

The opening of the canal in 1834 brought the first direct commercial communication between the East and the upper Ohio River. Except for the heavy products of the West that could not be profitably shipped over the new waterway, wagon traffic between Philadelphia and Pittsburgh declined appreciably. In spite of the handicaps, however, cargoes of tobacco, flour, meat and meat products, wool, and hemp bound for Philadelphia doubled in volume, and manufactured goods moving westward increased even more. But toll receipts were never large, and by 1852 they had begun what soon proved to be a rapid decline. The Pennsylvania Railroad later bought the failing canal. Though the western end was abandoned during the Civil War, the eastern section continued to do service for many years, principally as a carrier of anthracite coal destined for Philadelphia and other eastern markets.

Maryland and Virginia soon joined in the fight to win the trade of the Ohio and Mississippi valleys. For many years there had been talk of building a canal along the Potomac westward to the Youghiogheny by way of Cumberland, Maryland. The Potomac Company, incorporated in 1785 with George Washington as its president, against heavy odds had cut a passage around the falls at Georgetown before financial difficulties brought an end to the corporation. Work on the actual westward project began in 1828, when John Quincy Adams turned the first spadeful of dirt in the construction of the Chesapeake and Ohio Canal. Cumberland was reached in 1850. The proposed tunnel through the mountains to the Youghiogheny, however, was never finished, and the Baltimore and Ohio Railroad alone eventually tapped western markets. Virginia renewed in 1835 her efforts to build a canal westward to the Kanawha, but the headwaters of the James River, reached in 1856, proved its final terminus.

At the same time that various east-west canal plans were being pushed, waterways of a more local nature were under construction. Pennsylvania was especially interested in cheap transportation for the product of her coal mines, and several canals were built between or along the Susquehanna, the Lackawanna, the Lehigh, the Schuylkill, and the Delaware. New Jersey, also concerned primarily with the transportation of coal, built during the thirties the Delaware and Raritan Canal and the Morris Canal. The first connected Bordentown on the Delaware with New Brunswick on the Raritan; the second, beginning at Jersey City and ending at Phillips-

burg, linked the Hudson and the Delaware. These two canals were a part of the general plan, recommended by Albert Gallatin as early as 1808, of uniting the eastern seaboard cities by means of a commercial waterway that would obviate the dangers of the Atlantic. Another unit in the north-south project was the Delaware and Chesapeake Canal, completed in 1829.

The canal-building mania spread rapidly to the farm lands beyond the Alleghenies, where feverish efforts were made to join the Great Lakes (and thus the Erie Canal) to the inland rivers. Pennsylvania added to her already pressing financial difficulties by constructing west of the mountains the Pennsylvania and Erie Canal, connecting the Ohio River with Lake Erie. By 1850 Ohio had finished more than a thousand miles of artificial waterways; the Ohio and Erie linked the Ohio River at Portsmouth with Lake Erie at Cleveland and supplied water transportation from the lakes to the Gulf, while the Miami and Erie joined Cincinnati and Toledo. Indiana also secured lake-to-river transportation by constructing a canal beginning with Evansville on the Ohio and making use of a western branch of Ohio's Miami and Erie at its northern end. Illinois, though sparsely settled, built in 1848 a canal from Chicago to La Salle, thereby establishing a waterway between Lake Michigan and the Mississippi. Wisconsin joined the Fox and Wisconsin Rivers, making another connection between Lake Michigan and the mighty "Father of Waters." Michigan, by means of a canal around St. Marys Falls, created in the middle fifties a waterway between Lake Huron and Lake Superior that has proved of permanent value. Navigation of the Ohio was greatly improved by the Portland Canal around the falls at Louisville. Total mileage in the nation grew from less than thirteen hundred in 1820 to thirty-seven hundred in 1850.

Passenger Service on the Canals. In addition to carrying freight the canals were important arteries of travel for the general public. The boats offered both safety and comfort; a land-weary traveler wrote in 1829 that their "quietude . . . in contrast with the rack of a Jolting coach" was "truly wonderful." Moreover, they provided good lodging, excellent meals —"served up in as good order and style as may be found on board any of the Hudson River steamboats"—and "the quiet of a country cottage with an endlessly moving landscape." Although on hot summer days the decks sometimes had to be washed every fifteen minutes "to cool the simmering pitch in the seams" and people had to go below when the vessels passed under bridges, journeys were pleasant. Within four years after the opening of the Erie Canal seventeen boats devoted to the conveyance of passengers alone were plying between Albany and Buffalo. Cost and time were

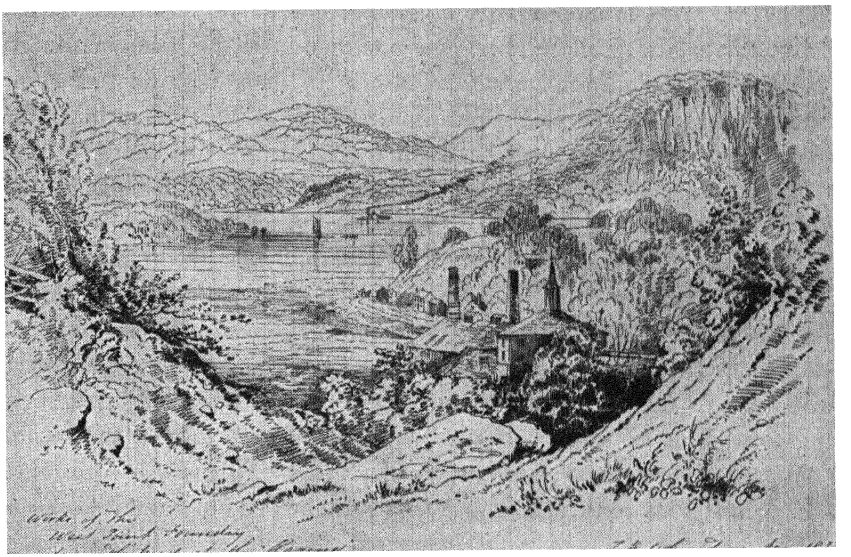
summed up in the not altogether accurate saying "a cent and a half a mile, a mile and a half an hour."

Economic and Financial Results of Canal Building. The economic effects of the canals were immediate and striking. No longer forced to deduct from the price of grain the heavy costs of wagon transportation to distant mills, the farmers found that their receipts from sales in local markets in some cases doubled. Land values rose abruptly both because of the increased profits agriculture was enjoying and because of the growing clamor for farms set up by the migrants who followed the waterways inland. Villages in western New York and along the lakes grew quickly into bustling towns and cities as eastbound traffic swelled. Buffalo, Cleveland, Toledo, Detroit, and Chicago began to rob the old river metropolises such as Pittsburgh, Cincinnati, Louisville, St. Louis, and New Orleans of their commercial glory. Unfortunately the canal-building fever coincided with and partially produced an era of excessive speculation and reckless spending. Only in such a period, perhaps, could so much have been accomplished, yet the ultimate results were somewhat tragic. Rash purchases of public lands, unwise expenditures for internal improvements that could not possibly bring immediate returns, unsound banking practices, and an unwillingness on the part of the states to curb the ambitions of their citizens led to a dangerous financial situation. In their jealous efforts to tap every available economic field, states pyramided their debts with abandon, and when national events precipitated a crisis in 1837, many of them repudiated their obligations. Canal building, except in the West, died quickly. Foreign investors suffered heavily. They had provided much of the needed capital, for few local citizens had cared to subscribe to projects that might destroy the profits of the turnpikes, throw teamsters and land freighting companies out of business, and close up the inns along the highways. Railroads, which for a half-dozen years had been shoving water transportation out of the public mind, profited by the change.

Railroads. Railroad development began almost simultaneously in England and the United States. But the experiments with rail transportation that the two countries made in the years between 1825 and 1830 were not wholly original. Though propelled by hand or horsepower or pulled by gravity, carriages run upon fixed tracks had long been known. Steam locomotives, intended to be driven on the public thoroughfares and highways, had also been in use for some time. Oliver Evans drove his "Columbian" (designed to draw passengers and freight over the new Lancaster Turnpike) through the streets of Philadelphia in 1802 and two years later built his strange "Orukter Amphibolos," which he hoped would travel both

on land and on water. When the first work began on the Stockton and Darlington road in England in 1825, steam buses, despite much legislative opposition, were operating "safely and successfully" in the city of London. It was not until 1830, however, that carriages and locomotives were combined and put on rails.

The First Experiments. With the exception of three short private roads in Massachusetts and Pennsylvania, the Baltimore and Ohio was the first modern railroad in the United States. Baltimore, like a majority of the



Courtesy the New York Public Library

FIGURE 7. WEST POINT FOUNDRY
(From the Diary of T. K. Wharton.)

other cities of the Old South, had not profited greatly from the era of canal building. Her merchants had therefore watched the growth of water commerce with concern and envy. At last, fearful that the proposed Chesapeake and Ohio Canal would benefit only the national capital and the small towns along the Potomac, the business men of the city sought a railroad charter in 1827. Charles Carroll of Carrollton, last survivor of the hardy group of men who had signed the Declaration of Independence, laid the first stone of the track on July 4, 1828, while John Quincy Adams was turning the first spadeful of dirt on the canal.

The now famous "B and O" opened its road from Baltimore to Ellicott's Mills in 1830, and the following year the *Tom Thumb,* equally famous

locomotive, made the thirteen-mile run in one hour. In 1830 also was opened in South Carolina the Charleston and Hamburg, which, when completed in 1833, was for a time the longest railroad in the world.[7] The *Best Friend of Charleston,* drawing four loaded cars from one city to the other, sometimes attained a speed of twenty miles an hour. In 1831 the Mohawk and Hudson, forerunner of the New York Central Lines, began operations between Albany and Schenectady; the *De Witt Clinton* ran the sixteen miles between incline and incline in an hour. The first of these engines was built by Peter Cooper; the second and third were turned out by the West Point Foundry of New York. In 1832 Matthias Baldwin delivered to the Philadelphia, Germantown and Norristown Railroad *Old Ironsides,* pioneer of what is now more than a century of engines from the shops of the Baldwin Locomotive Works in Philadelphia. Railway transportation was well launched by 1835.

Handicaps to Growth. Railroad progress was made with difficulty. Both technical knowledge and capital were lacking, and distances were great. While bridge construction had advanced rapidly on the highways, large rivers were for years almost impassable barriers. American engineers went abroad to study, but entirely different conditions at home made the knowledge they acquired of little value. Faced with a vast expanse of land where towns were few and hills many, they were compelled to use grades and tolerate curves that the Europeans would have scorned. In fact, each road met its individual problems as they arose, and the consequence was a hodgepodge of construction that long prevented unification.

The railroad builders were hampered also by state legislatures and economically interested individuals. In fact, the conflict between established capital and new material ventures is in no period more clearly revealed than in the early years of railroad development. In New York the stockholders and directors of the Mohawk and Hudson were made "jointly and severally and personally liable" for all debts contracted by the corporation, and it was stipulated by law that the state might take over the road at any time within five years merely upon payment of construction costs less the tolls that had been collected. Moreover, the company was required to limit itself strictly to passenger traffic because the state, having invested in the Erie Canal, sought to maintain a monopoly on the transportation of freight. Carrying privileges, however, were later extended. The Utica and Schenectady, for example, was in 1844 permitted to accept and transport

[7] The *Stourbridge Lion* was the first steam locomotive to make a regular rail trip in America. It was imported from England but proved too heavy for the rails and trestles of the Carbondale and Honesdale Railroad (Pennsylvania), on which it was tried, and was discarded.

"all goods, chattels and other property that may be offered for transportation." But the liberty was restricted to that period "during the suspension of canal navigation in each year only," and even then the tolls were required to be identical with those of the canal when it was in operation.

Many individuals aggressively objected to the trains. Farmers feared that the iron monsters would deprive them of markets for their grain and hay, and owners of canals, turnpikes, plank roads, and river boats and keepers of inns and hotels were convinced that the new means of transportation would not only take from them their profits but strip them of their invested capital as well. Members of the legislature of Connecticut declared that a proposed road they had been asked to approve would close up the canals and stage lines and in New Haven alone make useless property to the value of a million dollars that had been built up "in accordance with and to accommodate the immemorial channels of commercial and domestic enterprise." If the projected rail and river plan was accomplished, it was said, then "Connecticut like her sister State of New Jersey would be a mere conduit for the operation of foreign engrossers to whom her citizens would be made tributary, who like their brethren of New Jersey might then see the rail road cars passing with meteor rapidity, and their Steamboats spreading their streamers in curling smoke thro the State while they, poor serfs, would not be entitled to any share of the emolument. What now affords a comfortable support to many hundreds of our industrious fellow citizens would then go into the iron chests of an exotic company, to add to the millions of foreign capitalists."

Westerners looked askance at the huge expenditures involved because they suspected that the costs would ultimately come from the people's pockets. The railroad from Springfield to Meredosia, Illinois, was, wrote Solon Robinson in 1845, "another of the links of that endless chain that was to bind the States in love together, but has bound them in debt forever." There were less substantial objections also. It was asserted that the noise of the rushing, rumbling engines would fill the insane asylums; that the gas and smoke that poured out of the great funneled smokestacks would poison the air and kill all the birds; and that the flying sparks would fire haystacks, barns, and homes and thereby increase insurance rates to such a point that nobody could pay them. Many doubted that life was possible at such speeds as the carriages might attain. Religious and moral protests too were heard. Puritanical moralists were in some cases opposed to "fantastical rails and engines by means whereof the people might buzz about the country like bees in a clover patch."

Moreover, the democratic nation had not yet convinced itself that rail-

roads were not an intolerable monopoly. Having driven their teams on the publicly built highways and pushed their boats into the nationally aided canals, many individuals saw no reason why the railroads should not be available to all who wished to use them. Only reluctantly was it finally admitted that steam transportation on rails if it was to be enjoyed at all must be on a private basis; as late as 1839 William H. Seward still hoped

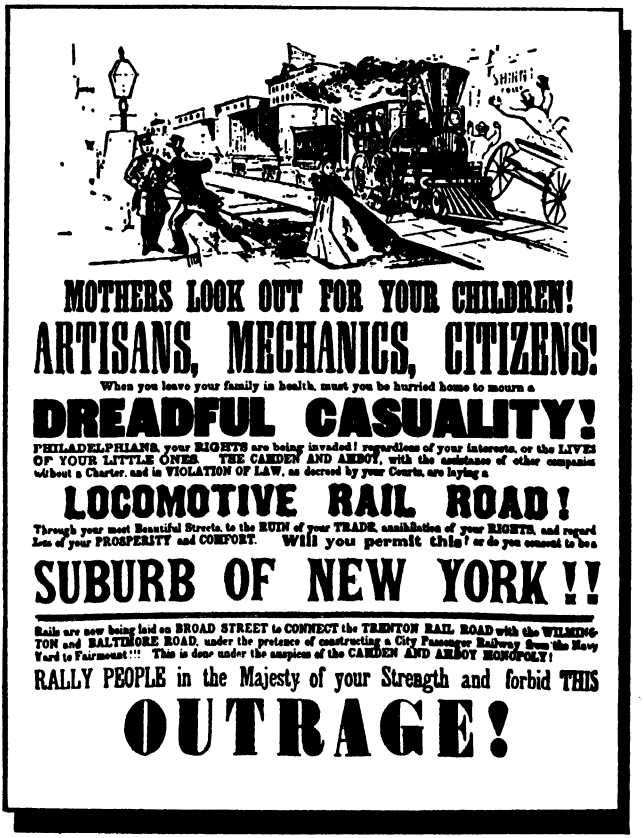


FIGURE 8. A PHILADELPHIA HANDBILL OF 1832

that the road might be public, and congressmen in 1850 when discussing a transcontinental railroad planned a double track so that anyone who so desired might drive his own engine. Progress, nevertheless, was rapid. The roads, as Baltimore could attest, brought prosperity, and before 1860 the form of the future could already be seen in Congress in such economic promoters as Thomas Hart Benton and Stephen A. Douglas and in the industrial world in such eager financiers and builders as Johns Hopkins and Robert Garrett of Baltimore and J. Edgar Thomson and Thomas A. Scott of Philadelphia.

Northern Railroads. In spite of difficulties a network of railroads gradually spread over the country. Fundamentally the projects closely followed the same plan as that used in canal building: short local lines tapping nearby economic resources or joining local shipping points, longer lines connecting the Atlantic seaboard with the trans-Appalachian region, and north-south lines tying the Mississippi valley at one end to the Great Lakes and at the other to the Gulf. New England and the Middle Atlantic States of New York and Pennsylvania were first to attain road systems providing reasonable speed for both passengers and freight. In 1851 the New York and Erie reached western New York, thus supplying the first rail connection between the Atlantic and Lake Erie. The Baltimore and Ohio, projected as a trunk line at its inception but delayed for many reasons, touched the Ohio River the next year and turned southward some of the traffic that had followed the Pennsylvania Canal to Philadelphia. About 1853 the various roads between Albany and Buffalo combined to form the New York Central, and in 1854 the Pennsylvania established direct connections with Pittsburgh. A Canadian road, the Grand Trunk, was a significant northern through route which, though its roadbed was in Canada, had its eastern terminus in Portland, Maine.

Southern Railroads. Southern railroad construction met as serious problems as had southern canal building, and its progress was correspondingly slow. Trunk lines were necessarily longer and more expensive than those in the North. With a few notable exceptions such as the Charleston and Hamburg the first roads in this section were town enterprises of only a few miles in length, but by the middle forties consolidation had begun. The Richmond-to-Chattanooga road was one of the earliest completed. Later the Western and Atlantic (linking Atlanta and Chattanooga) joined the South and the trans-Allegheny North, making of Atlanta the "gate city" of the Cotton Kingdom. The Illinois Central and the Mobile and Ohio, paralleling the Mississippi River, eventually connected the Gulf coast and the Middle West at Chicago. On the eve of the Civil War the South possessed some eight thousand miles of road.

Western Railroads. North of the Ohio and west of the Alleghenies the railroads brought dramatic economic conflicts. Pittsburgh at first saw no reason for giving up a flourishing river trade in favor of uncertain and expensive steam transportation. She ridiculed the "railroad mania" and called upon all and sundry to pause before it was too late. When the roads proved their worth, however, she promptly forgot her opposition and began a bitter fight with neighboring towns—particularly Washington and Wheeling—to win for herself the coveted terminus of the tracks that were

crawling westward from across the mountains. The Baltimore and Ohio—influenced by a million-dollar bond purchase—chose to touch the Ohio at Wheeling, and the hostilities that the Wheeling bridge had stirred flamed again. Pittsburgh made war on the "Terrible Hempfield" line by which Wheeling hoped to make connections with Philadelphia, and Wheeling struck viciously at the "malicious plan" of Pittsburgh to build to Steubenville and on into the grainfields west of the Ohio.

Cincinnati and Louisville were meanwhile engaged in an equally spectacular contest; struggling desperately for the economic privilege of tapping the South, they employed every known political device. In the middle thirties a railroad convention at Knoxville approved a road from Charleston to Cincinnati by way of the French Broad River and the Cumberland Gap, but Kentucky defeated the project and with it the last hope of the Queen City for direct connections with the Old South. Even before the middle of the century the steamboat center had shifted to St. Louis; Louisville had become through the Louisville and Nashville the entrepot to the lower Mississippi valley; and the railroads were pointing toward St. Louis, Chicago, Cleveland, and Buffalo, leaving Cincinnati to her own resources.

The panic of 1837 delayed western construction for a decade. In the dozen years following 1848 many roads were built in Ohio, Indiana, and Illinois. Everywhere towns sought access to the Great Lakes or to connecting links with the trunk lines of New York, Pennsylvania, or Maryland. From the Michigan peninsula, from the East, and from the Ohio valley building crews rushed construction toward Chicago; the Michigan Central and the Michigan Southern entered the city within forty-eight hours of each other in 1852. Two years later the opening of the Rock Island and Chicago between the Mississippi River and the Great Lakes blasted the hopes of Ohio River commercial centers, because much of the Louisville, Cincinnati, and other upriver trade was diverted to Chicago. That city, wholly devoid of railroad trackage in 1850, was within five years the terminus of twenty-two hundred miles; daily a hundred or more heavy trains arrived and departed as they bound the great agricultural heartland to the lake metropolis. By 1860 the railway system of the Northwest, though still a skeleton, spread over the entire section, touching the Ohio and the Mississippi at several points. The Civil War had scarcely begun before the rails crossed the mighty river into Iowa, Missouri, and Louisiana, leaving far behind the four stopping points of a few years before—Dunkirk, Buffalo, Pittsburgh, and Wheeling.

The Atlantic and the Mississippi—in contrast to the days of the plodding Conestogas or even the rushing stagecoaches—were but a step apart. At an

expenditure of twenty-five or thirty dollars one might in two days make the journey from St. Louis to Baltimore. The fifties were indeed fateful years in the development of transportation as well as in other things: the events of the decade isolated the South of cotton and a landed tradition and tied together the North and the West of corn and wheat and beef and iron and other indexes of a budding urbanism.

Pioneer Coaches and Travel. Measured by modern standards, the first cars were crude and infinitely uncomfortable. They were open to the weather and to the destructive sparks that poured out of the wood-burning engines. Connected by chains and equipped with regular carriage brakes, they bumped their way painfully, if rapidly, to their destinations. The carriages at first resembled individual stagecoaches, but later they were joined, and, as is still true in Europe, wooden running boards were built along the sides. Within a few years, however, the typically American coach with its center aisle permitting unimpeded social communication made its appearance. Passengers, "booked" at first, found tickets available by 1840, but not until ten years later was one able to buy through passage. The conductor—not the engineer as in Europe—was the chief officer of the train.

In spite of frequent accidents (caused in the early years mostly by broken axles), Americans soon recognized in the railroads a long-felt need. Travelers were fascinated by the "terrific velocity" and "lightning speed" that the trains attained. John S. Peters, former governor of Connecticut, wrote in 1833 that he "flew on the wings of Steam at the Rate of a mile in 3½ minutes." The irritating slowness of water craft and the agonizing miseries of the stagecoaches were no longer inevitable parts of every journey. Moreover, business men saw in the rails a magic wand that would turn straggling inland villages into flourishing cities. In fact, many changes came to the nation with the appearance of the "rushing overland giants" whose courses were determined by economic factors and not solely by the whims of nature.

The Problems of Construction and Unification. Railroad construction was expensive, and costly experiments were necessary. The first tracks were designed for permanence; those of the Mohawk and Hudson, for instance, were built of six-by-six Norway or white-pine stringers from twenty-one to twenty-four feet long laid upon fifteen-by-sixteen-inch granite blocks set sixteen inches deep upon a crushed-stone foundation. Solid roadbeds proved too rigid and were soon replaced by the ballast type. The dangerous wooden rails, topped with iron strips, later gave way to T-rails, now universal. The earliest bridges were wooden or stone; it was not long, however, before

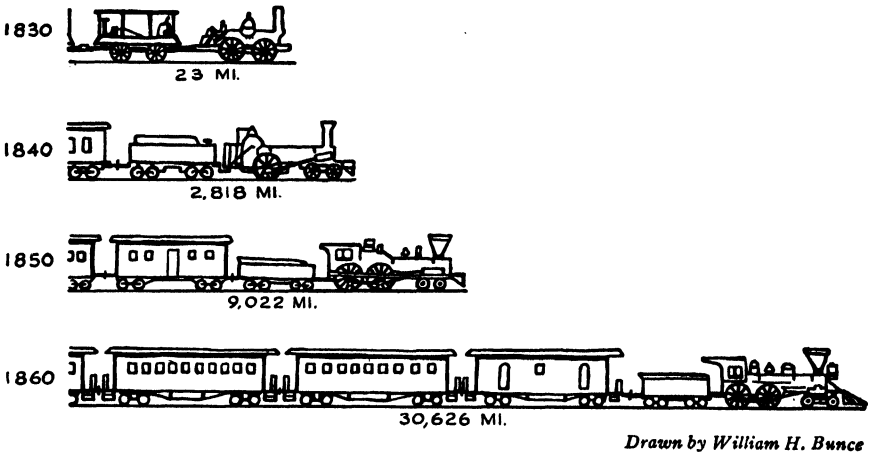
engineers began to experiment with iron, and by 1850 American structures had begun to attract world attention. Funds for building the roads were at first obtained through appropriations, gifts, or loans from states, cities, and counties or through the sale of stocks at home and abroad. The first land grant from Congress was secured by Stephen A. Douglas in 1850 for the Illinois Central. Though millions of acres of the public domain were eventually donated to the corporations, the railroads were built primarily through funds provided by European and American investors, especially the former.

Engines were from the beginning remarkably well constructed. Each year they grew heavier and more powerful. But manufacturers were handicapped by the fact that the tracks varied greatly in width on different roads. A standard gauge that would permit the interchange of cars was objected to by many people. Hack drivers, hotel owners, innkeepers, draymen, and lunch venders fought vigorously to prevent through trains; in the forties seven changes were necessary in the journey between Albany and Buffalo. The transfer of passengers and freight from one road to another meant money for local business men—and there was always the possibility that schedules might be so arranged that travelers would have to remain overnight. As late as 1854 citizens of Erie, Pennsylvania, rioted and destroyed railroad property when the companies proposed to modify their tracks so that the trains could pass uninterrupted through the town.

The Express Companies. The railroads were interested principally in passenger transportation; only slowly did they become carriers of regular freight. Particularly lacking was a parcel service, but in 1839 William F. Harnden began to carry small packages between New York and Boston in a carpetbag. The American Express Company, the Adams Express Company, and Wells, Fargo and Company (chiefly a pony express running between Mississippi and California) appeared before the Civil War. Even in these early years they were apparently little less versatile than today. C. K. Holliday, writing from Topeka, Kansas Territory, on September 26, 1855, advised his wife in Pennsylvania: "If you fear to travel alone, or can get no one to travel with you, you can consign *yourself* to the care of the 'Express Company' and it, through its agents, will see you safely delivered on board the boat at St. Louis. . . . It will cost a little more; but then you will have care and protection the whole way to St. Louis and will have yourself safely placed aboard the Boat at St. Louis." [8]

[8] Holliday was later promoter and first president of the Atchison, Topeka and Santa Fe Railroad. See "Letters of Cyrus Kurtz Holliday, 1854-1859," ed. by Lela Barnes, *Kansas Historical Quarterly,* vol. vi (August, 1937), pp. 241-294.

However incomplete, the transportation system that grew up in the nation between 1816 and 1860 was significant indeed. Rivers, lakes, canals, roads, and railways drastically altered economic, social, and political out-



Drawn by William H. Bunce

FIGURE 9. RAILROAD MILEAGE CHART

looks and practices. Railroads knit the East and the West together, foretold a material age, and may have been a major factor in splitting the North and the South asunder—not so much because they robbed one section of its trade as because they made evident the inequalities inherent in an agrarian conflict with industry.

Chapter 12

INDUSTRY AND THE RISE OF THE FACTORY

English Origins of the Industrial Revolution. The factory system had its beginnings in England. That nation, free from the devastations of continental wars and rich in certain essential natural resources, was the first to break away from the restrictive guild regulations that had for a long time governed hand creation. Her empire over the world gave her experience in financial organization as well as needed supplies and eager markets. Moreover, the "putting out" system that succeeded guild production did not prove entirely satisfactory. Factors seeking additional labor distributed their raw materials among families for partial or complete processing. But they were able neither to control the quality of their goods nor to predict the output at any given time. Because of a lack of uniformity in the various steps of manufacturing, workers under the system were often without jobs. It was customary in the woolen industry, for instance, for certain families to card, others to spin, and still others to weave; if any group either lagged behind or pushed too far ahead, unemployment resulted. The presence of available capital and thousands of idle workmen who had been forced from the land by agricultural improvements also helped in driving England into industrial pursuits.

Machines were the product of long years of experimental mechanical development on the part of many individuals. Primary interest centered in textiles. John Kay in 1733 devised the flying shuttle, which saved both time and labor and made it possible to weave cloth of greater width than before. Soon the looms were requiring more thread than could be produced; so pressing was the demand that the Royal Society eventually offered a prize for a satisfactory spinning machine.

Shortly after Kay's shuttle appeared, James Wyatt and Lewis Paul began experiments in mechanical spinning. Neither was ever able to perfect his machine. Success came only in 1764, when James Hargreaves conceived the idea of a spinner with a series of spindles all run by the same power. Hargreaves' spinning jenny, patented in 1770, spun eight threads at a time; subsequently the number was increased to thirty-two. Other inventors and

other improvements soon appeared. Richard Arkwright, itinerant barber and hair dealer, appropriated the work of many people and applied water power to the resulting machine, patenting his invention in 1769 as the water frame. Ten years later Samuel Crompton combined the Hargreaves spinning jenny and the Arkwright water frame and called the hybrid a spinning mule. Fine thread strong enough for warp as well as for woof was at last a reality, and for the first time cloth could be made wholly of cotton.

The mechanical solution of the spinning problem, since it smothered the weavers in an overabundance of thread, brought acute unemployment and much bitterness on the part of the workingmen. Kay was driven into exile and died in poverty in Paris, Arkwright's first mill was burned down, threats of violence were made against Hargreaves, and Crompton was attacked by mobs. Although Edward Cartwright's power loom of 1785 helped reduce the thread surplus, a balance between spinning and weaving was not attained until well toward the close of the Napoleonic wars.

The great inventions in England in the second half of the eighteenth century quickened the pulse of industry in many ways. Not only was spinning and weaving machinery perfected, but progress was made too in the development of steam engines, in the production of iron and some special steel, and in the making of tools. The use of coal as a source of power was stimulated also, and commerce was substantially enlarged. The general effects of the advance in all fields were to drive manufacturing from the home and to create a laboring class. The changes were so momentous that the period has come to be designated that of the Industrial Revolution.

Factors Aiding American Industrial Growth. The United States is much indebted to England for its progress in industry. In spite of British restrictions on the exportation of machinery and efforts to prevent anyone from taking drawings or plans of machines from the island, New Englanders were soon in possession of English mechanical secrets. Even before the American Revolution got under way, there were crude evidences of the beginnings of industrialism. Various domestic factors helped the growth of shops and mills. The abundant natural resources of the country were of overwhelming advantage. The presence of cheap land, however, retarded their use for a time at least, for investors hesitated to gamble their money in business projects when they could for a small amount buy land on the frontier that might soon double or treble in value. The feeling that landowning was a mark of distinction assisted further in making the soil a serious competitor with industry for labor and capital. Moreover, the con-

tinent was peculiarly suited to the extractive industries, and for that reason the people long preferred to sell to England the products of farm, forest, and sea and buy from her the manufactured goods that they needed. But slowly the nation turned to large-scale industry. Governmental encouragement,[1] particularly in the years when Alexander Hamilton was Secretary of the Treasury, stimulated mechanical growth, and the embargo and other restrictive measures that preceded the War of 1812 effectively checked the importation of foreign goods and greatly aided production at home. During the war manufacturing grew apace, and notwithstanding bitter rivalry from England after the conflict had ended, over-all gains were appreciable. Furthermore, the absence of burdensome taxes on business ventures and the lack of annoying tolls or imposts on internal commerce inspired expansion. Local, state, and national governments granted exemptions, privileges, and bounties; attractive financial inducements offered by town fathers were, in fact, often responsible for the selection of factory sites. High freight rates on ocean commerce also did something toward promoting the growth of manufacturing.

Power for the Machines. *Water Power.* Fully as essential in industrial progress as natural resources, mechanical ingenuity, and governmental bounties and subsidies was power. Water, wind, human beings, and domestic animals had for centuries been exploited in the quest for energy. Actually only the first of these was applicable to the heavy tasks of mechanical production; for this reason early mills and factories in America grew up on streams where the water flowed swiftly over breaks in the bottoms. Yet even with improved turbines water power was not thoroughly satisfactory. Steam—untiring, flexible, controllable, and relatively cheap—was the instrumentality that eventually gave to industry its significance and its diversity.

Steam Power. The story of the steam engine is a fascinating one, filled with trials and disappointments. At the dawn of the Christian era Hero of Alexander built a toy turbine; the first practical engine, however, was probably constructed by Edward Somerset in England in 1663. Thomas Savery, Denys Papin, Thomas Newcomen, and Humphrey Potter also con-

[1] The Society for Establishing Useful Manufactures, which had its rise and its collapse in the last decade of the eighteenth century, vigorously pushed industrial development. A major part of the proposed million-dollar capital stock was sold and a mill was started at the falls of the Passaic, but the host of manufactured goods that were hoped for never materialized. Hamilton and Tench Coxe of Philadelphia, his assistant in the Treasury Department, were sponsors of the project. Coxe was one of the leading exponents of industry in the early years of the factories. See Harold Hutcheson, *Tench Coxe; A Study in American Economic Development* (Baltimore: Johns Hopkins Press, 1938; Johns Hopkins University, Studies in History and Political Science, extra volume, new series, no. 26).

tributed to the development of steam power. More important than any of these was James Watt, a Scotsman, who after years of patient work perfected in 1785 an engine that could be used in the spinning mills. His problems were both of designing and of creating, and as there were no precision tools for boring cylinders and no molds for casting, he never attempted high-pressure engines.

Steam power was being used experimentally in the United States before the Revolution, and by the middle of the seventeen nineties Oliver Evans was building reasonably satisfactory high-pressure engines in Philadelphia. Limited in the beginning to dredging, pumping, and operating the simple machinery of gristmills and sawmills and small shops of various kinds, the use of the steam engine in America increased rapidly in the first quarter of the nineteenth century. While few going concerns changed their systems, many new plants with steam as their motive power were built. Particularly was this true in the trans-Allegheny region, where falls were missing and where there was an abundance of coal and wood for fuel. The steam engine was indeed a natural accompaniment of the expanding frontier. Water power, like river transportation, was wholly inflexible. Its radius of service was definitely restricted to certain geographic regions, and those regions were most often not especially suited to agriculture. Steam, on the other hand, could be generated anywhere, and by 1825 engines had become common in the cities that bordered the agrarian districts of the new West. Pittsburgh, Cincinnati, Lexington (Kentucky), and St. Louis were among those that profited most by the use of this power. By 1835 many small mills run by steam had sprung up in the grain-growing states of Illinois, Indiana, and Missouri.

The introduction of the steam engine did not bring a revolution in manufacturing; it merely set the stage for future progress. Industrial development throughout the years before the Civil War was slow and uneven. Although New England, New York, Pennsylvania, and New Jersey were chief centers of machine production, the itinerant workman, the small shop, and the factory existed everywhere side by side. In 1850 the per-capita value of household manufactures was a dollar and sixty-five cents in Indiana, a dollar and thirty-six cents in Illinois, but only twenty-five cents in Massachusetts and Rhode Island. Industrialization was not always encouraged. In the rural districts there were frequently strenuous objections because housewives and spinster daughters found their earnings from spinning, weaving, and knitting tragically reduced. Towns too sometimes fought mechanical innovations bitterly; Charleston, South Carolina, once went so far as to forbid the entrance of steam engines into the city.

Textiles Manufacturing. Since clothing is one of the three basic needs of man, the successful factory production of cloth was a momentous step in his economic progress. The textiles industry began to attract attention in the United States soon after its rise in England. Crude mills were, in fact, established before war began at Lexington and Concord, and at least one town possessed a "woolen manufactory" when Washington was first inaugurated as President. Real growth, however, did not come immediately, and for a time it was necessary for business men to appeal to their fellow countrymen to support domestic enterprises by their purchases. By the middle of the nineteenth century it had become possible for rich and poor alike to dress adequately and attractively in cloth of American manufacture —a fact that had not only economic but social consequence as well.

Cotton. While wool and flax were for many years spun and woven in the home, cotton cloth, generally speaking, has been satisfactorily produced only by mechanical means. But early experiments in America were disappointing. The machines that were built performed poorly or not at all. Fortunately a number of skilled workmen in England defied prohibitory laws and migrated to the United States. One of the most important was Samuel Slater, who, seeking rewards offered by the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts for improved machinery, surreptitiously sailed for New York in the late seventeen eighties. Well-versed in the construction of Arkwright machines and backed by Moses Brown and others, he set up in 1790 a mill at Pawtucket, Rhode Island, the equipment of which he built from memory. The invention three years later of the cotton gin by Eli Whitney insured an ample supply of fiber for both American and English mills. Once begun, the production of cotton goods expanded slowly but consistently in spite of foreign competition and domestic financial disturbances. The increasing number of spindles tells the story of the growing output: eight thousand in 1808, one hundred and thirty thousand in 1815, one million two hundred thousand in 1830, two million two hundred thousand in 1840, nearly four million in 1850, and five million two hundred thousand in 1860. Limited at first almost exclusively to the river valleys of Rhode Island, Massachusetts, New Hampshire, and Connecticut, the factories slowly spread southward through New York, New Jersey, and Pennsylvania and on into Dixie, where William Gregg in the years before the Civil War tirelessly urged manufacturing as a means of rescuing southern planters from the poverty of falling cotton prices. With the appearance of the steam engine they deserted the waterfalls whenever more convenient locations offered. But New England held undisputed supremacy until the twentieth century; in 1860 there were seven thousand

mills in that section and scarcely five thousand in the rest of the country.

Early textile factories made only rough cloth, and most of them had no facilities for bleaching, dyeing, and finishing the material. Between 1800 and 1860, however, many great institutions arose. The history of these establishments is interesting indeed; the trade names of their goods have in some cases been household words in America for more than a century. The Lowell mills, founded in Waltham, Massachusetts, in 1813 by Francis C. Lowell, were the first to use power looms and also the first to make cotton cloth from the lint to the finished product under one roof. The Naumkeag Steam Cotton Mills began operation at Salem, Massachusetts, in 1847, and Pequot sheets and pillowcases have with few interruptions been pouring from their machines ever since. Others in the distinguished list are the Great Falls Manufacturing Company (1823), the Amoskeag Manufacturing Company (1831), the Laconia Mills (1845), the Wamsutta Mills (1847), the Pepperell Manufacturing Company (1850), and the Pacific Mills (1854).[2] Total capital invested in cotton-textile plants approximated a hundred million dollars in 1860, and the dominance of aggressive business interests was already apparent in the concentration of production units.

Wool. The factory output of woolen cloth lagged behind that of cotton. One reason was that cotton was not easily spun at home. But more important, perhaps, was the quality of the raw material itself. American sheep were for a long time a poor lot at best, and the clip was short and coarse. Wool fiber, moreover, varies annoyingly in structure and length according to the part of the body from which it is sheared, the age and sex of the animal, and the kind of pasturage afforded. Uniform buying standards were therefore not easily set up; sound judgment as to values was developed only after years of experience. Machinery sufficiently flexible to care for the diverse raw material was difficult to create, and for years mill owners were forced to hire part of their work done in homes. A competent labor force too was wanting. Women and children poured eagerly into the cotton factories, but they were not adept in handling the complicated machinery of the woolen mills. Because of cheap land and other attractive economic opportunities few men cared to become professional workers in the industry. Financial uncertainty also plagued the producers of woolen fabrics. Mill owners were never sure they could profitably use

[2] *The Development of American Industries,* ed. by John George Glover and William Bouck Cornell (New York: Prentice-Hall, 1936), pp. 187-188. The Salem and New Bedford mills specialized in fine cotton cloth.

the raw material they were compelled to purchase, and markets for finished goods were erratic. Cotton manufacturers could rely upon reasonably consistent purchases of sheeting and duck, but predicting the amounts and types of cloth for wearing apparel was hazardous. "It is worth noting," says Professor Keir, "that the only wool mills which until the Civil War enjoyed any continuity of profits were those that made flannel or blankets or both." [3]

Since many of the early woolen mills were small and almost wholly dependent on local labor and local wood, much of the cloth was poorly constructed and some was wholly lacking in beauty. Attempts in color were made, but patterns and weaves were monotonously similar. English imports were long preferred, especially by the aristocracy, albeit Washington and other leading citizens out of their devotion to American business sometimes appeared on important occasions in homespun clothing. The woolen industry grew in spite of many handicaps. Jeremiah Wadsworth began at Hartford, Connecticut, in 1788 a mill that was soon turning out five thousand yards of cloth annually, and a number of others were soon founded in the region. In 1792 John and Arthur Scholfield of Yorkshire in England migrated to America, bringing with them valuable knowledge of English woolen machinery. They assisted in the development of factories in Massachusetts and Connecticut, and their influence was felt throughout the country. New inventions, modifications in styles, improvements in looms, and a rise in quality of the wool attained through breeding and proper grading contributed also to progress. M. Du Pont de Nemours of Wilmington, Delaware; Robert R. Livingston, minister to France; Colonel David Humphreys, minister to Spain; and William Jarvis, consul at Lisbon, Portugal, were instrumental in the importation from Spain into America of merino sheep, a mixture of Roman and African breeds producing an excellent clip. The *National Intelligencer* reported in 1825 that Ohio merino recently exhibited at the capital was said to be the equal of the best Spanish or Saxon wools; "we hope the day is not distant," commented the editor, "when we shall cease to be dependent on foreign countries for this invaluable article."

Regardless of changes for the better, a host of problems continued to beset the woolen industry. The wave of prosperity brought by the War of 1812 subsided quickly in the face of postwar economic reaction and desperate English competition. Frequent financial crises and shifts in the market brought perpetual uncertainty. Mills sprang up and collapsed with equal facility. Colonel Humphreys' plant on the Naugatuck River in Connecticut,

[3] See Malcolm Keir, *Manufacturing* (New York: Ronald Press, 1928), ch. 16.

employing at times as many as a hundred and fifty workers, was unusually large; the average number over the country did not much exceed twenty-five before the Civil War. Notwithstanding the facts that an ever wider variety of fabrics was being demanded and that factory-produced clothing was coming into prominence, cloth made in homes was perhaps still supreme in 1840. By 1860, however, sixteen thousand looms were in operation, and the annual value of their product exceeded sixty-eight million dollars.

Stockings and Carpets. Stocking and carpet weaving were parts of the woolen industry. Except for the yarn, stockings were generally made in the home. After 1832 a few factories installed Egbert power frames. These knit only straight round tubes; form was obtained by drying on shapers. The first carpet mill was started in Philadelphia in 1791, and from there the industry moved into New York and New England. Carpets were woven by hand in the factories until Erastus Brigham Bigelow invented the power loom in 1845. This contrivance made it possible for America to lead the world in quality and cheapness of product before 1860 and gave to the nation one of the great names among carpet makers.

Linen, Hemp, and Silk. While there was some hemp and silk weaving in the nation before the Civil War, the linen industry was snuffed out by cotton cloth before it ever emerged from the domestic stage. Hemp, grown particularly in Kentucky and Missouri, was used for making bagging and baling cloth. Silk, on the other hand, was a luxury fabric woven chiefly from imported thread. The industry had its beginning in Mansfield, Connecticut, but it soon spread to other towns. In 1840 John Ryle, an Englishman, took over the management of a mill that Christopher Colt had opened some years before on the fourth floor of his uncle's pistol factory at Paterson, New Jersey. By 1854 the plant was the largest in the United States, and the city of Paterson had become firmly established as a textile center. William H. Horstmann, a German immigrant who had learned the silk trade in France, had already introduced silk weaving in Philadelphia; his firm became eventually a famous maker of braids and fancy uniforms. Production for a long time was limited almost exclusively to ribbons and other narrow pieces or to thread for the new sewing machines. Only one mill in the country was weaving broad silk in 1860, and the total output of all the factories was valued at scarcely more than six million dollars.

Growth in the Metals Industries. Since machines are delicate and flexible instruments whose parts must be easily and accurately shaped, nothing measures the industrial progress of a nation more clearly than its metal consumption. Wood served the people of America reasonably well as a

construction material during the period of domestic production. With the development of the factory system, however, it proved entirely inadequate. Wood, in fact, is a stubborn material whose effective service is restricted chiefly to parallel and perpendicular strains, and even then careful attention must be paid to the nature and direction of the grain. Iron and steel alone have demonstrated their adaptability to the requirements of industry. But it must not be imagined that the change from wood to iron was quickly accomplished. One needs merely to look at an early model of the twentieth-century automobile to understand the persistent use of wood in American industrial products.

Expansion and Improvement in Iron Production. Not until after 1825 did iron making pass beyond the primitive methods that had long been used. The mounting popularity of steamboats, the expansion of railroads, the slow but steady growth of factories, and the rise of important cities beyond the Alleghenies brought acute need for the metal. Increased output was everywhere evident. Although the industry continued to cling to the seaboard and the eastern slopes of the Alleghenies, particularly in Pennsylvania, new outposts appeared in the upper Ohio valley and in Missouri, Wisconsin, and Michigan. Victor S. Clark says of iron production in 1860:

> At this time eight river valleys with their tributaries supplied most of our domestic iron. The Housatonic produced annually 25,000 tons of pigs, which were remelted in the vicinity for railway wheels and malleable castings. The Hudson, where anthracite was used to smelt the rich Champlain and Berkshire ores, had increased its output to 75,000 tons. The Delaware and Lehigh Valleys were the home of some of the largest iron works in the Union and produced over 160,000 tons a year. In the neighboring Schuylkill region, where furnaces were somewhat smaller, the total output was 100,000 tons. Farther south and west the Susquehanna excelled slightly the Delaware and Lehigh Valleys in the extent of its production. The country tributary to the Potomac, where charcoal was still used for fuel and production was declining, smelted annually 40,000 tons of pigs, of which three-fourths came from Maryland. West of the Alleghenies the great Ohio Valley, with its tributaries, the Cumberland and Tennessee, produced 40,000 tons per annum. The time was at hand when the center of furnace output would shift from the Atlantic slope to what but a few years before had been regarded as the western country.[4]

Furnaces were marked by certain definite characteristics according to their geographic locations. Owners of eastern foundries, pressed by British competition and stimulated by demands for iron suitable for the making of industrial machinery, were interested in improving refining methods; those west of the mountains were concerned mostly with the production

[4] Victor S. Clark, *History of Manufactures in the United States* (Washington: Carnegie Institution, 1916; 2 vols), vol. 1, p. 499.

of the rough metal used in agricultural implements. The distinction in mechanical needs between the industrial East and the agrarian West had become obvious by 1840. The farmers had money for few things besides plows, harrows, drills, and harvesting machinery, and charcoal-smelted iron served best in the manufacture of such items. It was not an accident that before the end of the decade of the forties Cyrus H. McCormick opened his reaper factory in the little town of Chicago, soon to become the economic center of the Mississippi valley.

The growth of giant furnaces soon revealed the impracticability of charcoal as a smelting material, but a successful substitute was not immediately available. Bituminous coal was crushed by the tremendous weight of the ore upon it, and anthracite did not at first burn satisfactorily. Methods devised by Frederick W. Geissenhainer in his New York laboratory between 1830 and 1833 made the latter the most-used fuel, however, until the Civil War. Coke, employed to some extent in England as early as 1740, became the chief reliance of iron makers in America only after 1860 with the development of the now famous Connellsville coal field in Pennsylvania.

The introduction of the European-invented hot blast, the use of grooved rollers instead of trip hammers, and the employment of laborsaving and timesaving techniques furthered the production of iron. Improvements were made too in the quality of the metal turned out. Various means were contrived for removing cinders, air holes, and other annoying impurities. In 1851 William Kelly in Kentucky found that forcing air through molten ore resulted in a much better product than could otherwise be obtained. A few years later Henry Bessemer, an Englishman, made the same discovery, and the metal created by this method—with many changes in procedure—has come to be called Bessemer steel. The new steel prepared the way for much of the material progress that came in the years after the Civil War.

Castings and Forgings. The increasing use of iron after 1830 was reflected strikingly in the new products that came from forge and mold. Stoves, cast in parts to be bolted together by merchant or purchaser and adapted for burning both wood and coal, were made throughout the nation. Their appearance marked the end of the ancient fireplace with its pots and covered skillets. By the middle of the century not less than a half million were being manufactured annually, and the total value in 1860 was estimated at nearly eleven million dollars. Molds were used also in turning out kitchen utensils, bathtubs, builders' supplies, sewer and water pipes, lampposts, lawn ornaments, and fire hydrants. The making of tools, gas fittings, hardware for doors and windows, and a miscellany of other articles did

much toward developing artistry and precision of small molding, rolling, and cutting machines.

Steam engines were important in encouraging the growth of foundries and machine shops. They required huge bedplates, shafts, cylinders, and flywheels. The bedplate of the steamship *Arctic,* cast at the New York Novelty Works in 1850, weighed sixty tons; shafts on the *Constitution,* forged in the East River in 1861, weighed twenty-three tons; a Philadelphia shop was equipped to bore cylinders sixteen feet in diameter and eighteen feet long; and the Corliss Engine Works at Providence, Rhode Island, made geared flywheels as large as twenty-five feet in diameter. By 1850 American engines built of standardized parts were being exported to Europe. The casting of car wheels greatly stimulated progress in foundry techniques.

Rolling Mills. Rolling mills too expanded rapidly. Limited in colonial days to producing the bar iron from which the local blacksmith beat out nails, clevises, and other primary needs of an agrarian society, they were by 1830 putting out quantities of bar and sheet iron, hoops, and strips for the tons of nails that came from the new cutting machines. Straps for the wooden stringers of the railroads were necessary for a time, but they were doomed when in 1844 the first precursors of the modern all-metal rails were rolled at the Mount Savage Works in Maryland. Both U-rails and T-rails were made in the beginning. Boiler plate, armor plate, structural wrought-iron beams, and I-beams were manufactured in large amounts, especially in Philadelphia and Baltimore. Government orders for construction framework swelled the output of the rolling mills. Even iron passenger cars for the trains were being attempted before 1860.

The Minor Metals. Among the minor metals copper, principal component of brass and bronze, was probably the most significant. It was obtained at first from small mines along the Atlantic seaboard from Maine to Alabama; the rich deposits in Tennessee, Georgia, and northern Michigan were not exploited until after 1850. A major portion of the smelting and refining continued for some time thereafter to be done in the East. Already, however, Connecticut brass workers, using old sheathing from the ships of New England or ores from local sources and fusing it directly in their own forges with zinc or tin, were fabricating a host of small items that found ready distribution from the peddlers' carts that infested the nation. Brass buttons, pins, hooks and eyes, locks, kettles, lamps, and jewelry were only a few of the numerous personal and household needs that came in ever-increasing quantities from the shops in the Naugatuck valley, where the brasswares industry centers even today. Clock makers,

who in earlier years had patiently whittled time-keeping mechanisms from wood, began to cut them from rolled brass. The clocks were smaller and cheaper than before, and because interchangeable parts were used they could be easily repaired by rural tinkers. Articles of bronze, alloy of copper and tin, were manufactured in fairly large quantities, as were also (after the invention of a satisfactory plating process) stamped knives, forks, and spoons. Tinware, made chiefly in Berlin, Connecticut, of imported tin plate, tinkled merrily from the sides of every peddler's cart. Lead was mined in the upper Mississippi valley, but its most important use, as in the case of copper, came in the industrial period after the Civil War.

Coal Mining. Great piles of wood along the river banks and the railroads attested to the fact as late as 1850 that coal was still relatively insignificant as a fuel for the engines that drove the steamboats and the trains. Nevertheless, coal had long been used in many places, and it was growing rapidly in popularity. By 1830 canal boats were transporting anthracite from the Pennsylvania fields to seaboard cities. On the western edge of the state deep tunnels were being dug into the hills along the Allegheny, Monongahela, and Ohio Rivers as tons of bituminous coal poured into the factories of Pittsburgh and nearby towns or floated downstream to the cities that dotted the Ohio and the Mississippi. In Virginia, Kentucky, Ohio, Indiana, and neighboring states other mines were supplying factories as well as homes. Altogether some fourteen million tons were mined in 1860. Anthracite production, already dominated by corporations, was comparatively stable, but in the bituminous fields the evils that were to plague the industry in later years were all too apparent.

The Lumber Industry. Although in general metal was urban and industrial while wood was rural and agrarian, expanding America did not lessen its total wood consumption when the age of iron began. Throughout the Atlantic coastal region, especially to the north, the whir of the saw kept pace with the turning wheels of the factories. In Maine, New York, and Pennsylvania in particular logs jammed the waterways on their way to the sawing centers. The Penobscot, the Hudson, the Delaware, the Susquehanna, and other important rivers provided convenient highways for raw materials and finished products. Always crude mills had pressed hard on the heels of the advancing frontiersmen; in the twenty years preceding the Civil War, however, the commercial center of the industry, following the population and the receding forests, moved slowly over the mountains, and the Mississippi River and the Erie Canal became heavy carriers of lumber. Logging camps developed in Wisconsin and upper Michigan, and Chicago rapidly grew into a great lumber market, overshadowing even Bangor,

Maine, before the Civil War. Yellow pine from the South was being consumed in large amounts over the entire nation. Circular and band saws and improved machines of sundry kinds increased the demand for lumber; the value of the total output in 1860 was slightly less than ninety-six million dollars.

The Furniture Industry. With the invention of woodworking machines and the rise of the factory system the making of furniture, long an art, became an industry. Although many small shops in the East continued to turn out beautiful hand-wrought pieces from native and imported woods, furniture for the great mass of the people reflected its mechanical production. Veneers, used to some extent in the late colonial period, became popular with the introduction of circular saws, which made it possible to cut strips a sixteenth of an inch thick. Tables, chests, bureaus, and beds made of inexpensive wood and covered with thin layers of polished walnut, mahogany, oak, or maple may not have been artistic or even substantial, yet for the first time ordinary Americans found something of beauty for their homes that was within their financial reach. Moreover, industrial processes made available even to the very poor a variety of articles undreamed of when the hand lathe and the carving knife had fashioned each piece. The annual value of factory-produced furniture rose from seven million dollars in 1840 to twenty-eight million in 1860.

The Factory Production of Foods. *Milling.* Changing dietary habits and growing urbanization made the factory production of foods profitable. Furthermore, the increasing needs of industry supplied markets for by-products that could not be utilized at home. Flour milling in particular flourished. Corn, basic food of the early colonists, had come to be used chiefly for feeding the horses that labored on the spreading farm lands and the cattle and hogs that were in ever greater numbers being turned into meat for the swelling urban population. Wheat provided the flour for the nation's bread. Automatic milling machinery, first developed by Philadelphia's mechanical genius Oliver Evans at least a decade before the turn of the century, transformed the grinding of grain into a large-scale industry. Milling centers moved westward with the wheat empire and the lengthening canal and railroad systems. By 1829 Rochester, New York, ranked third in production; there in ten "immense" water-powered mills the grain was lifted mechanically by means of bucket chains and screws from the boats to the great grinding stones and thence carried to the bolting machines and other devices and on to the packing room, where the flour was "put into Barrels by power so that throughout, little manual labor was required or employed." Before the middle of the century the mills had swept

on across Ohio, Indiana, and Illinois to the banks of the Mississippi. Though New York maintained leadership among the states, the West within ten years was processing more grain than any other section; St. Louis, located in the heart of the region of soft red winter wheat, was turning out four hundred thousand barrels of flour annually, and Ohio and Illinois ranked second and third to New York. The value of the total output of flour and meal in the nation rose from about a hundred and thirty-six million dollars in 1850 to more than two hundred and twenty-three million in 1860.

Meat Packing. Meat packing too followed the moving grainfields. In the thirties Cincinnati won the name "Porkopolis of the West," and a few years later *De Bow's Review* called it the most *hoggish* place in the world. From southern Ohio and Indiana and northern Kentucky rangy swine, numbering sometimes several thousand in a single herd, were driven into the city. Out of the packing houses that clustered near the river came lard, sausage, and pickled meats of many varieties as well as cured hams and shoulders wrapped in canvas bags for shipping. Establishments close by made brushes, glue, candles, soap, fertilizer, and other commercially profitable products from the refuse of the slaughtering and packing houses; in fact, these subsidiary industries, along with the excellent financial facilities that existed, were in part responsible for Cincinnati's dominance. But the Queen City's supremacy, challenged from the beginning by Louisville and St. Louis, collapsed completely with the opening of the Union Stock Yards in Chicago on Christmas Day, 1865. That beef made up an appreciable part of the meat packed in the new metropolis on the southern shore of Lake Michigan foreshadowed a cattleman's West—and an urban East.

Canning. American housewives, though they had as a part of household economy long practiced the ancient art of preserving food by drying, curing, pickling, and packing in syrup, were wholly ignorant of the basic principles of canning. François Appert, a Paris chef in search of some method of providing better food for the armies of Napoleon, probably first began the extensive use of heat in sterilization. His process soon spread to England and from there to the United States. But on the whole farmers and small-town dwellers continued to grow what they ate and urban housewives in the larger cities to buy their provisions from hucksters or from stores supplied by neighboring farmers. In fact, commercial marketing of garden truck preceded commercial marketing of canned goods.[1] In the decade before 1860 the value of vegetables and fruits shipped into metropolitan centers from the gardens and orchards along the Atlantic south-

ward from New York to the Carolinas increased in some instances fourfold.

The Shoemaking Industry. The necessary machinery for turning shoemaking into a factory industry did not come into general use until after 1860. Artisans still made shoes for the wealthy on "bespoke" orders, but the itinerant shoemakers of colonial days were no longer seen. In the twenties shoes were usually cut in central shops. The parts were then "put out" in turn to certain families each of whom had been trained in a single operation; when all the separate tasks had been completed, the shoes were finished in the central shop and were ready for sale. The panic of 1837 seriously disrupted this domestic system, and shortly thereafter the shoe "manufactory," housing all workers under one roof, appeared. Efficient organization and new machines hurried production. Mechanization began with the appearance of the leather-rolling machine about 1845. Other devices used in sewing the uppers together, in splitting leather, in making pegs, in buffing, and in die cutting soles, taps, and heels soon followed. Most significant of all was the McKay stitcher for attaching soles to uppers that Lyman R. Blake devised on the eve of the Civil War. Output grew with especial rapidity during the decade of the fifties. Boston became by 1855 the largest boot and shoe market in the world, though Milford, Lynn, and other Massachusetts towns too were important manufacturing centers. Styles changed, and "crooked" (right and left) shoes, packed in pairs, were introduced.

The Production of Alcoholic Beverages and Tobacco. In spite of the temperance movement, whisky remained throughout the thirties, forties, and fifties the great American drink. Thousands of bushels of corn in this form floated down western rivers to New Orleans, where the product was often sold at auction in the open markets. Quality was a minor matter. Geo. A. Lewis and Brothers, finding themselves unable to sell the high-grade merchandise of the Rappist stills of Economy, Pennsylvania, in competition with the other liquor that poured into the city on every boat, wrote Rapp in April, 1842: "No doubt it is inferior to your whiskey, but the purchasers—of whom few are judges—believe that they buy the very best at twenty cents pr gallon." By 1830 the spreading cornfields of Ohio had given the state leadership in the distilling business, and Cincinnati became before the middle of the century the largest whisky mart in the world.[5] Moreover, it was the center of the greatest wine-making experiment in the United States.

[5] Since the refuse of the distilleries was valuable as food for cattle and hogs, the manufacture of whisky in Cincinnati helped to maintain the packing industry.

"Plugs" and twists of tobacco were manufactured chiefly in the West, but snuff and cigars were made mostly in eastern cities. Total sales in 1860 amounted to more than thirty million dollars. Victor S. Clark has aptly said that "with whiskey costing 25 cents a gallon and two cigars retailing for 1 cent, the convivial indulgences of the early Republic were easily purchased."

The Extent of the Industrial Change. By the time of the Civil War industry in addition to bringing significant economic and social transformations had foreshadowed its centers of concentration. Two great industrial belts stretched from the Atlantic to the Mississippi, the first following the Mohawk valley and the southern lake shores to Chicago by way of Albany, Buffalo, and Cleveland and the second branching westward from New York, Philadelphia, and Baltimore to Lancaster, Reading, Pittsburgh, Cincinnati, Louisville, and St. Louis. Industrial machinery, farm implements, printing presses, sewing machines, rubber goods, revolvers, and telegraph instruments, along with a host of other mechanical devices, poured from the plants. But though total output was valued at more than two billion dollars in 1860, America was merely at the threshold of her industrialism. Keen commercial and industrial leaders, however, had throughout the nation, even on the fringes of the frontier, built their business houses, shops, mills, and factories and had demonstrated their eagerness to hurry material progress.

Chapter 13

COMMERCE AND THE BUSINESS STRUCTURE

The Power of Commerce. Commerce in the period following the War of 1812 kept pace with the whirring wheels of the factories and the chugging trains of the railroads. Manufacturing, transportation, and trade are, in fact, so intimately related as to defy distinct separation. But factories, highways, canals, and railroads are in reality adjuncts to the sale of goods; they are only a few of the essentials in the growth of a commercial network that makes widespread exchange possible. Such intersectional intercourse profoundly affects the economic life of a people. For example, the sale of Philadelphia-made stoves ended the reliance of many families on the colonial pot and kettle; the sale of shoes made in Lynn, Massachusetts, deprived the itinerant shoemaker and the local cobbler of their markets; and the sale of cloth from the mills at Lowell drove the spinning wheels from the living rooms to the attics and caused new crops to be grown in the flax fields. Flour, meal, and meat from the trans-Appalachian region when offered at attractive prices in the stores along the Atlantic seaboard sent easterners who had formerly labored in agrarian occupations into mills and factories or put them into countinghouses and the offices of transportation companies. Everywhere there was change as commerce expanded; increasing trade brought with it mercantile houses, banking institutions, and a national business organization.

Early Distributing Agents. The amounts and kinds of goods that make up the flow of commerce vary in part according to transportation facilities and distributing agencies. Before the Civil War, for example, the sale of perishable products was limited almost exclusively to local markets, and, until 1820 at least, internal trade except in the cities centered around the village store, the itinerant peddler, and the river boat.

The Village Store. The village store, connecting link between agrarian domestic economy and an industrial society, served a medley of purposes. Its shelves were lined with a miscellaneous array of strangely unrelated goods. In it were sold cheese and plow clevises, sugar and work clothes, firearms and needles, molasses and candles, nails and bacon, tea and pota-

toes; and in time it boasted a post office where stamps could be bought. Frequently fruits and vegetables were included in the varied stock, and, if the town was large enough to provide a market, there might be an occasional crock of butter of doubtful quality. In a side room were grains, plows, harness, horsewhips, and collar pads, and later a tank of kerosene was added. The back yard was seldom without its chicken coops. Transactions were conducted either in money or in kind, and sales were made to farmers from the countryside, to the villagers, or to neighboring towns. The storekeeper was often a buyer for distant produce or livestock merchants. The small town rose and fell according to economic vicissitudes, but the village store as an institution remained until the automobile forced it into relative oblivion in the first quarter of the twentieth century.

The Peddler. The peddler was a competitor of the village store. He carried in his stock those items best suited to attract the housewife. Pins, needles, clocks, buttons, scissors, and combs were among his wares. If there was no money in the home, he willingly accepted whatever was offered, provided, of course, there was a chance of turning a penny in the bargain. No group of traders ever exceeded the peddlers in economic shrewdness. Traveling strange and sometimes hostile country alone for months, they were forced not only to make their own way but in addition to return to their New England backers profits on the articles furnished them at the beginning of each journey. They were experts in the art of selling long before modern psychologists began teaching salesmanship.

The building of roads in the twenties, while it gave the storekeeper an advantage, made possible the creation of inland supply depots for the roving sellers, thus extending their commercial activities. The peddlers, in fact, laid the foundation for a distinct mercantile network. The development was a natural one. An itinerant vender who grew tired of his wanderings often settled down at some favorable location and opened a village store. Having already established his credit, he continued to buy from the New England manufacturer who had supplied him with goods in previous days. When the manufacturer began to fill the orders from stations provided for the convenience of the peddlers, the transformation was complete.

Other interesting results grew out of the peddler's trade. Before many years had passed, some of the more prosperous wandering sellers began to call only on the village storekeepers, thus becoming traveling wholesalers. The benefits were obvious: the peddler escaped the scolding housewife, and the small merchant filled his shelves from goods delivered at his door. Soon the overflowing wagons carried only sample cases, and the wholesaling peddler had become a drummer.

The River Boat. The river boat was a significant western institution. Though there were roads, towns, village stores, and perhaps some peddlers beyond the Ohio, an overwhelming part of the trade of the region followed the natural waterways. Boats of endless variety threaded the streams of the Ohio and Mississippi valleys. Steamboats supplied the larger settlements, and smaller craft took wares to individual farmhouses and tiny villages. "The Ohio," writes McMaster, "was now dotted with floating shops. At the sound of a horn the inhabitants of the village or the settler and his family would come to the river to find a dry-goods boat fitted with counters, seats, and shelves piled with finery of every sort making fast to the bank. Now it would be a floating lottery office, where tickets were sold for cotton or produce; now a tinner's establishment, within which tinware articles of every description were made, sold, and mended; now a smithy, where horses and oxen were shod and wagons repaired; now a factory for the manufacture and sale of axes, scythes, and edge tools." The great river, he continues, "was more than ever the highway of travel. The huge barge of an earlier day, almost as large as a seagoing schooner, with its arched and outlandish-looking deck and its crew of five-and-twenty men, had fallen into disuse. But the keel-boat, still the favorite for waters too shallow for steamboats, and the broad-horn were more numerous than ever. Some of the 'broads,' called family boats, were twenty-five by one hundred feet, had pens for cattle, and neat cabins and rooms for the 'movers' fitted with tables and chairs, beds, and a stove, and were constantly to be seen floating down the river in an almost endless procession with old and young, cattle, horses, swine, and fowls all in the same bottom." [1]

Western Rivers and the Inland Triangular Trade. The river boat was more than a distributing agent; it was an integral part of a well-established, though constantly changing, system of triangular domestic commerce. The initial step in this three-sided economic structure was the movement of manufactured goods from the Atlantic seaboard to the headwaters of western rivers. Lumbering wagons laden with merchandise rolled over the mountains from Philadelphia, Baltimore, Richmond, and other eastern cities to be unloaded at Pittsburgh or Wheeling on the Ohio. The Cumberland Road, says Professor Ambler, was "the great Appian Way over which passed the life-giving and sustaining forces of the nation." So heavy was the traffic that one writer has declared that the highway "looked more like the leading avenue of a great city than a road through rural districts."

[1] John Bach McMaster, *A History of the People of the United States* (New York: D. Appleton, 1902; 8 vols.), vol. v, pp. 151-152. Long after the floating stores had disappeared, showmen and itinerant photographers continued to ply inland waters. In Edna Ferber's novel *Show Boat* are depicted some of the adventures of the wandering troupes.

Three hundred thousand pounds of freight in twelve thousand vehicles entered Pittsburgh in 1817.

The second step was the distribution from Pittsburgh and Wheeling of eastern goods and the collection and transportation southward of local products. Numberless vessels traded and bartered in the agrarian products of the transmontane region. Flatboats, keel boats, arks, barges, broadhorns, Kentucky boats, New Orleans boats, bateaux, Johnboats, and skiffs gathered freight along the banks of every navigable stream. In 1826 three hundred boats descended to the Mississippi from the Wabash alone, and even as late as the middle thirties some four thousand yearly reached the Gulf from the Ohio and its tributaries. Many a western boy, including Abraham Lincoln, got his first sight of the world from a keel boat or an ark on its way southward.

Varied indeed were the cargoes that floated each year downstream to the open-air markets along the Mississippi or into the wharves of New Orleans, leading export city of the nation. Hoops, staves, lumber, corn, hay, wheat, tobacco, lard, cured meat, whisky, chickens, and livestock were all to be found on the muddy river highway to the Gulf. Many of the boats were operated as family enterprises. Some were manned by professional boatmen —and a rough lot they were. Hatless, stripped to the waist, these river men, bronzed from long hours in the burning sun, earned their title "half horse, half alligator." Strength was among them the measure of greatness, and calloused shoulders and arms revealed the severity of their constant battle with the treacherous waters. Hard-working and obedient until stirred by "licker," personal challenge, or unwelcome order, they could turn in an instant into "a combination of rubber ball, wildcat and shrieking maniac." Mike Fink, who by his own words could "out run, out jump, throw down, drag out, and lick any man in the country," was their hero and idol; even the robbers who infested the rivers are supposed to have feared his prowess. But rough as they were, these hardy men were an essential part of the commercial system of the young nation.

The third step in the triangle of domestic commerce was the shipment from New Orleans of raw products to foreign or Atlantic ports and the return of the mercantilists to the East to begin anew their trading ventures. It must not be supposed, however, that individuals made the complete circuit of East to West to South to East again; a great majority of those involved contributed only to a small segment of the flowing stream of commerce. Yet all combined to create through the movement of goods or money a clearly marked (though shifting) cycle of trade.

Steamboats and the Flow of Commerce on Western Rivers. Beginning in 1811 with the departure of the *New Orleans* from Pittsburgh, steam navigation soon came to affect profoundly the traditional flow of commerce.[2] Traffic within a few years began to move up as well as down the rivers. The results were significant. Farm prices were increased, industrial production was stimulated, and the sale of perishable goods was extended. Moreover, the traditional overland trade routes to the headwaters of the Ohio were challenged by a waterway that now led into the heart of the agrarian West. Coastwise commerce took on a new importance as merchandise destined for river towns in inland America left seaboard cities on ships bound for New Orleans. Planters in the cotton fields bordering the Mississippi and its tributaries and merchants as far northward as Pittsburgh ordered goods from dealers in the Crescent City. The river boats were no longer merely marketing instruments for corn and wheat and pork but distributing agents for eastern industrial products as well. Year after year the Mississippi-Missouri-Ohio system expanded. Locks, particularly on the Monongahela, Muskingum, Kentucky, and Green Rivers, helped in the establishment of dependable transportation for remote communities, and adventurous captains following unexplored streams took manufactured goods to the trading frontiers. In 1823 the *Eliza* steamed up the Great Kanawha into the timber, coal, and salt regions of the valley. In 1828 the *Wm. D. Duncan* conquered the even more difficult Allegheny River, and in 1832 the *Yellowstone* reached the mouth of the Yellowstone River on the upper Missouri.

Silence has long since fallen upon "Water Streets" from Pittsburgh to New Orleans, and rotting timbers and growing grass make it almost impossible today to conceive of a time when the wharves of river towns along the Ohio and the Mississippi resounded with the hustle and bustle of surging commerce. An admirer wrote of Cincinnati in 1841:

> There are . . . few places in the United States which more favorably impress a stranger who reaches it by water—the usual avenue—than Cincinnati. His eye glances upon that superb quay—our *public landing,* a space of ten acres, nearly, and a front of almost one thousand feet—with which our eastern cities have nothing of the kind to compare, in beauty and convenience. He surveys it, along its whole front, encumbered with packages of every description and to an immense amount—the foreign imports, or the domestic produce of the valley of

[2] The *New Orleans* was not powerful enough to make the return trip to Pittsburgh, but in 1816 the *Enterprise* steamed from New Orleans to Louisville in twenty-five days. The next year the *Washington,* built by Henry M. Screve, engineer and designer of the famous flat-bottomed river boats, demonstrated conclusively the practicability of steam navigation on the Mississippi.

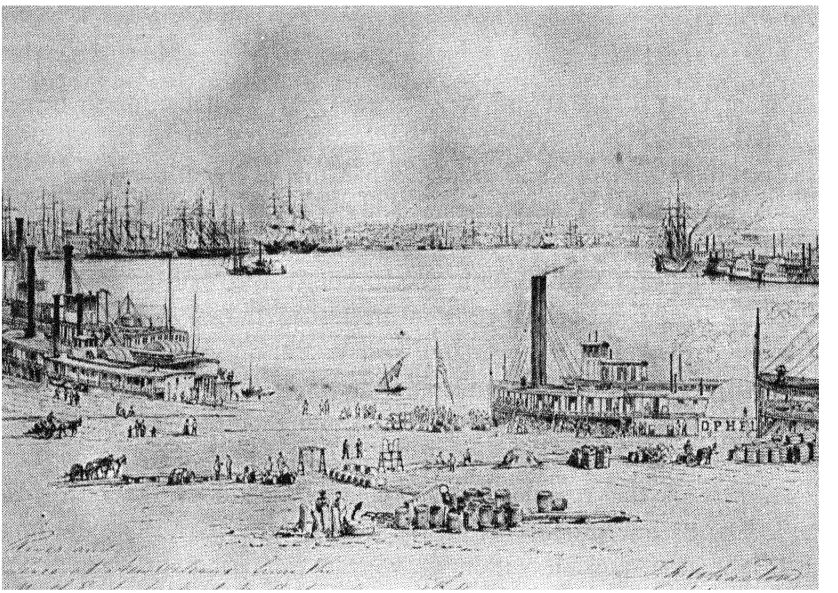
the Miamis—concentrating constantly at this point. The hurried arrival and departure, singly and in squads, of a whole battalion of drays; the unremitting and active labor of hands, loading and unloading the vessels in port; the incessant ringing of bells, as signals to passengers or the crews of the boats; the brief and abrupt interchange of business among the clerks on board, and those belonging to the mercantile houses of the city; with a great variety of sights and sounds of subordinate interest, forcibly—perhaps unduly—impress the mind of a stranger, by the value set upon time, and the constant exercise of industry around him, as a fact, that he has landed at a place where business is carried on upon a large scale, and among a people, who have neither the leisure nor the disposition to be idle.[3]

The wharves at St. Louis and New Orleans were veritable forests of belching smokestacks. Commercially the day of the steamboat on the Mississippi was even more romantic and dramatic than that of the ark and the flatboat.

Canal and Lake Transportation and Western Commerce. Wagoners and peddlers continued for many years afterwards to struggle westward over the highways with eastern goods, but it was evident by 1830 that except for local service their years of greatest usefulness were over. Steamboats diverted some of the overland trade to Pittsburgh southward to New Orleans by way of the Atlantic and the Gulf, and artificial waterways brought it practically to an end. The spreading canals were of aid in the development of a reasonably satisfactory system of distribution in the region east of the Appalachians; over the mountains they turned the major flow of raw products from the South to the East. The opening of the Erie made it possible within a few years for farmers in western Pennsylvania, Ohio, Kentucky, and the rolling prairies of Indiana and Illinois to ship their grain to New York City for eastern consumption or for exportation. As local waterways expanded, the overwhelmingly one-way trade from East to West became an exchange commerce. "What a vast traffic is going on, on this [Erie] Canal!" wrote an observer in 1829. "We meet a great many Boats laden with Flour, Pork, Whiskey . . . , Ashes, Salt, Lumber, Shingles, etc. for the New York and other markets." A few years later a traveler describing Albany noted that "an active trade is carried on between New York and this place by steamboat and innumerable river craft, and transshipments are made here to canal boats with which its docks or basins are filled, and in return Albany is the shipping point for all the rich and varied produce of the West and part of Canada, through the great line of connectors the Erie, Northern, and Welland Canals, and the Great Lakes to the farthest bounds of the Western Frontier."

[3] Charles Cist, *Cincinnati in 1841: Its Early Annals and Future Prospects* (Cincinnati: privately published, 1841), pp. 234-235.

Eastward-moving freight grew astoundingly. By 1840 more than twenty-seven million bushels of grain was reaching New York each year by way of the Erie and Champlain Canals, and within a decade the amount had increased to over forty-one million bushels annually. The growth is strikingly portrayed by a comparison of the seventy-eight bushels that made up the initial cargo going out of Chicago in 1838 with the thirty-one million



Courtesy the New York Public Library

FIGURE 10. THE WHARF AT NEW ORLEANS
(From the Diary of T. K. Wharton.)

bushels that left the city in 1860. Millers and packers used the canals to send their flour and their meat and meat products to the Atlantic. The Pennsylvania Canal was not of great value as a carrier of the bulky goods of the West, but railroads eventually gave Baltimore and Philadelphia a share in the riches that daily poured into the city at the mouth of the Hudson.

The Great Lakes, touching the agrarian West at many points and connecting with eastern canals at Buffalo, played their part in disrupting the triangular system of national trade existing in the early years of the nineteenth century. The first steam vessel on the lakes, *Walk-in-the-Water,* was launched at Buffalo in 1819, and the fleet developed rapidly thereafter. Every port had its ships. The western march of commerce can, in

fact, be seen in the rising importance of the lake cities—Buffalo, Cleveland, Toledo, Detroit, Chicago, and Milwaukee. The opening of the Ohio Canal in 1832 drew the agrarian products of western Pennsylvania, northern Kentucky, and eastern Ohio to Cleveland. But Toledo rose to particular prominence in the forties and within a few years was receiving grain from western Ohio, western Kentucky, Indiana, and even Illinois and Missouri. By 1860, however, Chicago had forged far ahead of all other contenders, and Milwaukee was pressing hard upon Toledo for second place.

Chicago, boundlessly optimistic, grew with amazing rapidity. "What a change in ten years!" wrote Solon Robinson in 1842. "Those of the magic lantern are scarcely more magical. Then [in 1832] the food of the little army [of General Scott] had to be brought from the lower lakes and carried upon pack horses across the great desert between Lake Michigan and the Mississippi. Then a steamboat had never visited the little garrison and trading post of Fort Dearborn, now the flourishing city of Chicago, whose harbor is crowded with steamers, ships, and schooners, full freighted up with emigrants and merchandise, and down with wheat and other products of the rich soil of the vast land of unsurpassed fertility, lying around the head of Lake Michigan." By 1848 as much as two hundred thousand bushels of wheat occasionally poured into the city in a single day. From "one to two hundred steamers, brigs, sloops, schooners, etc." lay in the muddy Chicago River, and so pressing was "the crowd of business" that plans were already afoot to widen the stream.

The total lake commerce in 1860 exceeded four hundred thousand tons. Cargoes were made up chiefly of agrarian products for the Atlantic seaboard and manufactured goods and livestock for farmers in the grainfields of the upper Mississippi and Ohio valleys. The building of interlake canals such as the Welland and the Sault Ste. Marie and the improvement of harbors greatly facilitated this sectional trade.

The Supremacy of the Railroads. The railroads were at first significant in east-west commerce only as supplements to the canals. Soon, however, it was apparent that they were to become an independent transportation system. Encouraged by Philadelphia, Baltimore, and other cities that had not profited from the growing commerce of the waterways, builders began to point their roads toward the Ohio River. In the forties tracks commenced to parallel the Erie Canal across New York, and in the fifties the New York Central, the Erie, the Pennsylvania, and the Baltimore and Ohio tapped the West.

As the canals and the railroads lengthened, southward-moving freight on the Mississippi came more and more to be made up of cotton alone;

finding no business at the once-flourishing landings, the boats that had plied between Pittsburgh, Cincinnati, and Louisville tied up at rotting wharves or steamed down the river to poke their noses into the Missouri and its tributaries looking for cargoes. But Gulf-bound trade was by no means dead. While it is true that the canals and the railroads turned the course of commerce in some instances from the South to the East, it is not wholly accurate to say that the movement of agrarian products of the West was actually changed from southern to eastern ports. The fact is that the canals, the railroads, and large-scale agriculture grew up in the trans-Appalachian West concurrently, with the result that goods that might normally have been expected to go to New Orleans went instead overland to the Atlantic coast. Yet the regions where primary river transportation was available were little affected. "Vandalia, once the capital of the state," said an Indiana farmer in 1848, "now wears the gloomy weeds of the 'deserted village.' The Kaskaskia, which runs at the foot of the hill on which the town is crumbling to decay, is the only permanent mill stream I have seen since I left the Wabash. Out of this in flood time, go flat boats, 300 miles by water to the Mississippi, and this is the only way of getting off produce that will not bear hauling sixty odd miles to St. Louis." In the middle of the century St. Louis was still a bustling place. "For nearly a mile," observed a visitor, "the shore is crowded with large steamboats, lying so thickly that only bows reach the shore. At this season [November], most of the New-Orleans boats go down with decks crowded with fat cattle, cows, calves, sheep, hogs, fowls, and horses, and with holds full of flour and grain, while every space on the decks and guards, is piled with bags of corn, oats, and wheat." The wharves of the Crescent City were even busier.

> . . . one might just as well undertake to show the magnitude of the ocean, and the fearful raging of the storm at sea, by filling a junk bottle with salt water, and shaking it before the eyes of his pupil, as to try to give an idea of the business upon the levee here, by a string of words and figures [wrote Solon Robinson]. It must be seen to be believed; and even then, it will require an active mind to comprehend acres of cotton bales standing upon the levee, while miles of drays are constantly taking it off to the cotton presses, where the power of steam and screws are constantly being applied to compress the bales into a lesser bulk, at an almost inconceivable rate per day, while all around are piled up in miniature mountains, which other miles of drays are taking on shipboard, and yet seem unable to reduce in size or quantity, either here or upon the levee; for boats are constantly arriving, so piled up with cotton, that the lower tier of bales on deck are in the water; and as the boat is approaching, it looks like a huge raft of cotton bales, with the chimneys and steam pipe of an engine sticking up out of the centre.

And this is but one item of one branch of the produce business of New Orleans. The whole fields of sugar hogsheads, molasses, pork, beef, flour, lard, oil, rice, meal, apples, and whiskey barrels, and bags of corn, oats, rye, barley, wheat, beans, peas, bran, potatoes, and cotton seed, bundles of hay, together with every other conceivable thing that ever grew out of the earth, are in such wonderful quantities, that the stranger is overwhelmed in wonder to know from whence cometh all this mighty mass of the products of the earth. It is utterly impossible to remove the daily accumulations as fast as they arrive; and at night, and every night, acres of such things as the weather might damage, are covered over with tarpaulin cloths, and guarded by watchmen.[4]

In spite of the busy river trade, however, J. D. B. De Bow was perhaps justified in saying that the enterprising North had "rolled back the mighty tide of the Mississippi and its ten thousand tributary streams until their mouth, practically and commercially, is more at New York and Boston than at New Orleans." By 1860 the railroads were supreme. River wharves were not alone in their idleness; grass had begun to grow on the towpaths of northern canals.

The Significant Economic Results of Commercial Changes. Commercial development east of the Mississippi River before 1860 brought important sectional and foreign economic specialization. The entire Atlantic coast as far south as Baltimore was turned slowly to manufacturing; England considered buying her grain from the American West in the hope that she might find there a market for the products of her shops. Few, perhaps, were fully conscious of the fact that growing traffic facilities and increasing trade were working profound alterations in economic habits. New Orleans before 1850 was ranked with London, Liverpool, and New York, but soon her glory was left to cotton alone; the wharves of Cincinnati, Queen City of the West and greatest inland metropolis in America, fell into decay as Chicago rose to commercial grandeur; the agricultural South lagged behind the industrial North in the race for national dominance; the plow was stripped from the hands of the eastern farmer, and he and his family became too often members of the miserable wage-earning class in factory towns. Solon Robinson challenged from Indiana the agrarians on the Atlantic coast in 1843: "You must break down your rail-roads and fill up your canals, or else we can deliver wheat at your own doors for 50 cents a bushel."

[4] Kellar, *Solon Robinson,* vol. ii, pp. 169-170. The railroads were certainly potent factors in making invalid Robinson's statement that "the time is rapidly coming, such is the vast increase of production in the fertile soil of the Mississippi Valley, when the whole river front will be insufficient to accommodate the shipping trade of the city, and slips will have to be cut into the land; and great basins, or docks, like those of Liverpool and London, will have to be made, to give room for the giant of commerce to expand his young limbs."

Commerce Beyond the Mississippi. West of the Mississippi River commerce before the Civil War was for the most part adventurous trade or individual or governmental experimentation. There had been pack-horse trails into the Far West since early in the century, though it was not until the twenties that teamsters, impelled by the news that revolution had occurred in the Santa Fe country and that rich profits were to be had in trading with the Spanish villages, began to move westward from frontier outposts. William Becknell, who struck out across the plains from Missouri in the fall of 1821 with a stock of merchandise, was the trail blazer to the new markets. Annually thereafter until the railroads had pushed into the region, wagon caravans departed from the westernmost towns along the Missouri for the Santa Fe country; some wandered far into Mexico and eventually to the Pacific.

The fur trade of the plains and the Rocky Mountain area was a temptation. Trappers, encouraged by the reports of Lewis and Clark, had long been operating west of St. Louis. General William H. Ashley established posts in the Rocky Mountain foothills in the early twenties, and traps were strung along the Rio Grande as soon as Mexico freed herself from Spanish restrictions. By 1840 furs from the entire region had joined the gold, silver, wool, and livestock that poured into St. Louis and New Orleans from Mexican territory. Outbound traffic in food, clothing, and agricultural implements from Missouri was greatly stimulated at the end of the forties when the Mormons founded their settlement in Utah; a decade later tools and provisions sold readily in the gold mines of what is now Colorado.

The opening of mail routes across the plains attracted attention to the trans-Mississippi West and swelled the demand for transcontinental railroads. The first mail contract was awarded to John Butterfield in the autumn of 1857, and in September of the following year the first coach left San Francisco bound for Tipton, Missouri, by way of El Paso, Texas. The coaches, though more comfortable than the thousands of heavy wagons that rumbled along the trails, were wretched enough. It is not strange, says Professor Paxson, that many passengers, forced to sleep in their seats and plagued by heat and cold and a host of other miseries of the "Via Mala," carried almost the whole of their baggage allowance of twenty-five pounds "in a jug." The opening in 1860 of the Pony Express helped popularize the Platte trail to the Pacific, but it did little toward increasing trade. It cost five dollars to send the thinnest tissue letter. High freight charges, in fact, remained for many decades the principal obstacle to commerce on the plains. Many efforts were made to solve the problem, includ-

ing the importation of camels from the Levant. The train of these "docile, patient, and easily managed creatures" that was driven into San Antonio, Texas, on June 18, 1856, provoked in later years many "tall" stories under western skies. The camel project soon collapsed, however, leaving only a few musty government records to tell the tale of this exotic experiment in transportation in the arid West.

Coastwise Commerce. Closely allied with the inland trade, but perhaps not subjected to such drastic changes, was commerce along the Atlantic coast. Colonial skippers had nosed their slow ships in and out of the harbors of the Atlantic in search of markets and bargains; these plodding boats, since there were few usable roads, had been the chief dependence of the early settlers for commercial communication. Although masters in the years between 1816 and 1860 made the same journeys and drove no harder bargains than had their sailing ancestors, the appearance of trading vessels in the towns along the Atlantic was no longer an occasion for especial rejoicing. Cargoes were mostly limited to the bulky and cumbersome goods that inland transportation facilities could not easily or profitably handle. The much-sought products of shop and mill were now distributed by other means. Considerable amounts of sugar, rice, tobacco, and naval stores from the South were carried northward to be exchanged for manufactured articles; an overwhelming amount of the coastwise freight, however, consisted of cotton, coal, and lumber.

The change was merely an evidence of the shifting national economic structure and the growing transportation facilities; it did not mean that trade along the coast was declining. The total sum of seaboard commerce was still large at the middle of the century, even in comparison with the combined value of canal and railroad traffic. Cotton that might have gone from southern ports direct to British markets, as tobacco and rice had done in earlier days, often moved northward as coastal freight to New York for transshipment to England. Manufactured goods from foreign ports destined for the South were likely to follow the same course. Holding a monopoly of the trade until the Civil War, American coastal ships in 1860—if the fishing fleet is included—totaled nearly three million tons. Steamboats carried an appreciable amount of freight and large numbers of passengers between New York and Providence and other North Atlantic ports.

A distinct part of coastal commerce was the trade that flowed into Gulf ports after the steamboats made inland sales possible. Eastern merchants, though they grumbled at their losses and hinted that all was not well in the commercial houses of the city, sent tons of merchandise to New

Orleans for distribution to upriver points. Brass clocks, pianos, barrels of glassware and shoes, and a medley of other articles made the slow trip—taking sometimes as much as three months—from northern Atlantic ports to river towns in the upper Mississippi valley. After 1850 large quantities of preserved foods and other goods were shipped to California.

Foreign Commerce. Foreign commerce between 1816 and 1860 directly reflected the economic development of the nation. Internal transportation facilities changed strikingly the nature of exports and imports as grain from the West turned eastern farmers into factory laborers whose industrial products checked the importation of certain classes of manufactured items. The spread of the cotton South provided an export commodity with which to meet the bills of Europe. Yet America was far from self-sufficing. Even though the United States was slowly winning economic independence from the British Empire, entering cargoes demonstrated the reliance of the people upon the factories of England. More than half the incoming freight was made up of manufactured or semimanufactured goods.

Fluctuation, 1815-1830. The flow of foreign commerce fluctuated violently in the forty-five years before the Civil War. Between 1815 and 1819 trade swelled enormously, exports rising in value from about seven million to nearly eighty-two million dollars and imports from thirteen million to more than one hundred and twenty-one million. Mostly responsible for this abnormal growth were the facts that during the War of 1812 American agricultural products, particularly cotton, had been unable to find markets and that English manufactured goods had not reached American storekeepers. But a glutted market, a high tariff, and financial panic brought collapse by 1819. Dull fluctuations marked the decade of the twenties. Of the agricultural products cotton alone continued to go to Europe in increasing amounts. The planters, nevertheless, were not prosperous. Only New York of the Atlantic ports escaped stagnation, although Mobile and New Orleans on the Gulf profited somewhat from the cotton trade. With the exception of the time of Jefferson's embargo, commerce had not been so listless since 1796.

Revival and Collapse, 1830-1843. Revival began in 1830, and for a half-dozen years there was rapid progress. The value of outgoing cargoes rose from seventy-one million to one hundred and twenty-four million dollars; that of incoming goods from sixty-two million to one hundred and seventy-six million. The speculative spirit of the Jackson period was largely responsible for the improvement in these years. The people, surfeited with easy money and convinced that prosperity had come to stay, bought recklessly

both at home and abroad. In 1836 imports surpassed exports by fifty-two million dollars; only once before in the history of the nation had the excess been so great.

Canals and railroads helped stimulate commerce by making it possible to export profitably the surplus agricultural products of the West. Moreover, in 1830 England opened her West Indies trade to American shippers, and in addition she was compelled by the development of her textile factories to buy liberally of southern cotton. Collapse came in the United States in September, 1837, however, and with it one of the nation's severest panics. Railway construction stopped abruptly, banking and business houses failed, farmers were unable to sell their products, and demand for European goods practically disappeared. In general, foreign trade declined rapidly until 1843, reaching at that time its lowest point in twenty years.

Rapid Growth, 1843-1860. Buoyant trade marked the period from the middle forties until the Civil War. Both domestic and foreign affairs were conducive to commercial growth. The nation, in fact, stood at the threshold of what might have been a great era. Few times have economic prospects been so glowing. The people were optimistic; prices were moving upward; plans were in progress for a transcontinental railroad; surveys were being projected for a Nicaraguan canal; gold was flowing out of the recently discovered mines in California and the Rocky Mountain region; industry was flourishing; and agriculture, with the possible exception of cotton, was more prosperous than ever before. And that was not all. England repealed her corn laws in 1846; the Irish famine, the revolutions of 1848 in continental Europe, the Crimean War, and the Sepoy revolution brought new demands for food products; gold was discovered in Australia in 1851; and trade was opened with the Far East. Total foreign commerce climbed at the end of the decade of the fifties to almost seven hundred million dollars.

Exports. Agricultural products made up a major part of the export trade. Year after year the shipments of cotton increased as the fields moved around the Gulf and northward into the valleys of the Cumberland and the Tennessee. Production mounted from three hundred and sixty thousand bales in 1821 to one million four hundred thousand in 1837 and three million eight hundred thousand in 1860. Foreign demands expanded in proportion. Great Britain and France were the two greatest purchasers, but sales were made too in Germany, Austria, Belgium, Holland, and Russia. The southern planter became almost wholly dependent upon European markets; eighty per cent of his crop was sold abroad. His returns, however, did not show comparable growth: prices fell more than

a third in the thirties, and the decrease in costs of transportation, tools, bagging, and ties did little toward compensating for the loss.

Because of the excessive freight charges involved in the transfer from inland farms and mills to eastern harbors, grain and flour exports lagged. But as transportation facilities developed, the latter became a significant item. The West Indies bought substantial quantities; Cuba, the Danish West Indies, and Haiti were the three most outstanding markets in the islands. Shipments were made also to South America, where the superior Baltimore grades found especial favor in Brazil. English purchases, of small consequence before 1829, became steadily larger after the repeal of the corn laws in the middle forties.

American tobacco, which had once monopolized the stalls of Europe, was rapidly outstripped by other export commodities, although England, Holland, and France were still important buyers. Rice in particular proved its ability to compete in the markets of the world. Sales shifted, however, from Spain and the Mediterranean countries to northern Europe; consumption in Holland and France more than doubled in the decade of the thirties. The West Indies too consumed sizable amounts. Little corn and corn meal were sent abroad, but meat and meat products were prominent items in foreign trade. Pork, bacon, and lard were sold in increasing volume to the West Indies, and before 1860 they had invaded European markets. Beef awaited tinning and refrigeration.

In spite of a marked decline in foreign demands, the products of forest and sea continued to move out of American ports. Barrels, kegs, staves, lumber, and naval stores were, as in colonial days, shipped to the West Indies, England, and continental Europe. But fish that had once found a peculiar market in the Mediterranean countries was no longer wanted there, and the West Indies bought sparingly. The whaling fleets still sold their wares over the world, though their days of glory were ending even before oil began to flow out of the first well at Titusville in Pennsylvania in 1859.

Only small quantities of the goods that were beginning to pour from American factories were exported. Cotton cloth for the Orient was among the most significant items. Small articles such as soap and nails, as well as a few pieces of fine furniture, were shipped in limited amounts.

Imports. Manufactured goods—cottons, woolens, silks, iron, cutlery, china, and a miscellany of other things—made up the bulk of the incoming cargoes. They were, however, slowly decreasing in relation to the total amount. Even before 1860 special foods, beverages, liquors, and condiments from the far corners of the earth were pressing hard for first place in

inbound merchandise. The wines, teas, spices, coffee, cocoa, sugar, and other luxury and semiluxury products gathered from Europe, the Orient, the islands of the Pacific, the West Indies, and South America clearly reveal the economic and cultural growth of the nation. Moreover, the internal commercial revolution that canals, railroads, and the new West had brought was manifest in the fact that two-thirds of all the imports arrived at New York.

The Merchant Marine. The American merchant marine did not keep pace with the expanding international trade in the forty-five years preceding the Civil War. Only in the twenties was real prosperity apparent. Throughout the decade the proportion of foreign commodities carried in American vessels did not fall below ninety per cent. Ambitious shipowners extended their business. Regular scheduled service between America and Europe, begun in 1816 with the establishment of the Black Ball Line, was enlarged. In 1822 and 1823 new lines were put into use between American and English ports.

While the percentage of world goods transported in American bottoms began a slow decline in the early thirties, the tonnage of the merchant marine continued to increase until 1860. The United States was, in fact, the greatest shipbuilding nation in the world at the time. Her sailing ships had no rivals on the sea. The justly famous American clipper reached perfection in such vessels as *Flying Cloud, Sovereign of the Seas, Great Republic,* and *Lightning.* The last logged on her maiden journey across the Atlantic a day's run of four hundred and thirty-six miles, the longest ever made by sail. On the highways of the world—around the Horn to California, into the Pacific for whales, to the Far East for tea—these masterpieces in wood and canvas proved their supremacy even though the burden of commerce still rested on the clumsy, slow-moving sailers that plodded the sea lanes of the world.

America's dominance in shipbuilding was due to the skill of her artisans as well as to her abundance of timber. The boats that came from the ways along every river, creek, and bay in New England and southward along the coast were works of art; they cost less, sailed better, and required smaller crews than comparable craft in Europe. But their days were numbered. The *Sirius,* one hundred and seventy-eight feet in length, which dropped anchor off the Battery in New York harbor on the evening of April 22, 1838, and the much larger *Great Western,* which followed soon after, demonstrated the superiority of steam power in ocean navigation and began the ceaseless plying of luxurious liners between Europe and the United States. The first of the English Cunard Line ships was

put into service in 1840, and before long the fleet, driven by side wheels or screw propellers, began to sweep the graceful clippers from the seas. In the late forties the elaborately appointed vessels (named after the oceans) of the American Collins Line challenged the British Cunarders and for a time perhaps excelled them. But discontinuance of congressional mail subsidies, coupled with a series of misfortunes, drove the company into bankruptcy within a decade. Amply supplied with cheap labor and technically equipped to produce the iron necessary for construction, England by 1860 had wrested the control of shipbuilding from the United States and with it domination of ocean commerce. Americans, blinded by the glory of their clippers, had refused to see that sails and wooden hulls were doomed.

The Business Structure. The thirties, forties, and fifties were years of ferment economically as well as socially. By 1830 the leisurely and agrarian philosophy of existence that had long been in vogue was being crowded out by hurrying business men whose moral codes conformed quickly and easily to conditions of the moment. Even in business there was change. Soon the hitherto dominant merchant gave way to the entrepreneur. Sometimes the one was transformed into the other. Such a man as Elihu Townsend represented the supersedence admirably, says Allan Nevins. "For long years he was simply a partner in a plain, substantial mercantile house. Then he assumed leadership in one great undertaking after another. He was one of the little group who chartered the New Haven Railroad and took its first stock. When the panic of 1837 halted the Erie, he stepped forward to aid it and brought in other moneyed New Yorkers. He was one of three men who built the Atlantic Dock in Brooklyn, costing nearly a million. He owned a large cotton mill in Brooklyn, and was interested in other factories. He had given substantial support to the development of Cairo, Ill.; while in his last days he evinced a keen interest in promoting the Mexican Ocean Mail and Inland Railway to shorten the journey to California by six to ten days." [5]

The modern corporation rose to importance with the appearance of the new and aggressive economic leaders. Though charters were for the most part still obtained from legislatures by special action, general state laws of incorporation were becoming widespread by 1850. They grew in significance as the number of business organizations created during the next ten years jumped tremendously.[6] Before the Civil War broke out, cries

[5] Nevins, *Ordeal of the Union*, vol. 2, p. 246.

[6] William C. Kessler, "Incorporation in New England: A Statistical Study, 1800-1875," *Journal of Economic History*, vol. viii (May, 1948), pp. 43-62, is an interesting study with many details.

were already being heard against the "soulless" corporation; it had, complained some, "neither a body to be kicked nor a soul to be damned." Even concentration in ownership had begun to grow, as was attested by the "Boston Associates," a group of financial aristocrats whose heavy hand was felt not only in economics but also in society and politics. The new order that was to rule the postwar years had, however, only just begun.

A workable yet far from satisfactory credit structure evolved with the rise of the business spirit. Some of the merchants who were spreading into wider fields turned to private banking and set up their agencies in many places, frequently making direct loans for long periods and occasionally conducting state lotteries to raise funds for the construction of roads and canals and other public facilities. They were important factors in providing much-needed credit for the growing new material nation. By 1850 the number of individuals whose names had become synonymous with great financial ventures had dwarfed the brief list that at the beginning of the century had included such names as Stephen Girard and John Jacob Astor.

Everywhere the market for stocks and bonds expanded as the credit market grew. Business men began to sense the profits to be had in speculation. Money poured through the rising banks into the urban centers of the East, particularly New York, and there its holders put it to work through investments in the securities of companies that were building transportation facilities, ships, factories, and other essentials in industrial progress. Stock exchanges were set up in New York (1817), Philadelphia (1832),[7] and Boston (1834) as the host of people eager to put their money into flexible paper rather than into real property increased. Brokers and bankers both served and fleeced the public; promoters in some instances won wealth and honor through despicable deals. The "bulls" and "bears" soon wandered into the financial arena, and the "shorn lamb" was not far behind.

The flourishing sales on the exchanges brought into being the call-money market. The financial supremacy of New York was thereby furthered, for in the deposits of inland commercial men who were doing business with its importers, exporters, and merchants and of rural bankers who needed their funds only when farmers were planting and harvesting, the city possessed an ample supply of cheap and readily obtained currency for speeding the speculative machine. All was not well, however, for the new type of loans, callable at the pleasure of the lender, brought instability

[7] Matthew McConnell was the first president of the Philadelphia Stock Exchange. The members met in coffeehouses and other convenient places about the city for eleven years or more before they finally began to build a permanent home in February, 1832.

and sometimes tragic forced sales that affected the whole nation. There were charges before 1860 that speculative investments were smothering production. Industry, nevertheless, found in the new procedure quickly available means of growth, and even the government made use of some of the great bankers in disposing of bonds. Corcoran and Riggs, established in Washington in 1840, handled much of the large loans of 1847 and 1848. Allotments were made to other bankers; Corcoran himself, on a visit to Great Britain, disposed of some four million dollars' worth in foreign markets.[8]

Facilities for handling short-term commercial credit arose. Little was done to dispense information concerning the "rails" and other securities that were being bought from bankers and brokers, but agencies for rating business houses soon appeared. Arthur Tappan, of the dry-goods firm of Arthur Tappan and Company of New York, organized in 1841 the Mercantile Agency. R. G. Dun joined the firm in 1854, and the next year John M. Bradstreet, a lawyer and merchant who had already been selling credit information in St. Louis, set up in New York Bradstreet's Improved Commercial Agency. The two ventures eventually led to the now famous Dun and Bradstreet. By the end of the fifties the commercial-paper market was well developed; both firms and individuals hurried mercantile growth by buying and selling at published discounts the short-credit documents upon which trade rested.

Important too was the rise of effective machinery for handling international payments, purchases, and borrowings. The young nation needed more money in bringing its resources into use than it possessed. Much of its capital flowed in from England, where because of the maturity of the industrial plant investment funds had constantly to be dispersed. Great financial houses in London and elsewhere kept an endless, though varying, stream of English money pouring into American railroads, canals, and other ventures. The total foreign indebtedness of the United States, estimated at about two hundred and twenty-five million dollars in 1843, approximated by 1860 four hundred million. Baring Brothers and Company and Rothschild and Sons were only two of the leading firms involved. American partners were being taken in by the thirties, and before the Civil War such able men as August Belmont and J. Pierpont Morgan of New York were agents for foreign institutions; Belmont represented the Rothschilds, and Morgan acted for George Peabody and Company.

The network of international credit facilities not only aided the sale of

[8] See ch. 14, "The Capital Markets, 1789-1860," in *The Growth of the American Economy*, ed. by Harold F. Williamson.

securities old and new but also encouraged world trade. Merchants bought among other things silks and teas from China, spices from the Pacific islands, manufactured goods from Britain, wines from France, coffee from Brazil, and cocoa, sugar, and molasses from the West Indies with English credit and paid for them by sending cotton to Liverpool. Europe was providing capital for long-time investments in industry and at the same time supplying funds on a short-time basis for the development of commerce. The American money market, however, was maturing rapidly, and before the turn of the century bankers of New York and Boston were, like their British predecessors, to carry their wares over the world.

Chapter 14

MONEY, BANKING, AND TARIFF, *1816-1860*

Although the development of transportation facilities and the spread of commerce and industry had by 1860 begun to bind the nation together, nobody could mistake the fact that the years between 1816 and the outbreak of the Civil War were for the United States years of growth in sectionalism and individualism. Diversity, however, sprang more from political and moral disagreements than from any lack of forces tending toward unity. Many distinguished statesmen, defying the British philosophy of laissez faire, advocated federal action concerning money, banking, and tariff as essentials in over-all economic progress. The program for material betterment that Hamilton and Gallatin had sponsored became the foundation stones upon which a vigorous group of men, led in Congress by Henry Clay, built great plans for the future. Clay, a westerner who had been instrumental in marshaling public opinion against England, gave rough form to an "American system" that would protect manufacturers through high tariffs, provide roads and canals through national appropriations, increase agrarian incomes by stimulating the demands for farm products, and swell the laborer's wages by enlarging the market for his finished goods. But "Wild Harry of the West" (soon to become "Mr. Clay of Ashland" and later the "Great Compromiser") suffered many disappointments. Even his distribution bill, by which he sought to distribute the federal surplus among the states for internal improvements, was nullified by the panic of 1837.

Among the other outstanding individuals who, along with Clay, urged the people to diversify their activities and further prosperity for all by building factories and transportation facilities and tearing down local interests were Matthew Carey, Hezekiah Niles, Friedrich List, Charles J. Ingersoll, and, for a time, John C. Calhoun. Carey, fluent and embittered Irishman who had a particular sympathy for the poor, retaught in many pamphlets the lessons that Hamilton had read to Congress. Niles, editor of the popular business journal *Niles' Weekly Register,* was perhaps a more effective propagandist for protection and federal encouragement in

other ways than was Carey. List, who came to the United States from Germany in 1824, was influential in creating favorable sentiment for railroads and for protective tariffs; his newspaper was a powerful force among the Germans of Pennsylvania, especially those in Reading, where he lived for several years before returning to his native land to sponsor a national economic program. Ingersoll, congressman from Pennsylvania, and a host of others worked eagerly in the cause of unity. All were challenged, however, by the determined advocates of states' rights. One of the first controversies concerned a national bank.

The Establishment of the Second Bank of the United States. The War of 1812 had been fought under discouraging financial conditions. With no national institution to stabilize the situation after 1811, state banks had by 1816 grown in number from eighty-eight to two hundred and forty-six, and circulation had expanded from forty-five million to a hundred million dollars. The Secretary of the Treasury frequently had no choice other than to take state bank notes at their face value in payment for bonds. Occasionally the War Department had been unable to make petty purchases, and it sometimes had been forced to pay the soldiers in money that was not legal tender in meeting their own tax bills. Suspension everywhere outside New England of specie payments after the capture of Washington by the British in August, 1814, had compelled Congress to take up the confused monetary question when it met in September. The advocates of a second United States bank had possessed a majority, but even after the close of the conflict month after month had been wasted in futile argument as the divided proponents of the bank sought vainly to strike upon an acceptable plan. Dallas and Calhoun, leaders of opposing factions, could not reconcile their differences until after the end of the war. Joined then by Henry Clay and other strong nationalists, they pushed their program through Congress. The bill creating the second Bank of the United States was signed by the President on April 10, 1816, and subscriptions began in July.

The bank, chartered for twenty years, was capitalized at thirty-five million dollars. One-fifth of this amount was owned by the national government. Moreover, five of the twenty-five directors were appointed by the President. Numerous advantages were expected to flow from the institution. Thoughtful financiers confidently hoped that the flood of "useless" paper money would be checked and the growth of "unstable" state and private banks halted. The Secretary of the Treasury did after much quarreling succeed in inducing the bankers of Philadelphia, New York, Balti-

more, and Richmond to resume specie payments; those in the smaller towns followed suit when unable to do otherwise.

The Troubles of the Bank. The storm of criticism that had raged about the original bank throughout its existence soon blew up again, especially in the South and the West. The inept and sometimes even corrupt management of William Jones, its first president, stirred resentment, and the panic of 1819 brought bitter criticism. The establishment was not without blame in the financial crisis: it reduced its circulation and increased the difficulty of obtaining loans, thus confirming the ordinary citizen in his conviction that bankers and specie both fail in time of need. The farmers were particularly penalized by the action of the bank, and their hostility quickly found aggressive expression. To weary and discontented folk, says Professor McLaughlin, the bank "appeared to be only an instrument for carrying out the schemes of money sharks, for collecting debts from the helpless, and for drying up the sources of money." In some cases states ignored constitutional restrictions and challenged the national government to act; taxes were levied upon the branches of the United States Bank in Maryland, North Carolina, Ohio, Tennessee, and Kentucky. A bill was introduced in Congress to abolish the entire system, but it was defeated, and Chief Justice Marshall, devoted nationalist, declared that the power to tax was the power to destroy and was therefore illegal.[1]

Marshall's decisions merely checked the attack of the states; they did not lessen the opposition of the people or obliterate the knowledge that investigation had revealed folly and dishonesty. Management was indeed inexcusably lax. In the branch bank at Washington the accounts of the first teller balanced on only fourteen days in 1818, fifteen in 1819, sixteen in 1820, fourteen in 1821, and thirty-five in 1822; those of the second teller balanced on only thirteen days in 1820, six in 1821, and twenty-five in 1822. "It would be an abuse of terms" to call the mistakes casual errors, wrote an officer of the institution, "when in fact to be wrong was habitual and to be right was the casualty." Despite the real service rendered to the country by the bank under the presidency of Langdon Cheves and his successor, Nicholas Biddle, opposition continued to grow.

The drift of events was against the bank. The great wave of migration that poured over the Alleghenies in the years immediately after the war with England brought into the Union five new states within six years: Indiana (1816), Mississippi (1817), Illinois (1818), Alabama (1819), and Missouri (1821). These new states were settled largely on borrowed money

[1] The two most important decisions were those involved in *McCulloch* v. *Maryland* (4 Wheaton 316, 1819) and *Osborn* v. *the Bank of the United States* (9 Wheaton 738, 1824).

and under frontier conditions that demanded easy credit. The westerners were not dishonest, nor were they seeking unwarranted help in building the agrarian frontier. With some truth and much humor an Indiana farmer wrote an easterner: "I will allow that some of us are no better than we should be, for we have taken the benefit of the Bankrupt act, and cheated our eastern creditors a little, but we shall pay up, . . . and we do sometimes send you a little spring wheat mixed with winter wheat; but we imagine that you don't know the difference, and ought to be thankful that we don't mix buckwheat. But we always pay our debts, (public ones excepted,) when we can't help it, and we don't get trusted, where we've no credit. Upon the whole, we are a moral people, and if we are not a religious one, it is not because we don't pretend to be."[2]

It was only natural that the South and the West should charge the bank with privilege, greed, and monopoly. Local financial establishments in the poorer regions always owed it heavy balances, and demands for payment caused resentment in states, cities, and towns and led to the assertion that the institution was draining the agricultural sections of their specie. Foreclosures brought ruin to many people. Public condemnation stirred the fires of hate. "I know towns, yea cities where this bank already appears as an engrossing proprietor," cried Thomas Hart Benton. "All the flourishing cities of the West are mortgaged to this money power. They may be devoured by it at any moment. They are in the jaws of a monster! A lump of butter in the mouth of a dog! One gulp, one swallow, and all is gone." The accusation, moreover, that the bank benefited the East at the expense of the West and the South was supported by fact. Ohio, Indiana, Illinois, Kentucky, and Tennessee, for instance, held only eighteen hundred and four of the three hundred and fifty thousand shares in the enterprise. States whose citizens owned no stock in the bank contributed annually to its profits, a part of which went to more than forty thousand foreign investors.

The Recharter Fight. The warrior who took up the cause of the farmers and the workmen in their fight against the monster they felt was threatening them was Andrew Jackson. The attack on the bank was, in fact, a part of the democratic revolution that placed the old general in the White House. Jackson was not content, however, to be the product of a movement; he was always the gallant knight of the plain people. Although he did accuse it of working against him in politics, he was not, it seems, at first particularly opposed to the second Bank of the United States; he merely objected to banks in general. But Nicholas

[2] Kellar, *Solon Robinson*, vol. i, p. 352.

Biddle and his resplendent Philadelphia temple soon won the undying enmity of "King Andrew," who, having already criticised the institution on several occasions, launched a determined battle against his foe when the Whigs, with Henry Clay as their candidate, made rechartering a fundamental issue in the campaign of 1832—four years before the charter was to expire. Urged by a friend that it was growing "more important every hour that you should be here," Biddle ordered a stock of good wine and left for Washington in January to be near the scene of battle. He was the chief marshal of the bank forces. He listened sympathetically to the advice of his associates that members of Congress be granted special privileges at the grilled windows of his financial house in the capital city; he procured wherever possible the mailing lists of religious papers in order that he might try to convince the subscribers by letter that the bank he headed was not a "monster"; he joined the hue and cry to awaken sleeping property holders to the dangers they faced; and he heartily approved the crusade to wipe out "professional politicians" who had "always been conspicuous for their opposition to the Bank of the U.S."

The recharter bill was passed by Congress on July 3 and, as Biddle had feared, was promptly vetoed by Jackson. The President was pleased, for he had not only given the death blow to the great "hydra of corruption" but also enjoyed the pleasure of flinging at the Whig candidate the very words Clay himself had used in opposing extension of the charter of the first Bank of the United States in 1811.

In vain did the advocates of the bank shout about "the rule of vulgarity and barbarism," "the Kitchen Cabinet gang," and "the miserable people who governed the President." They failed in their efforts to override the veto and, bitterer still, suffered ignominious defeat in the fall elections. Jackson, bolstered—perhaps too much—by his overwhelming victory at the polls, began the next year to sever governmental relations with the institution. He was, he declared to his cabinet, only taking the necessary step of preparing a working system of handling the money of the nation against the day when the bank would expire, because there was no "reasonable ground for expectation that any other Bank of the United States will be created by Congress." Having after two dismissals from the Treasury Department found in Roger B. Taney a man who would support him, he ordered that no more government money be deposited in the bank or any of its branches. Nor was that all. He directed further that drafts continue to be drawn upon the bank until all government funds had been exhausted. The Girard Bank of Philadelphia, after promising

to render all services formerly performed by the national bank, was designated as a place of deposit, and other banks were yearly added to the list. These came to be called "pet banks," and many were the charges of political corruption that were hurled against them.

The President had his way, though his course brought upon him severe criticism from the financiers of the nation and official censure from the Senate. After four years of vigorous effort Thomas Hart Benton was successful in having the annoying resolutions expunged from the journal of the Senate, and Jackson the politician emerged triumphant. But the bank as a private establishment did not survive the shock it had received. Biddle, anxious to teach the country a lesson, called in his loans and in the process gathered into his vaults five and one-half million dollars in specie. The contraction brought acute financial stress and many failures; even eastern business men were forced to admit that Jackson's apprehensions had been in part justified. Knowing that continuation by Congress was no longer possible, Biddle secured at heavy cost a charter from Pennsylvania in February, 1836. A few years later his Bank of the United States of Pennsylvania closed its doors forever.

Surplus, Prosperity, and Speculation in the Early Thirties. Victory by opponents of the bank brought no surcease of financial troubles; indeed, a host of factors combined to spread disaster over the nation within less than half a dozen years. Federal income in the early thirties was growing with embarrassing rapidity. In fact, the treasury had for some time been slowly accumulating a surplus. Returns from the sale of public lands made especially noticeable gains, rising from nine million dollars in 1829 to more than twenty million in 1836. Government receipts greatly exceeded expenditures. The growing balance might have done no harm had the last of the public debt not been paid in 1833. As it was, legislators at Washington grew restless and, fearing reckless dissipation, passed at last in the summer of 1836 a distribution bill that Clay had sponsored in many congresses as a part of his American system. The law required that a working sum of five million dollars be set aside for the government and the remainder be distributed as loans among the states in five equal installments.

Distribution was never completed, for panic struck the country before final payments could be made. Both national and international causes were responsible for the financial debacle of the middle thirties, but even had there been no foreign complications, the course of events at home was such as to endanger economic stability. Easy money, extravagant expenditures, and reckless speculation are harbingers of disaster wherever

they prevail. Many events conspired to create a bountiful supply of money. Vigorous national expansion, frontier necessity, and an apparent prosperity led to a mushroom growth of state banks whose financial principles were lax to say the least; the number rose from three hundred and twenty-nine in 1829 to seven hundred and eighty-eight in 1837. Fourteen states joined in the mad scramble by entering the banking business. The currency of the country doubled within the short space of seven years. In addition millions of dollars flowed in from foreign countries. Europe in general and England in particular had large stores of capital awaiting favorable opportunities for investment. American securities—railroad, canal, and sundry others—found eager markets abroad; they balanced the deficit in international trade and brought in supplies of specie as well. Claims long held by the United States against various European powers were being paid also, and the incoming funds swelled still more the federal surplus. Although the expenditures of the government rose from sixteen million to thirty-seven million dollars between 1828 and 1837, the income was still far in excess of needs.

Easy money produced easy money. This was especially true after Jackson's "pet banks" arose. Every governmental deposit made available further possible borrowings by individuals and encouraged the growth of wildcat banks. Between 1829 and 1837 loans mounted by more than one hundred and thirty-seven per cent; on the eve of the panic they totaled five hundred and twenty-five million dollars. Moreover, as speculation grew apace, less and less collateral was demanded. Inflation, with rising prices and reckless financial ventures, made its inevitable appearance. States approved without hesitation canal projects whose financial burdens were far too heavy for the returns obtainable. Railroad securities found ready sale on a rising market. Real estate values rose abruptly, and speculative gambling flourished. The South alone found itself unable to share in the expanding prosperity. Throughout the nation, however, indebtedness had increased to such an extent that should the bubble of inflation burst, there would be scarcely enough real value to pay the obligations involved. The people had forgotten the long upward climb after 1819 and the brief "Biddle's panic" of 1833; they were thinking merely of gains, heedless of possible losses.

Only the price of government land remained stable, and both the abnormal migration of the period and the seeming profits to be made led to excessive purchases. New settlers pouring into the West borrowed from local banks (whose capital was often supplied in part by the treasury) in order to comply with the cash-sale requirements of the government. They paid their borrowed funds into the land offices, which in turn redeposited

the money in the banks, where it again became available for borrowing. With each cycle of bank to borrower to government land office to bank again more people became involved in debt, although there was no increase in real money with which to pay the growing obligations. President Jackson became alarmed not only at the financial situation but also at the speed with which speculators were swallowing up the public domain in hope of personal profit. Failing to induce Congress to act, he issued on July 11, 1836, the Specie Circular, which provided with one exception that after August 15 only gold and silver would be receivable in payment for public lands. The President himself thus pricked the bubble of inflation that Jacksonian democracy had helped create.

The Specie Circular only caused a scramble for gold and silver. It was intended to force specie into the West, but its most obvious accomplishment was to throw doubt upon the value of the paper money that everywhere made up a great part of the circulating medium. People who owed heavy debts sought eagerly to exchange their paper notes for hard money. The banks found it necessary to call in their loans, thus implicating all creditors whether they had speculated in land or not. The whole business structure became involved in a persistent effort to turn into specie a credit balance that had grown far beyond the existing money assets. There was not enough gold or silver to go around, and the weakest debtors were, as always, mercilessly trampled underfoot.

The distribution bill added to the contraction that was in process. The Treasury Department, in order to comply with the law that Congress had passed, was forced to call in its deposits in local banks throughout the nation. But these institutions, already under heavy strain, did not possess the cash with which to repay the government, and they were compelled further to contract their loans. Moreover, the money while in transit from one place to another was entirely out of circulation when desperately needed.[3] The situation was aggravated by the fact that many foreigners, growing suspicious as to the soundness of their investments in America, demanded payment of old accounts and cashed in their securities wherever they could find buyers.

The Panic of '37. The warning cloud of financial panic had been visible for several years. As early as 1833 Philadelphia merchants had begun to mention to their western correspondents dull business in the city; some had reported "considerable failures" with "worse expected." On March 9, 1834,

[3] Since distribution was to be made according to population, the greater part of the government deposits was needed in the East. But for economic and political reasons many of the "pet banks" were located in the West.

A. H. Sheldon had written from Troy, New York, that "owing to the removal of the Deposits or something else there has been a wonderful pressure in the money market," resulting in the failure of numerous business establishments. By January, 1837, specie hoarding began in earnest, and in March several cotton firms in New Orleans collapsed. Wool from the West lay unsold in eastern cities, Connecticut clock makers instructed their salesmen to "hold on" as long as possible but in some instances called them in from the field to wait for better times, and merchants who refused credit to their cashless customers found themselves unable to dispose of their goods. Tenants moved out of their homes because they could not pay their rents. Interest rates in Philadelphia rose by the middle of April to two or three per cent a month. New England was particularly distressed; crops were bad and unemployment was widespread.

> The banks [wrote a Connecticut schoolmaster in his diary on April 30] are afraid to issue money and the business men are obliged to curtail their expenses and many to stop [their businesses] and many to break even when they are well off in property but can not turn it to money. Some say one thing caused it and some say another. Each political party ascribes it to the other. The one to the bad administration of Government, the other to the panic and fears of their opponents.
>
> Thus excited our Country mourns and many fall victim to the ruins of the times and all are more or less affected by the general prostration of business and trust and this too happening after light crops, which bring high prices, rendering it more distressing to the working people. Pulling both ends of the rope, draws it more snugly upon those it binds and as men think themselves politically right on both sides and their opponents wrong when shall the error be found?

New York banks suspended payments on May 10, and the acute panic was upon the country. Business failures plagued every city. The government tried in vain to find money with which to meet its current obligations. In New York interest rates rose to dizzying heights, flour jumped to twelve dollars a barrel, and the hungry and the unemployed rioted through the streets. Moneyed men lost most heavily in the crisis, but, as always, the greatest suffering came to the struggling masses of common people.

President Van Buren, whose illustrious predecessor had ridden out of Washington for the Hermitage amidst a joyous cavalcade just in time to escape the calamities that his political course had in part made possible, could do little to lessen the evils of the panic. He called a special session of Congress for September, and in Washington the politicians, as is their wont, blamed their political opponents for the troubles that had come. Clay said that the refusal to recharter the Bank of the United States, the

removal of its deposits, and the issuance of the Specie Circular were at fault. The President, on the other hand, maintained that it was the recklessness of the state banks that had brought disaster. Congress repealed the distribution legislation and passed a few beneficial laws, and time brought slow recovery. Specie resumption was hopefully begun in 1838. But the next year collapse came again with the suspension of Biddle's United States Bank of Pennsylvania. Throughout Pennsylvania and over the entire South local bankers refused once more to redeem their notes in specie.

The Independent Treasury System. When the worst suffering from the panic began to abate, President Van Buren attempted governmental reform. Neither a national bank nor dependence upon state banks had, he declared, proved satisfactory. He proposed that the Treasury Department establish its own receiving and paying offices, thus disconnecting itself completely from the finances of the nation except for collecting its revenues and paying its bills. This plan, called the Independent Treasury System by the administration and the Divorce Bill by the opposition, was the highest point reached in the theory that the government has no responsibility in regard to the money of the people.

Van Buren's system soon ran afoul of a political campaign and expired with the end of its sponsor's days in the White House. Before long Henry Clay was once more fighting for a national bank; defeated at every turn by the vetoes of President John Tyler, however, he finally gave up in disgust. After further painful experiences with state banks the Independent Treasury plan was reestablished in 1846. The next major change came with the creation of the National Banking System during the Civil War.

The State Banks. In the meantime the state banks had been running a devious course. Blaming the financiers for their troubles, some states outlawed banks entirely; others refused to subscribe to their capital stock or encourage them in any way. Nevertheless, the institutions thrived, and paper currency continued to flood the nation. The money of the people was still a local money whose value varied with its movement from place to place. One was never certain of his assets. Without any change in the amount of paper in his pockets the traveler found that his wealth fluctuated from day to day, and it might even disappear completely on a long journey.

Because of public disapproval it was almost impossible to make redemptions in specie,[4] and machinery for accomplishing sectional exchanges was

[4] The story is told that a man seeking to redeem a thousand dollars in notes of the Bank of Morocco in Indiana found that the proprietor was a blacksmith on a backwood road whose "bank" was a potato barrel. The owner begged the man not to tell its location lest general presentation ruin him.

Sentiment against redeemers was still strong. It is said that a man was burned in effigy at Versailles, Kentucky, in 1855 because he asked for redemption; that the Springfield, Ohio,

lacking. "The first thing you will discover on opening this letter will be a two dollar bill on Clark's Exchange Bank, Springfield, Illinois," wrote a citizen of Connecticut to a western friend in 1835. "I brought it along not knowing that I had it until I reached Albany. Now you will confer a favor on me if you will take it, and send me a bill on some Eastern bank." Industry was hampered by the fact that sales in distant places could not always be made for acceptable money. Connecticut clock makers in the thirties, for instance, frequently refused orders from Mississippi and Alabama because their profits vanished when they discounted bills they received in payment for their goods.[5] Business men were ever in uncertainty, and the bank-note guides that were regularly printed helped but little.

Financial Relapse and the Panic of '42. Tragedy followed in the wake of incautious monetary experiments. In 1841 a second financial crisis appeared. Commerce in many sections came to a virtual standstill, and merchants resorted to barter. Many banking and business houses collapsed. The South and the West suffered even more severely than in 1837. "Money is about as scarce here as it can well be," asserted James C. Hammond of South Carolina in 1841. A few months later a firm in Pittsburgh reported that four-fifths of its entire business was mere exchange. "Indeed," said a dealer, "it is confessed on all hands by the oldest and wealthiest merchants that money never was so scarce." Supply houses in New Orleans could send neither goods nor currency to their upriver customers. In some western states hard-pressed farmers succeeded in obtaining legal protection of their property from seizure. "Our legislators," wailed Leonard and Phelps of Madison, Indiana, in June, 1842, "were so liberal last winter as to take from us all privileges of collecting by coercion—when our customers had the means and wouldn't pay—so now a man may play the rascal with impunity."

State Debts and Repudiation. States and counties as well as individuals were inextricably entangled in debt. They had rashly sponsored railroads, canals, and public buildings until their "domestic" and "foreign" obligations were far beyond what their already heavily taxed citizens could pay. In their desperation they began recklessly to use scrip, which merely returned in the form of taxes and left everybody involved even poorer than before. They borrowed to meet past debts, thus building up new ones while canceling old. But in spite of the financial difficulties internal improve-

bank in 1857 was adorned with a brush and a tar bucket to warn off brokers seeking specie; and that in 1859 a man was threatened with lynching for endeavoring to redeem his paper money. See William J. Schulz and M. R. Caine, *Financial Development of the United States* (New York: Prentice-Hall, 1937), footnotes, pp. 242 and 248.

[5] Often when sales were made, the price demanded reflected not the value of the money to the purchaser but the value of the money to the seller at his home office, however distant.

ments continued. Scrip, each new series promptly dubbed a distinguishing name, poured from the presses as need arose, and slight attention was paid to the value of the assets pledged for its redemption. Indiana, typical debtor state, printed "White Dog" to pay for repairs on the Wabash Canal and "Blue Dog" for constructing a waterway between Lafayette and Terre Haute. In order to "make change" the contractors issued small bills, known as "Blue Pups." "A large litter of these dogs and pups," wrote an Indiana farmer in 1845, "are dropt upon the public every year, and it is upon the extension of this same canal [Lafayette-Terre Haute] to the Ohio River that the grant of a large quantity of the refuse land of the Vincennes Land District was made by Congress last winter, and upon the credit of which the creditors of the State are very modestly asked to lend us a little more money, which if we fail to get, I suppose the present Loco-Foco Legislature will stand godfather to another litter of pups, under some new color, to distinguish them from the older ones of the same prolific mother." [6]

The burdens at last became too heavy. New York, Pennsylvania, Maryland, Indiana, Illinois, Michigan, and Arkansas defaulted on their interest payments. They later met their obligations, but Mississippi and Florida flatly repudiated their debts. Domestic and foreign credit suffered severely. England especially was incensed, and the Reverend Sidney Smith wrote a new stanza for "Yankee Doodle":

> Yankee Doodle borrows cash,
> Yankee Doodle spends it,
> And then he snaps his fingers at
> The jolly flat who lends it.
> Ask him when he means to pay,
> He shows no hesitation,
> But says he'll take the shortest way
> And that's Repudiation!

The Panic of '57. Notwithstanding the confused monetary situation and a blighting slavery argument, the nation seemed in the middle of the century well on the way to prosperity. Everybody was hopeful. Congressmen talked confidently of a transcontinental railroad to California and a canal across Nicaragua. Manufacturers, certain that new markets would soon appear, pressed production far ahead of immediate consumption. Farmers, anxious to take advantage of high prices in war-torn Europe, hopefully turned to the soil and overplanted. Promoters pushed railroad lines into unsettled regions where profits depended wholly upon future growth.

[6] Kellar, *Solon Robinson*, vol. i, p. 524.

Speculators eagerly bought land along projected transportation lines and lots in cities yet to be built. Bankers in the West invested heavily in illiquid rail securities and sent their unemployed balances to New York banks. It was clear by the fall of 1856 that optimism was rushing the people into financial disaster. The slump that struck Europe in the summer of 1857 spread rapidly to the New York market, and when the overexerted Ohio Life Insurance and Trust Company collapsed in August, the panic was on. Western banks withdrew in two months more than twenty-five million dollars in deposits from New York alone; many, however, succumbed under the heavy demands thrown upon them by harvest time before aid could arrive. "Failures and assignments" were "the order of the day"; business houses, factories, and even hotels closed their doors. Chicago was extremely hard hit. The financial storm moved quickly eastward, engulfing Philadelphia and Baltimore banks in September and sweeping away eighteen New York institutions on the single day of October 13. Clearing-house certificates and fortunate arrivals of gold from California shortened the acute period of the panic, but recovery was exceedingly slow. Revival, in fact, was just getting under way when it was blasted by the first shot of the Civil War, which arched over the waters of Charleston harbor on April 12, 1861.

Banking Reforms. The financial troubles that marked the three decades from 1830 to 1860 brought eventually many permanent improvements. In 1853 Congress provided a much-needed subsidiary coinage to replace the inconvenient fractional paper currency, deliberately making the new coins lighter than the old so that they would not be sold as metal. In October of the same year the first clearing house was opened at Fourteen Wall Street, New York City. Boston in 1856 and Philadelphia two years later established similar institutions. The innovation obviated the necessity of sending messengers between debtor and creditor banks within the same city. Furthermore, it soon led to correspondent relations between urban and rural banks. Soon country banks began to maintain balances in the financial centers nearest them. In return their own notes were cleared, and, more than that, they received advice as to investments, credit ratings, and other matters of importance that was not otherwise easily obtained. Regionally the banking structure was being tied together, and it was even now becoming clear that uniformity was a national task.

Many attempts were made to guarantee note holders against loss. In 1829 New York set up a Safety Fund System into which each participating bank paid three per cent of its capital. The fund was used to meet deficits remaining after the assets of insolvent banks had been liquidated. Though

the plan pointed the way to modern practice, the burden was too heavy for a single state. "Free banking," in which paper money was issued in restricted amounts on sound securities deposited with the state comptroller, was tried also, especially in the forties and fifties; it was outstandingly successful in Louisiana and New York. By 1860 the New York plan, operating in something of the manner of the National Banking System of later years, had been adopted by sixteen states. The one great stumbling block in the way of the hoped-for security was the fact that though notes were backed by full value in security, there was no way to keep the security itself sound.

One of the most satisfactory of the banking experiments was the Suffolk System, begun in 1824 by the Suffolk Bank of Boston for the purpose of maintaining at par the value of the notes of rural and small-town banks of New England. Boston bankers, long aware of the fact that their own paper in competition with cheaper money quickly returned to their tills to lie idle, readily approved when the Suffolk Bank proposed to act as agent and clearing house for all nonurban institutions in the area. Notes of rural banks were maintained at full value through the requirement that each such institution keep on deposit with its city agent a sum over and above the amount needed to redeem them when presented. Reasonable uniformity was obtained through the expedient of demanding that all nonparticipating banks redeem their notes in specie. New England business profited greatly, and excessive issues on the part of individual banks were lessened.

The Tariff and Politics. The controversy over tariff was, like the question of money and banking, a natural result of the industrial and economic progress in the years between 1816 and 1860. American manufacturers were earnest advocates of the tariff principles of Alexander Hamilton because protection promised them personal advantage; and nationalists in general were supporters of the theory of restrictive levies for both economic and military reasons. But the developments of the War of 1812 might not have forced the tariff question into prominence had it not been for England's efforts to dump her surplus goods at any price upon America and thereby stifle the rising factories. War with a foreign power (1812-1816) brought through economic competition the first period of American protective tariff; war at home (1861-1865) was to bring through political maladjustment the second.

The First Protective Measure. For a dozen years after 1816 tariff was definitely feeling its way through a maze of conflicting but shifting opinions. The nation had not yet reached the stage in which every economic group demanded special privileges. In fact, previous levies had aimed

mostly at revenue. The tariff of 1816 was the first measure written into the law books of the nation that subordinated revenue to industrial progress. It came as a direct result of economic distress, and the lawmakers who passed it spoke much of "infant industries" and "national greatness." Daniel Webster as a representative of New England, whose "codfish aristocracy" could see no profit in exchanging its trading privileges for "the dust and smoke of unwholesome factories," protested against this initial protective legislation. John C. Calhoun, on the other hand, declared that the tariff was a cement that would bind the agricultural, manufacturing, and commercial nation into lasting peace; of the planters only John Randolph voiced the warning that the tariff would be the instrument of agrarian destruction.

Duties imposed by the tariff bill of 1816 were small in comparison with those of later years, and they were more logically levied. They were intended to be prohibitive only on goods that could be abundantly produced in the nation, partially prohibitive on products that could not be altogether supplied at home, and merely revenue producing on articles obtained entirely from abroad. But no single section fully approved of the law. Although struggling manufacturers, hard pressed by European competitors with their auction sales, long-time credit, and false valuations, fought vigorously for protection, efforts to secure increased rates in 1818 and again (in spite of the impetus given the cause by the financial crisis of 1819) in 1820 were unsuccessful. Even Massachusetts was still unwilling to desert the principle of unrestricted trade. Quincy Tufts after attending a meeting at Faneuil Hall on October 2, 1820, noted in his diary in regard to "two very important and eloquent speeches from Mr. Webster and I. Justin," "I have seldom been so much affected at a meeting." "The resolutions of opposition to the Tariff," he added, "were unanimously adopted."

Southern Opposition to Protection. By 1820 the South had drifted into uncompromising opposition to any increase in the tariff levies. Whatever other economic activities had suffered the previous four years, cotton exports had grown, and plantation owners saw no reason why they should strike at their own profits. Moreover, the nation against which protection was directed was the chief purchaser of southern cotton; two-thirds of the output went to England. And besides, tariff could result only in adding to the cost of the things the section bought. Randolph, talking to a more sympathetic audience than in 1816, told the planters that their support of protection meant only that they agreed to be taxed "in order to hire another man . . . to set up a spinning jenny." Calhoun voted against the tariff proposals; his ardent nationalism had collapsed under economic pressure.

Though defeated in the attempt to gain increased protection, manufacturers pushed their campaign forward energetically. They were encouraged by the aggressive but illogical demand of the West for high tariff rates. Selling their corn at eight or ten cents a bushel and their wheat at twenty-five or thirty, the farmers were often unable to meet their obligations, and hence anything that promised relief won their support. Randolph of the bony fingers and biting tongue was probably justified in pointing out the incongruity of "men in hunting-shirts, with deerskin leggings, and moccasins on their feet" wanting protection for manufacturers. But Clay's argument that protection meant high prices for agricultural products and good roads for all brought hope to the poor agrarians of the trans-Appalachian regions. Nevertheless, the tariff of 1816—with modifications—remained the law of the land until 1824.

The Tariff of 1824. The return of Clay to Congress and his election to the speakership in the fall of 1823 were in part responsible for the passage of the tariff bill of 1824. The rates were higher than those established eight years before but not so high as those proposed in 1820. The manufacturers, especially the makers of woolen cloth, were not satisfied, and they continued to fight for new laws. Various groups in New York, Pennsylvania, and other states demanded increased rates on wool, iron, cotton, hemp, flax, and glass. The opposition of New England was lessening because many former traders had shifted their interests to factories. The objections of the South, however, mounted in earnestness and in vigor of expression. Dr. Cooper, president of the College of South Carolina, asserted that the plan of the business men was to force the South to hold its plantations "as the serfs of the North, subject to the orders of the master minds of Massachusetts, the lords of the spinning jenny, the peers of the loom," all with the single purpose "to swell their riches."

The Tariff of Abominations. But the political wheels turned on, bringing early in 1828 a new tariff. The South, pinched by poverty and irked by the economic progress of the North, was goaded beyond endurance. To the southern statesmen protection was robbery—a legal robbery that, though it had not been contemplated by the fathers of the nation, was sanctioned by the government. Shortly after the passage of the bill Calhoun wrote his *South Carolina Exposition and Protest,* in which he implored Congress not to break the compact that bound the states into a union by smothering one section for the purpose of helping another.

The tariff of 1828 was indeed a peculiar bit of legislation. Pleasing no one, it came to be called the "tariff of abominations." It concerned, said Randolph, "manufactures of no sort or kind, except the manufacture of a

President of the United States." The law, in fact, had been proposed with the election of a President in mind. Protests, including many from New England, poured into Washington. "And with what propriety are we, in the city of New York," asked Stephan Allen, "compelled to pay a tax of fifty to one hundred percent on imported goods for the benefit of manufacturers who before this burthen was laid upon us were accumulating large fortunes from their business?" The measure was, he maintained, "both partial and unjust, stripping one portion of the community of their money, in order that another portion might be enriched by it." The South bitterly objected to the measure as unconstitutional, and northern wool manufacturers and consumers of molasses decried the bill.

Tariff for the next five years remained one of the most important political questions of the nation. The antiprotectionists looked forward with hope to the election of 1828. Jackson, however, gave them no comfort in his inaugural address, and at the Jefferson Day dinner on April 13, 1830, he openly rebuked the cotton aristocracy when he gruffly gave the toast that Van Buren had carefully selected for him: "The Union, it must and shall be preserved." South Carolina heard the general and knew what he meant, but she refused to be distracted from the defense of what she regarded as her constitutional rights.

The Tariff of 1832. Economic sectionalism had by 1830 reached a dangerous point. That nullification was warranted is open to controversy. That the South had grievances is obvious. Even the President admitted in his message to Congress that the tariff taxed "some of the comforts of life unnecessarily high," and in 1831 he again brought the subject to the attention of the House. In 1832 a new tariff, written for the most part by John Quincy Adams, was passed as a result of the agitation in the country. It merely removed some of the features to which the manufacturing and commercial East had objected. The South was in no way placated, and it prepared immediately to give vigorous expression to its discontent.

Nullification and Compromise. John C. Calhoun, though he was not alone in his protests, was the rock upon which southern opposition rested. So great was the sectional influence of this statesman that some wit at the time is said to have remarked that when Calhoun took snuff, the whole of Carolina sneezed. At any rate, his state, not forgetting, perhaps, the Kentucky and Virginia Resolutions of the period of Federalist domination, officially declared in November, 1832, that the tariff acts of the United States "purporting" to be acts laying duties and imposts on foreign goods were "in reality intended for the protection of domestic manufacturers, and the giving of bounties to classes and individuals engaged in particular em-

ployment, at the expense and to the injury and oppression of other classes of individuals." Such laws, being contrary to the Constitution, were, said the legislators, "null, void, and no law, nor binding upon this State, its officers or citizens."

The Compromise Tariff. The nullification that Calhoun and his friends announced offered opportunity to the South to demand as a unit a redress of grievances, but various state problems, economic and political, stood in the way of cooperation and left South Carolina alone in her defiance. President Jackson enjoyed nothing more than a good challenge that involved the rights of "the people" and the honor of the nation as he himself saw them, and so he wrapped himself in the convenient cloak of national government and ordered in the name of the Union that the rebellious Calhoun and his followers return to the fold before force became necessary. The President blusteringly prepared for action, but before either Congress or South Carolina could get much beyond promulgations, Henry Clay submitted a compromise bill. Known as the tariff of 1833, the measure provided for reductions over a period of ten years which, though slow at first, were eventually to reach a level of twenty per cent. Clay and Calhoun fought bitterly; with the acceptance of the compromise by Congress, however, their immediate quarrel was ended, each thinking that he had won.

The Drift Toward Free Trade. In spite of strong opposition, the tendency of tariff was downward throughout the twenty years immediately preceding the outbreak of the Civil War. Relative prosperity, particularly in the agricultural regions of the Middle West, combined with certain political developments at home and abroad to give the antiprotectionists the ascendancy. Only in the tariff of 1842 were definite increases made, and they were removed as soon as the Democrats regained political power. The Walker tariff of 1846 was distinctly a move toward free trade. Rates were lowered still more in 1857. But the long-impending panic that occurred in that year provided the protectionists an opportunity to cry, "I told you so," and a few years later the Civil War gave them a hold upon the country that was not seriously shaken for more than half a century.

Chapter 15

MATERIAL CHANGE AND THE RISE OF A LABOR FORCE

Mechanization on the Farm. Invention in the years between 1816 and 1860 brought a practical revolution in the life of the American farmer. The painful toil by hand that had since antiquity accompanied the production of food slowly disappeared with the advent of machinery. Though real mechanization did not come until after the Civil War, certainly there was reason for the comment on the eve of that conflict that "in no other country are there so many cheap and efficient implements and machines for facilitating the labors of the farm." Perhaps the compiler of the agricultural census of 1860 was justified in saying that machinery "has lifted much of the drudgery from the shoulders of the country-bred youth, who no longer loses his elastic step and suppleness of limb in the moil of the farm, which he once instinctively shunned as degrading, while he sought the lighter and more or less intellectual pursuits of the city. It has thus tended to elevate the pursuit of agriculture to its proper position in the social scale, as one of dignity and independence, and not one of mere physical toil, to be shared in common with the brute."

Until the nineteenth century preparation of the soil for seeding was back-breaking work in spite of the fact that for centuries man had made persistent efforts to devise an implement to make the arduous task easier. The first plows, however, merely stirred the earth; the soil was not *turned* until the moldboard was invented. But farmers are both cautious and suspicious, and when Joseph Foljambre of Rotherham, England, patented an iron moldboard in 1720, few people would use it. Even Sir Robert Peel could not convince his agricultural friends that the new device did not make the weeds grow. Many of the colonists used iron plows, generally made at home with the aid of local smiths, yet Charles Newbold of New Jersey had difficulty in selling the cast-iron ones that he started manufacturing in 1797 because the farmers declared that they poisoned the soil and "prevented the growth of crops." Nevertheless, by 1820 American plows were popular. They were lighter, simpler, and cheaper than those made in Europe; in

fact, an Enfield, Connecticut, firm began sending them abroad as early as 1819. Eastern production was soon outstripped by the rising factories of the West. A company in Pittsburgh was making a hundred plows daily by steam power in 1836. The next year John Deere began at Moline, Illinois, his great steel moldboard corporation and became thereby one of the significant industrialists who enabled the farmers to turn the tough soil of the prairie lands of Indiana and Illinois. In the fifties several attempts were made to introduce steam plows, but, in spite of an offer of a prize of three thousand dollars by the Illinois Central Railroad, mechanical propulsion became successful only with the appearance of the gasoline tractor in the twentieth century.[1]

Few mechanics were interested in the problem of planting. Drills, employed even in ancient Babylonia, were little used in America until the nineteenth century; corn and cotton seeds were dropped in hills or rows, and the small grains were broadcast. Russell H. Anderson says that "although a drill patent had been issued in the United States in 1799 and some English drills had been imported, drilling may be considered as virtually unknown before 1840."[2] J. Gibbons, Pierpont Seymour, and others built serviceable implements, but the most popular drill before the Civil War was the invention of Moses and Samuel Pennock of Kennett Square in Chester County, Pennsylvania, in 1841, which made it possible to sow and cover as much as fifteen acres a day. Attachments for the distribution of fertilizer were added in the late forties, and the first force feeder was put on the market in 1851. Other improvements were made during the Civil War years, when grain was in great demand.

Throughout the ages the most annoying physical problem of the agrarian has been that of harvesting. The grasses and the small grains have been particularly difficult to save after reaching maturity, and for that reason the reaper and the mower still remain the most important agricultural machines. With a sickle the farmer could cut hay for only a small number of animals, and with a cradle he could harvest not more than a few acres of wheat for himself before it ripened and fell to the ground. The reaper

[1] A steam-pulled plowing instrument much like the modern gasoline-powered "Rototiller" was being advocated in 1860. A writer in the New York *World* described it as a cylinder "filled with spiked or claw-formed teeth." By rapid revolution, he argued, "these teeth must dig up the ground six to twenty inches deep, as may be desirable, leaving the ground light, free, and thoroughly pulverized, to receive the seed of whatever kind." Not only would the top soil be loosened, he said, but also the subsoil "will not be packed still harder than it laid before, as with the plough." Quoted in the agricultural portion of the *Report of the Commissioner of Patents for the Year 1860* (Washington: Government Printing Office, 1861), p. 82.

[2] Anderson has an interesting article on "Grain Drills Through Thirty-nine Centuries" in *Agricultural History*, vol. x (October, 1936), pp. 157-205.

and the mower, combined for many years, were first used in America in New Jersey and Pennsylvania.

Real progress in the reaper industry did not begin until the early thirties, when patents were issued to William Manning of Plainfield, New Jersey (1831), Obed Hussey of Cincinnati, Ohio (1833), and Cyrus H. McCormick of Virginia (1834). These three men, soon joined by others, fought long and viciously for domination in the field. McCormick, while he built his first crude device in 1831, did not achieve leadership until after he moved his factory to Chicago in the forties. By 1852 a dozen or more different makes of apparatus were reaping the wheat in the spreading fields of the West. Moore and Haskell of Michigan patented in June, 1836, a machine that cut, threshed, and winnowed at the same time, but it was not popular.

Miscellaneous Farm Machines and Devices. A host of machines besides the reaper were devised for the farm. Moses Pennock invented in 1824 a wooden revolving rake with which a boy could rake and bunch twenty acres of hay a day. In 1830 Thaddeus Fairbanks, a Vermont plow maker, patented the first platform scales. Six years later Hiram and John Pitt, Yankee mechanics of Maine, built the first thresher. Steam-powered threshers that moved among the shocks scattering the waste straw over the ground as they went were in use by the late thirties, and within the decade a header was introduced that gathered "the grain from the heads . . . , leaving the straw standing in the field." In 1842 Jerome I. Case established at Racine, Wisconsin, a factory that was soon producing a superior thresher; his eagle-on-world trade-mark was eventually to become universally known.

Year after year new inventions appeared. Horsepower churns, in which could be made as much as a hundred pounds of butter at a single operation, aided the dairy industry. Stump pullers helped in clearing the fields, and Page's portable sawmill made it possible to produce lumber quickly and cheaply for the agrarian regions; lumber was needed on western farms for a multitude of things, especially homes and fences. A device for cutting, smoothing, and boring pickets was put into operation at Aurora, Illinois, but the product was too expensive for ordinary use. In fact, farmers of the West spent little for improvements because every extra dollar was devoted to "a further accumulation of acres," even though they lay, "like those already owned, idle, untilled and unproductive." Moreover, the wanderlust that had characterized Americans since the beginning of colonization still persisted. "There is no certainty if a man makes improvements this year," wrote an Indiana settler in 1844, "that he will enjoy them next; for the *fashion* of 'selling out,' and making a new location, is so strong, that no

one can resist it; so that it may be said that nearly the whole of the western population are afloat, with sails unfurled and anchors tripped, and ready to be off with the first favorable breeze that blows."

Modifications in Farm and Home Life. Machinery lightened the onerous labor of farming and brought profound changes in the life of the agrarians. Horses and mules replaced the plodding oxen when the farmer began to discard the heavy, clumsy tools of early agriculture. They could be used in sowing and reaping as well as in preparing the soil. In addition they opened, slightly at least, the social horizons of the farm family; whereas oxen were useful only in field or forest, the "donkey" and the "nag" could be driven to town. Horses, roads, and machines were primary factors in bringing city accommodations and culture to the farm, though they made the people daily more conscious of the distinct differences between rural and urban life.

Fully as important as the improvements on the farm were those in the home. The drudgery of housekeeping, no less monotonous and enervating than that of the farm labor in which women sometimes had to share, was reduced. Shining new pots and pans of tin took the place of the heavy black iron kettles of the past. The new utensils gave less wear than the old, but they were cheaper, and they possessed an aesthetic value not easily measured. Improved iron stoves brought a comfort hitherto unknown, and even the coffee mill saved work. Pumps lessened the labor of drawing water from the outside wells and springs.

Other home conveniences too appeared both in town and in country. The wood-burning open fireplace of colonial days, still in use even in New York City in the thirties, gave way to the iron grate in which coal served as fuel. This in turn was replaced by the iron stove, usually set up in the middle of the room. Eventually the stove was dropped into the basement, and the modern heating plant had its beginning. In spite of the fact that the nation was before long to win notoriety abroad by its inordinate desire for heat, rural houses for more than a generation remained mostly unwarmed except for the living room and the kitchen. Candles as a source of light were abandoned in favor of lamps. The tinder box fell before new devices. Sulphur matches, invented in Europe, were patented in America in 1836; boys were hawking them through the streets of New York in the forties at "seven boxes for sixpence." Cheap wallpaper of American make gave freshness to drab rooms even in the homes of the moderately poor. Carpets, now that warp and woof could be bought, supplanted scattered rag rugs. They were sometimes beautiful, but, tacked down firmly in the fall to remain uncleaned until spring, they collected so much dust

that they were a menace to health. The ancient knocker lost caste and was superseded by the modish bell, though in rural districts for another half century the visitor continued to let himself be known by calling a loud "hello" from the front gate. Everywhere over the land the American-contrived rocking-chair was lulling the hurrying generation to its rest.

Urban Material Changes. While technical development in the ante-bellum period brought neither to homes nor to cities such rapid or striking changes as it did, for instance, to the national transportation system, urban progress was noteworthy. Colonial laws restricting the construction of wooden houses were extended, streets were improved, and travel was facilitated by the introduction of horse-drawn and cable-drawn cars. The cities were indeed busy places; economic life flowed on restlessly and incessantly. "Long lines of white and gilded omnibuses wind their way at an uninterrupted rapid rate, as far as one can see, amid thousands of other vehicles, great and small," wrote Fredrika Bremer of New York traffic in 1849. A few days later she added: "I can not help admiring the way in which the drivers here manage to get out of the way, and twist about and shoot between and disentangle themselves, without any misadventure from the really Gordian knot of carts and carriages. It is extraordinary, but it is not excellent. I sat all the time in expectation of seeing the head of a horse come through the carriage window, or of the carriage being smashed to pieces." Pedestrian dangers were even more appalling; Miss Bremer said of her feeling when afoot in the town, "That beautiful little plot, with its lovely fountain [in front of the Astor House, where she was staying], seems to me, beside the bustling Broadway, like an oasis in the agitated sand." [3]

Not only New York but also the more leisurely Boston and Philadelphia were growing rapidly. In the South and the West many of the oldest towns, though their cultural advances continued, felt keenly the competition of rising commercial centers. If hopes were dangerous, there was reason for fear on the part of Baltimore, Charleston, New Orleans, Cincinnati, and St. Louis, for in spite of financial disasters and speculative reverses every infant village west of the Appalachians envisioned itself a thriving metropolis of the immediate future. Springfield, Illinois, "was 'going to be' a London or Pekin, in the eyes of men," and Madison, Wisconsin, on its four lakes must, according to its inhabitants, inevitably become the center of the universe. Tradition has it that some of the speculators when counting future dollars "discarded all figures below millions."

[3] Fredrika Bremer, Swedish author, arrived in America in October, 1849. Her letters, translated by Mary Howitt and published under the title *The Homes of the New World; Impressions of America* (New York: Harpers, 1854), contain much interesting social and economic material.

Chicago alone, however, made the magic progress that was expected. Neither oil field nor gold rush ever inspired human beings with more energy or economic optimism than did this little settlement on the Chicago River at the southern end of Lake Michigan. In the middle thirties merely a village of "Balloon houses, that is, built of boards entirely—not a stick of timber in them except the sills," it grew in twenty years into a city of some seventy thousand people and before the Civil War was drawing tribute from the entire upper Mississippi-Ohio valley region.

The quickening urban life throughout the nation found expression in many improvements. The Tremont House in Boston, "the American Athens," which received its first guests in October, 1829, boasted eight water-closets, and when it was remodeled in 1852 plumbing was extended to all parts of the building. The Eastern Exchange Hotel, opened in the same city in 1846, was the first public building in America to be heated by steam. The private bath was introduced in 1844 in the New York Hotel, and the pioneer installation of elevators was made at the Fifth Avenue Hotel in 1859.[4] Merchants began to display their wares in show windows and to enlarge their delivery service. Ice carts and in some places milk wagons made regular trips even in small towns and villages; coupon or ticket books were provided for the convenience of the housewife. Installment sales, particularly of sewing machines and pianos, flourished toward the end of the period.

Steam ferryboats with rudders at either end to obviate the necessity of turning around were in use in the East before 1830. In New York passage across the Hudson was available every ten minutes; the toll was six and one-half cents. The large cities employed uniformed policemen to preserve order and regulate traffic. They were unable, however, to cope with the serious fire problem. Volunteer fire companies were more enthusiastic and more energetic than in colonial days but little more effective. Nero's behavior was no stranger than that sometimes seen in America: rival fire companies occasionally fought one another viciously for the honor of extinguishing the blaze, and it is said that now and then a fire was started for the excitement and glory of putting it out. An English printer who arrived in New York in 1835 went sleepless many nights to follow the engines or the hook-and-ladder wagons. "All the Engines," he wrote in his diary, "are numbered and at night they have a lamp on a pole with their number, preceding them. Immediately a fire occurs the Church Bells are set ringing which soon spreads over the town. The first of the com-

[4] E. Douglas Branch, *The Sentimental Years, 1836-1860* (New York: Appleton, 1934), pp. 57-58.

pany who hears the alarm goes and gets the Engine, or Machine as it is generally called. There are always plenty of people to pull it for they are never drawn with horses as they are with us [in England] neither have the Insurance Offices any Engines. When the Engine is no longer required, or if it was only a false alarm it returns and all the Company are called over, when all absent are fined; the fine fixed by the Corporation is 3$ but the Companys have the privilege of making their own bye laws, the usual fine is ½$." Evils of the fire-fighting system were practically the same over the entire country. Reforms were slowly introduced; onlookers were brought under legal control, and in 1844 Philadelphia initiated the practice of circumscribing the districts in which each company, except by invitation, was allowed to function.

By the end of the eighteenth century urban dwellers along the Atlantic seaboard had grown weary of the pumps and oil lamps in their streets. Building satisfactory waterworks and providing efficient lighting systems, however, proved perplexing municipal problems. Mechanical and financial difficulties were many, and controversies as to the relative values of public and private ownership were frequent. Progress was made perhaps because it was no longer possible for cities to rely on the inadequate and distinctly obsolete facilities of earlier years. New water supplies were especially needed. Philadelphia, finding the "great expense attending steam engines, and the vexation occasioned by repeated accidents" too heavy to bear, decided in 1818 to abandon her old pumping system and the next year began construction of a dam on the Schuylkill. The Fairmount plant, whose giant fifteen-foot wheel raised a million and a quarter gallons of water into the reservoir in twenty-four hours, sent its first flow into the city in 1822. It soon became a center of interest to local and foreign visitors. But the most remarkable feat of the generation was the Croton aqueduct in New York. The great forty-mile conduit, crossing the Harlem River "on a magnificent and lofty bridge, fourteen hundred and fifty feet long, and one hundred and fourteen above tide-water," carried "over valleys and through hills" as much as a hundred and fifteen million gallons of water a day into the receiving reservoir at Eighty-sixth Street and Sixth Avenue. On July 4, 1842, water from the distributing center on Murray Hill, near where the city library now stands, was turned into the pipes, and New York celebrated wildly her complete freedom from the wells and springs of ancient days. More than a hundred and thirty other cities and towns, East and West, were before 1860 enjoying the luxury of running water and the safety of fire hydrants.

Although the use of gas for illuminating purposes was exhibited in

Philadelphia in 1796, Baltimore, Boston, and New York were the American pioneers in the installation of regular gas plants. Companies began in the twenties to bury mains in the business districts of these three cities. Quincy Tufts of Boston noted in his diary on November 30, 1822, "They are laying the Gas Works by my store today." The first corporation in New York was organized in 1823 with exclusive rights to serve the section south of Canal and Grand Streets. Two years later pipes were put down on both sides of Broadway, and Samuel Leggett, president of the concern, opened his Franklin Square mansion to visitors in an effort to check rumors that the innovation was unsafe for use in the home. Seeing, however, was not believing, for everywhere the public feared the new illuminant.

Objections to street lamps were especially vigorous; storms, it was argued, would blow down the standards, and the resulting explosions would cause great damage. Nowhere would cities permit the erection of storage tanks. Scientists joined in the protests. The "red and warm" glow of the old oil light was much preferred to the disagreeable color of the new gas flame, said one, and Sir Humphry Davy in London had a few years before declared that it "would be as easy to bring down a bit of the moon to light London as to succeed in doing so with gas." But consumption grew rapidly. When Philadelphia began on February 10, 1836, to maintain nineteen private and forty-six public jets on Second Street, Baltimore was already supplying in excess of three thousand private and one hundred public lamps, and New York more than ten thousand private and four hundred public ones. Improved burners soon demonstrated the unquestioned superiority of the new lights over any other kind, and gas works made their appearance in many cities. In the forties plants were built in Albany (1845), Newark (1847), Charleston (1848), New Haven (1848), Rochester (1849), Hartford (1849), Syracuse (1849), and other towns.

Tar and rosin were used in a few instances for producing gas, but by 1840 coal had become the greatest source. The coke and the by-products that resulted from the process known today as "destructive distillation" were valuable for fuel and other industrial uses. But gas was not cheap, and customers persistently complained of the expense of their lights.[5] Mechanical developments shortly brought reductions, and before the middle of the century the "sleepless" city where economic life rushed on inces-

[5] Charges in Philadelphia were at first three dollars and fifty cents a thousand cubic feet, with a discount of five per cent if the bill was paid within three days, but a few years later the price was reduced to two dollars and fifty cents and the discount period lengthened to five days. Quarterly bills were instituted in 1839.

santly in the attractively illuminated streets came into being. Furthermore, as one New Yorker said, crime was "greatly diminished, and the evil propensities of the vicious kept in check."

General Social Inventions. Mechanical growth in the thirties, forties, and fifties was not limited merely to basic changes on the farm, in the home, and in the factory. Devices, significant and insignificant alike, poured upon the market in an unending stream. So prolific were inventors that in July, 1836, the Patent Office was made a separate bureau and annual reports were instituted. Moreover, some effort was exerted to prevent needless and costly litigation; priority of rights was recognized, and models and specimens were demanded for public exhibitions. In the ten years preceding the Civil War more than twenty-five thousand patents were issued.

Not all inventions aided the nation materially. Apple peelers, egg beaters, knife cleaners, remodeled bootjacks, and beds that folded like umbrellas, for example, contributed little to general progress. The typewriter, the gyroscope, the sleeping car, machinery for making artificial ice, and a method for condensing milk proved useful only to later generations.[6] But many contrivances and processes found immediate acceptance. Between 1830 and 1835 the mechanical fundamentals of drop forging, die stamping, and pattern turning were developed, and thereafter wood and metal became pliant servants to the tools of man. Successful vulcanization, which Charles Goodyear stumbled upon while experimenting in the thirties and patented in 1844, made possible an extended use of rubber. Rubber boots and shoes, long known, and "gums" and overshoes greatly lessened the discomforts and hazards of rainy days. In 1846 Richard M. Hoe built the first steam cylinder press, and that same year Elias Howe, Jr., patented the original sewing machine. Howe soon had many competitors, all of whom paid him tribute on his lock-stitch patent. Isaac Merritt Singer devised in 1850 a treadle chain-stitch machine that salesmen were soon selling to the women of America at "a dollar down and fifty cents a week until paid for," and the factories of Wheeler and Wilson in Bridgeport, Connecticut, and Grover and Baker in Boston further flooded the market. By 1860 annual production had reached somewhere between thirty-five and forty thousand.

[6] Alfred Ely Beach and William A. Burt each built several practical typewriters in the thirties and forties, and in 1857 Samuel Ward Francis patented a machine in which was incorporated for the first time a satisfactory inking mechanism. The gyroscope, advertised first in 1856, was devised by Abner Lane of Killingsworth, Connecticut. Gail Borden began in the fifties to market beef extract, condensed milk, and concentrated coffee. Alexander Twining's invention in 1850 of an inexpensive process of making ice was little noted, but the Pullman "palace" sleeping car (first built in 1859) attracted enough attention before 1860 to win space in illustrated newspapers and magazines.

The sewing machine revolutionized the making of clothing and, according to the census report for 1860, "opened avenues of profitable and healthful industry for thousands of industrious females to whom the labors of the needle had become wholly unremunerative and injurious in their effects." With Lyman R. Blake's invention of what came to be called from its backer the McKay machine for sewing soles to the uppers of boots and shoes, the shoemaker began to share with the dressmaker, the tailor, the hatter, and the harness maker the benefits of rapid production.

The Telegraph. The telegraph brought to the nation one of its most outstanding changes. This fascinating electrical device, invented by S. F. B. Morse, carried its first official message from Washington to Baltimore on May 24, 1844. In spite of an early appropriation of thirty thousand dollars, Congress refused to concern itself with the development of a communications system. Like other ventures of the day, the telegraph was forced to depend on private capital and private initiative for its progress. Since relatively small sums were required in the construction of lines and the purchase of equipment, large numbers of local companies seeking profits sprang up and stretched their wires as far as their limited funds would permit. The "systems" that developed before 1852 were for the most part merely cooperative agreements among various of these feeble ventures. Petty bickerings, failures, defaults, and even personal greed were ever in evidence, and consolidations and dissolutions were common. Only after the middle of the eighteen fifties did aggressive corporations begin to weld the unstable and frequently hostile independent units into a whole.

Among the important individuals besides Morse who were concerned with the new enterprise were Amos Kendall (wandering New Englander who as a newspaper editor had joined the Jacksonian "Kitchen Cabinet" by way of Kentucky), Ezra Cornell (carpenter, mechanic, and inventor, of Ithaca, New York), whose benefactions were to be instrumental in creating a great educational institution, and Alfred Vail. The first small subscriptions for construction were made by Corcoran and Riggs, whose bank had begun in Washington only a few years before; William Swain of the Philadelphia *Public Ledger,* who had supported government ownership of the telegraph; and Henry O'Reilly, who built the first line over the mountains. The largest single investment in the original organization—the Magnetic Telegraph Company—was four thousand dollars.

Though rivers presented for a time almost insurmountable obstacles and right of ways were obtained with difficulty, by the end of 1845 many eastern cities were connected, and the next year "the magnetic keys were talking to Pittsburgh." Not only economics and business but national

romance as well triumphed when Irishman O'Reilly and his construction crew pushed the thin wire "in defiance of winter storms upon the mountains" over the Alleghenies and on through Bedford and Greensburg to jump the Ohio at Pittsburgh and shove its tendrils into the Mississippi valley. The telegraph for many years had only a frail hold upon the nation. As service improved and its uses widened, however, it became an accepted institution. Line construction and maintenance were always difficult. Winds, sleet and snow, floods, and even pigeons played havoc with the wires, and huntsmen frequently shot off the glass insulators. Nevertheless, by 1860 fifty thousand miles of the "lightning thread" spreading north, south, and west connected the cities east of the Rocky Mountains, and plans were under way for a line to San Francisco.

While brokers and sponsors of lotteries early made use of the new means of communication, the telegraph was at first chiefly a dispenser of news. The wires were welcomed to Pittsburgh with the comment: "We will now know what passes in Congress, perhaps, as soon as the people on Pennsylvania Avenue, and the New York merchant will not sooner be informed of a steamer from Europe than his brethren in Pittsburgh."

> The channelled lightning [says E. Douglas Branch] was to talk to Pittsburghers, and talk for them, of many things: the arrivals of ships, the quotations on sealing wax; the results of elections, and "all is forgiven" to distant prodigals; orders made and countermanded as prices shifted in distant markets; "joy speeding on the track of sorrow"; assurances of undying love, and the price of calves in Cincinnati.

The newspapers too were quick to perceive the utility of the simple contrivance. Western editors united and hired eastern agents to send the news of the day over one wire for the use of all. The associations, since "scoops" could not be resisted, often dissolved in anger. The press eventually came to rely on the now famous "AP," just coming into being, for much of its news. Railroad officials refused for several years to concern themselves with the new invention. The New York and Erie and the Pennsylvania were the first to realize the value of instantaneous communication in the direction of traffic. The Western Union, using the lines of the latter road, was begun in 1856, and the system came to be permanently associated with the railroads. The telegraph affected the economic life of the nation in many ways, but it never became a social institution as did the telephone of a later date.

Labor and the Factory System. Although the factory system from the beginning brought to society in general increased leisure and many conveniences the value of which can scarcely be measured, the people whose

sweat and toil made these changes possible profited little. The astounding economic growth of the nation produced riches hitherto unknown and called forth unceasing praise from men of business and commerce, ministers, and literary leaders; yet wage earners shared sparingly in the gains, and each year their poverty became in contrast to the growing wealth more apparent. The social consequences of industrialism were particularly baneful because the expanding factories drew into their discipline entire families. Hamilton had said in his *Report on Manufactures* in 1791 that "in general, women and children are rendered more useful, and the latter more early useful, by manufacturing establishments, than they would otherwise be," and it looked at last as though his socially tragic "blessing" might be enjoyed. During the three decades before the Civil War, mills, which he had approvingly declared "continue with convenience during the night as well as through the day," sprang up in abundance; unfortunately, however, they paid only a miserable wage for long hours of toil.

"At half past four in the morning the factory bell rings, and at five the girls must be in the mills" is a biting indictment not of machines but of the society that owned and ran them. That six members of the family of Willard Howland of New England should have been required in 1828 to labor a total of seventy-two working days from daylight to dark in order to earn twenty-two dollars and forty-seven cents is a travesty on the optimism that prevailed at the time. For the more than nine hundred hours that its members worked, this typical factory family was paid a net average of slightly less than three cents each an hour. John, presumably small (although the record does not reveal his age), contributed the little mite of nine cents a day to the family purse, and two years later he was earning eleven. Polly, who a part of the time at least in 1828 and 1829 was earning two dollars a week, does not appear on the payroll in 1830. Did Polly marry a farmer at the edge of town? If so, one wonders if the Hamiltonian ideal that "the husbandman himself experiences a new source of profit and support from the increased industry of his wife and daughters" was realized!

Women and Children as Wage Earners. The extent of employment of women and children in American factories in the years before the Civil War is difficult to determine. It is apparent, nevertheless, that in many occupations the infant Industrial Revolution thrived upon their labor, especially in New England, where the men were continually being drained off to the promising West or drawn to the sea by the temptation of profits in fishing or commerce. Women, occupied at the beginning chiefly in making "shirts, children's clothes, pantaloons, and cheap, ready-made

clothing for the western and southern trade," were by 1833 replacing journeymen tailors. Until well toward the middle of the century they far outnumbered men cigar makers, and they were numerous enough in the printing shops to elicit vigorous protests from the typographical societies. But it was in the cotton mills of Lowell and neighboring towns that "female operatives" were supreme. Here, seeking a few years of independence before marriage or ready cash to fit themselves for the teaching profession, they crowded men completely out of the market. Industrialists were pleased; Joshua Aubin of Amesbury, Massachusetts, if we are to believe his diary, took great pride in having about 1821 dismissed sixty male weavers "and substituted for them 30 girls, who were easily managed and did more and better work." Obviously few shared in the horror of Stephan Allen of New York when he saw emblazoned on a placard in Brookfield "TWENTY YOUNG GIRLS WANTED."

> The caption of this hand-bill [wrote Allen] was presented in startling capitals and must I should presume have made others as well as ourselves stare on the first view of it, and wonder as we did, in the name of common decency who it could be that wanted twenty young girls. These things however are familiar to the proprietors of manufacturing establishments and therefore advertisements, such as the above may be seen and read without shocking the sensibility of those whose whole object is money, although the means used to obtain it may demoralize a whole community; but to such as have seen or heard of the evils which result in other countries from this business, and fearing the same to our happy and prosperous Republic, it cannot be viewed with indifference.

It was the children, however, who deserved the most pity. They were parts of the mill town and the traditional mill family. When the household became wholly dependent on the industrialist for existence, young boys and girls were pressed into every occupation in which they might earn a few pennies to add to the family income. Driven to labor in many cases by indolent fathers and often taken advantage of by their employers, these unfortunate waifs, caught in a system that neither they nor their parents understood, brought poverty to an entire social group in the desperate effort to sustain family life. Young workers were used mostly in the textiles industry. The editor of the *Mechanics' Free Press* of Philadelphia declared in 1830 that it was "a well known fact, that the principal part of the help in cotton factories consists of boys and girls, we may safely say from six to seventeen years of age," and the members of a labor convention held in Boston two years later estimated that children constituted about two-fifths of the whole number of people employed.

The New England Textile Mills. Opinions concerning life and working

conditions in New England textile towns differ widely. Modern scholars find little that was good in the system that prevailed, but, though there is much justification for saying that the entire cotton and woolen industries were based on exploitation of female labor, the girls had better living quarters, more money, and a more varied cultural and social life than they had had at home. European visitors were much impressed with the cleanliness and benevolence that they saw in the factories that dotted the streams of Massachusetts, Connecticut, and Rhode Island. Prominent Americans too were lavish in their praise. Edward Everett, James Russell Lowell, and Ralph Waldo Emerson were inspired by the energy and moral earnestness of the new industrialism, and Harriet H. Robinson, in her youth a worker in the Merrimac mills, remembered pleasantly as an elderly lady her experiences.

There is no doubt that the operatives were in general carefully guarded. Too many people perhaps were interested in their social and religious welfare and too few concerned with them as growing human beings. At Lowell, show place of the textile industry, they lived in crowded company-owned dormitories, where as many as six shared one small room and where they were all without exception required to be in bed by ten o'clock. A deliberately sponsored ideal of behavior, conveniently referred to as "Christian conduct" for young ladies, made each worker her sister's keeper. There was no hardship in the required attendance at church on Sunday, but social pressure severely limited individual freedom the remainder of the day. Moreover, the girls spent six days a week from before daylight until after dark in the factory under the watchful eye of a superintendent. The rooms were hot, ventilation was wholly lacking, and motes of cotton filled the stifling air. Rest periods were unknown, and only thirty minutes was allowed for lunch. And for all her labors the young worker received not more than one or two dollars a week. If dismissed for any reason, she could not obtain a job elsewhere because "her name [was] sent after her, and she [was] rejected."

The rugged farm girls who flocked to the factories often did not make the moral and intellectual growth that was expected; they sometimes shocked the social leaders of a generation that took inordinate pride in the benevolence of the New England mill owners. Astounding is the comment of the Reverend James Porter in 1850:

> Many young women have few useful books. Interrogate them as to the reason of it, and you hear the reply, "I am not able to purchase." It may be observed of many, too, that they have no regular place of worship but go occasionally to different churches as strangers. Ask the reason and you are told, "I cannot afford

to *hire* a seat." And this is true. Not because they are in ill health, or are necessarily poor; but they have *squandered* their resources.[7]

Wages. Wages varied with occupation and geographic location, and their significance changed according to the stage of industrial development. The girls in the mills at Lowell and Waltham, for instance, could after a year return to their homes if they desired. As new inventions in the East drove former hand craftsmen to the machines and the spreading acres of the West forced one-time farm families into the factories, however, a permanent labor force began to make its appearance. Father, mother, and children turned to the spindles as the sole means of livelihood. They lived in company houses, pastured their cows in company fields, and bought their food at company stores. Religious, literary, and social leaders who had concerned themselves so earnestly with the Lowell experiment apparently took no note of the frail children—some with their faces blackened by long hours in the dyehouses—who dragged their weary bodies home at night in many a New England town. Having no gardens or farms to which to turn for a part of their existence, many workers found their incomes woefully inadequate. Samples from the record of the Howland family, already mentioned, amply illustrate the miserable wages that were paid. Between April 25 and May 19, 1832, Mungar, John, Hannah, and Lavinda worked a total of ninety-three days for a net return of eighteen dollars and thirty cents; between July 15 and August 10, 1833, Mungar, John, and Paulina went to the mills a total of seventy-two days and received sixteen dollars and sixty-seven cents, but they paid one dollar for pasturage and three dollars and sixty-nine cents for rent, which left a total of eleven dollars and ninety-eight cents; between February 24 and March 22, 1834, Mungar, John, Lavinda, and Paulina labored a total of ninety days for sixteen dollars and twenty-three cents net; in January, 1835, Paulina, John, Orinda, and Perlancey worked a total of ninety-one days, for which they received a net return of seventeen dollars and sixty-nine cents; and in March, 1836, Malvin, Orinda, and Paulina put in a total of sixty-four days for a net return of fifteen dollars, plus eight dollars for extra work. And so it goes through page after page of the hundreds of ledgers that still remain from these early years of the textile industry.

Factory wages elsewhere in the East were no better. Six hundred boys in ten Paterson, New Jersey, spinning and weaving mills were earning in 1835 an average of slightly more than a dollar a week each. It was said that in the clothing trade in Philadelphia in 1829 a woman had to

[7] James Porter, *The Operative's Friend, and Defence: or, Hints to Young Ladies, Who Are Dependent on Their Own Exertions* (Boston: Charles H. Peirce, 1850), pp. 77-78.

exercise "unceasing industry from sunrise till 10 or 11 o'clock at night, constant employment (which few of them have) without any interruption whatever from sickness or attention to their families, to earn a dollar and a half a week." Two years later Pittsburgh tailors were paying twenty-five cents for making a pair of pantaloons that required about fifteen hours to sew and twelve and a half cents for fashioning a shirt that "takes a woman a whole day if she attends to any other work in her family." In New York, according to the *Sentinel,* a labor paper, four cents was paid for each pair of duck pantaloons produced and seven cents for each cotton shirt. Matthew Carey of Philadelphia estimated in 1833 that a woman could earn annually in that city fifty-eight dollars and fifty cents sewing shirts. He pointed out that allowing fifty cents a week for rent, fifteen cents a week for fuel, eight cents a week for soap, candles, and other small necessities, and ten dollars for clothes and shoes for the entire period, she would have two and three-fourths cents a day to spend for food and drink. Women and boys in Massachusetts shoe towns were paid from twenty-two to forty-five cents a day.

Men fared better in the rising industrial system than women and children, but even they rarely received more than twenty-five dollars a month. Supervisors in the textile mills were paid as much as two dollars a day, repair men sometimes a dollar and a quarter, and weavers seldom more than four or five dollars a week. Because of a persistent decline in prices for piecework, employees in boot and shoe factories complained in the middle thirties that their former earnings of nine or ten dollars a week had fallen to four or six. Stagecoach drivers and farm hands received from ten to fourteen dollars a month; inclement weather and other elements beyond their control, however, resulted in the loss of many weeks each year. Lock tenders on the canals were provided with living quarters and given a dollar or so a week.

Not all labor was so poorly compensated. Trained engineers and skilled mechanics were generally paid not less than five dollars a day. Beginning readers in New York printing shops made ten dollars a week. Connecticut clock peddlers got from six to twenty, although state license fees, gate tolls, ferriage, horseshoeing, and other incidental expenses cut heavily into their incomes. Wages in Chicago and other western towns were high. Women as day workers usually earned a dollar, and housemaids were paid from three to four dollars a week. The average salary of steamboat captains was about one hundred and fifty dollars a month; pilots received one hundred and forty, engineers one hundred and twenty-five, clerks fifty, and firemen twenty-five. Doctors customarily charged fifty cents a

visit and an additional fifty cents a mile for travel. Incomes in general grew worse rather than better as the years went on.

Industrial Society. In spite of the growth of the factory system, America remained until the Civil War decidedly agrarian. Only in the leading seaboard cities did the typical slum section make its appearance. In New York after the great fire of 1835 the poor poured out from the Bowery like unsuspected rats, revealing a phase of city life that few cared to recognize. Partially responsible for the deterioration were changes in the type of immigrants. The alien laboring element was making abnormal gains. Between 1847 and 1852 the number of mechanics in the country declined by eight thousand and that of farmers increased by only twelve. Laborers, on the other hand, jumped from thirty-six thousand to eighty-three thousand. Forced by poverty into the meanest sections of the cities, the incoming destitute added to the growing squalor of industrialism. In Boston the Committee on Internal Health reported in 1849 that in the houses of the Irish workmen of the city "each room from garret to cellar, is filled with a family consisting of several persons, and sometimes with two or more families." The next year a survey conducted by the police department of New York disclosed the unwholesome fact that "18,456 persons lived in 8,141 cellars." Rents from the overcrowded tenements yielded often fifty per cent on the investment and rarely less than fifteen. Derelicts—men, women, and children of all races indiscriminately mixed—slept sometimes in filthy holes where one cent a night was charged for a bed consisting solely of the bare floor and two cents when a bit of straw was provided. These miserable people were obviously not regular members of industrial society, but they were, said many, the evil fruits of the machine.

Low wages and wretched living conditions were not the only troubles that came to the poverty-stricken. Imprisonment for debt, which had long before sent many an English colonist to the New World, was still current. The Boston Prison Discipline Society estimated in 1829 that twenty-five thousand debtors a year were thrown into jail in America. Although criminals were given food, bedding, and fuel, the debtors were in most cases supplied only "walls, bars, and bolts." Frequently the default was but a petty one; incarceration for as little as twenty-five cents was not unknown, and the average seems to have been about twenty dollars. Too, the poor found themselves competing with prison labor. Humanitarians, eager to reform society, convinced prison officials, except in Philadelphia, that people in confinement should work. The output of prison shops was sold at low prices, and thus, to some extent at least, the unsuc-

cessful were set against the successful, and the wage earner as a debtor-prisoner tended to draw into prison with him his hardest-pressed fellow wage earners.

The militia system and the banking system also wrought inequalities upon the poor. In many states every individual of military age was required to appear at his own expense with arms for drill at certain periods of the year. The rich stayed at home and accepted their penalties in preference to bearing the loss of time and transportation and other costs involved, but the wage earner and the small farmer, having no money, could not so easily discharge their obligations; in fact, declared a labor organization in New York in 1831, the law provided in effect "that he who is too poor to pay his fine shall do the public work for nothing and find himself." Monetary impositions were little less galling. Especially after the destruction of the second Bank of the United States the workman was often compelled to accept at par for his labor the depreciated bills that flooded the country. When he bought his provisions, however, the storekeeper allowed him only the market value of his paper. Furthermore, the increasing prices of goods aggravated the situation, particularly in the half-dozen years before the panic of 1837. Mess pork, for example, between 1834 and 1836 rose from fourteen to thirty dollars a barrel, flour from five to seven dollars, and molasses from twenty-eight to forty-eight cents a gallon. Changes were not usually so drastic, but the trend of the exchange value of the worker's wages was throughout the period generally downward. Labor, pinched economically and stirred to restlessness by the spirit of Jacksonian democracy, began, in a determined effort to share fully in the rise of the common man, to demand free schools, high wages, and working hours that would permit some opportunity for self-improvement.

The Labor Protest: Unions and Strikes. Discontent among the workmen found ready though ineffectual expression. Trade-unions began to flourish in the early thirties; their membership on the Atlantic seaboard was estimated in 1836 to be not less than 300,000. But they never grew powerful enough to overcome the obstacles that they faced. The new transportation system made it possible to ship goods readily from one part of the country to the other, and since the appearance of the new machines the craftsman's art had ceased to be a bargaining factor. Every individual, young or old, became, indeed, a competitor of his neighbor. Strikes, most rudimentary of the laborer's weapons, were for the most part unsuccessful. They were conducted against heavy odds and perhaps without confidence. Furthermore, they brought down upon the unions vigorous industrial and agrarian disapproval, and many were the trials for "conspiracy" that workers were

compelled to undergo. The courts, unswervingly devoted to the preservation of property, regarded the struggles of labor to secure improved conditions as dangerous to the welfare of society. Any organized effort on the part of the wage earners was, the judges seemed to believe, a deliberate scheme to overthrow national security and stability. Nevertheless, between May, 1833, and the coming of the panic four years later at least one hundred and seventy-two strikes were called. Of this total one hundred and twenty-nine were either demands for higher wages or protests against reductions; twenty-seven were for a ten-hour day. Little was accomplished, and the labor program collapsed when the financial system crumbled in the fall of 1837. Revival came in the fifties, bringing numerous strikes and some slight gains.

Labor and Politics. Another means of promoting the welfare of the workman was political action. The labor movement in politics began its varied career in Philadelphia in 1827. It has always rested on a wider basis than strike action, for it has included not only laborers but intellectuals as well. The latter are most often not products of the wage system. Their interest in labor has been largely philosophic, and throughout American history they have usually reflected the humanitarian theories of their age. From their ranks have come the speakers, the writers, the editors, and the experimenters. Robert Owen, Horace Greeley, Arthur Brisbane, Charles A. Dana, John G. Whittier, George W. Curtis, and William H. Channing were some of the most outstanding in this group in the thirty years before the Civil War. The leading figures in the transcendentalist movement and its Brook Farm experiment were directly or indirectly involved in the reform movement.

Although Americans were convinced that there was actually no working class,[8] manual laborers and intellectuals differed fundamentally from each other in philosophy. The former sought to win relief by pressing their individual or group causes, whereas the latter hoped to bring social betterment, including aid to the aggrieved wage earners, by fusing many causes. Distributive cooperation, anarchistic cooperation, and communistic cooperation were all made subjects of experimentation. Phalansteries, free farms, and time stores were some of the schemes proposed.[9] The attractive-

[8] The wage earners were apt to be regarded as people "of small means and narrow circumstances" who had not yet attained wealth. Letters and diaries of the period reveal the fact that the nation was determined that no particular group should take to itself the honor of being *the* working group; there was pride in the belief that every American was a workman. Foreign visitors were impressed with the tradition.

[9] Few periods have produced so many socio-economic reformers as the years between 1820 and 1860. Robert Owen, Frances Wright, William Weitling, John Campbell, Stephen Pearl Andrews, George Henry Evans, Thomas Skidmore, Sarah G. Bagley, and a host of others

ness of the political programs to labor at any given date depended upon the economic situation in the nation. In periods of prosperity the unions grew rapidly and strikes were called without hesitation; when work was scarce and the family purse could not be made to stretch over the ordinary needs of existence, however, strikes were few and political promises were welcome.

The Accomplishments of Labor. The laboring group in America approached 1860 with far greater handicaps, perhaps, than any other definitely recognized element in society. Strikes, political action, and philosophic experiments had all been tried with no great success. The demands begun in the early twenties for free schools, abrogation of imprisonment for debt, mechanics' lien laws by which laborers might collect money due them, equal political rights, increased wages, decreased working hours, abolition of child labor, and discontinuance of Sunday work had been defeated in part at least. But some reforms had been obtained. Free schools had been established in theory if not in fact. The ten-hour working day had been wrested from a few industrialists, and President Van Buren had in 1840 ordered a shortened day for all government employees. Some gains had been made in the enjoyment of the ballot. Imprisonment for debt had been largely abolished except in the southern states, and working conditions for women and children had improved slightly. Child labor still remained, however, and wages had made no perceptible upward climb. Partially responsible for the lack of progress was the fact that many of the reformers turned their sole energies to the antislavery crusade. Although reminded often that the Negroes of the Cotton Kingdom were probably less slaves than were the laborers of the North, they refused to be convinced that "from sunup to sundown" was too long a working day or that a few pennies was too little compensation for those dreary hours of toil. Nevertheless, the years between 1816 and 1860 were for the labor movement years of momentous beginnings.

sired a medley of reform movements whose rocky ways are well described in John R. Commons and associates, *History of Labour in the United States* (New York: Macmillan, 1918-35; 4 vols.), vol. i, pp. 493-623.

Chapter 16

THE CHANGING SOCIAL ORDER AND ITS ECONOMIC IMPLICATIONS

Economic progress in America between 1816 and 1860 cannot be studied without a consideration of the social development of the country. The two were intimately connected, and each had decided effects upon the other. Nor can one fully understand the growth of the conflicts that culminated in the bloodshed of 1861-1865 without some knowledge of the thoughts and interests of the generation that kindled the quarrel but did not live to see the end of the resulting war. The outstanding characteristics of that generation were moral certainty, optimism, faith in America, disregard of Europe, and inventive alertness.

Population Changes. The pre-Civil War period, a part of which Professor Fish has called that of "the rise of the common man," was one of flux in the population. Not only were individuals changing their homes with a convincing faith that each move would bring them prosperity, but also the people in the nation were rapidly increasing in number. Growth was an asset. Large families were profitable and prevailed everywhere. Economic opportunity, fostered by the spreading transportation system and the rising mills and factories with their consequent demands for labor and raw materials of every description, beckoned to all. The population rose from seven million in 1810 to thirty-one million in 1860.

While there is never free selection as to place of abode and kind of occupation, it is perhaps true that Americans of this generation could exercise a wider choice than those of any other. Lack of transportation facilities and a pressing need for food had dictated agrarian pursuits for the men and women preceding them, and the iron hand of a highly developed industrial society was to guide the economic lives of many of their postwar successors. The student has but to look at the population maps to discover the restlessness of the society of these years before the Civil War.

In the East there was a slow drift into the cities. Farms were deserted both because eastern grain could no longer compete with the cheaper

agricultural products of the West that were pouring in by canal and railroad and because the mills and factories offered to the farmers what appeared to be a more attractive existence than that possible on the land. In 1810 there were in the entire nation only eleven cities of more than eight thousand inhabitants; by 1860 there were one hundred and forty-one, although the country was still decidedly rural. New York, with a population of two hundred thousand in 1830, was most important. Philadelphia, Baltimore, Boston, and Charleston were significant also, but they lacked in size in comparison with the growing port at the mouth of the Hudson; Charleston, the smallest, had only thirty thousand people. All eastern cities were beginning to manifest a distinct urban culture. Park projects, dignified monuments, and well-constructed public buildings were becoming numerous enough to attract the attention of foreign visitors.

The region of most striking growth in population was the trans-Appalachian West. Many residents of the East, crowded off their farms by economic changes, were unwilling to become a part of the industrial force of the Atlantic coast, and they moved over the mountains to settle on the virgin land of the great Mississippi and Ohio valleys. Professor Channing estimates that between 1820 and 1850 fully four million easterners migrated to the West. So remarkable was the shift, in fact, that in spite of the arrival of thousands of European immigrants who stopped in the cities along the seaboard, many of the coastal states did not increase in population comparably with those of the West, and Delaware at least remained practically stationary. In the middle of the century almost half the people of the United States lived west of the Alleghenies.

The migrants pouring over the mountains carried with them the habits and characteristics of the stable East. As new material and cultural ideals penetrated the pioneer lands, the rude cabins of earlier days slowly disappeared. Cities and towns sprang up with the developing transportation systems that brought opportunities to buy and sell. Pittsburgh, Cincinnati, Louisville, St. Louis, and the newly established Chicago began to reflect the expanding business civilization of the Atlantic seaboard. The rise of Keokuk, Burlington, Davenport, and Dubuque on the Mississippi River and Chicago, Southport (Kenosha), Milwaukee, and Manitowoc on the western shore of Lake Michigan marked the progress of the movement and hurried the transformation of the West.

Foreign Influences. Growth in the population was not due entirely to the mounting birth rate. Many foreigners entered the country, bringing with them obvious economic, social, political and religious changes. English, Welsh, and Scotch came in great numbers. They were easily absorbed

because of their family connections, their language, and their general similarity to native citizens. Some found employment in mills and factories, where they supplied fuel for the budding industrial reform parties; others moved into the upper Mississippi valley and became bankers, shopkeepers, and farmers.

The most disturbing element economically among the immigrants was the Irish. Various causes for emigration from the Emerald Isle had long existed, and an acute potato famine in the middle forties sent thousands to America, many of whom were poor peasants whose financial resources were exhausted when they purchased the meanest ship quarters to the new world of opportunity. Landing practically penniless in New York, Philadelphia, Baltimore, and lesser Atlantic ports, they were with few exceptions unable to reach the farm lands of the West and were therefore forced to accept whatever work they found available. Their poverty, in fact, provided American material development with one of its greatest needs at the time—pick-and-shovel workers. And so it was that the canals and the railroads and the city sewage and gas lines were built to the accompaniment of the brogue of "old Erin."

Inclined somewhat to drink and rowdyism, the Irish brought conflicts even before the ditches were dug and the embankments thrown up. When they pushed into the factories, mills, and mines, serious trouble began. Violence sometimes broke out as New England girls were driven from their spindles and native workmen from their jobs. Many of the displaced laborers bitterly joined the skilled artisans unfortunate enough to have had their places in the economic structure taken by machines. The long-established household-help system was disrupted by Irish girls who became domestic maids.

Politically too the Irish stirred up hatreds and jealousies. Swelling ever in number—ninety-two thousand in 1846, a hundred and ninety-six thousand in 1847, a hundred and seventy-three thousand in 1848, two hundred and four thousand in 1849, and two hundred and six thousand in 1850—they tended to concentrate in definite quarters of the cities, where their unswerving party loyalty made possible the rapid growth of efficient "machines." They learned the ways of democratic politics with peculiar aptitude and were soon demanding a share in office spoils and appropriations for parochial schools as well. Hostility toward the Irishman and his religion became so great that riots occurred in the thirties, and the following decade saw the appearance of the "Know-Nothing" party, whose chief aim was "to save America for the Americans." But in spite of opposition the Irish each day climbed upward in the political organizations that had

first sought only their vote. The amazing rise from political "rags to riches" provoked acrid comment from the press. The story of Barney O'Toole, who at the end of his first day with the pick decided he was meant for a judgeship, was told in verse:

> Then he lit up his pipe and he put on his coat,
> And he ran for an office; they counted the vote;
> And they figured it out by the Tammany rule,
> And who was elected, but Barney O'Toole.
> Then he bought a new coat and a diamond so fine,
> And a lad for five cents give his boots a nice shine;
> Then he talked about court, legislation and school,
> For he now was a statesman, bold Barney O'Toole.[1]

The Irish long remained an important factor in politics; for a generation after the Civil War a carelessly spoken word had in the politician's mind at least the power to turn a national election.

Another group of immigrants was made up of Germans. Those who arrived in the early thirties were, on the whole, ordinary peasants, artisans, and laborers in search of economic opportunities. The migrants of the forties, however, were in some cases fleeing the political persecutions of the Metternich system in their native land; they were men of culture and for the most part commanded enough money to enable them to choose their places of abode. Unlike the Irish, the Germans did not expect to find a new Canaan beyond the Atlantic, but patient and persevering (though frequently contemptuous of the raw democracy in which their lot had been cast), they went to work with a will. They quickly built up their close-knit communities and soon became a significant factor in the economic life of the nation. Large numbers settled in St. Louis, Louisville, Indianapolis, and other cities. In Cincinnati they made up by 1840 fully one-third of the population; on the side of the metropolitan canal designated "across the Rhine" they maintained—as they did in other places—their own schools, papers, and social habits. Everywhere they took root they set up their shops and their trades, and many of them became substantial citizens.

The Germans, while they scattered throughout the nation, came eventually to concentrate in the upper Mississippi valley. There they filled up the agricultural lands of southern Michigan and Wisconsin and northern Indiana, Illinois, and Ohio; before long they were predominant in the city of Milwaukee. In addition to their industry the Teutons brought

[1] Quoted in Carl Wittke, *We Who Built America* (New York: Prentice-Hall, 1939), p. 161. See ch. 8 for a discussion of the Irish immigrant.

among other things a taste for music and for beer. They organized music societies, May festivals, and choral groups, and they may have been instrumental in defeating the movement for prohibition that Neal Dow of Maine was leading. Too, they provided antislavery crusaders before 1860, soldiers for the northern army in the Civil War, and brilliant if sometimes contentious reform leaders in the years after 1865.

Other immigrants also, though they came in small numbers, had their influence on the country. Parisian dancing masters and chefs were in part responsible for the drift from British to French etiquette and food accents in eastern cities. French Canadians appeared in New England mill towns, and Dutch, Belgians, and Swiss carried their respective customs and economic habits to local communities in Wisconsin, Michigan, and Iowa. The forerunners of the great migration of Danes, Swedes, and Norwegians of the next generation were even now spying out land in Minnesota and neighboring states.

Economic Society in Town and Country. Rural life was only slowly affected by the growth of population and industry. Urban society, however, underwent many changes. Most noticeable was the rise of a distinct aristocracy of money. The word "millionaire" came into common use during the period to describe those who, according to the New York *Sun,* had "by honest and laborious industry . . . raised themselves from the obscure and humble walks of life, to great wealth and consideration." New York was the richest city in America. In the thirties some of its bankers began to refuse deposits of less than one hundred dollars, and the bulls and bears started their ceaseless fight in the stock exchange; in the forties was issued the first metropolitan directory of private fortunes (John Jacob Astor left at his death in 1848 the astounding sum of twenty-five million dollars); and before the middle of the century a thousand of its citizens possessed more than one hundred thousand dollars each. Other places too were increasing in wealth, but none so rapidly or so proudly as the port at the mouth of the Hudson.

Riches brought new responsibilities and the necessity for redeploying capital. Entries in the benevolence ledgers grew with the bank accounts. Amos and Abbott Lawrence made liberal gifts to Williams and to Harvard, John Jacob Astor gave four hundred thousand dollars toward founding a city library in New York, and in every section men of lesser means donated money for public purposes. Old charitable institutions expanded, and numerous new ones appeared. Organizations for alleviating the sufferings of the poor became especially numerous; almshouses, refuges of every description, soup societies. magdalen societies, and female hospitable

societies sprang up in many cities. Philadelphia in particular sought to prevent poverty. The Philadelphia Savings Fund Society, established in 1816 for the convenience of the poor, had as its aim to induce those of limited means to save each week a few pennies from their wages in order that they might not fall into the debtors' prisons. The Savings Fuel Society, originating some time later, hoped through encouraging small deposits by laborers in the summer to build up coal funds that could be used on cold winter days when jobs were few.

Many problems that had perplexed the colonists remained unsolved. Public health, for example, had made little improvement. Cholera epidemics occasionally brought tragedy to port towns, and smoke rising gloomily from smudges on the streets of Mississippi River towns told of yellow fever. In the country malarial fevers and agues were accountable for most of the sickness. Thousands of southerners complained annually of biliousness and exhaustion, and "the sallow complexions and jaundiced looks" of the frontiersmen "bore ample witness to the fact that all was not well within." [2] Expenditures for medical services were moderate, but general economic losses caused by sickness were enormous.

Changing Social Habits and Beliefs. Americans of the ante-bellum period were interested chiefly in politics. The Constitution, although there was controversy as to whether all people enjoyed its privileges equally, was a hallowed document that gave encouragement to the mighty and the humble alike. The presidency was open to those of native birth, and most boys dreamed of the day when they would be rich. Merely having been born a human being and an American was sufficient heritage to bring about the realization of any desire. Ambition even without training could hurdle every obstacle that might appear. As late as the end of the century enough of this feeling still existed to make it possible for Horatio Alger to win a fortune writing about the poor but honest who climbed to wealth and greatness.

It is not strange that the generation was filled with unbounded optimism; neither is it peculiar that faith in the future soon grew into a definite political philosophy. "The duties of all public offices are, or at least admit of being made, so plain and simple that men of intelligence may readily qualify themselves for their performance," said Andrew Jackson in his first message to Congress in 1829. So firm became the general

[2] See R. Carlyle Buley, "Pioneer Health and Medical Practices in the Old Northwest Prior to 1840," *Mississippi Valley Historical Review*, vol. xx (March, 1934), pp. 497-520, for a discussion of fevers and agues on the frontier. The effect of these peculiar diseases on economic life was sometimes profound. See also Madge E. Pickard and R. Carlyle Buley, *The Midwest Pioneer: His Ills, Cures, and Doctors* (Crawfordsville, Indiana: R. E. Banta, 1945).

belief in equality and the ability to accomplish that divinity itself was not beyond the reach of the imagination. Ralph Waldo Emerson in his transcendentalism preached merely what was a logical conclusion of the prevailing idealism. Andrew Johnson, poor boy of the Tennessee mountains who achieved the presidency, envisaged both man and government as potentially perfect.

Nor were divinity, office, and wealth alone obtainable. Anyone could by honest endeavor work his way from the lowly masses to the best that society had to offer. Society, like the economic structure, was undergoing rapid changes; although defended valiantly by members of venerable and time-honored families, the door of social privilege was everywhere being beaten upon by followers of new professions.

Notwithstanding grim warnings of danger sounded by the moral leaders, many new habits, new reasons for expenditures, and new sources of income arose. The changes were important in economic life, for they stimulated the circulation of money and created fresh activities in the material growth of the nation. Leisure, racing, and gambling were vices; still New York, Philadelphia, Montreal, and Toronto participated in cricket matches, the *America* in 1856 captured the famous yachting cup that Europe has since vainly tried to regain, and Flora Temple, Lady Suffolk, and the blinded Lexington won undying fame on the race tracks. Society both committed "sins" and willingly paid for them.

The decline in popularity of the stately Virginia reel is proof that the people as a whole took lightly the prudish social dictum that no well-mannered married woman might indulge in the recently introduced waltz except with her husband, and then only in the presence of a few intimate friends. Yet maidens at first shunned the new and sinful pleasure of the round dance. Everywhere attempts to discourage social change slowly collapsed. Increased consumption of tea and coffee indicates that the writer was whistling into the wind who in 1838 admonished young ladies never to indulge in those beverages because they would "loosen the tongue, fire the eye, produce mirth and wit, excite the animal passions, and lead to remarks that we should not have made in other circumstances, and which it were better for us and the world, never to have made." In spite of their apparent disregard of the laws of propriety, however, the men and women of the period probably applied their ethical principles to ordinary conduct more carefully than have those of any other in American history. Even religion came to embrace a social philosophy. Transcendentalism and socialism, both vigorously sponsored at the time, were outgrowths of moral and economic hope.

Changes in Dress. One of the most evident indications of the new order or lack of order that increasing money and growing democracy were bringing was in dress. No longer could the rank of urban people be determined by the clothes they wore; the streets were crowded with overdressed women whose social positions were of no particular importance. The shop windows were filled with fashionable attire from Paris and London, and *Godey's Lady's Book* took to the farm girls and the small-town dwellers the latest in styles. Yet there was no monotonous uniformity. Along the Atlantic seaboard, for instance, the belles of Boston, New York, Philadelphia, Baltimore, and Charleston were easily identified by their distinctly different fashions. A traveler noted in the late thirties that New Yorkers were "remarkable for being well dressed, superior out of sight to the people of any other place that I have seen. Tailoring seems to be carried to great perfection." Over the mountains there was a riot of styles as the migrants from various sections poured into the new lands. Alma M. Stevens, writing from Fairfield, Illinois, in February, 1836, commented that "the ladies here wear sun bonnets made of calico and calico caps and striped linen frocks to meeting" and then thoughtfully added, "I mean the western Ladies, the eastern people dress much as they did there." Notwithstanding the fact that the frontier was an effective leveler, social habits and rivalries persisted in spite of economic hardships. "There is a good deal of style here, I tell you—some considerable rivalry amoung the leaders of the town—the two most prominent don't speak," wrote a citizen of Chicago in 1839. "A lady, last winter I believe it was, gave *$500* for a ball dress! That's for you! But they are obliged to go to balls and parties, &c. in *carts,* sitting down upon straw! and sometimes to church in the same way." Even on the frontier young women of modest economic means on occasion dressed with taste and with what a few years before would have been regarded as extravagance.

Although men had given up the knee breeches and the laces of colonial days for simpler democratic garb, the waistcoat remained a center of color among the aristocratic. Well-groomed young gentlemen wore blue broadcloth coats with high rolling velvet collars, gold-plated buttons, buff vests, high hats, and striped pantaloons. Agrarians with few exceptions kept to their traditional blue jeans, and many still went barefoot in summer.

Manners and Customs. Adult behavior, not always commendable, was democratic in the extreme. Much to the chagrin of visitors from abroad, no one hesitated to ask a stranger his age, occupation, salary, and opinions. But, frank and generous—"more so than in countries where the means of living are less profuse & general"—and as a rule observant of the laws

of the land, men found no work too menial as long as it promised material profit. "Buy & Sell and get gain" was, according to one Englishman, the motto of the nation. Americans, remarked a Scotsman, "have that restless activity which they call *shove* which makes everybody active." So eager were people of every class for economic advancement that they were never content with what they had; foreigners noted that although each farmer owned his own land and each villager his own cottage, neither was pleased. "No situation or station however complete seems satisfactory to many," wrote a traveler; "thus the strong ties of social happiness are broken and families are divided so much and so early that even natural affection has not time to fructify. The links which bind the parent to the child & the child to its parent are few and slender." Indeed, there were few opportunities for family leisure. One Chicago wife said of her husband in 1835, "Some days I do not see him at all from Sun rise in the morning till 10 at night, except a few moments at meals." Food, whether eaten at home or in the "short order" lunchrooms, was swallowed as quickly as possible and washed down with copious drafts of ice water—excuse enough, perhaps, for the inordinate number of advertisements of stomach bitters that appeared in the press of the day.

Masculine personal habits reflected the restless vigor of the time and revealed the intensity with which the generation lived and sought economic gain. The internal revenue returns were smaller, but the "plug" of tobacco was as definitely a part of the nineteenth century as is the cigarette of the twentieth. "Every man we meet," complained Mrs. Basil Hall in 1828, "has constantly an immense lump in his mouth, which he keeps munching at as if it were a bit of bread, and the spitting that ensues is beyond what I can describe." [3] The cuspidor was a regular fixture in public buildings and conveyances: "there was a *'spitting box'* in every corner of each room of the White House" and one under the chair of every congressman, "which he *used* most powerfully every moment." Profanity and drunkenness also were common. The eastern dandy slipped intoxicated under the table as readily as the western frontiersman, and the politician and the lawyer found it no handicap to their careers to appear drunk in public occasionally. On the whole, however, the great majority of men were temperate in their habits and circumspect in their conduct, especially toward women.

Children, still expected in polite society to be little men and women,

[3] *The Aristocratic Journey*, p. 206. Many journals of foreign travelers are available for the period of the eighteen twenties and thirties; Mrs. Hall was a particularly keen observer of social and economic habits.

enjoyed a part of the freedom that had arisen in the nation. Foreign visitors, in fact, were sometimes much annoyed at finding them in every public place. "It is no uncommon circumstance," wrote an Englishman in 1829, "to meet with those not above the height of a curly headed will or older than any smiling round faced poll assuming the confidential air of maturity and no small pretension to a knowledge of Places, Men, Manners & things aye even politics which even sages in olden times would have been deemed oracles to have exhibited." In the thirties boys began to earn money independently, especially in connection with the growing metropolitan newspapers. The news criers, says Professor Fish, were in the forties almost as characteristic of New York City as were the dogs of Constantinople. From their ranks came many of the shrewd business men of the next generation. Girls and young ladies retained in outward expression at least their humility and obedience, but even they placed a high value on economic prospects in their selection of husbands.

Americans in the thirties, forties, and fifties, though for the most part too busy to squander time in depravity or to concern themselves with social niceties, were not without social intercourse. Except for food, not much money was lavished upon entertainment. In Washington dinners were at five, but elsewhere usually at two or three. Table etiquette was lacking both in public and in private. The chief purpose of the diners seemed to be to devour the great feasts with the least waste of time and energy. Haste was universal. "Indeed," wrote Mrs. Hall, "an American breakfast or dinner never fails to remind me of the directions given of old for the eating of the Passover, 'With your loins girded, your shoes on your feet, and your staff in your hand; and ye shall eat it in haste'; and truly if the Israelites obeyed the command with a strictness equalling American speed it must have been a strange scene." Knives, all too prominent in colonial times, remained the most-used table instruments. They were dipped into "butter, stewed onions, salt, potatoes," ices, and creams with equal facility. At the end of the meal the men rushed off to business or remained over their cigars to talk of such things as politics, canals, and railroads, and the women, generally few in number, retired to another room to rest and gossip.

Homes, Urban and Rural. Architecturally, American homes in the years between 1816 and 1860 were of great variety. Changing structural designs, particularly toward the end of the period, lent to cities a distinctiveness previously impossible. Gothic and Italian influences were evident in some places, and the octagonal houses inspired by Fourier were to be found in a few towns. Row houses were not unusual in the aristocratic

sections of Boston, New York, Philadelphia, Baltimore, and St. Louis. Everywhere there was a lavish but tasteful use of white in the exterior decorative scheme. For the most part, however, cities gained little in attractiveness, and few individual dwellings equaled in dignity those built by the aristocrats of colonial days. Urban living conditions of the middle class vastly improved with the introduction of cheaper furniture and utensils, running water, and gas lights. The bath, rarely indulged in oftener than once a week, was becoming a fixed custom. A few showers were in use before the end of the twenties, and, in spite of the fact that in some places restrictive laws and special taxes discouraged their installation, stationary tubs were soon available. The surroundings of the poverty-stricken remained much as they had always been.

In the agrarian regions of the South and the West surplus cash went into more land rather than into better homes. Mrs. Hall declared that southern houses were "the most wretched hovels I ever saw in my life, log hovels not even weathertight; I am sure no Irish cabin can be poorer, and the people themselves look squalid and miserable." But Harriet Martineau, more fortunate in her hostess and kinder in her observations than Mrs. Hall, wrote of a log cabin in which she visited: "Roses and honeysuckles, to which hummingbirds resort, grew before the door. Abundance of books, and handsome furniture and plate, were within the house, while daylight was to be seen through its walls. In my well-furnished chamber, I could see the stars through the chinks between the logs."

The home has in the South seldom been a measure of wealth. During the ante-bellum period and, in fact, until the end of the century the houses of the ordinary farmers and sometimes of even the planters were low log cabins "built after the universal, never varying pattern, of two rooms with a broad hall between." Though usually much closer, the kitchen was separated from living and eating quarters sometimes by as much as a hundred yards, and the spring, the smokehouse, and the woodpile might be even farther away. Yet well-to-do southerners seemed not to mind, for there were "plenty of negroes to run back and forth." John T. Leigh, Mississippi nabob, who annually put up sixteen thousand pounds of bacon for his slaves and harvested vegetables, fruits, corn, and oats as well as fifty thousand pounds of cotton (about one hundred and twenty-five bales) from his six-hundred-and-forty-acre plantation, lived out his years in a two-room log cabin, "dog run" in the center, with the kitchen ten yards away.

Even southern villages were unattractive, because shade was of necessity avoided. "They lie scorching and glaring on the rising grounds, or on the

plain, hazy with the heat," wrote Miss Martineau, "while the forest, with its myriads of trees, its depth of shade, is on the horizon. But the plague of mosquitoes is a sufficient warrant for any sacrifice of the pleasures of the eye; for they allow but little enjoyment of anything in their presence." Indeed, the insufferably hot sun has slandered Dixie throughout the history of the section. Parched fields and simmering swamps are never beautiful. Travelers northward, throwing away their mosquito nets and stepping upon fresh green grass where "everything" was "so neat and pure and substantial, . . . presenting the greatest possible contrast to the dilapidated appearance of things in the lazy South," naturally felt that the North was infinitely superior.

On the prairies of Indiana, Illinois, and neighboring states log cabins were much used until after the Civil War. "Many a good family," said Solon Robinson, who knew the farmers as well as any other man of his time, "lived comfortably, contented, and happy" in cabins whose walls were unpeeled logs "'chinked' with rails, and 'daubed' with mud." Floors were rough puncheons and roofs were clapboards, and doors and furniture were merely split boards. Unlike those of the East and the South, however, the rude huts of the West were temporary affairs; year after year more of them were replaced by frame buildings with brick chimneys.

The agrarian regions were not wholly without beautiful homes. There were mansions on the northern shores of the Ohio, and in the blue-grass sections of Kentucky and Tennessee (and in other places as well) noble structures half hidden by ancient trees sheltered the wealthy farmers and stockmen. Gracious dwellings characteristic of colonial days still dotted the coastal plain south of Baltimore and by 1860 were found on many plantations westward to Texas. The "great house" with its outlying slave quarters was a center of beauty and benevolence or of crudeness and barbarity according to the observer's attitude toward slavery.[4] New England farmsteads could scarcely be called attractive, but they were substantial.

Amusements, Drama, and Music. Material progress made it possible for people to enjoy social and cultural diversions formerly not available, and spreading democracy permitted individuals to participate in activities previously forbidden. The period of youth and courtship preliminary to marriage, heretofore of little economic importance, was lengthening. Profit-minded citizens, conscious of this fact, began to bid for the hard-earned

[4] Those who happily possess a curiosity that will lead them to further reading on the subject will find the plantation, the master, the mistress, and the slaves excellently pictured in *Life and Labor in the Old South*, by Ulrich B. Phillips, who loved them all enough to spend a lifetime in the records of the Cotton Kingdom.

but lightly spent dollars of both the country swain and the urban dandy. "Pleasure gardens," where the youth "whispered compliments" over creams and confections, appeared in cities and towns as far westward as the population reached. Logrollings, corn huskings, and quilting parties were being crowded out by less utilitarian amusements.

Plays, unless "wretchedly done," were well attended, and by 1850 the theater and the opera were established institutions. Harriet Beecher Stowe's *Uncle Tom's Cabin* did not, as is often said, popularize the stage; fading diaries and letters show that with few exceptions both natives and foreigners, particularly in the forties, flocked eagerly to the playhouses. Simon Legree and little Eva merely gave a handful of reformers justification for what they must otherwise have had to call a waste of hours and money. Although minstrels and melodrama were enjoyed, the pre-Civil War generation of orators most dearly loved their heroes' dramatic mouthings of Shakespeare's plays. Edwin Forrest, Edwin Booth, and Charlotte Cushman were the leading American actors. Foreign artists too, such as the Viennese Fanny Elssler, "the most brilliant, extraordinary and celebrated opera dancer in the world," drew large crowds, and Lola Montez in her spider dance had her admirers. In New York the Bowery, more realistic than artistic, gave promise of a future Broadway, while the circus lent joy to childhood and age even to the very edge of the frontier. But anything that savored of aristocracy, whether presented in town or in country, was definitely rejected. Edmund Kean was in the twenties hissed back to England, and in 1849 followers of Edwin Forrest began at the Astor Place Opera House, where William C. Macready, representative of the "autocratic English," was playing, a disturbance that turned into a riot in which twenty-two persons were killed. Democratic growth was universally evidenced in the broad humor of the stage and the inordinate love of the audiences for hoaxes. P. T. Barnum, greatest showman in America, whose genial frauds were relished partly because the ease with which they were discerned gave a feeling of superiority to those who saw them, deftly led his countrymen to spend their money brazenly without thought of economic gain; more than any other man of his time he made the people forget the self-imposed and transcendentalist-encouraged doctrine that their work was their play. Minstrel shows (especially those of the great Christy) and Irish plays drew large audiences.

Music, though popular, provoked only limited financial expenditures on the part of the general public. The Handel and Haydn Society of Boston (1815), the Boston Academy of Music (1832), and the Philharmonic Society of New York (1842) were hopefully launched, but they

weathered the years with difficulty. Foreign opera singers, Italian and French, met with little appreciation. The declaration of a Bohemian after a classical piano recital that President Tyler knew "no more about music than an oyshter," however, was only the result of momentary irritation. Americans were merely too literal-minded and too much engulfed in material things to enjoy the imaginative. Moreover, many wanted tear-wrenching sentiment or resounding democracy in their songs. The "sixteen sons and daughters" of Jesse and Mary Hutchinson, "plain farming people" and precursors of twentieth-century "hillbillies," were never without listeners. "Rocked in the Cradle of the Deep," "The Old Oaken Bucket," "Dixie," "America," and a host of other tunes were relished, but Stephen Collins Foster's "Old Folks at Home," "My Old Kentucky Home," and "Swanee River"—in which the "ever-ready laugh is half smothered in a sigh"—touched the heartstrings. Saddest and therefore most precious of all was John Howard Payne's "Home, Sweet Home."

Americans were not averse to spending their money to hear musicians who appealed to their tastes. Ole Bull, Norwegian violinist, was always welcome, and the public paid more than seven hundred thousand dollars during the season of 1849-1850 to hear Jenny Lind, "Swedish nightingale," sing ninety-five times. There was a moderate demand for musical instruments. Melodeons were bought at the rate of about twenty thousand a year, and Chickering and Wurlitzer pianos were purchased in large numbers. The piano, however, moved west slowly. Practical men who saw only wealth in the new land that lay before them eschewed such instruments of culture because the money they represented would buy many acres of rich western soil. "You don't know how much an elegant piece of furniture of this kind looks out of place in a log cabin," wrote Solon Robinson. "I do. During my travels last winter, I came upon a lonely cabin unadorned by plant or shrub, and against the rough black logs, and upon the rough puncheon floor, stood a costly piano. The wife had been raised in luxury, fitted for life with a finished education, which naturally unfitted her now, without servants to take care of her humble house and growing family. And what use had she for a piano? None whatever. But before marriage it had been her dearest friend, and her parents, thinking to make her a most acceptable present, had sent her this old friend (dear at the cost of freight), soon to be ruined under its rough shelter. Half its cost in necessary and useful articles, would have been far more valuable."

Intellectual Opportunities. *Newspapers, Books, and Magazines.* As early as 1829 a traveler in western New York wrote in his diary, "It is a fact

that daily, semi-weekly or weekly journals are published in nearly every Town and Village in the Union, thus diffusing animation and Life, and intelligence and freedom through every vein and artery of the vast body with an irresistible impulse." Newspapers were at the time a luxury enjoyed mostly by the aristocracy, but within a few years they were available to all who could read, small sheets appearing with reasonable regularity even in tiny western hamlets. Technical improvements in printing and an increasingly democratic news content were chiefly responsible for their swelling popularity. Richard M. Hoe's steam cylinder press, first used in 1846 by the Philadelphia *Ledger,* and Josiah Warren's stereotyping inventions quickened and cheapened production enormously. Editors, not yet having come under the influence of their advertisers, energetically propounded their theories—economic, social, political, and religious. The freedom of the Republic was nowhere more effectively demonstrated than in the press, and even the most poorly educated people eagerly followed their political heroes. The "penny dreadfuls," though concerned too much with scandals, robberies, and murders, took to the masses the news of the nation. By the middle of the century perhaps ten million copies of newspapers and magazines were being printed weekly. Among the most significant magazines were *Godey's Lady's Book,* the *New England Magazine, Harper's Weekly, Niles' Weekly Register, Peterson's Magazine,* the *North American Review,* the *Southern Literary Messenger, Hunt's Merchants' Magazine,* and *De Bow's Commercial Review.*

New York City established itself as the center of American journalism during the thirties and forties. In 1833 Benjamin H. Day began to sell successfully his New York *Sun* for a penny. James Gordon Bennett learned the trick of "snappy" summary and caught the eye of rushing Americans with his *Herald,* and Horace Greeley, who founded his *Tribune* in 1841, made particular efforts to teach the nation through vigorous editorials. In Washington President Jackson's editor friends were giving shining examples of the effectiveness of the press as a political instrument.

American books made their appearance in great numbers with the beginning of such now venerable firms as Harper and Brothers, D. Appleton, J. P. Lippincott, and Little, Brown and Company. Aristocratic and democratic tastes alike were fed by the volumes that came from the presses; the value of the output in 1850 was estimated at more than twelve million dollars. The literati found pleasure in such well-known writers of poetry and prose as Longfellow, Hawthorne, Emerson, Holmes, Whittier, Lowell, Irving, Cooper, Whitman, Poe, Lanier, and Simms. The scientifically curious both read the works of and corresponded with

the foreigners Darwin, Lyell, and Hutton and closely watched the careers of the American scientists Agassiz (geologist and zoologist), Gray (botanist), and Audubon (ornithologist). Nationalists seeking the glories of the nation paid tribute to the pens of Sparks, Bancroft, Parkman, and Hildreth. Plain democrats from Maine to Texas, loving adventure, exaggeration, egotism, and rugged patriotism, reveled in *The Life of David Crockett, The Autobiography of Peter B. Cartwright,* and numerous other tales of nation builders. The general public, however, preferred collections of sentimental poems and essays; books on religious thought, manners of young men and young ladies, and the language of flowers; and moral novels whose heroes and heroines skirted close to evil yet always emerged unsullied.[5] Demand for such books was large. *Uncle Tom's Cabin* led all other works, but *Fern Leaves* sold fifty thousand copies in six months and sales of *Reveries of a Bachelor* eventually passed a million. In the absence of free libraries from which to borrow, circulating libraries, charging fees of from five to ten dollars a year, trebled in number between 1825 and 1850.

Lyceums. The immediate influence of writers—much as they contributed to the education of adult Americans—was perhaps eclipsed by that of stage lecturers. The lyceum movement, originated in Millbury, Massachusetts, in 1826 by Josiah Holbrook, spread discussion of national questions to every rural district. It offered at moderate cost the greatest array of talent ever yet available on the public platform to a single generation. For a sum rarely exceeding twenty-five cents apiece town dwellers heard the foremost thinkers of the day; visitors were usually admitted free.

Colleges and Universities. Institutions of higher learning sprang up and quickly began to extend their fields of service far beyond the traditional religious ideals of "virtue and piety." Between 1830 and 1850 some eighty new ones appeared to which flocked the youth of the day. Students learned few things well, but they became facile in the easily attained habit of generalization. The intellectual monopoly of the aristocracy was slowly breaking up. Western colleges in particular challenged the old order and gave expression to the growing democracy. As early as 1819 the president of little Allegheny College in western Pennsylvania, whose students numbered scarcely a baker's dozen, wrote an eastern friend that if Harvard would

[5] Mary Jane Holmes' *Lena Rivers;* George Lippard's *Blanch of Brandywine* and *Monk of Wissahikon;* Mrs. Maria J. McIntosh's *Violet, or the Cross and the Crown;* Mrs. Lydia Huntley Sigourney's *Letters to Young Ladies, The Religious Souverier,* and *The Withered Heart;* Timothy Shay Arthur's *The Tried and the Tempted, Lizzy Glenn, or Trials of a Seamstress;* Mrs. E. D. E. N. Southworth's *The Discarded Daughter* and *Virginia and Magdalene;* Maria Cummings' *The Lamplighter;* and Mrs. Susan Warner's *The Wide, Wide World* are only a few of the volumes that delighted the generation.

not recognize her "young but beautiful and promising sister of the west," other universities would. Oberlin in Ohio initiated in the thirties both coeducational and coracial training. Everywhere schools were expanding. In 1834 Nashville University, prompted by "a desire to advance the cause of knowledge," launched a campaign to raise ten thousand dollars for endowing a "professorship of modern languages" in order that "Moliere, Tasso, Cervantes, Camoens, Schiller and Goethe" might be enjoyed "in the glowing originals."

Many young men still obtained their early training in the offices of practicing lawyers and doctors; before the end of the period, however, legal and medical schools at Harvard, the University of Pennsylvania, the University of Virginia, and other leading institutions were drawing students not only from the cities but from the far frontier villages and farms as well. Technical education too made rapid progress. The Rensselaer Institute and the Franklin Institute were founded in the twenties, and they were followed in the middle forties by the Naval Academy, the Sheffield Scientific School at Yale, and the Lawrence Scientific School at Harvard. In engineering West Point overshadowed them all.

An overwhelming number of the colleges were devoted solely to the classics. With only a handful of notable exceptions teaching was universally bad and physical equipment painfully deficient. College life, nevertheless, was strangely like that of today. Administrators were perpetually soliciting the wealthy for gifts or eternally badgering the legislators for grants. Students played football and cricket, bowled, chased cats, "sentimentalized" with lady friends, and borrowed clothes and razors; at least on one occasion in Cambridge they hissed the college president because he threatened to take a matter of broken windows to the grand jury. Self-confidence and self-indulgence were cardinal virtues. In October, 1837, Thomas Wentworth Higginson of Harvard after listening to a lecture on the starry skies noted in his journal that the professor "did not seem to know more about astronomy than I do," and some time later on his return from church he made the very revealing entry, "Snoozed." Destructive celebrations and "jollifications" were frequent. Yet students profited in spite of dire predictions to the contrary. In few generations has the economic superiority of the college-trained individual been more apparent. By the middle of the century society was beginning to recognize the fact that equality of opportunity was intimately connected with universal education.

Education for the Youth. Opportunities for learning were as abundant for the young as for the adult. The plain people in 1830 read and wrote with difficulty, but in the three decades preceding the Civil War they

turned as avidly to education as they did to democracy. Reformers and labor leaders were by the early twenties beginning to question the domination of secondary education by the "grammar" or "Latin" schools. In 1827 Massachusetts enacted legislation requiring that every community of five hundred families or more provide by taxation for a high school, and before long Maine, Vermont, and New Hampshire did likewise. Though the laws were not always obeyed, many high schools were built in the East during the next twenty years.

But Jacksonian democracy had its real expression in the appearance of the public-school system. The long-waged fight to establish the principles, first, that society is financially responsible for the maintenance of free schools for the rich and the poor alike and, second, that parents are obligated regardless of any personal belief or inconvenience to send their children to school was a difficult one. The wealthy, able to afford the cost of employing the most exclusive tutors for their sons and daughters, could see no reason for *free* schools. They felt, moreover, that the proposals were being advocated by laboring men, whose children, they declared, were adequately equipped for the tasks they would face in life; machines then were simple contrivances. Some thirty-two thousand of the "substantial" citizens of Pennsylvania petitioned the legislature to repeal the law that was "needlessly" wasting their money in a vain hope of state-wide education. The demand for schooling for all, however, was irresistible.

The development of the public schools in the three decades before the Civil War served two purposes: it made accessible some education to most people, and it provided a much smaller number with an opportunity of earning enough money to put themselves through college or to prepare for political careers. Particularly did ambitious rural boys who found themselves unable to save from their meager farm earnings turn to the schoolhouse as a stepping-stone to greatness.

New England supplied a majority of the teachers. Women from this "nursery of learning for the whole Union" poured into the South and over the mountains into the West, spreading everywhere their sectional culture. Horace Mann, who began at Lexington, Massachusetts, in 1839 the first state-supported college for training teachers, remains one of the most important figures in the field. Many other northern individuals were significant, notably Thaddeus Stevens of Pennsylvania. Unfortunately there were in the poor and thinly populated South few educational leaders. Schools were scarce in the piedmont and almost completely lacking west of the mountains. James H. Hammond, later governor of South Carolina, wrote on his return to Charleston from a sojourn in the western part of the

state with his six children, "I come to educate them—to get from the woods into the world." Sometimes foreign visitors, unaware of the overwhelming part that ambition to get along economically had played in the building of the nation westward, saw only deliberate materialism in the neglect of culture in the sparsely settled agrarian regions. Harriet Martineau said of the planters in Alabama: "The sons take land and buy slaves very early; and the daughters marry almost in childhood; so that education is less thought of, and sooner ended, than in almost any part of the world. The pioneers of civilization, as the settlers in these new districts may be regarded, care for other things more than for education. . . . They are . . . money-getters; and few but money-getting qualifications are to be looked for in them."

Religious, Political, and Social Idealism. Religion was an important factor in the social-improvement program of the day. Though there was no agreement as to whether home or foreign vineyards should be tended, most people contributed to missionary service. Politicians were as sure of the world's appreciation of their democratic institutions as were religious enthusiasts of the universal acceptance of their Christ. The British consul at Philadelphia reported to his superior in 1852 that "the rage amongst the multitude here for bringing all other States under forms of government similar to their own, is hardly to be credited except by persons who, like myself, have been witnesses of the fact."[6] American money went not only to heathen lands to save the benighted but also to enlightened Europe to rescue such patriots as Louis Kossuth from the talons of the autocratic.

In spite of the exceeding faith in democracy, many utopian communities were established in the thirties and forties. They were mostly the result of inspiration provided by Robert Owen, Charles Fourier, and Étienne Cabet. Owen was indefatigable in his labors for human betterment. Before coming to America he had at his mills in New Lenark in Scotland successfully defied the argument of his industrial associates that high wages and consideration of the workers would bring disaster. Seeking a wider field for his experiments, he purchased in 1824 the village of New Harmony, Indiana, which the Rappists had settled. His ideals of greater glory for the ordinary man fitted into the spirit of the nation; his belief, however, that the laws of property and marriage were needless encountered insurmountable obstacles.

The doctrines of Fourier reached America chiefly through the advocacy

[6] Laura A. White, "The United States in the 1830's as Seen by British Consuls," *Mississippi Valley Historical Review*, vol. xix (March, 1933), p. 529. The article contains a great deal of information on wages, rents, living costs, and other economic matters.

of Albert Brisbane of the New York *Tribune*. The Frenchman, said Brisbane, proposed *"dignifying and rendering attractive* the manual labor of mankind." The rise of the common man in America had somewhat dulled the force of the scriptural admonition that man "shall earn his bread by the sweat of his brow," because the command was suggestive of penance. Fourier propounded the doctrine that joy should accompany the struggle for bread; man, being a social animal, ought, he maintained, to live gregariously and not individualistically. According to his plan groups or phalanxes of from three hundred to eighteen hundred people were to dwell together, each person working at what he most enjoyed; waste, selfishness, greed, and personal ambition were to be replaced by efficiency, happiness, liberality, and social responsibility. But the founders discovered to their sorrow that human nature remained much the same in their idealistic colonies as in the frankly competitive society that surrounded them. Brook Farm, supported at one time or another by almost every literary figure of the period, was one of the most outstanding ventures, yet like the rest it succumbed to financial difficulties, selfish desires, and rumor and slander.

Women's Rights. The zeal for reform spread into many fields. Lucretia Mott, Elizabeth Cady Stanton, Lucy Stone, Margaret Fuller, and other vigorous feminists initiated a determined movement for the legal and social freedom of their sex. And there was reason. Women had few privileges besides that of being courteously or brutally owned; their possessions and their children belonged wholly to their husbands; their wages were not their own; and the gainful occupations in which they might engage were limited principally to writing, teaching, sewing, typesetting, waiting on table, and working as domestics in homes or as operators in factories. Efforts to break away from the galling restrictions merely provoked ridicule and abuse. The declaration of a New York labor organization in 1831 that "the laws by which the property of married females is taken from them and vested in their husbands, like that of other slaves in their masters, is productive of a train of injustice and misery in the community" met with little response except in the West, where the work of wives and daughters often meant to the struggling frontiersman the difference between success and failure economically. Reforms, however, soon began to appear. Mississippi in 1839 granted to married women the control of their own property, and within a decade the example was followed by at least a half-dozen other states—all, with the exception of New York and Pennsylvania, west of the Alleghenies. For the most part men were then and long continued certain that women's place was wholly in the home.

Women nevertheless resolutely shoved their way into the active life of the

nation. Margaret Fuller became a special reporter for Horace Greeley's newly founded *Tribune,* and in the forties she edited the *Dial.* Cornelia Bradford published the *Mercury* for a time after the death of her husband. The Woman's Medical College in Philadelphia, though forced to fight for its existence against powerful opposition, began regularly to issue the degree of Doctor of Medicine in 1854. By that time female classical colleges were producing many teachers. It was, in fact, in the fields of teaching, writing, and social reform that women attained their greatest success. Dorothea Lynde Dix was one of the leading agitators for social betterment; in spite of the fact that she was "nervous, overstrained, and delicate," she undertook single-handed the colossal task of distracting the attention of congressmen and state legislators from railroads, canals, and other economic and commercial projects long enough to browbeat them into making appropriations for the improvement of prisons and for the establishment of humanitarian institutions for the care of the feeble-minded and the insane. Not even the witchcraft horrors of early Massachusetts can match the brutality visited upon the mentally ill in the first half of the nineteenth century. Even temporary derangement from worry or illness brought almost inevitable sentence to conditions that meant permanent loss to society and slow and miserable death to the individuals involved. Julia Ward Howe and her husband, Samuel Gridley Howe, who in 1832 founded the Perkins Institution for the Blind, helped immensely the humanitarian cause; in Laura Bridgman they succeeded for the first time in bringing a person who was deaf, dumb, and blind into intellectual contact with the world.

The Temperance Movement. Strong drink too claimed the attention of the reformers. Everywhere women directed "cold water" picnics and led "water wagon" parades. Young boys marched gallantly in the "cold water" armies. Westward to the farthest bounds of the frontier temperance societies grew up in towns, villages, and churches, and courthouses and wooded vales resounded to the fervid pleas of abstinence orators. "The lovely goddess of Temperance" presided in "all her glory" at many a banquet table. "Cold water is the beverage that intoxicates the multitude at the present day," wrote John S. Peters of Connecticut in 1852, yet there is evidence that the "multitude" felt much as did Jonathan D. Mariam of Berlin [Connecticut], who, after listening to a temperance lecturer, noted in his diary, "likt him verey much, but did not think it my duty to leave off drinking."

The moral aspect of the crusade against liquor was significant, but the vow "Lips that touch liquor shall never touch mine" and the declaration "TETOTAL OR NO HUSBAND" emblazoned on temperance picnic banners were in part the results of a widespread and growing desire for better homes,

more material possessions, and improved economic and social well-being in general.

The Antislavery Crusade. The greatest emotional demonstration of the period was that called forth by slavery. The crusade and the war that followed had significant effects on the economic life of the nation. Reformers, both men and women, charged upon the southern slaveholders with ruthless vigor. They were convinced that victory must be theirs because their opponents were attempting to defend "might against right, ignorance and folly against reason." Harriet Beecher Stowe is only the best-known woman in the movement. Lydia Maria Child, for instance, wrote more on the subject than Mrs. Stowe did and was certainly no less earnest in the cause. The Grimke sisters and others were indefatigable workers also. The women, however, were overshadowed by William Lloyd Garrison and his masculine followers, who, says Professor Craven, brought the two hostile sections into martial array on the battlefield.

The Significance of the Social Changes. The generation of Americans who spent the major part of their adult lives between 1830 and 1860 was a disturbed one socially, politically, economically, and religiously. The reformers occasionally reached helplessly for the unknown, but they bore always their self-imposed burdens with joy. "Sometimes I shudder Sam, to think what a glorious part of the drama we are let on Earth to see," wrote W. T. Hutchinson to a friend. "What have we done to merit such exultation as I feel at times?"

The most conservative pulpits were opened to reformed drunkards, who thundered against the monster that had once held them in bondage. William Lloyd Garrison, Wendell Phillips, and their associates preached fervently against slavery, great scourge of society, and women fought energetically for privileges that many of their friends would ridicule. The reformers, though they were in some cases relentless and perhaps unmindful of the consequences of their teachings, were sincere and determined. Whatever else they accomplished, they spread democracy and added leaven to the economic system; in addition they stirred sectional hostilities and hurried civil war that was to affect profoundly the material structure of the nation. Social changes more than anything else in the years between 1816 and 1860 revealed the fact that economic life had come to mean more than the mere basic existence for which the colonists had struggled.

Chapter 17

ECONOMIC CONFLICTS AND THE CIVIL WAR

The North Versus the South. It is unfortunate that the remarkable progress of the nation in the forty years before 1860 culminated in fratricidal war. The hostilities and jealousies of the period are understandable, but that they led to the battlefield is not easily accounted for. The material superiority of one part of the country over another cannot wholly explain the tragedy, particularly since those who were stirring the caldrons of hate were relatively few in number. The sources of conflict were not in themselves unique. Sectional economic and social dissensions were present even in colonial days, and they grew more intense with the formation of the Union. Before the Revolution there was no central government the direction of which might be fought over by the people, and animosities were partially forgotten in the common opposition to the domination of the mother country. With the adoption of the Constitution, however, the question of political control of the new Republic became important, and differing economic philosophies of government soon brought bitter controversy. Before Washington had served out his first term of office, Hamilton and Jefferson began an acrimonious argument over industrial centralization versus agrarian individualism. The reform-conscious and restless generation of the thirties, forties, and fifties took up the quarrel so avidly that it blundered into a war.

But were Bull Run and Gettysburg and the Battle of the Wilderness a direct result of differences of opinion concerning public land sales, internal improvements, the division of national income, and the transmutation of southern energy into northern money? Certainly the economic disagreements of 1860 were no more real than those of 1896, and yet, in spite of threats of secession, one great crusade and a defeat at the polls ended temporarily the conflict between the East and the West. The West in 1896 was more nearly an economic unit than was ever the South. The latter indeed was in 1860 a diverse section. Even in the cotton states less than five per cent of the population owned as many as twenty slaves each, and three-fourths of the people of the South possessed none at all. Planters,

urban business men, yeoman farmers, "poor white trash," and Negroes (slave and free) presented a society whose interests were far too varied to be universally affected by any given set of economic factors. The student must therefore approach the subject of the Civil War with discretion. Simple economic explanations may lose some of their validity when studied in connection with pertinent social, cultural, political, and racial habits and thoughts. Moral aggressiveness on the part of the North was obviously involved in the conflict, and perhaps the hustle and bustle of industrial life and the open eagerness and grasping vigor of the business men were in themselves more distasteful to the agrarian South than is commonly supposed.

The fact remains, however, that there were significant economic causes of the Civil War. By 1830 it was evident that "Yankeeland" and "Dixie" were in decided disagreement. Many observers had been predicting separation since long before the end of the eighteenth century; Peter Campbell wrote about 1792 that "the interest of the Southern States are so diametrically opposite to that of the Northern ones, that it is not likely their union will be of any long duration." [1] There are many reasons for the hostility that has always existed between the sections. The South, being agricultural, has throughout its history reflected the slow caution of the farmer in its development. Its wealth has been an immobile wealth, traditionally—though seldom actually—expressed in great plantations and stately mansions. The planter, fully conscious of his aristocracy and able to impart some of his sectional pride to his less opulent neighbors, was strained financially even in the days of Jefferson. His income, moreover, dwindled as cotton culture drained the soil of its fertility and an overabundance of the

[1] In defense of his prediction that separation was inevitable, Campbell declared: "The foreign commerce of the Southern Provinces, is already carried on in British bottoms; they have no shipping of their own excepting small craft; so that this act, though put in force, will not affect them in the least; while the New England States, who may be justly called *maritime* and are the coastal carriers of the Northern Provinces, and much interested in foreign commerce, will complain much of such a measure, and probably aim at retaliation, by imposing a duty on goods carried in British ships, equal to a prohibition.

"This matter, like most others, will no doubt be warmly contested in Congress; and if the Northern States carry this point, it will be very distressing to the Southern ones, but, on the contrary, if they lose it, they may burn their capital ships, or let them rot in their docks, and there will be an end, in all probability, of ever America having a navy. It will be extremely difficult to enact a law congenial to the whole, or strike a medium between them; so that it is probable, ere long, this great empire will be divided into two separate Governments and Independent States. If Britain should foment a misunderstanding of this sort, then would she be umpire between them, and have no cause to regret the loss of her American colonies; and be soon reimbursed by their commerce, in the treasure she expended in attempting to subdue them; each state would then court her alliance and friendship, and be emulous who should enjoy it most." *Travels in the Interior Parts of North America in the Years 1791 and 1792* (Publications of the Champlain Society, Toronto, 1937), pp. 246-247.

fiber drove prices downward. On the other hand, the industrial North was always on the move. It possessed a flexible wealth that adjusted itself to changing conditions with remarkable agility and showed astounding qualities of growth. The northern industrialist borrowed on far more favorable terms than did the southern agrarian, and he could shift his capital to the most advantageous positions easily. He learned in the years after the Civil War—if not before—that his political arguments when backed by money could work wonders. He made his capital a servant, while the southerner was a slave to his economic surroundings.

The commercial and financial organization of the South was cumbersome and expensive. The planter marketed his products, especially cotton, through the factor, who, though in some ways little more than a leech on the economic body, was necessary because neither the owners of great estates nor the small farmers could finance their farms from selling time to selling time. A few planters before the war borrowed from northern banks directly, but generally they secured their needs on credit from local individuals who charged them high rates of interest. In addition, each agreed to deliver in the fall to the factor his cotton crop, a liberal amount of which was confiscated as payment for the loans already made. Whatever was left was sold, and the proceeds, after deduction of brokerage and commission fees, hauling and insurance costs, and sundry other charges, were remitted to the planter. Year after year the cotton farmer grew more hostile toward the northern banker and his agent who took his interest, compelled him to sell his crop as soon as harvested, and goaded him severely when tragedy blasted his fields.

In buying as well as in selling the southerner found himself paying tribute to other geographic sections. Every industrial product that he bought had added to its real value the cost of transportation and the levy of each succeeding middleman. Season after season as he balanced his budget he discovered that current returns failed even more miserably to meet his obligations. By 1830 the seaboard planter was drawing upon his accumulated capital, and soon he was forced to sell his slaves one by one or else move westward into new cotton lands in the hope of restoring his fortunes. Annually the South saw in its business centers the seasonal commercial men of the North, who disappeared when the cotton had been marketed; periodically the section suffered from financial panics for which it was not responsible. Everywhere he turned, the southerner came face to face with evidences of his exploitation and decline. The decline, however, was chiefly a failure to keep up with the moving economic order, an inability to share in the increasing wealth of the nation. That it was

altogether due, as some suggest, to an unprofitable system of labor is somewhat questionable in view of the fact that the evils that the southerners were suffering long plagued the agrarians of the nation.

With diminishing economic importance came isolation to the South. In the beginning the Cotton Kingdom and the Old Northwest had been closely allied.[2] Some of the grain from the scattered corn and wheat fields of Ohio, Illinois, and Indiana had found markets on southern plantations and in the great exporting city of New Orleans. The Mississippi River had tied the two sections together with what appeared to be unbreakable bonds. But the highways, canals, and railroads that industrial development brought in the North had gradually weaned the Old Northwest from the South and drawn the products of its new fields eastward to Atlantic seaports. The cotton grower stood alone in his opposition to the forces that threatened him with poverty. Unable to establish an economic industrialism of his own—although the section was in many ways suitable for manufacturing—he turned to politics for relief. For a quarter of a century or more he made a brilliant if sometimes erratic fight for his principles, only to see the walls of his democracy fall upon him in the dark days of Reconstruction. He never recovered. When the war was over, the farmers west of the Mississippi took up the losing fight against the industrialists, and they, like the southerners, were often labeled "enemies" of the Union.

The Tariff Question. Tariff provoked one of the first economic controversies between the North and the South. Concerned at first with the raising of revenues for maintenance of the government, the question soon became involved with protection. The protection that was desired at the beginning, however, was protection in general and not of particular industries. The flooding of American markets with European goods made it clear that the nation must guard its citizens against unfair competition, and in the years immediately after the War of 1812 the South was as vigorous in its support of tariff as any other section. New England, on the other hand, was somewhat loath to submerge what she regarded as her sectional interests for the good of the whole nation.

As time went on, the planter became convinced that tariff was merely a tribute that he paid into individual pockets under the sham name of sectional welfare or of national progress. That taxes on imports bore heavily upon the South can hardly be disputed. The duty increased the

[2] The dependence of the cotton South upon the Northwest has perhaps been overemphasized. The upper South furnished a major part of the grain and pork for the cotton growers, and Missouri and Kentucky in particular provided mules for the plantations.

prices of the goods the section bought without raising the prices of the products it sold. No amount of argument could convince the southerners that internal improvements and other indirect compensations would make up for the direct losses they suffered under the tariff plan; they regarded any scheme of internal improvements as only a means of obtaining money for the use of somebody else. In vain did the forensic Webster cry: "There are many false prophets going to and fro in the land who declare that the tariff benefits only the manufacturer and that it injures the farmer. This is all sheer misrepresentation. Every farmer must see that it is to his interest to find a near purchaser for his produce, to find a ready purchaser, and a purchaser at a good price." Every planter, nevertheless, knew that the price of his cotton was fixed in England, and to mention good prices when year after year the returns from a pound of cotton grew less was needlessly to prod an annoying sore.

But southern opposition to tariff was not universal; there were many local dissensions and personal differences. The sugar growers of Louisiana were looking for assistance from the national government, hemp raisers in Kentucky undoubtedly pushed Henry Clay into the ranks of the protectionists, and the tobacco planters in Tennessee, Kentucky, Virginia, and, to some extent, the Carolinas were not certain that protection did not help them. Moreover, the mountain and hill people knew little about tariff and cared less; the survivors of the old Whig party preferred the Union to economic "freedom." Although the statesmen were able to soothe the quarrel by compromise, southerners continued to grumble about the millions of dollars of unnecessary profits that were rolling northward into the tills of the industrialists and capitalists—and the empty purses of the cotton growers gave reality to their discontent.

Economic Inequality. The aggrieved southerners turned to statistics to prove that they suffered from economic inequalities. Hundreds of millions of dollars, they estimated, had flowed out of the thinning soil of the Cotton Kingdom to enrich the North. "The South," said one, "stands in the attitude of feeding upon her own bosom a vast population of merchants, shipowners, capitalists, and others who, without the claims of her progeny, drink up the life blood of her trade. It cannot be here asserted that a deduction should be allowed for that portion of the southern crop which is shipped directly from the southern ports to foreign countries. The tonnage register will show that nine-tenths of the shipping employed belongs to northern capitalists. . . . Where then goes the value of our labor but to those who, taking advantage of our folly, ship for us, buy for us, sell to us, and after turning our own capital to their profitable

account return laden with our money, to enjoy their easily earned opulence at home?"

The vassalage of the South, however, was often exaggerated. The section was, for example, never primarily dependent on the North for its bacon, flour, and corn; and cotton gins were, according to the census of 1860, manufactured in large numbers in Alabama, Georgia, and Mississippi. Yet, because agrarian regions are always subservient to industrial centers, there were abundant reasons for complaining about dependence on the North. Southerners, already goaded to fury by their own journalists and orators, probably did not enjoy the advice of a northern farmer who told them in 1845 that one of the first things they must learn was "that out of their own staple we furnish them almost every manufactured article, for which they pay us for carrying the raw material from the gin and press we built for them, done up in our bagging and rope, and sewed with our twine and needles, drawn upon our waggons by our horses in our harness, over roads made with our plows and hoes and spades, to our steamboats, and upon that to our ships; not forgetting to let our commission merchants have a good share of 'skinnage'; And then after manufacturing, to return it in the same way to exchange for more of the raw material; by all which means we constantly keep a raw spot in your feelings; but it is not yet sufficiently 'galled' to teach you to become *home manufacturers*—the only healing salve that you will ever find to cure the festering sore of 'such low prices for cotton that planters cannot live by it.' "[3]

The Slavery Controversy. The economic gulf that was slowly splitting the North and the South asunder might never have become alarming had the slavery question not been concerned. This "peculiar institution" that spread over Dixie in theory if not altogether in fact was fundamental in bringing the sections to resort to war to settle their disagreements. The humanitarian and moral aspects of slavery must be left to other historians, but any economic study of national developments before the Civil War must include much about the slave and his owner. Slavery, like tariff, was in the beginning not a subject of controversy; the entire nation approved of the practice. Indeed, New England was deeply involved in the importation of slaves until the end of the trade in 1808, and New York remained until 1860 the center of slave-smuggling intrigues. The institution flourished in the South because of its special fitness for the production of cotton. Cotton, in turn, was important on account of the growing significance of the industrial revolution. Thus it was that a combination of factors

[3] Kellar, *Solon Robinson*, vol. i, pp. 472-473.

over which neither the North nor the South had any control brought the two regions into further conflict.

The Negro, said the southerners, was best suited for labor that required little actual skill. Work in the cotton fields was so simple that many individuals could with proper supervision be successfully worked alongside of one another. The overseer became under certain conditions a necessary part of the slave system and was a focal point of criticism when antislavery sentiment began to grow. The picture of the South as a section of rich plantations tended by devoted Negroes, however, is a false one. Only the wealthy could afford the luxury of slave labor, and those who owned enough slaves to send them to the fields under drivers or to hire overseers to supervise their plantations were few. That this small number of great planters completely guided the destiny of the South is for the most part fiction. They never, for instance, possessed the political control that the factory owner and the city boss wielded in the North. Though in some cases they may have driven the poor whites from the richest land and forced them into proud poverty, they could not direct their vote. George Fort Milton says that the yeoman farmers were throughout the slave era the political and social mudsills of the Cotton Kingdom,[4] and Fletcher M. Green asserts that "preliminary investigations suggest that a majority of the political leaders of the Old South between 1830 and 1860 came from the plain people rather than from the larger planter class."[5]

Whatever the leadership, the differences between the two sections were striking. In the North the industrialist gathered year after year more people into his factory system, but the goods that he sent out were made up primarily of the brawn and sweat of his laborers and not, as in the South, of capital assets. Northern machinery grew better with each succeeding season; the land of the South became more barren with every returning harvest.

Slave labor as such was not a unifying force in the South. Small farmers sometimes regarded it as partially responsible for their failure to get along, and artisans were irked by competition from skilled Negroes. The border states were never entirely sympathetic with the system, both because they had little profitable work for the slave to do and because in the controversy that arose they could not continue their friendly commercial relations with North and South alike. Even when trouble came, they remained individualistic. They blamed the North for its unwarranted meddling and

[4] *The Eve of Conflict; Stephen A. Douglas and the Needless War* (Boston: Houghton Mifflin, 1934).

[5] "Democracy in the Old South," *Journal of Southern History*, vol. xii (February, 1946), p. 19.

endeavored to beat the South into quiet on the basis that they suffered most from escaping slaves and must be the battlefield in event of war.

Only the rise of the abolitionist group in the antislavery movement brought something of agreement to Dixie. Hard pressed economically, fearful of its political standing, and resentful of criticism from distant reformers, the South rushed to its own defense in what came to be reasonably concerted action. As late as 1830, in fact, the slave owners had been ready to admit that slavery was an evil, but they insisted that it was a necessary evil. Socially, contended Senator Hammond of South Carolina—and his argument was not unlike that of Alexander Hamilton in regard to manufacturing—there must be a group upon whose labors rested the progress and development of the cultured. Harriet Martineau, English visitor to America, found in the South in 1835 no more than one individual who defended slavery without exception. The planter's conviction that freedom of the Negroes was at the time impractical was not wholly groundless.

With the beginning of rabid criticism by the abolitionists the South shifted its opinions and marshaled many arguments in justification of its labor system. When William Lloyd Garrison and his uncompromising followers declared the Cotton Kingdom to be a land of sinners, southerners picked up the gauntlet and announced themselves ready to fight for their homeland. Dictation concerning the moral aspects of their economic life by a section whose sins they regarded as greater than their own led them to strike back with vigor. In their earnestness they soon convinced themselves that the institution they sponsored was not an evil but a positive good. The Christianization and civilization that they gave the blacks was, they believed, ample compensation for lifelong labor. Furthermore, there was no actual need to demonstrate the goodness of slavery, for the Bible had sanctioned it. Servitude was eternal, as attested by one of the ten commandments—"Thou shalt not covet thy neighbor's manservant nor his maidservant nor anything that is thy neighbor's."

The question of slavery was badly fumbled by both North and South. Neither section made any constructive efforts to settle the problem. Southerners refused to admit that their "peculiar institution" could ever change, and northerners blindly condemned their fellow Americans without feeling obliged to present a workable plan of emancipation. Even the freed Negroes were everywhere discriminated against.

Slavery and Expansion. The slavery controversy was not merely sectional; with expansion it became a burning issue in national politics. West of the Mississippi lay thousands of square miles of land whose growing

population would some day seek admission into the Union. Whatever section controlled the votes of the new states would dominate Congress and thus write the laws of the nation. Both the North and the South made desperate efforts to predetermine by sheer numbers the status of slavery in the embryonic states. The South, however, was at a decided disadvantage. The planter hesitated to take his property into a region where the fortunes of politics might without compensation destroy it at a stroke. The solution was to choose in advance whether the territory should be slave or free. But that was difficult. Although nature had perhaps already fixed the profitable limits of slavery, the politicans could reach no decision. A decision required time, and time was not to be had. Regardless of sectional quarrels, America moved westward relentlessly as long as there was available land on the frontier. The spirit of Manifest Destiny drove both proslavery and antislavery men forward whether they had settled their quarrels or not. It was impossible either to control expansion or to adjust the matter quickly. William H. Seward labeled the dilemma "the irrepressible conflict."

The Missouri Compromise. Efforts were made by the South to maintain a political equilibrium in the Senate. In 1819, when the free and the slave states were equal in number, Missouri applied for admission into the Union. Sectional bitterness flared immediately. The balance was threatened, and, more than that, some land formerly regarded as free territory was included within the bounds of the new state. After many compromise proposals it was finally agreed in 1820 that Missouri might be slave; Maine, obviously free, had already petitioned for statehood. Equality was thus preserved, and at the same time an agreement was made by which slavery was forbidden in all land of the Louisiana Purchase above thirty-six degrees thirty minutes.

Texas and California. Scarcely had the Missouri controversy been temporarily disposed of when the war with Mexico that followed three years after the admission of Texas in 1845 brought under the American flag a vast new territory and precipitated another acute dispute over slavery. The antislavery advocates, even though they longed for the land to be a part of the American domain, had no desire to spread the institution that they were seeking earnestly to abolish. The expansionists in the North were perfectly willing to take all Mexico if it could be obtained without slavery. That, however, seemed doubtful. Soon David Wilmot of Pennsylvania offered in Congress a proviso that all territory gained by the Mexican War be forever free. The northerners were pleased, but the southerners, notwithstanding their realization that slave labor was an economic impos-

sibility in much of the region, insisted on what they regarded as their political and constitutional rights.

The discovery of gold in California and the rapid growth of western population fanned the flames of discord. Jealousy and hatred were everywhere apparent. Congressmen carried arms. "Fire eaters" of the South threatened secession. Every national project was suspected by the North as a snare by which the Cotton Kingdom hoped to make political gains. Transcontinental railroad plans, a canal across Nicaragua, and filibustering expeditions to Cuba were looked upon as schemes for enlarging the slave empire. James Russell Lowell, poetic abolitionist, wrote of the southerners:

> They just want this Californy,
> So's to lug new slave states in.

The Compromise of 1850. Compromise was again attempted in 1850. John C. Calhoun, Daniel Webster, and Henry Clay, who had come into prominence in 1812, made in Congress a last desperate effort to settle the differences of the North and the South before they slipped from the political scene. Clay, likening the states to "four and twenty furnaces" belching fire and hatred that would eventually consume the nation, presented his solution and pleaded for peace between the sections. Webster, admitting that "grievances, real or supposed," were dividing the country, made at the expense of his own personal popularity a powerful plea for unity. But Calhoun, so ill that he could not deliver his speech—his body, in fact, within a few weeks to be borne back to his native South Carolina just as the buds of the celebrated *Magnolia grandiflora* were beginning to swell—pointed to the severance by sectional quarrels of social, economic, and religious bonds and declared that neither the "plan proposed by the distinguished Senator from Kentucky, nor that of the 'Administration'" could save the Union. Indeed, it may be that it was only the incessant labors of Stephen A. Douglas and a handful of other young statesmen, who had already presented the measures separately, that prevented the compromise efforts from failing completely.

In the end California was admitted as a free state, the slave trade was abolished in the District of Columbia, and the southerners were given a new and effective fugitive-slave law. Two years later a presidential campaign revealed both the political weakness of the antislavery group and the desire of the nation for peace. But peace was not at hand. Harriet Beecher Stowe's *Uncle Tom's Cabin* stirred the abolitionists to action; the passage of "personal liberty laws" in the northern states nullified the fugitive-slave legislation that the Compromise Congress had provided; and

the Ostend Manifesto appeared to some to disclose the evil intention of the slavocracy.

Kansas and Nebraska. The hopes of the peace advocates were blasted still further by the Kansas-Nebraska problem. Stephen A. Douglas, inspired as much by economic plans as by a wish to see the controversy finally removed from national politics, introduced in 1854 his Kansas-Nebraska bill, by which the people in each of the territories were to be permitted to solve their own problem of slavery. But the question would not be downed, and the repeal of the Missouri Compromise made of the region a bloody field of battle for a half-dozen years. Northerners established companies for encouraging antislavery migration into Kansas, and Missourians, unwilling to take their slaves into a territory where they might soon be freed, rode over the boundary line on election day and cast as many proslavery ballots as opportunity allowed. Both groups were impelled in part by economic motives; the latter wanted land, and the former wanted the profits that were to be had from sawmills, gristmills, and hotels.[6]

The Kansas-Nebraska bills (1854 and 1857) made inevitable a split in the Democratic party, last bond between the contending sections. When Chief Justice Roger B. Taney ruled in the Dred Scott case in 1857 that a Negro was not a citizen and could not become a citizen, radical northern Republicans and abolitionists regarded the decision as additional evidence that the unholy planter controlled the judiciary as well as the rest of the government. In 1858 Abraham Lincoln declared, "A house divided against itself cannot stand. I believe this government cannot endure permanently half slave and half free." In spite of the fact that he later made many efforts to correct the impression, the South was firmly convinced that his declaration meant an unalterable determination to stamp out slavery in the nation root and branch.

The Election of 1860. Lincoln was a member of the newly formed Republican party, whose chief demand was that slavery be entirely excluded from the territories. The planters were sure that the "black Republicans" were intent on destroying the economic existence of the Cotton Kingdom, and John Brown's raid on Harper's Ferry in 1859 was evidence to all southerners that no consideration of humanity would turn them from their purpose. Many northerners, on the other hand, saw in

[6] Some of the economic phases of the Kansas conflict are discussed in Samuel A. Johnson, "The Emigrant Aid Company in the Kansas Conflict," *Kansas Historical Quarterly,* vol. vi (February, 1937), pp. 21-23. F. H. Hodder, "Genesis of the Kansas-Nebraska Act," Wisconsin State Historical Society *Proceedings,* 1912, pp. 69-86, is an especially interesting and valuable study.

Buchanan's veto of congressional legislation providing free homesteads for the western settlers a part of a southern plot to control the development of the nation. Lincoln's nomination at Chicago in 1860 brought a final challenge; the South was resolved not to wait until the enemy was at the "hearthstone" but to "meet him at the doorsill and drive him from the temple of liberty." The cry of secession alarmed few in the North. As late as November 2 Seward said in New York: "For ten—aye, twenty years, these threats have been renewed in the same language and in the same form, about the first day of November every four years, when it happened to come before the day of the presidential election. I do not doubt but that these southern statesmen and politicians think they are going to dissolve the Union, but I think they are going to do no such thing." Seward was wrong. On December 20 South Carolina seceded from the Union.

Secession. The act of secession was not committed by a handful of youthful radicals. The men who took the state out of the Union were the leading citizens of the commonwealth, and their course was one of dignity and deliberation. Whatever criticism may be made of their action, their sincerity cannot be questioned. Although they may have been misguided, they rose in honest and earnest defense of their homeland. They felt that they destroyed no Union; to them the compact had been broken long before. And South Carolina was not alone in seceding. All the states of the lower South as far west as Texas followed in rapid succession.

The Outbreak of War. Secession did not necessarily mean war. Many people in the North approved Horace Greeley's admonition to "let the erring sisters go in peace." Stephen A. Douglas, in fact, worked out a plan of economic unification for the politically separate sections.[7] In New York the business men were strenuously opposed to armed conflict. Mayor

[7] Douglas was convinced that there could be no peaceful economic separation. He wrote in a memorandum (quoted in Milton, *The Eve of Conflict,* p. 540) that "there can never be peace between the people of the upper and lower Mississippi so long as the one attempts to exercise jurisdiction to the seclusion of the other over any portion of the river; or obstructs, impairs or interferes with the rights of free navigation on terms of entire equality with its own citizens. There can never be peace so long as goods and merchandise, imported at the ports of the one confederacy, for sale and consumption in the other, or subjected to the payment of duties and taxes, under the operation of laws in whose enactment they have no voice, and in the proceeds of which they have not an equal participation. There can be no peace so long as there be any restriction, hindrance or encumbrance upon commerce, trade, transit, and intercourse which is not common to the citizens of both." Governor Magoffin of Kentucky in replying to South Carolina's invitation to follow her into peaceful secession declared that "the mouth and the sources of the Mississippi River cannot be separated without the horrors of civil war." President Lincoln, while denying the possibility of secession, asserted the impossibility of severing commercial relations when he said in his first inaugural: "We cannot remove our respective sections from each other, nor build an impassable wall between them. A husband and wife may be divorced and go out of the presence and beyond

Fernando Wood recommended to the Common Council that the city secede. "With our aggrieved brethren of the Slave States," he declared, "we have friendly relations and a common sympathy. We have not participated in the warfare upon their constitutional rights or their domestic institutions." And in defense of New York "capital, energy, and enterprise" he demanded "a continuance of uninterrupted intercourse with every section" of the nation. Many, in fact, were the economic ties that bound East and West and North and South together. New England cotton mills drew their raw materials from southern plantations, and northern manufacturers found important markets south of the Ohio. The business structure without regard to geography was everywhere geared to peace.[8]

Few in the South believed that bloodshed was an inevitable accompaniment of secession; some argued that the section could make better terms as an independent unit than as a minority group within the nation. But Abraham Lincoln, coming to the presidency on March 4, 1861, chose war rather than a divided Union, and three days after the firing on Fort Sumter on April 12 he called for seventy-five thousand troops.

Lincoln's appeal for soldiers was to the South evidence that the government meant to coerce the states. It brought immediately the withdrawal of North Carolina, Virginia, Tennessee, and Arkansas. Maryland, Kentucky, and Missouri were in large part sympathetic with the Confederacy; the first was virtually held to the Union by force, the second maintained a position of neutrality until the fall of 1861, when it joined the North after invasion by southern troops, and the third was divided in its loyalty, the governor supporting the South without taking with him the legislature. The Southern Confederacy as eventually created contained eleven states. Both the North and the South drew troops from the border region regardless of allegiance. The western and most mountainous part of Virginia transformed itself by doubtful legal means into West Virginia in 1863 and became a part of the Union.

the reach of each other; but the different parts of our country cannot do this. They cannot but remain face to face, and intercourse, either amicable or hostile, must continue between them."

[8] Many statesmen of the North deplored the radical teachings of antislavery and abolition leaders. Hamilton Fish, although regretting the "insanity" of certain states and communities, wrote early in 1860: "There is madness at the North, and if it is limited in its range, rascality begins where the madness ends. A great and dominant part at the North teaches through its accredited and most influential public organs such gentle doctrines as these: 'It is the natural duty of the slave to kill his master, and all who restrain him of his freedom'; 'It is the natural duty of every freeman to kill the slave's master and all who restrain him of his freedom.' . . . I don't think these things are well calculated to bind up the breach between the North and the South. I think they are calculated to make a gulf between them which cannot be passed, or bridged over." See Allan Nevins, *Hamilton Fish, The Inner History of the Grant Administration* (New York: Dodd, Mead, 1936), chs. iii and iv.

The Economic Resources for War. The northern states overwhelmingly exceeded the southern in both men and material resources. Of the slightly more than thirty-one and one-half million people in the country less than nine million lived in Dixie. Of these nine million over one-third were Negroes, slave and free, and thus the South had scarcely upward of five million white inhabitants, of whom certainly less than a million and a half could possibly be put under arms. The North could on the same basis muster at least five million men, and further gains were later made by immigration and the enlistment of southern Negroes in the northern army after the Emancipation Proclamation was issued. The disparity in wealth was obvious also. The Confederacy owned little more than one-third of the real and personal property in the nation, estimated in 1860 at sixteen billion dollars. In addition the business structure of the country centered chiefly in New York and neighboring cities. Financially neither the North nor the South was prepared to fight. The federal government had since 1857 been running a deficit each succeeding year, and the actual money in circulation was only four hundred and forty-two million dollars. Of that sum two hundred and fourteen million was in gold and twenty-one million in subsidiary coin. When the war began, the specie disappeared, leaving only the two hundred and seven million in bank notes as a monetary medium.

The first problem that faced the North after the firing on Fort Sumter was the formation of an army. No effective and vigorous steps were taken, however, toward throwing troops into the field. Lincoln's call for seventy-five thousand volunteers was not fully answered; eleven of the states were beyond his reach. Furthermore, immediate use was not made of the men who enlisted. "The scenes that were enacted as the states of the North proceeded to respond to Lincoln's summons," says Professor Randall, "offered many a commentary upon the cross purposes, circumlocutions, and makeshifts of an unmilitary democracy struggling to improvise a war machine for an emergency."[9] During the first two years of the war the army grew with little direction. At enormous monetary cost the governors of the various states made by diverse efforts significant contributions toward raising a military force. Throughout the North boys assembled under local political leaders and drilled on town squares or vacant lots. Sometimes soldiers on leave formed companies, secured commissions, and tendered their organizations for service. The host of unrelated units were sooner or later combined to become a part of the fighting power of

[9] James G. Randall, *The Civil War and Reconstruction* (New York: D. C. Heath, 1937), p. 263.

the North. But turmoil and extravagance were everywhere apparent. States and even counties and towns vied with one another in the amount of bounties provided as inducements for volunteers, and the government at Washington, not to be outdone, offered national rewards. Five hundred dollars cash in advance was not unusual. Keen bargainers made personal profit by deserting and reenlisting over and over again.[10] Money would secure exemption from duty; anyone could obtain his release from the draft either by paying three hundred dollars or by providing a substitute.

There was equal confusion in procuring supplies for the army. Agents of the different states and localities bid against one another in the purchase of available materials and thus added to the high prices already created by temporary scarcities. Only manpower was drafted; wealth escaped restrictions. Often swindlers and profiteers flourished while the new recruits suffered from unserviceable clothing and inedible food. Women did what they could toward supplying socks, bandages, and other needs of the soldiers in the field and in the hospitals.[11] Individuals furnished arms, munitions, and means of transportation at exorbitant prices.[12] Commodore Vanderbilt provided at excessive rentals ships for Secretary Welles'

[10] Even escaping slaves from the Confederacy were hurried northward to enlist and collect the bounties offered. Cornelia Hancock wrote from the Contraband Hospital in Washington on January 4, 1864: "They have issued an order here preventing any black man going north but the large bounties offered in Massachusetts, $325. induces them to go north on the underground R. R. and get the bounty. They offer me $5 for every volunteer I can secretly obtain. . . . I shall get them if I can with what time I have for they draft them here and compel them to go for nothing, and I am interested for them that they should enlist from Massachusetts. I think black regiments from that state are better treated than District soldiers." *South After Gettysburg,* ed. by Henrietta Stratton Jaquette (Philadelphia: University of Pennsylvania Press, 1937), p. 37.

[11] Fred A. Shannon, *The Organization and Administration of the Union Army, 1861-1865* (Cleveland: Arthur H. Clark, 1928; 2 vols.) is a standard account of the formation and administration of the army.

[12] Traders known as sutlers supplied the blockading squadrons with food and incidentals at outrageous prices. Acting Assistant Surgeon Boyer of the U. S. bark *Fernandina* noted in his diary on May 26, 1863: "From early morn until late at night the cry is Sutler! Sutler!! Sutler!!! Everyone has something to buy. No sooner has a boat returned from the schooner but what there are others who want something else, and I suppose were he, the Sutler, to remain here one week, the same want would still exist—for as long as a 'Greenback' can be had, so long will it trouble the possessor, and he will not feel satisfied until it has passed into the hands of the Peter Funk of the schooner. . . . I will quote a few of the Sutler's prices so as to show how he imposes on our good nature at a time when we cannot help ourselves but are compelled to pay him his villainous prices. They are as follows, viz: Flour $12 per bbl., Sugar $20 per 100 lbs., Hams $16 per 100 lbs., Coffee $45 per 100 lbs., Butter $41 per 100 lbs., Shoes $5 per pair (worth $2.50), Pipes $15, Envelopes $1 per hundred, Paper $5 per ream, Collars $4 per hundred, Sherry, Madeira and Port Wine $15 per doz., Stomachic Bitters $18 per doz., Ale $3 per doz., Tobacco (killikinick) $5 per bale of 5 lbs., Potatoes $3.50 per bbl. and everything else in proportion. It is a confounded shame that he charges such prices, and it looks foolish in us for paying him his prices, but 'necessity knows no law.'" Later the surgeon wrote: "Some of the boys have 'sore heads' today, the effects of ale and wine, which they managed to get of the Sutler on board of the schooner

conglomerate navy, and though many were literally rotten, Congress voted him a medal of honor at the end of the war. So obvious was the corruption involved in the government's acquisition of necessities that in 1863 pennies similar to those in circulation were privately coined which bore an inscription so arranged that it read "Millions for the contractors but not ONE CENT for the widows." Politics rather than military efficiency dominated the buying of arms; repeating rifles and the Gatling gun were rejected, while the soldiers in the field fought with obsolete muzzle-loaders.

Wartime Finances. *Bond Issues.* Financing the war was a serious problem. In spite of the fact that monetary conditions in the country were improving, the treasury possessed on July 1, 1860, only slightly more than six and one-half million dollars. Throughout the remaining months of the year expenditures continued to exceed receipts. Faced by an urgent need of funds when war broke out, Salmon P. Chase, Lincoln's Secretary of the Treasury, hurried off to New York to borrow from the bankers; he was, however, not satisfied with the results of his visit, for Wall Street demanded outrageous interest. Chase was an able man, but he knew little about fiscal affairs. He was severely criticized for not announcing immediately an energetic financial program. It was only after a great deal of delay that he finally decided to raise money by issuing bonds, and even then he stipulated that purchases must be made at par. Sales lagged until the bonds were pitched on the market for whatever they would bring in any available medium, and they were never really successful until Jay Cooke of Philadelphia threw his power behind the undertaking. Cooke, though he was scrupulously honest according to the canons of business and patriotic in that he asked less commission than any other financier, profited greatly from his labors. In all, Congress authorized during the war over two billion dollars of bonds and treasury notes in addition to somewhat more than a half billion of greenbacks, postal currency, and fractional paper money. Income from taxes collected from the people exceeded six hundred million dollars.

Tariff. Customs dues, ordinarily the chief single reliance of the government for revenue, proved disappointing. The Morrill Act of 1861 was not primarily an income-producing measure, but periodic changes brought the rates to forty-seven per cent by 1864. The increasing levies were made both

'Jas. W. Lawrence.' A sad state of affairs—last night they felt good and talked of their rich relations, but alas! today they feel poor and miserable and think of their poor relations."

The blockading squadrons got some of their supplies by foraging. Surgeon Boyer recorded on January 29, 1863, that Captain Pickle, "Nimrod" of the ship, had "returned from a hunting tour with 5 dead deer, 1 do. cow, 12 live hogs and 8 dead duck." Gardens were sometimes planted ashore, and in at least one instance an attempt was made to raise chickens. Some provisions were bought from Negroes.

for creating revenue and for protecting American manufacturers against competition while they were paying high internal revenue taxes. Receipts from internal revenue taxes were, in fact, of far greater importance than those from tariff; in 1865, for instance, the former brought to the treasury two hundred and nine million dollars, the latter scarcely eighty-five million. A "direct tax" on the states yielded less than five million before 1865, and an income tax, levied in August, 1861, did not bring much money into the treasury until toward the end of the war.

Paper Money. Since the circulating medium was severely restricted, government collections were difficult. Even business was seriously hampered by the lack of currency. There was little specie in circulation, and the paper notes of private banks were questionable. Counterfeiting was common. Persons fortunate enough to possess a few gold or silver coins parted with them reluctantly; one poetic farewell was widely quoted:

'Tis the last silver dollar,
Left shining alone,
All its laughing companions
Have melted and gone;
Not a coin of its kindred,
No specie is nigh,
To echo back softly
Its silvery sigh.

You must leave me, bright dollar,
The last of my few,
Since thy mates have departed,
Skedaddle then too.
Thus kindly I send thee,
To wander afar,
In the sky of shinplasters
A glimmering star.[13]

Postage stamps were resorted to for small change, but they were inconvenient because of their annoying propensity to stick together. Gumless stamps did not prove satisfactory, and paper notes varying in value from three to fifty cents were finally put into use. Fractional paper currency, issued both by the government and by private banks and mercantile houses and known by the general term "shinplasters," did little more than facilitate small transactions.

The imperative needs of business and the Treasury Department forced the government to begin early in 1862 to print legal-tender notes, which,

[13] The verses are here recorded as they were copied on October 24, 1863, by Surgeon Boyer in his diary from the Olean *Advertiser*, a rural New York newspaper.

because of their distinctive coloring, were promptly called "greenbacks." By the end of March, 1863, four hundred and fifty million dollars had been authorized. This money, good in the payment of all debts public and private except duties on imports and interest on the public debt, was backed by nothing more than the honor of the government. It promptly brought inflation and fluctuation; prices were shoved upward, and debts were contracted which later with the return of specie payments became extremely burdensome. Indeed, the financial troubles of the government for the next thirty years were directly or indirectly connected with these "rag babies of the Civil War."

The Establishment of a National Banking System. Beginning in February, 1863, additional currency was made possible by the establishment of a national banking system. The National Banking Act of that year brought into being a group of banks wholly under the supervision of the government. Every member institution was compelled to comply with strict reserve provisions and to deposit with the Comptroller of the Currency federal bonds equal to at least one-third of its capital stock. In return it received government-printed national bank notes to the extent of ninety per cent of the market value—not exceeding par—of the securities deposited. This system not only made it feasible to redeem the notes of failed banks but also provided the Treasury Department with a lasting market for its bonds. It had, however, no profound influence on the circulating medium during the Civil War; less than one hundred and fifty million dollars in notes had been printed when Lee surrendered at Appomattox.[14] Although the confused monetary situation was somewhat relieved, for long years afterwards the soldiers complained of the favoritism shown to the financiers who had been paid a double profit for their patriotic services in the struggle for the preservation of the Union.

The Economic and Financial Problems of the South. The South, never completely self-sufficing, was seriously limited economically throughout the war. Its poverty was especially trying because of the effectiveness of the northern blockade. Ships sailed out of the Confederacy for the West Indies with reasonable regularity, yet month after month incoming supplies lessened in amount. England and France, generally sympathetic, never could quite decide to give aggressive recognition to the South. The section was compelled to turn from the production of cotton to the growing of food-

[14] The national banking system did have an important influence on the finances of the country after the end of the war. In 1865 national bank notes exceeded state bank notes for the first time, and in that year a tax on the latter ended their existence. The tax could not be levied sooner because of the inadequate distribution of national banks.

stuffs. Futile efforts were made to manufacture needed goods in quantities sufficient to meet the abnormal war demands.

In the matter of raising an army the Confederacy held a distinct advantage. Many southern soldiers were under arms before Lincoln made his first call for troops. The conscription acts of 1862 and 1863 brought out the fighting force of the South far more effectively than did the early drafts in the North. In spite of much corruption in military affairs and many controversies between state governments and the Confederate administration, soldiers were quickly pushed into the war. Paying the recruits and supplying the army, however, were tasks never successfully mastered. Notwithstanding the establishment at favorable locations of factories, mills, and mines for the production of arms, iron, gunpowder, clothes, and salt, military requirements were often lacking. Iron rails from local railroad lines were used for repairing main lines—and even for transforming the hull of the *Merrimack* into the ironclad *Virginia.* Agriculture, though severely hampered in some sections, provided both the civil and the military population adequately until Sherman's march through the heart of the South destroyed food-producing farms as well as military supplies. Lee's defeat was not unconnected with the fact that in Virginia there were not enough grain and pasturage for his cavalry horses.

The financial problem of the South was even more complicated than that of the North. The Confederacy failed to dispose of large amounts of bonds abroad; it failed to bring Europe begging to Dixie for cotton; and it failed to set up a stable currency. Inflation not only caused suffering through high prices but also nurtured discontent and suspicion, especially in the army. Roger Q. Mills, leader in the fight for tariff reform in later years, wrote his wife in June, 1863, from Tennessee: "I am well and getting along as well as a man could who is destitute of everything. Confederate money here is utterly worthless. It takes one dollar to buy a ginger cake. I gave 100 dollars for a coarse saddle tree, 600 dollars for a common good family horse. Nothing fine. My pay now will hardly support me much less send you. I want you to not take one dollar of money due me at home in Confederate money unless they will pay five for one. Don't take it from *any body* in payment of my old debts due me. I had rather lose the debt and be done with it. The money has been made worthless by speculators and people at home and I won't take it. . . . I hope our army will soon go into Kentucky where I can get equipped like a gentleman. . . . I wish I could send you my daguerreotype . . . but it would cost about $50 which I have not got."

Two months later Mills was writing his wife from a camp near Chat-

tanooga: "*Every thing* is scarce. I never have been so hard up for something to eat in my life. Meat is almost out of the question and will still be more scarce for the future. We have lost our hog country [Tennessee] and our army is in close quarters about something to eat and the people in the country seem to be as bad off as the army. I have seen many worse for they have no meat and no earthly prospect of getting any. And then the Army camping around them has eaten up their roasting ears potatoes &c and many are in a pitiable condition. The people on this side of the river are pretty well whipped outside of Virginia and South Carolina. If it were not for the army many of them would favor reconstruction. But the army is not whipped. We are yet strong. The people at home have abandoned themselves to speculations and extortions and have forgotten God and their country. . . . Watermelons are worth 15 dollars! peaches $2 a dozen &c. Every body out of the army is bent on making a fortune out of the war and we poor soldiers have to fight and perish for them and such as are fortunate enough to get home will be poor, poor indeed."

Troubles were chronic both for the civilians and for the military, and, in spite of bond sales, produce loans, paper money, and taxes, government coffers were consistently empty.[15] When Lee surrendered in April, 1865, certain parts of the South were destitute, and the road to economic recovery in the nation was soon to be roughened by political reconstructionists.

[15] One of the first taxes of the Confederacy was levied in August, 1861, on real estate, slaves, and other property, but one proviso of the legislation was that the state governments might pay the entire tax with Confederate notes or specie without levying on individuals. A comprehensive tax law of 1863 contained a unique and apparently wholly distasteful proviso that compelled the farmers to pay to government collectors one-tenth of the products of the soil for the year. The most famous of the Confederate loans was that known as the Erlanger loan, in which Erlanger, a Frenchman, undertook to sell cotton-secured bonds abroad. "The whole scheme," says Professor Randall, "bore the aspect of a gigantic cotton speculation."

Chapter 18

CIVIL WAR HERITAGES AND POSTWAR READJUSTMENTS

The Economic Heritage. The Civil War serves in the economic history of the United States to separate the years of agrarian democracy from the succeeding years of industrial domination. The change, however, was not entirely the result of the conflict. The progress of civilization seems to lead away from the farm; certainly in America after 1800 each decade brought the industrialist and the machine into greater prominence. Perhaps only the presence of an open frontier where land could be obtained cheaply preserved until after the middle of the century the leadership of agriculture. The forcible destruction of slavery was of little note in the economic decline of the southern farmer, for the institution of involuntary labor had already about come to its natural bounds before 1860. On the eve of the war "it could not go forward in any direction and it was losing ground along its northern border," says Professor Ramsdell. "A cumbersome and expensive system, it could show profits only as long as it could find plenty of rich land to cultivate and the world would take the product of its crude labor at a good price. It had reached its limits in both profits and lands. The free farmers in the North who dreaded its further spread had nothing to fear. Even those who wished it destroyed had only to wait a little while—perhaps a generation, probably less." [1]

Although more a violent stimulant than a creator in any real sense, the war had important consequences. At a stroke it freed the slaves, removed the South from national politics, and cleared the way for industrial growth. The heritages that it left were significant. The prosperity that had arisen in the North during the four years of carnage continued. Industries that had been formed on the basis of war orders flourished, and business increased enormously. With Gordon McKay's sewing machine for leather it was possible for a workman to turn out three hundred pairs of finished shoes in a single day. Factory-made clothes were profitably offered for sale. Packing houses were built in Chicago, their owners before long to

[1] Charles W. Ramsdell, "The Natural Limits of Slavery Expansion," *Mississippi Valley Historical Review*, vol. xvi (September, 1929), p. 171.

become representatives of the "bloated plutocrats" to the cattle raisers whose steers would often not bring enough in the glutted stockyards to pay the freight charges. Millers sprang up in the wheat regions of the new Northwest; Washburn, Pillsbury, and Christian (to be labeled "oppressors" by the farmers when the price of grain dropped to twenty-five cents a bushel and less) soon began in Minneapolis a potential monopoly of flour making. Brewing in Milwaukee and St. Louis joined the ranks of rising "big business" as the vats of Schlitz, Pabst, and Anheuser grew larger. More than two million barrels of oil had come from the local field at Titusville, Pennsylvania, by 1864. The liquid gold that poured out of the earth quickly attracted John D. Rockefeller, who was to become before the end of the century the personification of the new industry that emerged from the ashes of conflict.

Unfortunately the economic revolution that the Civil War fostered promised little immediate gain for the wage earner. The worker was placed in a mechanical pace setter, and his wages were fixed at disastrously low rates in comparison with the mounting welfare of mankind. In addition the postwar city, spawned by industrialism, was plagued by a multitude of material and social evils that sapped his moral stamina.

Most tragic of the economic heritages of the war was the disrupted and physically broken South. The section was destitute, and death had entered almost every house. The one hundred and seventy-four thousand tattered soldiers who turned their faces homeward in the spring of 1865 found their countryside wholly changed. The land had been devastated with appalling thoroughness. The once beautiful Shenandoah valley lay a disheveled waste; pillage and fire had swept over its rich farms repeatedly, and only an occasional blackened chimney kept grim watch over the desolation. Throughout the entire South northern armies or marauding guerrillas had wrought economic havoc. A huge investment in slaves (estimated at two to four billion dollars) had been wiped out. From Atlanta to the sea Sherman had obliterated everything of direct or indirect value to the Confederacy. The few remaining iron skeletons of railroads, their broken ends pointing toward what had been flourishing cities, lay rusting in the sun. Doleful buttresses to which hung rotting timbers marked the places where loads of cotton and other agricultural products had crossed southern rivers on the way to market. Salt water flowed unhindered through the wrecked dams, gates, and canals of former rice fields, and useless wiry grass grew where once had been waving grain. The Mississippi, teeming artery of commerce in days of peace, flowed through broken levees over thousands of acres of cotton lands with only

briers and canebrakes to impede its wanderings. Fences, gristmills, cotton gins, barns, haystacks, and sometimes even houses and churches were victims of the forces of war. Crops were gone from the unfenced fields, and animals were scarce; in 1870 there was less livestock than in 1860 by nearly half a million horses, over two hundred thousand mules, a million cattle, one million three hundred and fifty thousand sheep, and six million hogs. The property of the South did not again reach its prewar value until the turn of the century.

Many of the southern cities bore deep scars of battle. Richmond had been burned during the Confederate evacuation; Columbia, South Carolina, had fallen before General Sherman in December, 1864, as a "Christmas gift" to the North; Atlanta, half destroyed, was filled with thousands of people without food or shelter; Mobile on the bay was partially demolished; New Orleans was dispirited; and countless lesser communities, especially along the rich seaboard region of South Carolina and Georgia, were ravaged to various degrees. Charleston, seat of secession and, said some, "hotbed of iniquity," was humbled. There on April 14, 1865, Henry Ward Beecher, ever his brother's determined keeper, stood among the ruins and looked "upon this shattered fort and yonder dilapidated city with sad eyes, grieved that men should have committed such treason and glad that God hath set a mark upon treason, that all ages shall dread and abhor it." It was indeed a strange joy with which the reformers beheld the fruits of four years of economic destruction, unmindful of the fact that the whole nation must pay the costs of restoration.

More than material possessions had perished in the South. A traditional life and an accustomed way of doing things were gone. Moreover, those most capable of rebuilding the disordered civilization were in discredit among their conquerors and in many instances were fleeing the country. The great holocaust had wiped out the sentimental and the practical. Libraries and other cultural institutions great and small, as well as silverware, dishes, and furniture, had vanished. Scholars, statesmen, and leaders in every walk of life wrapped themselves in rags or cast-off clothing and went back to work. But the road to recovery was discouraging. Major-General M. C. Butler, one leg missing, began life anew in his upland Carolina home "with a wife and three children to support, with seventy emancipated slaves on his farm, a debt of fifteen thousand dollars and in his pocket one dollar and seventy-five cents." Henry Timrod, southern poet, went to bed hungry every night; his friends were powerless to aid him, and "two years later the frail young soldier and singer of the South

was beyond help."[2] There were reports that one might occasionally see in the barren fields human beings hitched to the plow alongside a bony cow. Many people were entirely homeless, their houses and lands having been sold by the government for taxes to former slaves or to northern speculators.

Reconstruction. In spite of their destitution, the southerners went bravely at the task of rebuilding their homeland. In the towns men who had formerly been rich and influential turned in some instances to menial tasks to eke out a living. Planters fortunate enough to hold on to their land during the war sought through legal contracts with the freedmen to continue production.[3] Failure of former masters to appreciate the position of their one-time slaves in the democracy led to the enactment of unwise legislation. The result was quick and determined action from the North, and those who were trying to put back to work a labor force that had turned to idleness were accused of seeking to reenslave the blacks.

Conflict between victor and vanquished was inevitable. The outcome of four years of warfare could not possibly make the South think as the North, nor could it change the planters' ideas of the proprieties in human relations. Few people, if any, in Dixie wanted to restore slavery, but, on the other hand, few, if any, could understand how freedom from bondage could give the Negroes instantaneous intellectual and social equality with

[2] Robert Selph Henry, *The Story of Reconstruction* (Indianapolis: Bobbs-Merrill, 1938), pp. 20-21.

[3] One of these agreements, made in Falls County, Texas, in 1866, is especially interesting:

"Know all men by these present that this agreement made and entered into this the —— day of October 1865 for the year 1866 between J. H. Anders of the first part agent for J. B. Billingsley on the plantation belonging to the Estate of Willis L. Long, deceased, and the undersigned Freedmen of the second part.

"Witness, That we the undersigned Freedmen do hereby agree and bargain with and bind ourselves severally and collectively to remain on, prepare, plant, and cultivate, gather and prepare for Market one hundred and twenty acres of land Known as the McDonald place, belonging to the estate of Willis L. Long. We do agree that it shall be planted and cultivated by the advice and direction of the said J. H. Anders. We obligate ourselves to cultivate the crop well and to take good care of the team and tools, we are not to ride the Mules or Horses without the Consent of the said J. H. Anders, only to the plow and back. If any of us fail to do our duty, the Foreman is to report him or her to J. H. Anders. He is then to appoint six of us to try the accused and if found guilty is to leave the place and forfeit his part of the Crop. The said J. H. Anders is to furnish us the said land and team, tools and food for ourselves and families, in the same manner as before, for the year 1866. We are to get one half of every thing that is raised on the 120 acres of land for the year 1866.

"We the said Negroes furthermore promise to Keep the fence around the said land in good repair. And we are to furnish coal and a good striker to do our Blacksmith work. In testimony whereof we have hereunto set our marks opposite our names in the presence of

"Witness	Twining Taylor X	2
R. Holland	Abe Booty X	1
W. C. Moore	Simon Booty X	2
J. H. Anders	Sol. Land X	2¼
	Howel Sachel X	2"

the whites. The trouble was, perhaps, that one section was attempting under disheartening circumstances to rebuild its ravaged economic and cultural structure while the other was endeavoring to establish a national governmental institution in keeping with the vigorously expressed though unassimilated theories of the reformers of the thirties, forties, and fifties. The differences between the two, great as they were, might never have brought tragic consequences, however, had not radical emotionalists come into control of political administration.

The national government pursued a peculiar course of helpfulness, indifference, and hindrance in the economic rehabilitation of the South. At first there was no particular thought of coercion. President Lincoln desired to rebuild the Union and forget the carnage as quickly as possible, and the men and women who went southward to teach and serve in the early days of peace were well-intentioned. The Freedmen's Bureau, established by Congress in an effort to care for the unfortunate, rendered commendable service to the needy, both black and white. But soon a combination of circumstances brought the hopes of quick restoration to an end. Greedy business men, seeing opportunities for gain, flocked into the Cotton Kingdom to reap rich harvests from misfortune; mercenary industrialists, realizing the advantages of a protective tariff, sympathized with those who wanted to keep "the rebels" from the halls of Congress; and radical politicians, knowing that they held the power, demanded chastisement. The economic good of the nation was, in fact, completely forgotten in the hostilities of personal and political ambitions and prejudices as pushed forward by a handful of senators and representatives at Washington. The word *reconstruction* lost all its implication of rebuilding and became a symbol of retribution.

Charles Sumner and Thaddeus Stevens, declaring that the South was conquered territory, overthrew the work of Lincoln and Johnson and set up military authority throughout the southern states. The people upon whom leadership in the South had formerly rested were as rebels stripped of all political power, and government was placed in the hands of the inexperienced. The clever and unprincipled immediately took advantage of the poor and unlearned. A host of northerners, varying "all the way from unselfish philanthropists to narrow-minded busybodies and thieves," poured across the Ohio and the Potomac into Dixie, many of them, empty carpetbags in hand, looking for an easy way to fortune. Southern "scalawags" joined the eager horde. Democracy, using the ballot box, worked in strange ways. The one hundred and fifty-five members of the South Carolina legislature in 1868—not more than twenty-two of whom could

read and write—paid a total of only six hundred and thirty-four dollars in taxes.

Under the so-called "Negro rule," which was merely a blind for carpet-bag domination, the debts of the southern states grew with alarming rapidity. Politics fed itself fat at the expense of economic welfare. Within a few years the outstanding obligations of North Carolina increased from about sixteen million to forty-two million dollars and those of South Carolina from slightly more than five and a half million to approximately twenty-four million; the debt of Georgia grew from less than a million to eighteen million, and that of Mississippi and of Louisiana more than doubled. Plain graft, personal vindictiveness, and regrettable ignorance guided the course of government. Proceeds from bonds issued for the building of railroads were often stolen outright, and in one case at least they were traded for chips in a New York gambling house. Appropriations in every state exceeded revenues by many millions of dollars. The manager of the state-owned railroad in Georgia explained that "the exercise of the most rigid economy" enabled him to save thirty thousand each year out of his annual salary of two to three thousand dollars. Legislators who were almost totally illiterate requisitioned twenty-five-dollar dictionaries and ten-dollar gold pens. The South Carolina lawmakers bought elaborate furniture, some of which they carried home; they purchased too—with public money—such unpolitical things as tall hats, foodstuffs, "linen-bosomed shirts, suspenders, cravats, palpitators, embroidered ginghams, silks, stockings, chemises, garters, gowns, diamond rings and earrings, gold watches and chains, valises, combs, brushes, blankets, towels, a baby's swinging cradle, and even a metallic coffin." The poor whites and the Negroes whose votes made the thievery possible profited little.

Given an excuse in the Ku Klux Klan and racial inequalities and outbreaks in the South, political reconstruction dragged on through the years and came to an end only in April, 1877. Economic reconstruction, however, had scarcely begun. Rebuilding was indeed "the harder part of war."

The Financial Heritage. The southern states were required to cancel their war debts before restoration to the Union, and some of the national expenditures during the conflict were recovered through the sale of confiscated cotton and other property. Even so, the cost of the war to the nation was enormous. The ordinary disbursements for carrying on the American government from its beginning until the end of the fiscal year 1860 amounted to one billion seven hundred and eighty million dollars. In the next five years costs aggregated three billion four hundred and eighteen million. But this sum includes only the actual war spendings;

it does not include the destruction of persons and property, the tremendous outlay for political vengeance, or the pension payments, which have to date amounted to about eight billion dollars. The interest-bearing public debt jumped during the conflict from sixty-four million to more than two billion two hundred and twenty million dollars, making a per-capita increase from two dollars and six cents to sixty-three dollars and ninety-three cents. Professor Commager estimates that the entire money cost of the Civil War, North and South, may have exceeded twenty billion dollars.

Real estate levies and tariff rates rose to painful heights. Many people felt that the added load of reconstruction was needless. "We are groaning," complained an Illinois farmer, "under burdensome taxation. If the policy of Stephens [Stevens] and Sumner are carried out, involving additional expenditure of millions if not hundreds of millions in unnecessarily large armies of soldiers and armies of politicians under the Freedmen's Bureau bill piling taxes still higher upon the people, it will end in repudiation of the whole government debt. The money cannot be raised by the people." [4]

Fiat money brought many perplexing problems. The disturbance in the banking structure that had begun with the election of Abraham Lincoln in the fall of 1860 had culminated in complete suspension of gold payments before the end of 1861. United States notes to the amount of four hundred and thirty-three million dollars, with only the credit of the government behind them, had been issued during the war to meet the pressing need for an adequate circulating medium. The result was both inflation and fluctuation. Prices had soared throughout the war, climbing one hundred and sixteen per cent between 1863 and the coming of peace, when they stood at a higher point than ever before recorded in the history of the nation. Those who were shouting loudest about the unsoundness of the situation had profited most. Wage earners and salaried people had suffered intensely, for their incomes had advanced scarcely a third as rapidly as had the prices of the things they bought.

The national bank notes were a source of discontent. Backed by bonds, they were, according to the bankers, sound. But many saw no reason why an interest-bearing big piece of paper called a bond should be any sounder than a noninterest-bearing small piece of paper called a greenback—both were printed by the government, and both were based solely on the credit of the nation. There were other important reasons for the objections to the notes. The patriotic contribution of the soldiers toward saving the Union had consisted in carrying arms in the field at thirteen dollars a

[4] Quoted in Howard K. Beale, *The Critical Year* (New York: Harcourt, Brace, 1930), p. 226.

month in depreciated currency. That of the bankers and the financiers, on the other hand, had been limited to offering their dollars in exchange for bonds. But the securities had been bought at market prices in any available money, and toward the end of the war it had been possible to obtain for four hundred dollars in gold a thousand-dollar bond that paid from five to seven per cent interest. Moreover, the owner could deposit the bonds in the treasury at Washington and for every hundred dollars in face value get ninety dollars in crisp new paper notes to lend at whatever rates he could exact. The injustice was made fully evident in the trying years of readjustment after the war, when the former soldiers, struggling to adapt themselves economically to the changes in the nation, were forced to pay excessive interest rates and usurious commissions on their borrowings. Furthermore, the financiers never grew weary in their persistent argument that the government was in honor bound to pay the interest on its bonds in gold. The debtors and even President Johnson were convinced that the men who had provided money had rendered no greater service than had the countless others who had given of themselves. Not only had the wealthy and aristocratic not served in the army; some had advised their sons against doing so because there were "plenty of other lives less valuable."

Financial Reconstruction. When the task of disbanding the military forces was finished, the government turned to the problem of stabilizing the currency. Many difficulties were involved; there was no agreement in the country as to what steps should be taken, and congressional attention was centered chiefly on the coercion of the South. Hugh McCulloch, a native of New England and a conservative financier who had been a banker in Fort Wayne, Indiana, for twenty-eight years before his selection as Comptroller of the Currency at the creation of that office in 1863, was Secretary of the Treasury. Appointed to that office by President Lincoln in March, 1865, when the embarrassments of reckless expenditures, excessive taxes, burdensome debts, and inflated values were becoming obvious, he faced an onerous task. He turned first to the money question.

It seems reasonably certain that the lawmakers who created the greenbacks had meant to retire them with the soldiers, and the Secretary took the opportunity in his annual report for 1865 to remind Congress of the situation in the country. "Our prosperity," he said, "is rather apparent than real, . . . we are measuring values by a false standard, . . . we are, in fact, exposed to all the dangers which attend an inflated currency, which diminishes labor—the true source of national wealth—and stimulates speculation and extravagance, which lead invariably to thriftlessness and demoral-

ization. Before the country becomes again really prosperous, the specie standard must be restored, prices reduced, industry stimulated, the products of the country increased, the balance of trade between the United States and other nations cease to be against us." A few days later the representatives resolved by a vote of one hundred and forty-four to six that "this house concurs in the view of the Secretary of the Treasury in relation to the necessity of a contraction of the currency, with a view to as early a resumption of specie payments as the business interests of this country will permit; and we hereby pledge co-operative action to this end as speedily as practicable."

Although the desirability of resumption was generally conceded, many people doubted the expediency of lessening the nation's currency. A great number felt that if both the long- and the short-time loans were funded and the finances of the country carefully directed, gold values would eventually return without any disturbance in the business and financial world or any decrease in the amount of money. This contention was supported by the argument that during the war economic activities had so expanded that a larger circulating medium was essential to continued progress. Some said that contraction was a "double-quick march to bankruptcy"; others, less radical in their opposition, declared immediate resumption to be "Utopian in the extreme."

The most vigorous protests came, as always, from laborers and debtors, especially in the West. A traveler in that section reported that "since the large issue of Green-Backs, as a Lawful Tender Great Prosperity was produced extensively through that class which had formerly not been able to pay their debts, & educate their families, even by the hardest struggle, but often had been wretched, and almost ruined. . . . The very numerous respectable class that I have been speaking of, all through from the Bay of Fundy to the Mississippi, say that the Green-Back currency made so plenty, has been far the greatest blessing in the form of currency that they have ever known, or heard of in the world. Labor and everything else would sell for a good price and it is their earnest wish that influential men, who regard the good of the millions of people would do all they possibly can to have the laws made such that instead of withdrawing the Green-Back currency more shall be thrown into circulation; so much more is now needed since many parts of the South are now being opened to business enterprise." [5]

The farmers, many of whom had assumed obligations during the war when prices were high, objected strenuously to contraction. The inevitable

[5] Quoted in Beale, *The Critical Year*, p. 238.

result of making money dearer, they asserted, would be the starvation of thousands of women and children and the involvement of the common man in a hopeless struggle against the "greedy beasts of Wall Street." And deflation would indeed work a hardship upon those who made their living from the soil. When wheat sold at two dollars a bushel, a farmer whose land was taxed one hundred dollars could pay his bill with fifty bushels of grain. If it fell to one dollar, he would have to double the amount; and if it dropped to a quarter, he would have to sell four hundred bushels—and often his fields would not produce that much. Although increasing production both at home and abroad was partially responsible, the agrarians were convinced that the sole reason for the decline in prices was the appreciating value of money.

Congressmen soon became aware of the opposition in the country to contraction and trimmed their sails accordingly. Early in 1866 they restricted the cancellation of greenbacks to ten million dollars in the first six months and to four million a month thereafter. In May the Overend-Gurney failure in London precipitated a financial collapse in the British Isles that had serious repercussions in the United States. Many blamed the Treasury Department for the troubles that came, and in January, 1868, when less than forty-four million dollars in greenbacks had been withdrawn from circulation, further retirement was legally prohibited. Nothing more was done until after the panic of 1873.

Efforts to reduce the public debt by abolition of all interest obligations failed in Congress in spite of the approval of President Johnson, and hopes of reducing the tariff were not realized until long afterwards. The question of monetary reform was studiously avoided in national elections. Western Democrats in 1868 sought to force their party to accept the "Ohio Idea"; they demanded that the public debt be made payable in "dollars," either paper or gold, and strongly intimated that the printing press would be a pleasant means of reducing national obligations and relieving hard-pressed farmers and laborers. George H. Pendleton, leader of the plan, was defeated in convention by Horatio Seymour, and in the fall elections U. S. Grant, Republican, was swept into the White House by an overwhelming majority. The first bill that President Grant signed was one insuring the bondholders against payment in depreciated greenbacks. Thus the harassed debtors were temporarily routed. They were, however, by no means conquered, for they were to grow up in ever-increasing numbers as wealth rose higher and as hard times periodically struck the nation.

The Moral Heritage. Discontent in the country was not the only result of political and financial controversies. An apparent collapse of morals

added to the sectional and personal distrust that flourished everywhere. Wars always bring degradation, but the harvest of evils that America reaped in the ten years following 1865 was overabundant. Honesty was a virtue little known in the land among men in high places.[6] "The Grant era," says Professor Nevins, "stands unique in the comprehensiveness of its rascality."[7] Manipulations in railroad stocks and venal agreements among the owners poured millions of unearned dollars into the pockets of the magnates. Corners in food products and in gold were no less profitable to those who conceived and developed them and were more immediately disastrous to the unfortunate victims of the heartless schemes. Politicians gorged themselves at the expense of the public. The Tweed Ring in New York City was the most flagrant and the most open example of political corruption. Tweed, a poor chair maker, became in fifteen years a multimillionaire by appropriating the earnings of his fellow citizens. The courthouse, planned in 1868 to cost not more than two hundred and fifty thousand dollars, swallowed up eight million without reaching completion. On one day, April 5, 1870, nearly fifteen million seven hundred and fifty thousand dollars in fraudulent municipal bills, more than fourteen million of which was sheer plunder, was certified by the ring's members. Politicians in other cities were equally crooked, though not quite so skilled in the art of thieving.

State legislatures East and West were notoriously rotten. At Albany, New York, few measures could be passed without the purchase of a considerable portion of both houses, and the governor of the state was

[6] Corruption spread even to the diplomatic service. James Watson Webb, minister to Brazil; General T. B. Van Buren, representative of the United States to the Austro-Hungarian international fair in Vienna in 1873; and Robert C. Schenck, minister to Great Britain, all became involved in distressing scandals.

[7] Nevins, *Hamilton Fish* is the most thorough study available of the Grant administration. In listing the scandals of the administration Professor Nevins writes (p. 640): "The 'Erie War' of Gould and Fisk against Vanderbilt was fought out in 1867-68. Oakes Ames began his Credit Mobilier bribery in the first weeks of 1868. In 1869 the Tweed Ring theft became most brazen and unrestrained. In the spring of 1868 Speaker Blaine made his famous ruling in favor of the Little Rock & Fort Smith Railroad, and that summer asked his first favors of two Little Rock officers. During 1870 the Whiskey Ring took definite form in St. Louis. In the fall of 1870 Secretary Belknap's wife accepted the first corrupt payments in connection with an Indian post-tradership. In 1870 also the Freedman's Bank charter in Washington was amended by Congress, and the theft of its assets began. The year 1871-72 witnessed the Leet & Stocking exactions in New York, and toward the close of 1872 Minister Schenck was drawn into the toils of the Emma Mine promoters. The summer of 1872 produced that ludicrous knavery, the Southwestern diamond-field swindle which Clarence King so neatly exposed. The looting of Eastern savings banks and insurance companies was then almost completed. In brief, the years 1868-73 were the years in which corruption kept pace with the upward curve of the business cycle; in which the lax morals of the financial world were transferred to the political world. After the panic of 1873, virtue reasserted itself in the chilly air of the depression. It is an illusion to think of 1875-76 as the scandalous years. They were merely the years in which the great scandals of the earlier period were dragged to light."

suspected of having accepted a price for his approval of certain railroad measures. In Pennsylvania Simon Cameron demonstrated the fact that money was an essential to success in public office, and Matthew Stanley Quay "made politics expensive beyond the most extravagant dreams." Legislative scandals were publicly uncovered in Illinois, Wisconsin, and Missouri. Kansas, however, provided the most sensational exposé. There a young man, backed by his reform associates, who were supporting J. J. Ingalls for the Senate, found courage enough to rise in the legislature and lay upon the speaker's table seven thousand dollars which, he declared, Senator Pomeroy had paid him for his vote.

Dishonesty was rampant in federal affairs also. The Whisky Ring, using tactics associated with modern "rackets," blackmailed all its competitors into an organization whose chief purpose was the evasion of government taxation. Distillers in St. Louis defrauded the Treasury Department of more than a million dollars in 1874 alone. The Belknap scandal, the Star Route fraud, and numerous other unpleasant incidents involving national theft led suspicion of corruption dangerously near the Executive Mansion. President Grant stubbornly refused to recognize vice among the members of his official family.

Congress became entangled in the filthy coils of the Crédit Mobilier, a corporation that the controlling stockholders of the Union Pacific had formed in order to secure for themselves Gargantuan profits on the construction of the road. Oakes Ames, on the theory that "there is no difficulty in inducing men to look after their own property," prevailed upon other members of Congress to buy stock. Influential senators and representatives were allowed to purchase shares at par value when they were worth at least twice that amount, and some were permitted to meet their payments from dividends. An unforeseen quarrel brought into print in the New York *Sun* in 1872 a series of letters that revealed the sordid plans and evil intentions of the promoters. A congressional investigation disclosed the effectiveness with which Ames had worked in the House and the Senate. Even the Vice President, Schuyler Colfax, owned twenty shares; they had been paid for from profits. The strangest part of the whole episode is the fact that some of the lawmakers of the nation were never convinced that they had violated any moral principle, and at least one regretted only that his purchases had not been "larger in amount."

The corruption that characterized the years of readjustment immediately after the Civil War was not due to an inherent weakness in the citizenry. The rapid settlement of the West had undoubtedly contributed to the disruption of society. Besides, political power had in many cases been shifted

from long-established units to inexperienced groups, and wealth had come to many individuals whose normal expectations of riches had been extremely limited before the war. But the greatest cause of the deterioration was, perhaps, the abrupt emergence of the nation into a financial society that spoke of money in terms that were yet unintelligible. The term *millions* had on the whole little relation to actual money, and *billions,* except as a figurative expression, was beyond the ability of the most imaginative to grasp. The elementary canons of prewar prudence could not be applied to the new figures, for they were unfamiliar things. And so it was that the banker, the speculator, and the politician as well as the imprudent and the foolhardy juggled the unaccustomed sums that had come into use with ignorant recklessness. When fortunes were lost, the losers excused themselves to those who had been fleeced as nonchalantly as did Jim Fisk when he said of the money that he and Jay Gould had obtained in their effort to corner gold in September, 1869: "It has gone where the woodbine twineth." [8]

Population Adjustments: The Final Movement into the West. The Last Frontier is a story in itself, complicated and ephemeral, and it would probably have unrolled its pages even had the blue and the gray never met on the battlefield. Nevertheless, many of the forces that sent thousands of Americans into the trans-Mississippi West had their roots in the tragic years between 1861 and 1865. The eager search for gold and the need for votes in Congress during war and reconstruction were responsible for the admission of Kansas, Nevada, and Nebraska into the Union without regard to their population. Soldiers finding difficulty in adjusting themselves economically after being mustered out of service turned to the plains; railroad builders seeking gain created the cow country and then lured a host of farmers into the arid lands to turn under the grass; and business men inspired by the new vision of wealth that war had brought pushed across the Mississippi in quest of sales and profits. The new West was a part of the heritage of the Civil War as well as a powerful factor in the development of the nation.

The Miner's Frontier. The "Great American Desert," as the high plains had long been called, had not been without evidences of civilization in 1860. Spanish culture had existed in the Southwest before English colonization of the Atlantic coast began, and Brigham Young had established a Mormon refuge on the Great Salt Lake before 1850. Economically the most

[8] Corruption in the second half of the nineteenth century was a cankerous world-wide malady. Especially notorious were the political and financial scandals in England, France, and Italy.

important settlers in the immediate postwar years were the straggling prospectors wandering the dry creek beds or digging in the rapid mountain streams in search of gold and silver. They gave the nation the fleeting and uncertain "miner's frontier." Rumors of lucky strikes hurried thousands of eager wealth seekers into barren gulches to build up mushroom towns that often withered away as quickly as they had arisen. Territories with sufficient people to ask for statehood frequently found half their population missing within a few years. Typical of the fortune of those who followed the lure of the precious metals was that of the ambitious individuals who pressed toward the Rockies with "Pike's Peak or Bust" chalked on their wagons and a short time later struggled eastward with all hope gone and "Busted, by Gosh!" scrawled freshly under the faded and battered slogan that had announced their going.

The Cattle Country. The cattle country, the vast expanse of open, treeless, dry plain stretching roughly between the ninety-ninth meridian and the mountains that shut off the Pacific coast, did not become significant until several years after the miner's frontier began its growth. Neither the cowboy nor the prospector was economically fundamental in national development, but both definitely affected the course of events East and West. "The day of the cattleman" began at the close of the Civil War and ended about the middle of the decade of the eighties. Its origins were diverse. In the southern tip of Texas cattle multiplied with great rapidity. Even before 1860 some had been driven across the Mississippi to eastern markets and some herded westward to California to provide meat for the Pacific coast. Until the Confederacy was cut in two by the Union forces, Texas had supplied a part of the beef for the southern armies. When peace came in 1865, there were millions of cattle in the Southwest that could be hurried to the slaughterhouses.

The eastern factors involved in the appearance of the cattle country were varied. In the first place, the economic revolution that had come with the war brought a potential demand for enormous amounts of food products for the growing city population. Secondly, the invention of timesaving machinery and the development of refrigerator cars and canning processes spread the market for meat beyond limits previously envisioned. Last, and perhaps most outstanding, the thrust of the railroads out into the eastern edge of the plains country provided effective transportation facilities. In 1866 the Missouri Pacific reached Sedalia, and before long drivers were urging lowing steers toward the little Missouri station from which a great majority would move eastward to the Union Stock Yards in Chicago. The trail to Sedalia lay through the rough wooded country of southeastern

Kansas, southern Missouri, and northern Arkansas, however, and "mobs and swindling thieves" did much damage. Soon Abilene, on the open Kansas range, supplanted Sedalia and became the first real cow town in America. Later herds were driven northward to other railroad points, some even as far as Moose Jaw and Regina on the Canadian Pacific.

The glamor of the cattle kingdom has been written of too many times to be given space in an economic history.[9] The long winter vigils, the annual round-up, the boisterous saloons and dance halls, and the dramatic cowpuncher are merely colorful parts of the life of a society that was trying to adjust itself to a new economic environment. Few of the figures realized that they were living romance.

The Farmer's Frontier. The greatest contributor to the disappearance—as to the creation—of the cow country was the railroad. The moving fingers of population that followed the rails as they crawled into the grasslands wrote the end of the long drives. The nesters and the sheep herders had already closed off many of the water holes, but they were transients who might be summarily dealt with. The farmers who plodded out in the wake of the chugging trains, however, sat down to stay. They divided up the range and fenced in their farms with barbed wire. The cattlemen waged a losing fight against an enemy whose real force they could not see, for behind the agrarians were eastern industrialists who sought outlets for their wire, shoes, implements, and clothing and sources of food for their factory workers. The cowboy fell before the onslaught of the plow, and with him went the buffalo and the Indian, leaving the tillers of the soil to turn and snarl at the financial East that had encouraged their enterprise.

As the farmers gradually shoved the cattlemen from the great plains, the little glory that rode with the cowpunchers faded into the drab futility of an agrarian contest with a stubborn nature. The same forces that had pushed the plowman westward since the beginning of the nation still urged him on. The movement was accelerated by the passage in Congress during the Civil War of the Homestead Act, which the North had been urging for many years. The bill that Lincoln signed on May 20, 1862, provided that any person over twenty-one years of age who was a citizen of the United States or who had filed his intention of becoming one might be granted free of charge a quarter section (one hundred and sixty acres) of land after five years of residence. Soldiers were permitted to count their war service as a part of the required time, and anyone might after fourteen

[9] The best interpretative study of the region is Walter Prescott Webb, *The Great Plains* (Boston: Ginn, 1931). Professor Webb presents brilliantly the transformations in life wrought by the dry, treeless, and level land.

months pay one dollar and a quarter an acre and become the owner immediately.

The theory of free lands was a benevolent one: the earth was meant for rich and poor alike, and those who gathered up more than they could personally use were oppressors. David Lloyd-George was merely repeating what many Englishmen in America had been saying in one way or another since colonial days when he asked in 1909: "Who made ten thousand people owners of the soil and the rest of us trespassers in the land of our birth? . . . Where did the table of the law come from? Whose finger inscribed it?" But in operation the Homestead Act fell far short of the spirit of the law. Cattlemen, railroad corporations, and others forced their employees to take up claims and then surrender them to their employers. Water holes were fenced in and surrounding owners compelled to sell at low prices. Unfair advantage was taken of the provisions of the Stone and Timber Act and the law concerning desert lands. Large donations were made to the railroads as outright gifts. Although congressional investigations brought forth criticisms of the system, there was no remedial legislation. Land speculators, in fact, were often welcome in the confidential offices of the government at Washington.

Foreign ownership was particularly distasteful to westerners. Estimates of total European holdings ran as high as a hundred and eighty million acres, seven individuals and corporations owning more than ten million. Absentee landlordism with Oriental laborers was not an impossibility. In May, 1886, George Bancroft, American historian, wrote President Cleveland: "Suffer one of your sincerest friends to express the hope that . . . you will enforce at an early day the duty of protecting the laborer in his right to purchase with his savings a bit of public land for actual settlement. This cannot be done except from effectually repressing the tendency to its monopoly by wholesale domestic forestallers and English capitalists, who are seeking to establish on the larger scale the British system of landlord and tenant. Our democratic doctrine is for the plough in the hands of the owner of the soil." Arthur and Cleveland alone fought vigorously to enforce the law, but their efforts were as nothing; year after year the frontier ideal of each farmer with his own land and his own cottage grew less a reality.

In spite of difficulties the West was eventually settled, and before the turn of the century Manifest Destiny had at last spent itself. The frontier was gone. By December, 1890, all the states but Utah, Oklahoma, New Mexico, and Arizona had been admitted. That year the Superintendent of the Census reported that the day of free lands was over, and in 1894

Frederick Jackson Turner, young professor of history at the University of Wisconsin, wrote its obsequies and began its interpretation.[10]

[10] Actually free lands were available until long after 1890, and Frederick Jackson Turner was not the first to see the fruits of a closed frontier. Many keen observers sensed the impending changes before "Significance of the Frontier in American History" (*Proceedings* of the State Historical Society of Wisconsin, 1893) appeared, and Ignatius Donnelly, for instance, penned in his diary keen predictions forty years before Frederick Logan Paxson's brilliant *When the West Is Gone* (New York: Henry Holt, 1930) was printed.

Chapter 19

THE NEW INDUSTRIAL NATION

The New Industrialism. The Civil War was fought by an agricultural people. When Lincoln was elected in 1860, only slightly more than sixteen per cent of the population lived in towns of over eight thousand. Already, however, the puny shops, mills, and forges of earlier days had been left behind. The output of American factories had during the decade of the fifties jumped more than eighty-five per cent, and the war further stimulated manufacturing, bringing to eager industrialists boundless dreams for the future. And, indeed, the United States became in the latter half of the nineteenth century the leading manufacturing nation in the world. During the ten years preceding 1900, Britain's far-flung empire dropped into second place. That a few individuals who were sometimes unscrupulous and often lacking in social vision dominated the industrial scene is regrettable largely because of the staggering waste involved; the essential consequence of their efforts was to rush to an extravagant fruition an inevitable development. Since colonial days there had been a slow but certain drain of the population from the farms to the towns, and with every generation there had come new tools and new machines to make less arduous man's struggle for a living. So profound were the changes in mechanical production and in business and financial organization after the Civil War that the period is frequently referred to as that of the *new industrial revolution.* Goods of every description poured from the growing factories to enrich material life. The home, the farm, the shop, the store, the church, and the school—truly, every phase of human existence—underwent modifications little less than magical. Even though the "industrial captains" and the "financial barons" made excessive profits in dollars and in some cases transformed farmers and laborers into virtual servants to the industrial genii who wrought so marvelously in the land, society as a whole was the real recipient of the benefits of the age.

The machine was the keystone of the physical progress that was made. On account of the amazingly complex organization needed for its effective use, however, it brought with its blessings monumental problems that

necessitated a host of economic, social, political, and financial readjustments. The minds that conceived the instruments for converting raw products into finished articles were required to devise other instruments for utilizing the accompanying by-products. Capitalists had to build up financial resources powerful enough to install and maintain huge plants costing sums beyond the comprehension of a simple agrarian society. Industrialists were compelled to study not only the wants but also the purchasing ability of the nation lest they find their storehouses filled with unused goods; if the farmer, the lumberman, the cattleman, the miner, the well driller, or the wage earner, for instance, could not buy back in finished form the results of his work, the great plethora at the doors of the factories might smother all concerned. In addition, too frequent interruptions in the stream of crude resources of the earth flowing into the machines might allow the hungry giants to devour the proprietors financially, for, while laborers could be dismissed, interest rates went on and notes continued to fall due. Moreover, delicate mechanisms must be tended with expensive care for fear they might refuse to work.

The social implications of industrialism were as involved as the problems of physical maintenance. The shops that turned out engines, coaches, and tracks for the railroads that spread the population over the nation stood hard by other shops that produced electric cars that pulled the people into the cities and concentrated them—without regard to schools, churches, amusement, or health—in districts from which they might easily reach the pounding wheels that gave them their sustenance. About the plants where electrical equipment, telephones, bathtubs, gas stoves, and other modern commonplaces of the home were made clustered unfortunate human beings who never tasted the fruits of their labors and whose miserable surroundings were sources of burdensome crime and disease, the cost of which the rejoicing worshipers of industrial progress paid. Man has been taxed to the utmost to retain mastery of the machine he has created. Ever must he be on the alert for fear the servant that has brought him his greatest physical comforts might turn and rend him. Periodically when goods pile up and thousands of the poor go hungry and ill-clad, it seems that the fight has been lost, and the discontented long for "the good old days" when individuals wrested their existence directly from nature with their own bare hands.

The Economic Scene in 1865. With the exception of the troublesome problem of reconstruction the economic stage in 1865 was open and inviting. The Civil War had given impetus to manufacturing, developed in the East in particular a sudden demand for goods with ample opportunity

for excessive profits, provided emergency tariff legislation that proved of permanent assistance to the factory owners, and removed from the political scene the agricultural disciples of Jeffersonian democracy. Even more important, the people were at last ready to take advantage of the abundant resources that previous generations had scarcely touched. Manifest Destiny had inspired settlement of the continent from sea to sea. Trees of every size and variety still blanketed a great part of the vast domain of the United States. Along the Atlantic seacoast, throughout the crescent of the Old South, over the entire Mississippi valley from end to end, on the plains of the West, and along the Pacific shore lay soil whose broad acres could supply unlimited products for the industrial machines. Across Texas and for fifteen hundred miles northward grazed enough cattle to glut any available market. Beneath the surface of the earth was wealth untold. Three hundred and thirty-five thousand square miles of coal, anthracite and bituminous, awaited the miner to blast it into bits for the yawning maws of eager factories. Fabulous stores of oil and gas lay imprisoned deep underground ready to gush upward to serve mankind in myriad ways. Especially abundant in Pennsylvania, the southern Appalachians, and the Great Lakes region were ores that needed only the magic wand of the manufacturer to change them into iron and steel for the use of man. Gold, silver, copper, and lead were also to be found among America's material assets.

Almost as astounding as its presence was the fact that a large part of this vast treasure was still unclaimed. Nature had covered much of her mineral wealth with soil unsuited to the needs of the agrarian, and the poor farmers who because of their inability to cope economically with their wealthier neighbors had been pushed on to this unwanted land were glad to sell it for the proverbial song. Moreover, the government, owning fully half the national storehouse of riches, was ready through congressional land grants and other gratuities to give away its wealth to industrialists at little cost.

The Extent of Industrial Growth. Cold figures are never very expressive, but industrial growth between 1860 and 1900 is remarkable even when portrayed in mere statistics. In those forty years capital invested in manufacturing increased from one billion dollars to more than nine and a half billion, the cost of the raw materials from one billion to more than seven billion, and the value of the industrial output from less than two billion to more than thirteen billion. In 1900 a larger number of people still depended on farming for a living than on any other single occupation, yet sometime during the decade of the eighties the expanding fields of the nation became as producers of wealth less significant than manufacturing.

At the end of the century not more than sixteen states derived their principal income from agriculture.

Only a dozen specific industries manufactured in 1880 goods valued at over a hundred million dollars annually; twenty years later the number exceeded thirty. Milling, most important at the beginning of the eighties, was surpassed within a decade by slaughtering and packing, and before 1900 iron and steel had forged ahead.[1] Although declining in relative importance, the Middle Atlantic States, thanks to New York and Pennsylvania, led in production throughout the period. New England, holding second place in 1850, was far outstripped by the Central States before 1900; during the nineties Illinois, Indiana, and Ohio turned out more than thirty per cent of all American manufactured articles. "Nowhere else in the world," wrote S. N. D. North in the Twelfth Census, "has there been so rapid a transformation of the occupations of the population." Even the agrarian South was becoming dotted with small towns, and textile and lumber mills and tobacco factories were growing up. At the turn of the century the industrial wealth of the Western and Pacific States alone amounted to more than that of all the East fifty years before.

The Location of Industries. Manufacturing tended to concentrate in New England and southward along the Atlantic to Baltimore. But, without a single hampering customs law, factories spread inland rapidly; between 1850 and 1900 the center moved westward from Harrisburg, Pennsylvania, to Columbus, Indiana. Because they possessed peculiar advantages in abundant natural resources or highly developed transportation facilities, individual states in every geographic section led in the manufacture of particular products.[2] The West and the South became each year more im-

[1] If industry is classified according to general groups, the rank in 1900 was: first, foods; second, textiles; and, third, iron and steel and their products.

[2] The states that ranked first in various items in 1900 were: New York—dairy products, chemicals, men's and women's factory-made clothing, roasted and ground coffee and spices, confectionery, electrical apparatus and supplies, fur goods, men's furnishings, furniture, gloves and mittens, hosiery and knit goods, architectural and ornamental ironwork, malt liquors, lithographs and engravings, planing-mill products, millinery and lace goods, pianos, paints, paper and wood pulp, patent medicines and compounds, printing and publishing, shirts, wholesale slaughtering (not including meat packing), soap and candles, sugar and molasses, and cigars and cigarettes; Pennsylvania—carpets and rugs other than rag, coke, foundry and machine-shop products, glass, iron and steel pipe, leather (tanned, curried, and finished), and petroleum; Massachusetts—leather boots and shoes, rubber boots and shoes, cotton fabrics, rubber and elastic goods, and woolen and worsted materials; Connecticut—ammunition, rolled brass and copper, brass castings and finishings, brassware, clocks, corsets, cutlery and edged tools, fur hats, hardware, needles and pins, and plated and britannia ware; New Jersey—dyeing and finishing of textiles, sewing machines and attachments, and silk and silk goods; Rhode Island—jewelry and silverware; Illinois—agricultural implements, bicycles and tricycles, railroad cars, glucose, distilled liquors, and wholesale meat packing; Ohio—carriage and wagon materials, carriages and wagons, and clay products; California—explosives, canned and preserved fruits and vegetables, and vinous liquors; Maryland—fertilizers and canned

portant. Everywhere the turning wheels of mills and factories denied the hope of Jefferson that the nation might never "see our citizens occupied at a work bench, or twirling a distaff." The sage of Monticello had regarded "those who labor in the earth" as "the chosen people of God," but in the latter half of the nineteenth century census after census indicated that "manufactures . . . gained steadily upon agriculture." The Carolinas, in the heart of the Old South, stood in 1900 second and third in the production of cotton textiles.

Mass Production, Standardization of Parts, and the Piece-Rate System. One of the outstanding factors in the amazing growth of industry after the Civil War was mass production. The term in its most accurate sense may not be applicable to American manufacturing before 1900, yet it is properly used in its popular conception during the second half of the nineteenth century. Certainly the elements of bigness, maximum production at minimum costs, and scientific application of management, capital, and machines were present in recognizable form. Present too was the necessary accompaniment of "mass consumption." Throughout the land industry was not only reshaping economic and social life but also capturing public plaudits as it applied itself to the three basic problems of material progress: first, securing raw materials; second, maintaining and improving machines for turning out a host of new products; and, third, obtaining consumers for finished goods. Two of the physical essentials to greater production were standardization of parts and utilization of by-products.

The value of interchangeable parts had first been demonstrated in the making of rifles. Eli Whitney was operating a prosperous gun factory before the end of the eighteenth century, and the War of 1812 stimulated new experiments. In 1827 an investigating committee reported that "100 Hall rifles, made in 1824, were stripped and the metal parts mixed and remounted on 100 new stocks, the parts all coming together well." Many similar tests were conducted. Parts were not identical in form or in quality, however, and each individual piece was finally shaped with a file by a craftsman. It was nearly the middle of the century before steel dies and reasonably accurate cutting machines were available, and then only to a limited extent. The new method increased output, permitted reductions in prices, and enabled the consumer to obtain mechanical service and replacements readily and inexpensively. Moreover, it gave to manufacturing a

and preserved oysters; Wisconsin—lumber and timber products; Missouri—chewing and smoking tobacco and snuff; Louisiana—cloth bags; Virginia—tobacco stemming and rehandling; Minnesota—flour and gristmill products; Texas—cotton ginning and the making of cotton oil and cake; Colorado—lead smelting and refining; Georgia—turpentine and resin; and Washington—fish canning and preserving.

flexibility not otherwise obtainable. Component parts of a machine could be made wherever most suitable with absolute certainty that every piece would function properly. By 1900 sewing machines, watches, agricultural implements, typewriters, bicycles, and many other items were being produced on a mass basis, and already the manufacturing corporation that was little more than an assembling plant had come into existence.

The piece-rate system came as a result of efforts to eliminate loafing and inefficiency in industrial plants. Frederick W. Taylor, foreman in the Midvale Steel Company, originated the idea in 1882 in the hope of securing maximum factory production through standardization of motions, tools, and equipment and the payment of wages on the basis of units produced rather than of hours worked. His paper on "A Piece-Rate System," which he read in 1895 before the American Society of Mechanical Engineers, was in part responsible for the ultimate appearance in American universities of courses in "industrial management."

The Utilization of By-Products. Not until the experimental laboratories of the twentieth century began to function was utilization of by-products really effective, but there were many successful efforts before 1900 to turn traditional waste materials into economic assets. The refuse of cities, for instance, was made to pay for its collection: bones, glass, iron, and paper were sold to junk dealers, tin cans were baled and disposed of to concerns that recovered the solder, tin, and iron; heat from incinerators was sometimes used to create steam for generating electricity; and garbage was reduced by a vapor process to grease for export or for local use as fertilizer filler. The great piles of slag discarded by iron and steel furnaces were transformed into bricks and cement, and by the end of the nineties conversion of the sawdust of lumber mills into molded boards, paper, alcohol, and even cloth was being attempted. Coal tar and gas tar, formerly burned because they could not be thrown into the streams without polluting the water or buried without ruining the vegetation, became sources of artificial dyes. Ammonia was obtained in the process of making illuminating gas. Wool grease was rescued from the scouring water of the textile mills and used as a cold-cream base. No scrap of leather, rubber, wool, or silk was thrown away.

One of the most important industries founded solely on waste products grew up around the cotton gins. In 1870 only four per cent of the cottonseed that lay in piles around the gin shacks was utilized for economic purposes; by 1900 the amount had jumped to fifty-three. The shells made excellent fertilizer. From the kernels was extracted an oil valuable in manufacturing oleomargarine and soap as well as for use in cooking, temper-

ing, sardine packing, and putty mixing. It was employed also in miners' lamps. Cottonseed meal, made by grinding the pressed pulp of the seed, was fed to animals.

The packing houses too began to profit by materials once wasted. The sheep, cattle, and hogs that were herded into the slaughtering sheds now yielded more than meat and lard. From the brains of various animals came preparations used by medical men for the treatment of neurasthenia, agoraphobia, St. Vitus's dance, and other nervous disturbances, and from the rib marrow of freshly killed calves was taken medullary glycerin, powerful stimulant in the production of red corpuscles. Industrial by-products included glue, gelatin, fertilizer, soap, leather, felt, toothbrush and knife and umbrella handles, combs, buttons, brushes, pepsin, albumin, oils, oleomargarine, candles, glycerin, isinglass, tennis strings, sausage casings, hairpins, dice, bottle caps, artificial teeth, neat's-foot oil, and cyanide of potassium. Finley Peter Dunne, American humorist, pictured the spirit if not the fact of the age when he had Mr. Dooley say late in the nineteenth century: "A cow goes lowin' softly into Armours an' comes out glue, gelatine, fertylizer, celooloid, joolry, soft cushions, hair restorer, washin' sody, soap, lithrachoor an' bed springs so quick that while aft she's still cow, for'ard she may be anything fr'm buttons to pannyma hats."

The Growth of the Heavy Industries. Fundamental in the material growth of America after the Civil War were the so-called heavy or basic industries. These were concerned not with the creation of consumers' goods that measured the welfare of individuals but with the creation of things that made up the physical plant of the nation. They were the producers. They built giant furnaces that melted the ores of the earth; they shaped the steel rails that tied the continent together; they brought into being the locomotives and ships that transported the burdens of man; they fitted huge factories with machines that dwarfed the power of human beings; they made gigantic cranes that lifted tremendous loads; they formed great steel plates for covering the sides of battleships and guns for studding their decks; and they threw sturdy bridges across teeming streams and raised towering buildings to house the wonders of the new industrialism.

The Metals Industries. *Iron and Steel.* Although the railroad builder, the housewife, the farmer, the contractor, the implement maker, and the industrialist in every field became each year more dependent upon the iron that poured from the blazing furnaces, the second half of the nine-

teenth century is aptly called "the age of steel." [3] Improved methods of production enabled the mills to keep pace with ever-increasing demands as the use of the material widened. The Bessemer process, though used successfully at Wyandotte, Michigan, in 1864, was not widely employed until the decade of the seventies. By 1880 annual production had jumped to nearly nine hundred thousand tons. In the new procedure air was blown upward through molten iron in an egg-shaped "converter," and the resulting combustion burned out such impurities as carbon, silicon, and manganese. The steel thus produced soon proved its superiority over the brittle iron that had been used in railroad construction in the years when locomotives and cars were small and light. It was not, however, thoroughly satisfactory, for its quality could not be easily varied to suit the multitudinous needs of the age, ranging from screen cloth to the skeletons of giant buildings. Furthermore, since phosphorous and sulphur could not be removed during refining by the Bessemer method, ores from which the required pig iron could be made were limited to those containing only small amounts of these elements.

The open-hearth method of steel production, developed by the Siemens brothers in Germany and the Martin brothers in France, was first tried in the United States at Trenton, New Jersey, in 1868. The procedure was expensive in the beginning, and progress was correspondingly slow. But the new steel grew in favor each year, especially for sheets, plates, castings, and structural forms. As technological improvements appeared, output jumped from seventy-five thousand tons in 1880 to more than three million in 1900. This growth is easily explained. A great variety of iron could be utilized in the open-hearth process, and large amounts of scrap could be used in the charge. Even more important was the fact that the product was always under control; heat, regulated by automatic mechanisms, was blown over the molten mass at will, and samples could be taken at any time. Chemical elements were added or removed at the direction of laboratory technicians. Only when the metal was exactly suited to the purposes for which it was intended were orders given to tap the furnace and start the white-hot liquid on its way to the ingot molds.

Many advances were made in turning steel into usable form. Nails, once patiently beaten out by hand, were shortly after the Civil War being made

[3] Because of the spectacular uses to which steel was put, one is likely to forget the contribution of plain cast iron to the growth of industrial America. Iron was prosaic; it could not successfully carry a train or hold a building against the wind or span a great stream. Yet it was in many cases the burden bearer of the working steel parts. The frames of machines great and small were made of cast iron, as were also, for instance, gratings and fireplugs for city streets, boot scrapers and lawn mowers for urban dwellers, and pumps and cider mills for agrarians.

by automatic machinery; a single workman in a Wheeling, West Virginia, mill turned out in February, 1874, one hundred and seventy-six kegs in a week. A few months later the Pennsylvania Iron Works at Danville, Pennsylvania, heated, rolled, straightened, and punched ready for laying one hundred and fifty-six gross tons of rails in twelve hours. Giant hammers grew larger with each new installation, and by 1890 hydraulic presses had come into use. Everywhere, even in the financial structure, bigness seemed more and more to mark the industry. Fortunately attention was not devoted entirely to heavy pieces. By the middle of the seventies the scientific marvels that foreshadowed the delicate machines of the twentieth century were apparent. In 1874 a concern at Ironton, Ohio, rolled iron so thin that a piece three inches wide and five inches long weighed only nineteen grains, and the next year sheets one fifteen-thousandths of an inch thick were made in Pittsburgh.

With the exception of an important detached region around Birmingham, Alabama, where both ore and fuel were available, production units at first tended to cluster in a relatively narrow band stretching over the Alleghenies from Philadelphia to Pittsburgh. Roughly speaking, Pennsylvania paid more money in wages, invested more capital in plants, and turned out more iron and steel than all the other states combined; Philadelphia, Bethlehem, Johnstown, and Pittsburgh were busy centers of her industrial life. But giant furnaces and mills soon sprang up in the triangle of land bounded by the Ohio and Mississippi Rivers and the Great Lakes. Ironton, Cleveland, Canton, Youngstown, Mansfield, Chicago, Milwaukee, and Detroit were only a few of the cities that marked their westward movement. These new plants lay close to vast coal deposits in Pennyslvania, Ohio, Kentucky, and Illinois and in addition could draw ore from the Lake Superior district, richest in the world. The Vermilion and Gogebic Ranges in Minnesota were discovered before the Civil War, but ore shipments did not begin until 1884. The "red dirt" of the great Mesabi Range, discovered in 1866, started to move down the hillside to Two Harbors in 1892, bringing a new era in American industrial growth. In the meantime furnaces had appeared in Texas, Missouri, Kansas, Wyoming, Colorado, and California. They were insignificant, however, in comparison with the plants costing forty or fifty million dollars that were to be found along the southern shores of the Great Lakes. By 1900 the iron and steel industry had forged ahead of all others, and the roaring furnaces and the noisy mills reflected the economic welfare of the nation. Alexander Holley, Abram S. Hewitt, and Andrew Carnegie and his associates—

Charles Schwab, Henry Frick, and Henry Phipps—had been the most outstanding figures in the development.

The Lesser Metals. Copper, employed extensively even in the colonial period, became really essential in American economic life only in the years after 1865. Upon this rustproof and flexible metal, which still remains the best practical conductor of electricity yet discovered, rested the growth and development of the electrical industry in all its phases. Before 1900, in fact, practically everyone in the nation had become in one way or another indebted to copper. The telephone, the telegraph, and the electric streetcar are but three of the many mechanical marvels of the age that found copper indispensable in their growth. Light for teeming cities and for private homes as well as power for industry and for household equipment was likewise dependent upon the metal.

The output of the copper mines kept pace with the new demands. Production in Michigan, begun in the fifties, soon far outstripped that of the East, accounting for eighty-five per cent of the total by the end of the seventies. Ten years later Montana had forged ahead and Arizona was just beginning an enterprise that in the twentieth century was to make her the leading producing state. Improvements in refining greatly aided the industry. It eventually became profitable to refine ores containing as little as eleven pounds of metal to the ton. The new processes, however, called for huge sums of capital, and big business soon came to dominate copper from the mines to the fabricating mills.

Lead, used especially by printers, plumbers, painters, and electricians, was important also. Mines in Missouri, though the ore was poor, were throughout the period substantial producers, and the region around Leadville in Colorado and the Coeur d'Alene district in Idaho contributed appreciable amounts. Zinc, component of brass, was used in the electrical industry and in the manufacture of tubs, buckets, and pails. Smelting establishments were located in two distinct geographic regions, the first including Illinois, Indiana, Kansas, Missouri, and Wisconsin and the second Pennsylvania, New Jersey, and Virginia. Tin, used mostly in making bronze and in coating the thin iron plates from which household utensils and cans were produced, had to be imported, and aluminum, lightest of all the metals, was prohibitive in price until the perfection of the electrolytic process of extraction reduced it from about thirty dollars a pound in the early eighties to fifty cents in the late nineties.

Gold and Silver. The precious metals have played their most conspicuous part in America as money. Even in that role they have perhaps contributed less to national economic development than have the more prosaic iron,

steel, lead, copper, zinc, and aluminum. Always, however, they have appealed strongly to the imagination, and new discoveries have frequently set the world ablaze with excitement. The finding of the Comstock Lode in Nevada in 1858 started prospectors scouring every promising gulch in the Rockies. Fortunate strikes in the middle seventies brought into being Leadville in Colorado and Deadwood, Custer, and Rapid City in the Black Hills of the Dakotas. When machines replaced the washing pans of earlier days, mining the precious metals came to require both engineering skill and immense sums of money. In view of the expenditures returns were small; in 1880 the total yield of gold and silver was less than seventy-five million dollars.

Heavy Industrial Equipment. For many years after the Civil War the railroads attracted the outstanding engineering skill of the country. The small thirty-ton locomotives of 1865 were before the end of the century supplanted by efficient monsters of over a hundred tons. The Baldwin shops still led the field in production, though the fifty-million-dollar American Locomotive Company, a consolidation of all competitors, was soon to forge ahead. Freight cars too grew tremendously in size. The wooden boxes of 1860 that groaned under seven or eight tons were replaced by others carrying easily fifty tons or more. The steel car came into use by 1880, and before long it was to drive certain types of its flimsy rivals completely from the rails. Rapid improvements were made in sleeping cars and in cars for city transportation systems as well. Throughout the mechanical nation bigness was everywhere apparent. Giant machines and presses and cranes in factories, huge engines in plants and in ships, and capacious dredges and scoops on engineering and construction projects had made their appearance by 1900 and were soon to become commonplace.

Heavy industrial output included also great beams and steel cables for the bridges that increasing railway and highway traffic made necessary. The Eads Bridge across the Mississippi at St. Louis (completed in 1874) and the Brooklyn Bridge across the East River (completed in 1883) were the most notable, but many other important bridges were built, especially in the Middle West, before the end of the nineties. Elevated railroads and lofty buildings foreshadowing the skyscrapers brought new demands for iron pipe in a wide range of sizes for sewage, water, and gas mains.

Shipbuilding. The industrial progress of the United States between 1865 and 1900 did not extend to maritime construction. The glory that had belonged to American shipbuilders in the age of the great clippers just before the Civil War was never regained. The iron and steel mills were not favorably located in relation to the ways where the famous sailing

ships had once been turned out. Moreover, neither the mechanical skills nor the administrative procedures built up in the days of wood were applicable in the age of metals. Even more significant was the fact that the new masters of capital were little interested in pouring their dollars into an industry in which construction costs were high, technical production of needed material was not yet adequately developed, and a foreign nation (England) had already preempted the field. Shipbuilding, however, did not entirely disappear; though timber had to be imported from the South or the West, construction of wooden vessels continued in yards along the Atlantic, and by the early seventies some iron ships of substantial burden were being launched. The coastal trade—limited wholly to American ships—and the lake traffic in grain and ore were salient factors in maintaining the industry in spite of many handicaps. The first whaleback steamer for the lake trade was launched in 1889; during the decade of the nineties yards from Buffalo to Chicago turned out more than half the tonnage produced in the nation.

Sporadic interest in naval defense, strengthened by the imperialistic ventures that began in the years before 1900, turned some concerns to the building of battleships. The need for armor plate and heavy guns made new demands on the steel mills, but few companies other than Carnegie and Bethlehem were able to afford the large outlays necessary to obtain essential equipment, much of which had in the beginning to be imported from Europe. The naval program was in part responsible for mechanical progress in rolling nickel-steel ingots and in using hydraulic forging presses. The shipbuilding industry was nevertheless of little note in the great material advance of the nation.

Coal Mining. Exceeded in importance before the Civil War by wood and water power and outstripped in part in the twentieth century by electricity and oil, coal claimed the years between 1865 and 1900 as peculiarly its own. As the basic element in the production of steam it powered the great locomotives that knit the nation into an economic whole, the ships that sailed the seas, and the giant machines that day after day turned out a bewildering array of new products. As coke it fueled the towering blast furnaces that made possible the "age of steel." In the cities it was used in the manufacture of the gas and electricity that provided heat and light for urban dwellers; in the country it replaced wood as winter fuel, and the "grate" drove the andirons from the ancient fireplace. The veritable fairyland of by-products that it contributed to the nation was not developed until the twentieth century, but gas and tar in particular were used in large amounts before 1900.

In spite of the dramatic part that coal played in the growth of industrial America, the story of its production is throughout a tragic one. The mechanical marvels that it helped to produce could be little used in the mines from which it came. Only with the introduction of electrical equipment after 1900 were miners relieved of the back-breaking tasks of picking and loading coal manually. Wages were low and accidents more frequent than in any other established industry. Living conditions were in many instances dismal indeed. The squalid villages that hugged the mine openings were neither rural nor urban; since there were no sewers, no lighting systems, and no water mains but only crowded shacks along dirt paths, the dwellers therein enjoyed few of the pleasures of the country and none of the advantages of the city. The laborers in most places bought their food, clothes, and supplies at company stores and paid their rent to company treasurers. Accounts were in arrears with disheartening frequency, for days of work often averaged no more than one or two a week throughout the year. Only in the small anthracite district of Pennsylvania and in some of the larger bituminous establishments were things appreciably better, yet even there coal miners were plagued with economic and social poverty.

Basic among the many reasons for the unfortunate situation in the bituminous industry was the very abundance of the fuel itself. Lying in rich deposits throughout the nation, soft coal could in many places be mined with little initial outlay of capital and therefore, unlike oil and other rich resources of the earth, could not be dominated by a few captains of industry. In fact, it never achieved an industrial standing with stability in production and price. A few great corporations had their "captive mines" from which they drew their own fuel, but theirs was a buyer's and not a seller's psychology, and they, along with all other business men, sought desperately to keep the cost of coal at the lowest possible point. Generally speaking, profits were everywhere small, and as the mines spread over the Alleghenies into the Middle West and southward across the Ohio River, the inherent evils in the industry grew more rather than less. Competing fuels early in the twentieth century were to emphasize further the troubles that had long been acute, and coal was soon to become the first of the "depressed" industries.

Lumber and Millwork. Lumbering and the manufacturing of wooden products constituted in 1900 one of the four "billion-dollar" industries in America. The timber alone as it came from the forests and the finishing mills was valued at more than five hundred million dollars. Although stone, tile, concrete, and steel provided the structural material for the

growing industrial plants, wood retained its supremacy in building interiors. Large amounts were used also for furniture, kegs, casks, barrels, and packing boxes, and lesser quantities went into such various articles as matches, pencils, cigar boxes, show cases, sewing-machine cases, woodenware, refrigerators, rulers, and novelties of many descriptions. The conifer forests were by far the most significant economically. The pines provided considerably more than half the timber consumed. As the white variety of the northern states disappeared, the yellow pines of the South came into greater use, making up in 1900 over twenty-five per cent of the total lumber output of the mills. The hardwoods too were important, but production amounted to only twelve per cent of the whole; half of this small proportion was oak.

TABLE II

PERCENTAGE OF LUMBER PRODUCTION BY SECTIONS*

	Northeastern States	*Lake States*	*Southern States*	*Pacific States*
1850	54.5	6.4	13.8	3.9
1860	36.2	13.6	16.5	6.2
1870	36.8	24.4	9.4	3.6
1880	24.8	33.4	11.9	3.5
1890	18.4	36.3	15.9	7.3
1900	16	27.4	25.2	9.6

* From *Twelfth Census of the United States*, vol. ix, "Manufactures," pt. iii, p. 812.

Concentration of ownership and production was apparent by 1900, but big business had not yet come to dominate the lumber industry. The average capital of the sawmills at the end of the nineties was still less than ten thousand dollars, and the average number of workmen employed was only seven. More than eighty per cent of the saws in operation were, in fact, supplying local needs. Nevertheless, wealthy individuals and great corporations were mostly responsible for the rapid movement of the mills across the nation. Commercial lumber came from the timber frontiers, and there was found the largest capital investment per establishment. The average, for instance, was in Minnesota in 1900 over sixty thousand dollars, and the state possessed three of the four mills in the country producing in excess of one hundred million feet each annually. The increase in demand through the years led the greedy "timber barons" to spread their cutting crews ever wider over the national domain. Before the Civil War the ruthless destruction by the sawmills had begun to exceed forest

regrowth as the lumber centers moved slowly from Bangor, Maine, westward through Albany, New York, and Williamsport, Pennsylvania, and on beyond the mountains into the Northwest; with the perfection of band saws, steam carriages, power planers, and other mechanical aids in the seventies, eighties, and nineties the devastation became alarming. By the turn of the century the mills were already fleeing the denuded hills and flatlands of Wisconsin, Michigan, and Minnesota for more promising acres in California, Washington, and Oregon and along the Gulf in the Cotton Kingdom.

Paper and Pulp. Closely akin to the lumbering industry was that of paper. Books, newspapers, and magazines joined the hungry devourers of timber in the eighties as paper made of wood began to be fed into the presses of every city, town, and village in the land;[4] scarcely less voracious were the new standardized business forms, advertising catalogs, circulars and handbills, and city telephone and business directories that poured from the printing shops. Factories and stores throughout the nation consumed great quantities of manila as well as straw wrapping paper, and makers of luggage used considerable amounts of boards for partitions, drawers, and compartments. Paper bags and boxes were gaining in favor for industrial packaging. Builders and roofers found specially treated sheets and rolls helpful in insulating and waterproofing. Housewives redecorated their homes at little cost. Compulsory school attendance and some degree of efficiency in the enforcement of truancy laws helped swell the paper demand as thousands of children carried their rough tablets to the classroom. Altogether production rose from eight pounds per capita in 1880 to fifty-seven pounds in 1900, highest in the world. The variety was astounding, ranging from tissue to trunk boards, selling for from twenty to two hundred dollars a ton.

The basic machinery for paper making had been invented before the Civil War, yet technical progress was slow in the years preceding 1880. The shift to wood fiber and pulp during the decade, however, brought rapid advance. The average capital investment per establishment more than doubled between 1880 and 1890, and by 1900 some plants rivaled those of the textile interests. The Great Northern Paper Company of Millinocket, Maine, turned out two hundred and fifty tons of paper a day; it owned

[4] The chief daily papers of Manhattan alone in 1902 were using about a hundred and twenty-five thousand tons of paper yearly, the cost of which was approximately five and a half million dollars. Consumption was apportioned roughly among the papers as follows: *Journal*, forty thousand tons; *World*, thirty thousand tons; *Herald*, twenty-five thousand tons; and *Sun*, *Times*, *News*, *Press* and *Tribune*, thirty thousand tons altogether. The cost of the paper alone was frequently more than total sales income; the difference was made up from advertising.

the town that had grown up about it and completely dominated its employees. Automatic machinery came also with the change from rags to wood. Material for the new wood-pulp paper was prepared either mechanically or chemically. In the first process logs were merely ground into pulp by friction; in the second they were chipped into small pieces and the fibers then freed of all intercellular matter through the action of sulphurous acid or caustic soda.[5] Whatever the method, the mass was then run over screens, and as the liquid drained away, the deposit was dried, emerging eventually from heavy calendering rolls as a continuous sheet. By 1900 electricity was powering some of the great mills, and export shipments had begun. Private ownership and partnerships prevailed in the industry long after they had become unusual in others.

Leather and Its Finished Products. The products of the leather industry in the United States in 1900 were valued at more than six hundred million dollars. Consumption in terms of dollars had increased sixfold since 1850. As in most of the other industries, concentration in ownership and production made its most rapid strides in the last decade of the century. Pennsylvania, New York, Massachusetts, and Wisconsin were the leading states, but leather establishments were found throughout the nation. Only after 1880 was full advantage taken of machinery; up to that time hand labor had been chiefly relied on in tanning, currying, and finishing, and old formulas and practices had been tenaciously clung to. Tanneries had a tendency to follow the receding oak and hemlock forests westward.

Leather was economically important in many ways. Heavy hides from oxen, cows, and horses furnished soles for shoes; belts, washers, and lacings for machines; and harness for draft and pleasure animals. Skins from calves, goats, kids, deer, sheep, and pigs were used in a variety of articles, including boot and shoe uppers, shoe linings, trunks and traveling bags, purses, book bindings, saddles, upholstery covering for buggies and surreys as well as for furniture, and a host of incidental items.

Petroleum and Gas. While neither petroleum nor gas was employed to a large extent in industry until the twentieth century, the production of crude oil mounted steadily in the post-Civil War period; consumption in the refineries rose from seventeen million four hundred thousand barrels in 1880 to thirty million six hundred thousand in 1900. Much of the refined product in the form of kerosene, often called coal oil, served as fuel for the rural and village lamps of the nation. Some gasoline was used in

[5] The spruce forests provided three-fourths of the raw material for the new paper of industrial America; poplar, used chiefly in the soda process, supplied half the remaining twenty-five per cent. Hemlock, balsam, and other woods were used in small amounts.

stoves and engines, and each year more and more high-quality oils and greases were needed for the machines of industry. Gas for illuminating purposes was growing in favor also. Establishments for the production of artificial gas multiplied nearly thirtyfold between 1850 and 1900. Capital invested grew from six and a half million dollars to five hundred and sixty-seven million, and the value of the output from slightly less than two million to more than seventy-five and a half million. The use of manufactured gas increased two hundred and eighty-one per cent during the nineties.

The Manufacture of Glass. Decorative glassware as well as more practical items had been turned out even in colonial days, but commercial glassmaking rose to importance only in the second half of the nineteenth century. Capital invested jumped from three million dollars in 1850 to more than sixty-one million in 1900. The output was no longer—as it had been in the years preceding the Civil War—made up chiefly of windowpanes and an assortment of bottles and jars for the housewife, the apothecary, and the grocer. The introduction of kerosene as an illuminant created a demand for millions of glass lamps and chimneys, the rise of industrial dairying and an increasing thirst for beer and soft drinks brought a need for bottles of great variety and number, the growth of urban centers stimulated immensely the production of Mason and other jars as food containers, and the development of a new mercantilism with palatial department stores as outlets necessitated the use of plate glass in large quantities.

Although abortive attempts at manufacturing plate glass had been made at Cheshire and at Lenox Furnace in Massachusetts in the decade of the fifties, the first successful plant was built in New Albany, Indiana, in 1869 by Captain J. B. Ford. This establishment, which began turning out polished plates as early as 1873, was beset by many difficulties and eventually failed. In 1880 Captain Ford, who had given up his interests in the New Albany venture in 1872 and during the next three years had started factories at Louisville, Kentucky, and Jeffersonville, Indiana, formed with John Pitcairn the New York City Plate Glass Company and began the construction of a plant at Creighton, Pennsylvania. Out of the struggles of these two men came in 1883 the Pittsburgh Plate Glass Company, which by 1895 had swallowed up most of its competitors. Sensing the fact that the major financial losses involved in glassmaking were suffered in distribution and not in production, the corporation in 1896 began to set up in the leading cities of the nation branch stores that not only delivered their fragile goods safe to the customer but, on request, installed them as

well. At the same time better manufacturing processes were developed. The introduction in the late nineties of the annealing lehr, or leer, a series of connecting furnaces of diminishing temperatures through which the plates were passed on rollers, was a vast improvement; the cooling process that had formerly required approximately three days could by the new method be completed within three hours. Moreover, a twenty-thousand-dollar lehr could displace ninety-six of the old-style three-plate kilns, which cost some thousand dollars each to build. Continuous movement was applied also to grinding and polishing.

New methods and new machines were devised too for the manufacture of window glass, jars, and bottles. Continuous-tank furnaces replaced the old pot type in many places, and compressed-air pipes connected with molds on revolving tables supplanted human blowers in the production of bottles and fruit jars. Structural glass appeared, and special plants were set up for bending glass for store fronts and greenhouses and for other purposes. Everywhere, in fact, the use of glass was growing with remarkable rapidity.

The Consumers' Goods or Sustaining Industries. One of the primary purposes of the economic labor of man is to provide himself with the materials he needs for sustenance and for making life more than a mere tolerable experience. These consumers' goods, as they are often called, are made up of food and clothing and furniture and watches and clocks and all other products that serve individuals primarily. During the nineteenth century industry as such was overwhelmingly concerned with building the great physical plant of the nation; by 1900, however, the trend of the future was already apparent, for year after year an ever greater proportion of the output of the factories was destined for personal consumption and personal satisfaction.

The Foods Industry. *Meat Packing.* Manufactured food products in 1900 were valued as a whole at more than two billion dollars. The largest single item in the total was meat. Before the Civil War the packing houses had moved over the Appalachians to center in Cincinnati and neighboring towns. After the return of peace in 1865 Chicago, lying conveniently near the cornfields and at the eastern ends of the railroads that reached out into the plains then being overrun by the cowboys, slipped quickly into the lead. Goodnight, Chisholm, Dawson, Piper, McKee, and other pioneer western cattlemen opened the way for Armour, Morris, and Swift to build the metropolis at the southern end of Lake Michigan into the greatest cattle town in the world. The thirty-five thousand dusty steers shipped eastward from Abilene, Kansas, in 1867 grew to more than half

a million by 1871, and the number continued to increase for several years. Before the end of the decade of the eighties, however, the range had been fenced in and the cowboy and his wandering herds had virtually disappeared. But cattle, fattened in the cornfields, still poured into Chicago, where at the end of the century approximately a million eight hundred thousand were being slaughtered annually. The yards were crowded with other animals too; seven million hogs and three million sheep were processed in the packing houses of the city in 1900.

The Union Stock Yards in Illinois' great metropolis was the largest industrial food-production center in the world. Fifty thousand men, women, and children were employed in the three-hundred-and-twenty-acre plant, their tasks varying from pig feeding to scientific research. Production included besides meat and meat products an array of goods ranging from fertilizer and glue to perfume and medicine. The yards provided an important market for corn and hay and other feed for livestock. A host of commission merchants acted as agents for the farmers whose cattle, hogs, and sheep were daily unloaded into the welter of stench and dust that hung over the spreading pens. Indianapolis, St. Louis, Milwaukee, South St. Joseph (Missouri), Omaha, and Kansas City also were busy packing cities; the last three grew with especial rapidity during the nineties, although at the end of the decade their combined output scarcely equaled that of Chicago. Altogether the giant plants in 1900 processed nearly three billion pounds of fresh beef, a billion two hundred million pounds of fresh pork, a billion three hundred million pounds of salted pork, three-quarters of a billion pounds of ham, nearly a billion pounds of smoked bacon and sides and shoulders, almost three hundred million pounds of sausage, four hundred million pounds of fresh mutton, and a billion pounds of lard. Chickens joined the never-ending stream of hogs, cattle, and sheep into the stockyards; the number slaughtered more than doubled in the ten years following 1890.

Packing houses sprang up in the West for the simple reason that the cornfields of the nation were there. The remarkable growth of the industry, however, was the result of many factors. The economies achieved by the introduction of endless chains, moving belts, and other laborsaving devices facilitated production, as did also the scientific application of human energy. As the raw materials moved through the plants, each individual had his specific task; sometimes a workman made only one or two strokes with his knife. It required more than two hundred men to convert a steer into dressed meat. "The animal has been surveyed and laid off like a map," wrote John R. Commons in 1905, "and skill has

become specialized to fit the anatomy."[6] Profits derived from the utilization of by-products greatly aided the expansion of the packing business, and the spread of the national transportation system widened the marketing area each year. But most important of all were the development of artificial refrigeration and the perfection of the refrigerator car. The first made summer packing possible, and the second gave rise to the fresh-beef trade. Manufactured ice, known in America probably as early as pre-Revolutionary days, was not made in commercial quantities until after the Civil War. As late as 1870 slaughtering was still carried on almost exclusively in the winter months, and pork, as it had always done, made up the major part of the product. Though the first shipment of fresh beef to the East left Chicago for Boston in September, 1869, in a refrigerator car built on the patents of William Davis, it was not until ten years later that steaks and roasts and other cuts of fresh meat became regularly available to eager consumers as an established part of the commerce of the land. Mechanical developments were not wholly responsible; the rise of cities was basic in the change. No place in the nation reflected so strikingly as did the busy stockyards of Chicago the fact that urbanization was rapidly overtaking America, for, with the exception of relatively small amounts of bacon and salt pork bought at crossroads stores, country people still killed and preserved their own meat.

By 1900 packing had become a modern industry. Because large outlays of capital were needed in building and maintaining plants, machinery, refrigerator cars, and a wide variety of other equipment essential in processing and marketing meats and the accompanying by-products, it had come also to be dominated by a few individuals. The "beef trust" was a reality.

Milling. While the packing houses were spreading westward, the flour mills were following the grainfields from the Atlantic coast onward along the Erie Canal and the southern end of the lakes, dipping downward to St. Louis, and coming at last to center in Minnesota, heart of the wheat empire. In 1870 the great eight-story granite "Washburn A" plant at the falls of St. Anthony, measuring one hundred by two hundred and forty feet, contained storage room for one hundred and sixty thousand bushels of wheat. When it was in full operation, forty-nine millers and their assistants could produce some four thousand barrels of flour a day. Close by on the eastern bank of the Mississippi was being erected the even more astounding "Pillsbury A" mill, which was ultimately to reach an output

[6] Quoted in William H. Kiekhofer, *Economic Principles, Problems, and Policies* (New York: Appleton-Century, 1941; revised ed.), p. 68.

of fifteen thousand barrels daily. By 1880 Minnesota was grinding more wheat than any other state. The twenty-two establishments in Minneapolis alone in 1885 were capable of turning out more than fourteen million pounds of flour every twenty-four hours. Furthermore, the millers of that city were important personages in determining in part at least the destinies of the railroads in the region, they owned well-placed elevators throughout the wheat area, they held large shares in the banks of the city, and they dominated the wheat-minded Minneapolis Chamber of Commerce. These men of business, though bitterly hated by the farmers whose grain they bought at the prevailing low prices, had by 1900 not only pushed Minnesota far into the lead as the greatest flour-milling state in America but also made Minneapolis the marketing center of the agrarian Northwest.

The remarkable success of Minneapolis in flour production rested primarily on the development of new milling processes. The expansion of agriculture westward brought always the necessity for agrarian and industrial readjustments, and the spread of the grainfields into Minnesota and neighboring states was no exception. Soft winter wheat (planted in the fall), which flourished in warmer sections, did not survive the cold weather of the region. A newly introduced spring-planted variety that was introduced yielded bountiful harvests, but it was soon discovered that the old methods of grinding were not satisfactory. The hard, brittle kernels when run once through the ponderous millstones, as was the accepted practice, emerged with the husk, the germ, and the starchy portions so thoroughly pulverized and intermingled that they could not be easily separated. Obviously separation had to be accomplished before actual flour making was begun. This was achieved by first merely breaking or granulating the wheat under slow-turning stones, after which the "middlings," or flour-bearing part, was reground and sifted until all extraneous material was removed and it was powdery fine and ready for the bakery kitchen or the deft touch of the homemaker. A "middlings-purifier" designed in 1870 by Edmund N. Lacroix at the Minneapolis mills of George M. Christian insured the success of the "new process" milling.

Other technical progress was made in the milling industry. Rollers of chilled iron or of porcelain soon replaced the ancient stone burrs that had long ground the grain of the world. The change marked the completion of the industrialization of flour making. The "gradual reduction" and "new process" methods of milling[7] had several years before the turn of

[7] The three most important processes of flour making were referred to as the "old," the "new," and the "gradual reduction." In the old process the grain was ground but once, and

the century made hard spring wheat a staple crop, established the superiority of Minneapolis flour, and begun to close up the gristmills that dotted the rural roads of the land.

Although Americans individually still consumed more corn in edible form than any other people in the world, the amount milled, including feed for animals, amounted to scarcely half that of wheat. Small quantities of rye, buckwheat, barley, and oats were ground for food or for use in the brewing industry.

Bread and Other Bakery Products. The work of the laboratory scientists and the appearance of great corporations lessened the importance of the traditional "butcher, baker, and candlestick maker" as figures in American economic life. By the beginning of the twentieth century commercially baked bread of unvarying quality and reasonable price, fresh from the trust-owned ovens, had eclipsed an ancient household art and in the larger cities at least driven many corner bakeries into oblivion. Crackers and cakes, however, had been sold in crossroads stores long before factory-made "light bread" became popular. In 1900 the nation bought bakery goods amounting to one hundred and seventy-five million dollars as compared with sixty-five million twenty years earlier, yet industrial baking on a large scale was still in the future.

Dairy Products. Though the manufacture and distribution of dairy products became significant only in the twentieth century, quantities of butter, cheese, and condensed milk were being produced on a commercial basis throughout the last twenty-five years of the nineteenth. The output rose in value from slightly more than twenty-one million dollars in 1880 to one hundred and thirty-one million in 1900. New York, leading dairying state, processed in 1880 more than one billion three hundred million pounds of milk, or almost exactly half the national total, but in all the region north of the Ohio and westward to the Great Plains the household was slowly giving way to the factory in the making of butter and cheese for urban consumption. Pennsylvania, Ohio, Indiana, Illinois, Wisconsin, Iowa, and Michigan were large producers. As early as 1880 Iowa surpassed New York in butter making, and by the end of the century Wisconsin was forging ahead toward dominance in the production of cheese. Notwithstanding the fact that local communities of recently arrived immigrants in the West were beginning to specialize in Swiss and other

the husk, or bran, (used almost exclusively as food for animals) and the germ (which injured the keeping quality of flour) were then sifted or "bolted" out. The new and the gradual-reduction process differed chiefly in the number of times the grain was ground—two or three in the first and five or six in the second. The gradual-reduction method was borrowed from Hungarian millers at Budapest.

European types, eighty per cent of the cheese was standard American. Three-fourths of the butter was marketed in tubs or similar containers; generally consumers in New England, in Pennsylvania, and on the Pacific coast preferred prints, rolls, or balls of from one to two pounds in weight.

Sugar and Glucose. For many years after the Civil War sugar refining was a slow and cumbersome process. Modern machinery did not come into general use until nearly the beginning of the twentieth century. Refining was, in fact, chiefly a family affair, and mills passed from father to son sometimes through several generations. The Havemeyers of New York and Brooklyn were especially prominent. It was Henry O. Havemeyer who first realized that the industry could be profitably run only as a big business and with financial favors from Washington. With samples in his hands, arguments on his tongue, and money in his pockets he was from the beginning of the eighties a familiar figure in the halls of Congress. He wrested protection and subsidies from reluctant lawmakers and in 1891 formed the still colossal American Sugar Refining Company, thereby providing the people with a new opportunity to grumble at the lengthening list of trusts. Producers of beet sugar met with many difficulties. The plants could be grown in most of the northern states, but profits depended almost entirely upon heavy subsidies from the government. E. H. Dyer established a reasonably successful refinery at Alvarado, California, in 1879, and Claus Spreckels built another at Watsonville a few years later. In 1889 the Oxnard brothers began at Grand Island, Nebraska, a factory that became in a decade the American Beet Sugar Company.

The production of glucose (a corn sugar used in table syrups, strained honey, confectionery, and other products in which a cheap, mild sweetening is needed) began in 1870. Factories in the Middle West and in New York were by the middle of the eighties consuming from eleven to twelve million bushels of corn a year. In 1897 all the mills in the country with one exception were united into a trust under the name Glucose Sugar Refining Company.

Canning. Although corn, tomatoes, and other vegetables as well as some meat, fish, and oysters had been canned on a limited scale before the Civil War and Gail Borden had between 1860 and 1865 sold large quantities of condensed milk in tins to the Union army, American housewives before 1900 bought only small amounts of canned goods. High prices, prejudices, and fear of being poisoned kept demand low, and as a consequence the industry, especially until 1880, grew slowly. The total value of the product at the end of the century was only slightly more than eighty-two million dollars, apportioned roughly as forty-four per cent veg-

etables, twenty-four per cent fruit, twenty-seven per cent fish, and five per cent oysters. Maryland, New York, Indiana, Illinois, and California led in preserving vegetables, and California packed more than half of all the fruit. Salmon was the most important of the fish canned. The canneries, set up first on the Sacramento River in California in 1864 and on the Columbia two years later, spread on to Alaska in 1878. Sardines were put up chiefly in Maine and oysters in Maryland. At first cans were rolled and soldered by hand, but by the middle eighties both ordinary and key-opening containers were being made by machinery.

The Textiles. The textiles industry, second in value of output in 1900, was concerned with the production of cloth of every description and was intimately connected with the manufacture of clothing. Though the fundamental mechanics of weaving were well developed before the Civil War, improvements continued to be made throughout the rest of the century. Increasing amounts and varieties of fabric were needed, but complicated manufacturing devices were not altogether desirable because the textile factories had always drawn their workers mostly from the ranks of the untrained. Surplus farm women, wives and daughters of local fishermen and whalers, immigrant Irish, French-Canadians, and discouraged English families had long oversupplied the northern mills with operatives. The excess grew in the eighties and nineties as a horde of pauper peasants from southern Europe poured into Atlantic ports on every ship and swelled the lines of laborers looking for work. The mills of the South drew almost entirely on local town population for help; when that was inadequate, boys and girls were recruited from the back country, where the traditionally large families always provided more people than could be employed on the hilly farms.

Two of the greatest handicaps to speed in weaving were the breakage of warp and the necessity for frequent stops for insertion of fresh bobbins in the shuttle each time the weft was exhausted. A simple contrivance was eventually devised for automatically stopping the loom whenever the warp broke. The problem of replacing bobbins was more difficult. In 1894, however, the Draper Company of Hopedale, Massachusetts, introduced the Northrop loom, which in a twentieth of a second—the time the shuttle rested in the shuttle box—threw out the empty bobbin and put in a new one without halting the machine. In spite of opposition by established factory owners in New England, more than forty-two thousand looms were sold within five years. No other invention in the post-Civil War period did so much to advance the production of plain cloth. A machine

devised by the Crompton and Knowles Loom Works of Worchester facilitated the creation of fancy patterns.

Cotton Textiles. The most important single item in the textile-weaving industry was the manufacture of cotton cloth. While New England still held the lead, the South, many of its mills equipped with the best machinery available, was steadily increasing its output. The number of spindles grew from about six hundred thousand in 1870 to more than four million thirty years later; the Carolinas spun half their own cotton crop in 1900. Altogether, cotton consumption in the nation more than doubled in the twenty years preceding the turn of the century, and the value of the finished product rose from one hundred and ninety-two million to three hundred and thirty-nine million dollars. New methods of finishing, especially mercerization (which was actually a reintroduction),[8] stimulated the market for cotton cloth. Knit cotton hosiery and underwear and cotton small goods such as tape, webbing, figured labels, banding, belts, belting, trimmings, and edgings as well as flat and round braids, including millions of shoe and corset laces, were growing in importance.

Wool Textiles. The woolen industry, subject in colonial days to royal decrees and throughout the history of the nation to shifts in tariff regulations and vagaries in styles, has run a fretful course. The price of the raw material has always fluctuated with disastrous rapidity, the post-Civil War period being no exception; in 1899, for instance, it jumped upward with reckless speed only to collapse so completely the next year that many mills were forced to close. Furthermore, mechanization was not complete. At the end of the century many housewives in America still spun their own thread and knit stockings, socks, gloves, and wraps for their families. And, though their work was described by a census reporter as "a vanishing industry," owners of small mills continued to make up wool for their local customers "on the halves" or to card, spin, and weave at fixed prices. On the whole, however, the woolen industry grew in importance each decade. The cloth that came from the looms varied in type according to demand. Before 1880 broadcloths, doeskins, cassimeres, flannels, and other plain, substantial fabrics made of carded wool were used extensively, but thereafter worsted cloths, suitings, dress and upholstery goods, and braids made of combed wool quickly gained favor. The value of worsteds moved upward from twenty-two million to one hundred and twenty million dol-

[8] Mercerization, a chemical process that imparts a sheen to cloth, was developed by John Mercer and patented in 1850. Mercer, an English factory worker of humble origin, was a self-taught genius. He not only made many improvements in the production and printing of cloth but also invented the blueprint process of reproduction. In 1852 he was elected a Fellow of the Royal Society.

lars between 1870 and 1900, and the amount of cloth produced for use in men's and women's clothing more than tripled during the last ten years of the period.

Considerable amounts of worsted yarns were used also in the manufacture of carpets, in which America led the world. Erastus B. Bigelow of Boston, Massachusetts, and Alexander Smith and Halcyon Skinner of Yonkers, New York, were mostly responsible for the application of power machinery to this particular type of weaving. Expansion was marked after the Civil War; the product increased in value from less than eight million dollars in 1860 to forty-eight million in 1900. Firms in New York and Massachusetts specialized in the finer grades of carpets and rugs. Those in Pennsylvania and New Jersey capitalized on the growing desire of middle-class urban Americans for hardwood floors covered with ingrain carpets and art squares. In fact, the output of the mills of Philadelphia and its suburbs in 1900 amounted in value to nearly half that of the rest of the nation. Axminsters and Wiltons were especially favored in the flamboyant nineties, when homes were overstuffed and the Gibson girl was popular; production of the former jumped in those ten years from three hundred and seventy-nine thousand to five million yards and of the latter from one million yards to more than four and a half million.

The United States led the world also in the manufacture of hosiery and knit goods; only in silk weaving, perhaps, was progress so remarkable. Capitalization rose from five hundred thousand dollars in 1850 to eighty-one million at the turn of the century, and the value of the goods increased during that time from one million to ninety-five million dollars. Cardigan jackets, gloves, mittens, and other minor items accounted for nineteen million of the ninety-five-million-dollar output in 1900; hose and half hose for twenty-seven and a half million; and two-piece underwear for forty-five million, with an additional three and a half million for union or combination suits of one type or another. Obviously the day of the red flannels, frequently referred to at the time as "scarlet," was passing.

The manufacture of wool felt for boot and shoe linings, upholstery, belts, and other items was a minor but not insignificant industry. Closely related to it was the making of felted-wool hats, which, though in vogue in the eighties, were soon sold almost exclusively in rural stores. Felt hats made of rabbit, cony, and nutria fur came to be used in the urban areas; more than twenty-two million a year were being manufactured by 1900.

Silk Goods. While scarcely more than a third as important in money value as the wool industry, silk spinning and weaving made astounding strides after the Civil War. Between 1860 and 1900 the proportion of

domestic to imported cloth consumed rose from thirteen to seventy per cent, and the nation, producing none of its raw material, became a serious rival of France. At the Paris exposition in 1900 American thread won the grand prize, and ribbons woven on American-designed looms were awarded the gold and silver medals. The mills tended to concentrate in New Jersey, Pennsylvania (in the coal-mining towns), New York, and Connecticut; Paterson, New Jersey, alone had seventy-seven silk factories, and in 1900 nearly half the establishments in the country were located in the state. In the twenty years before the end of the century the value of silk goods produced jumped from forty-one million to one hundred and seven million dollars. Silk, however, was still an exclusive fabric; except for bits of hair ribbon it had not yet become the birthright of every young girl regardless of whether she was rich or poor or whether she lived in town or in country. Silk underwear was manufactured in limited amounts, and outer apparel of silk was available in the larger stores. The height of respectability for the social matron of the nineties was a black silk dress.

Ready-Made Clothing. A large part of the cloth that came from the busy looms of America was used in the manufacture of clothing. Declining prices brought increasing sales. No longer did the head of the household have to make his wedding suit last a lifetime, and boys began to rebel at wearing the cast-off garments of their elder brothers. Machines had wrought economic wonders in every field, and the purchase by ordinary people of goods formerly enjoyed solely by the wealthy was nowhere more apparent than in dress. Men's suits, cut by power-driven knives or circular disks (introduced by Albion and Wurth in their factory on Staten Island, New York, in 1872) and sewed on improved machines, were relatively inexpensive.

The manufacture of clothing was to some extent not an industry so much as it was merely an occupation in which the woefully poor, dominated often by clever but ignorant and greedy masters, eked out a living in disheartening surroundings. Ambition, energy, capital, and industrial knowledge were frequently lacking. Long after the use of power machines had become established in other industrial fields, suits and dresses continued in many miserable shops to be made by foot-power sewers and hand needles. In fact, the domestic system of production was increasing rather than declining as the nineteenth century drew to a close. Thousands of women in New York and other large cities sat in dirty tenements, in shops at the rear of cheap dwellings, or in their squalid rooms plying their trade by night as well as by day for pitifully small wages. Payments were generally made on the basis of "tasks" completed, and, since competi-

tive bids could not be met by mechanical or scientific economies, the size of the task per given payment rose; cheaper prices in clothing were thus achieved mostly through the sweat of the laborers. Yet the characteristics of industrialization were not entirely absent. Specialization and localization, for instance, were obvious. Collars and gloves were manufactured in Troy and Gloversville, New York, respectively; Danbury, Connecticut, became known for hats; and it was usual for coats, vests, and trousers of the same suits to be made in widely separated towns. Laborsaving machines were available too, and in few other industries was the economy of time more striking. To shrink, cut, sew, and finish one hundred men's suits by machine required only slightly more than two hundred and twenty-seven total labor hours, as compared with twenty-four hundred by hand.[9] Twelve dozen overalls turned out in a week on a machine could not be completed in less than two months by a manual laborer. But the factory owner was often more interested in saving money than in saving time, and his adoption of industrial devices was closely related to the passage of antisweatshop laws.

Regardless of its regrettable human aspects, the manufacture of ready-made clothing was both socially and economically important. The value of men's wear produced grew from approximately eighty-one million dollars in 1860 to about two hundred and seventy-seven million in 1900; during the same period that of women's wear increased from seven million to more than one hundred and fifty-nine million.

9

ONE HUNDRED MEN'S SUITS
Time in Hours

Job	*Machine*		*Hand*	
Shrinking	HOURS	MINUTES	HOURS	MINUTES
Coats	1	48	11	40
Pants	1	08	8	20
Vests		20	3	20
Cutting				
Coats	4	32	33	20
Pants	2	58	16	40
Vests	1	34	11	40
Sewing				
Coats	66	40	1000	
Pants	64	17	433	20
Vests	64	35	416	40
Buttonholes				
Coats	6	17	275	
Pants	2	43	63	20
Vests	4	20	75	

Boots and Shoes. The new sewn shoes that appeared after the Civil War, while they had the advantage of cheapness, were uncomfortable because of an inside seam. Before the end of the eighties an outside seam had been developed, and the perfection of the Goodyear welt system during the next few years completed the basic mechanization in the production of shoes. The United States Commissioner of Labor wrote in 1898 that in no other industry had "the introduction of machinery . . . been more rapid, or . . . played a more important part in saving time and reducing labor cost." Brockton, Lynn, and Haverhill in Massachusetts far exceeded any other centers of production, but at least fifty cities and towns scattered throughout the nation produced goods to the amount of a million dollars each in 1900. Materials ranged from the roughest cowhide to the shiniest patent leather, and styles varied from clumsy brogans to trim dress shoes. Everywhere high tops, buttoned or laced, were popular, and during the nineties almost as much goatskin (morocco) was used for uppers as all other leathers combined. Altogether more than two hundred and nineteen million pairs of leather boots and shoes were turned out annually.

The manufacture of rubber footwear also was growing rapidly. The aggregate production of rubber boots, shoes, tennis shoes, arctic overs, lumbermen's overs, and felt boots was approximately fifty million pairs annually at the end of the century. The factories were centered in Massachusetts, Connecticut, and Rhode Island.

Tobacco and Alcoholic Beverages. The amount of tobacco grown in 1900 was almost exactly twice that of 1860, and the use of factory-made cigars, cigarettes, chewing and smoking plugs and mixtures, and snuff had increased enormously. Cigars, long known, and cigarettes, just coming into general use, accounted for fifty-six per cent of the two hundred and eighty-three million dollars at which the total tobacco product was valued. Cigarettes were made almost exclusively by machinery. Inexpensive and quickly disposable, they fit well into the hurried business world, and, though cigars were still more popular by a ratio of three to one, consumption grew from about forty million in 1875 to over three billion in 1900. New York City, Richmond (Virginia), Durham (North Carolina), and Rochester (New York) produced more than ninety-four per cent of the whole. Chewing and smoking tobacco and snuff were processed in simple pressers and grinders; millions of cigars, especially in New York City, Cincinnati, Philadelphia, Pittsburgh, Richmond, Chicago, Baltimore, Lancaster, Tampa, and Detroit, continued to be turned out by hand even though large-scale manufactories had appeared as early as 1880.

Even more important than tobacco in value of product were alcoholic

liquors. Wines were of little significance. Nicholas Longworth had failed in a forty-year attempt before the Civil War to establish the industry in Cincinnati, and between 1865 and 1900 New York, Ohio, and Missouri, leading producing states east of the Rocky Mountains, never succeeded in lifting the value of their total output much above two million dollars annually. California, however, made rapid progress; by the end of the nineties it was manufacturing three times as much wine as the rest of the country. Distilled liquors, including whisky, rose in value from about fifteen and a half million dollars in 1850 to more than ninety-six and a half million in 1900. Malt liquors—beer, ale, and porter—made even more pronounced gains. They jumped during the same period from about five and a half million dollars to more than two hundred and thirty-seven million. Anheuser-Busch of St. Louis and Pabst and Schlitz of Milwaukee were famous names in the field, but New York led all other states in production, with Pennsylvania second. At the turn of the century the people of the United States were spending for alcoholic drinks and tobacco annually more than they were for flour and meal and within twenty per cent of what they were paying for all the meat and meat products of the packing houses of the nation.

Industrial America at the End of the Century. The pageant of American industry between 1870 and 1900 was indeed a breath-taking one. Total production reached staggering sums. In the last year of the century, for instance, seventy-five million running yards of carpeting were woven; two hundred million pairs of shoes, slippers, and boots were made; nearly thirty million dozen pairs of hose and half hose were produced; three hundred and eighty-three million square yards (five square yards per capita) of woolen and worsted fabrics and four and a half billion yards (nearly sixty square yards for each man, woman, and child in the nation) of cotton cloth came from the mills; and even enough liquor of various kinds was bottled to provide every person with seventeen gallons. Machinery for farm, office, and factory, as well as equipment and gadgets of every description, poured in unbelievable quantities into the stream of goods available for eager customers. Household and neighborhood industries had been driven out of existence, and the processing of agricultural products such as butter and cheese had become factory tasks. The amount of horsepower employed had grown from slightly less than six million in 1890 to more than eleven million in 1900—an increase of nearly ninety per cent. Mechanization and rapid production were everywhere apparent. The effect on the people was profound. Many felt that the Biblical curse that man should earn his living by the sweat of his brow had at last been

tempered with mercy, and Henry George sensed the potentials for ending poverty. Unfortunately, however, industrial growth brought new problems and new destitutions. It was synonymous with the rise of the city—and that was on the one hand identified with tenements, with low wages, and with filth and corruption and on the other with cultural, intellectual, and social betterment. Although much must be said in the following chapters about greed, riches, poverty, and exploitation, it is obvious that basically the people of the United States in the years between 1865 and 1900, whatever their errors and their inequalities, were struggling upward toward a new level of material prosperity. Good or bad, these years of industrialization and urbanization are the foundation stones upon which the well-being of the nation rests today.

Chapter 20

AGRICULTURE IN THE INDUSTRIAL AGE

The Final Movement into the West. With the coming of peace in 1865 agriculture began its last great period of expansion. For many years after the Civil War the farmers continued to move westward with their grains and their livestock in search of virgin lands, as they had done throughout American history; before the turn of the century, however, they came to the end of their journey on the arid plains at the foothills of the Rockies.

The migration that filled up the final agrarian frontier differed only in detail from that which had by successive waves carried the settlers from the Atlantic seaboard to the western boundaries of the first tier of states beyond the Mississippi. Except for the fact that advancing civilization dictated more diverse cargoes and sometimes provided in the railroads less trying means of transportation, the wanderers who thronged the ferry towns along the Missouri and crowded the roads leading to the new El Dorado looked much like those who years before had filled the rocky paths across the Alleghenies and waited impatiently on the banks of the streams in Ohio, Indiana, Illinois, and neighboring states. Hope for economic betterment still led the vanguard onward; from far-off Idaho a young North Carolinian wrote his mother in the late eighties: "I can always make a living in this land of freedom, if I am well; at least I think I can, although I can't in North Carolina." Equally effective in sending thousands on the move was the goad of thinning fields. Americans had always preferred to seek new soil rather than maintain the fertility of the old, and so each succeeding generation had spread the half-worn farms farther toward the Pacific. "This shadow of partial exhaustion," declared a census official in 1880, "passes, like an eclipse, in its westward movement." Serious problems besides inevitable overproduction were bound to appear when desirable land was gone.

The last agricultural frontier was, like previous ones, compounded of European immigrants as well as native Americans. Especially did the Scandinavian countries, Russia, and the small states of central Europe

provide settlers for the trans-Mississippi farming empire. Norwegians and Swedes filled up the Northwest; Minnesota and the Dakotas in particular received hundreds of thousands of these new arrivals who never in their generation were quite able to comprehend the fact that here were millions of unplowed acres stretching away to the setting sun that were to be had at little or no cost. "Free lands and the Norwegians and the closing of the frontier," wrote Ignatius Donnelly in 1890. "What a splendid conjunction; a great race worthy of civilization with the fat lands a free gift to them. Never again will the world see such a conjunction of man with nature. One could almost weep as he looks down the vista of the future and sees the closely packed swarming multitudes competing for a little piece of the earth's surface. To these people this will be indeed the golden age! A something to be painted in poetry and eulogized in oratory."

But the Great Plains were not altogether encouraging. They necessitated adjustments in habits and cultivation as profound as those that had faced the farmers who first plodded out into the treeless prairies of the Middle West. The population was restless. Failure to realize economic ambitions led to wanderings from state to state and from farm to town to farm again. Not only families but also institutions were ever changing their locations; many a denominational college that began its existence as far eastward as western Illinois or eastern Wisconsin moved on to Iowa, then to Minnesota, and at last to the Dakotas. Year after year the agrarians crowded farther and farther into the plains, where life, except for the hopeful, was drab indeed. A traveler in 1888 noted that the country around Garden City in western Kansas had not one tree under which a dozen people might have a picnic. "There is," he continued, "no grass in the yards except by irrigation. . . . The houses stand exposed in a pitiless way; no shrubs, not even a rose or a lilac, a currant or a gooseberry to give a square foot of shade; while the low buildings, low wind mills, 'dug outs', and sod houses, suggest the terrible winds. Alkali soil, no wheat, a few fields for corn; dry, barren pastures, even in April, and everywhere large, rough herds of half-starved cattle. . . . The past winter must have slain its thousands of the poor creatures, for everywhere were bodies, or piles of white bones, averaging for long stretches of miles, two to the minute. So, dear Hoosier farmer, not quite satisfied, think twice before you pull up stakes. There are places worse than Indiana. The flowers of the yucca and prickly pear would scarcely balance the sterility of western Kansas."

In spite of the discouraging conditions in the arid region, however, wheat and corn and cattle, though they profited the producers little,

poured out of the plains in ever-increasing amounts, and before the decade of the nineties was over, they had begun to smother a market already disrupted by the rapid development of national and international transportation facilities. Few, perhaps, realized the economic significance of the carloads of whitened bones being shipped eastward to fertilize fields whose soil had long been exhausted but whose owners were struggling desperately to stem the competition of a new agrarian empire.

The Growing Farms. Agricultural expansion after the Civil War was not limited solely to the trans-Mississippi West; except in the industrial East it was notable everywhere. The number of farms in the United States rose from two million to five and a half million between 1860 and 1900. In fact, statistics seem to indicate that there were nearly three times as many farmsteads established in the latter half of the nineteenth century as there had been in all the previous history of the nation. This astounding growth was in part the result of the break-up of old estates. In the South the average size of farms decreased abruptly after 1865, but the tendency was apparent in all sections. Only in Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, Wyoming, and the Dakotas did holdings perceptibly increase. New fields too were coming into use. Total improved land under cultivation jumped from one hundred and sixty-three million acres to more than four hundred and fourteen million. At the end of the nineties forty-four per cent of the entire area of the nation was devoted to agriculture,[1] and more people still made their living by farming than by any other single occupation. Capital invested exceeded that in industry. Only in population and wealth were the agrarians falling behind.

The Swelling Crops. *The Major Grains.* Although rising factory production after 1865 almost completely monopolized public interest, agricultural growth was no less rapid than industrial. The prairies of Ohio, Indiana, and eastern Illinois, which had gained ascendancy in the fifties, were outstripped in turn by fresher soil as the plow moved onward. Season after season total yields of grain grew larger as the fields crawled westward with the frontier. Wheat led the wandering crops, its center of production shifting from central Ohio to central Iowa between 1850 and 1900. But the soft white winter variety upon which the nation had relied chiefly for its flour since the beginning of cultivation along the Atlantic seaboard in colonial days neither flourished in the dry regions nor survived the cold winters of the Northwest. The introduction of a hard red winter wheat, however, soon made of western Kansas a vast granary, and the use of a hard red spring wheat enabled Minnesota and North Dakota by the end

[1] In 1850 the percentage had been only fifteen and six-tenths.

of the century to forge ahead into first and second place among producers. The annual harvest in these three states grew from two million bushels in 1860 to one hundred and ninety-three million in 1900; national output increased at the same time from one hundred and seventy-three million to six hundred and fifty-eight million bushels. Foreign markets alone saved the farmers from literally smothering themselves to death in an unwanted surplus.

Corn, like wheat, spread westward with the population, but its progress was slower, and the fields never moved far into the plains region. Seven of the ten leading corn states in 1860 were still among the first ten in 1900, and the center of production had not reached the Mississippi. The forty-year supremacy of Illinois was challenged only by Iowa, Kansas, and Nebraska. The grain, no longer used extensively for human consumption, was still essential in the production of beef and pork. Large amounts were grown also for feeding work horses and dairy cattle. In fact, corn was cultivated more or less extensively on eighty-two of every hundred farms in the nation. Total harvest in 1900 amounted to more than two and a half billion bushels. The value of this prosaic crop has always exceeded that of any other produced by the American farmer, and declining prices in the eighties and nineties had impressive political consequences.

The Minor Grains. Barley, rye, buckwheat, and oats too were important; production of the last rose from less than two hundred million bushels in 1860 to more than nine hundred million in 1900. With the exception of buckwheat they followed corn and wheat westward. In 1850 the North Atlantic States produced forty per cent of the oats, eighty per cent of the barley, and eighty-three per cent of the rye, but the same section grew in 1900 only nine per cent of the oats, three per cent of the barley, and twenty-nine per cent of the rye. On the other hand, the harvest of oats in the North Central region increased during those fifty years from twenty-eight per cent of the crop to eighty-one per cent, barley from sixteen to sixty-eight, and rye from five to sixty-two.

Rice, grown only in the South, was a primary item of food in the Cotton Kingdom. Production, however, lagged after the Civil War; the crop of 1860 was not again equaled until the end of the century. The destruction wreaked on irrigation systems and mills by invading northern forces was not the only factor involved. Held in check by virgin forests that lined the slopes at the headwaters of the rivers that flow into the South Atlantic, floods from time immemorial had risen and receded slowly, leaving upon the lowlands along the coast a rich sediment; but when the voracious postwar generation denuded the hills, the waters

rushed down upon the rice fields in raging torrents that sometimes swept away thousands of acres of topsoil in a single night. Moreover, harbor dredgings in the Savannah interfered with drainage in the fields along the river. Between 1880 and 1890 Louisiana crowded South Carolina out of first place in rice production, growing in the latter year more than sixty per cent of the entire crop. "The fields once banked and ditched at great expense, and valued in the middle of the nineteenth century as high as two hundred dollars per acre, are now frequented only by waterfowl," wrote Professor Phillips in 1929, "and the pounding mills at Charleston stand as empty relics of a bygone day." [2]

Kaffir corn, a new plant of the sorghum family grown originally by natives of Africa known as Kaffirs, made its appearance in the West in the last decade of the century. On account of its comparative indifference to drought it won wide popularity both as a grain and as a forage. Acreage in cultivation rose from about forty-six thousand in 1893 to more than six hundred thousand a half-dozen years later.

Hay and Forage. Hay and forage were exceeded in value in 1899 only by corn. New England devoted more land to them than to all other crops combined, but the North Central States produced more than half the tonnage harvested. Wild grasses, millet, alfalfa, clover, cornstalks, and Kaffir corn were used most extensively for dry feeding. Alfalfa, first introduced in New York about 1820, gained rapidly in popularity toward the end of the century, especially in the Rocky Mountain region and along the Pacific coast. It fed nitrogen to the soil, its long roots broke up the earth, and it could be harvested several times in one season. With the invention of the ensilage cutter and blower green corn, cut fine and stored in huge cylinders called silos, became a valuable food for dairy cattle.

Vegetables and Fruits. Developing urban life brought in the last decades of the nineteenth century an increasing demand for a variety of vegetables. For a time New Englanders, seeing in the rising city markets an opportunity to produce profitable crops on their thinning soil, turned their land into truck farms and gardens; soon, however, fast trains and refrigeration brought them into competition with rich fields over the nation. American economic life offers no more romantic episode than that in which all the states of the Union came to serve the tables of those who had long since ceased to sow and harvest. In 1899 the people of the United States consumed twenty-one and a half million bunches of radishes, two and a half million bushels of turnips, a million and a half bushels of green beans, two million bushels of green peas, fourteen and a half million bushels of sweet

[2] *Life and Labor in the Old South,* p. 118.

corn, thirty-two million bushels of tomatoes, five million bushels of cucumbers, three and a half million eggplants, eight and a half million squashes, one hundred and ninety million watermelons, one hundred and forty-three million muskmelons, eight million pounds of rhubarb, four hundred and thirty-three million heads of cabbage, nine million heads of cauliflower, one million bushels of lettuce, one million bushels of spinach, twelve million bunches (twenty-four million pounds) of asparagus, sixteen million bunches of celery, and one hundred and thirty-one million dollars' worth of fruits. Tomatoes came principally from Maryland, New Jersey, and Delaware; squashes from Massachusetts and New York; watermelons from Georgia, Texas, and Missouri; muskmelons from New Jersey, Texas, Illinois, Indiana, Maryland, and Virginia; rhubarb from Illinois, California, and New York; cauliflower from New York; kale and spinach from Virginia; asparagus from California, New Jersey, Massachusetts, New York, Illinois, Pennsylvania, and South Carolina; and celery from Michigan, California, and New York. Steamers sailing out of Norfolk, Virginia, carried early vegetables from the South to winter-bound Baltimore, Philadelphia, New York, and Boston; boats from the wharves in southern Michigan distributed produce in Chicago, Milwaukee, and other port towns; and fast trains rushed perishable crops from distant California and Texas to inland cities and the eastern seaboard.

Ventilated cars were devised for shipping watermelons and potatoes and other long-keeping vegetables. But foodstuffs that spoiled quickly could be sent only short distances by this improved method. Fruits from the Pacific coast, for instance, even when dispatched by fast express, rotted before they could be sold east of the Mississippi. The use of ice-cooled cars solved the problem of preserving perishable foods while in transit. In the spring of 1888 strawberries were sent successfully from Florida to eastern cities under refrigeration, and in June a carload of ripe apricots and cherries was shipped from Suisun, California, to New York without reicing. Railroad facilities for many years thereafter were always overtaxed, although the six refrigerator cars of 1887 increased to sixty thousand by 1901. Fruit shipments from California rose from seventy-four million pounds in 1890 to a hundred and eighty-two million in 1900. The great never-ending movement of fruit and vegetable trains across the continent had begun.

Cotton. The story of cotton between 1865 and 1900 is in effect the history of the South. In that period more than in any other, perhaps, the term "one-crop section" was most aptly applied to the southern states. Corn, tobacco, rice, vegetables and other produce continued to be grown, but

farmers in Dixie, until the decade of the nineties at least, became ever more dependent economically upon the whitening bolls that burst each fall in fields from Carolina to Texas. Cotton had dominated the South for at least thirty years before 1860; it was the war, however, that drove the region for a quarter of a century into inescapable obeisance to the single staple. The four years of conflict destroyed the plantations, wrecked the labor system, and left a whole population in poverty. No matter what the future consequences might be, some means of sustaining life had to be found immediately. There was no choice. Only the one crop—cotton—promised money for food, clothing, tools, and work animals and for rebuilding homes and cities. The road back to stability was filled with evils for many and was for all a rugged way.

The tenant system that arose in the cotton region after the Civil War was the outcome of an unavoidable economic readjustment.[3] There were fields without tillers and farmers without land. The solution of the problem brought landlord and cropper. Plantation owners, having no money with which to hire help, let out their farms in small parcels to Negroes and poor whites, who, having no cash with which to pay rent, gave in return for use of the soil a share of their crops. Unfortunately planting comes before harvest, and neither planter nor tenant possessed money for buying seeds, animals, food, tools, and equipment. Since land was practically worthless, only some agricultural product yet to be grown could be offered as security on borrowings. Cotton alone was acceptable by the lenders because, regardless of how heavy the rains or severe the droughts and plagues, it never completely failed; it could not be eaten, fed to the horses, or easily disposed of without detection; and, however low the price, total returns were greater than for any other single crop the hard-pressed farmers could grow. And so it was that landlords, asking for credit from local merchants, were obliged to agree to deliver at harvest time stipulated amounts of lint. They paid high interest rates and were heavily penalized for breach of contract, and therefore they were forced to require that their tenants grow cotton. The economic results were baneful indeed. A chain of debt bound tenant, planter, merchant, and banker together, and in their efforts to extricate themselves the banker exploited the merchant, the merchant exploited the planter, the planter exploited the tenant, and the tenant exploited the land.[4]

[3] This tenant system was not necessarily a product of the Civil War; tenancy appeared throughout the nation in the years between 1865 and 1900. Only its peculiar exploitations and its regrettable universality can be traced directly to the desolate battlefields that covered the South in 1865.

[4] Planters able to establish credit with wholesale houses set up their own stores, where, like other merchants, they often charged exorbitant prices for their goods.

The small farmer who owned his own soil was tied as closely to the prevailing agricultural system as was the tenant. When he needed seed and equipment in the spring, the rural merchant made him sign a bond to deliver a stated amount of lint cotton in the fall. The fertilizer dealers did likewise. The agrarians, both landed and landless, were caught in a trap from which escape was difficult; their debts, it seemed, never grew less, and all too often they ate up their crops on charge accounts before harvest came. As though to make the rule of King Cotton more galling, the fiber brought less and less each year in the markets of the world. The price fell more rapidly than that of any other agricultural product, declining from about twenty-nine cents in 1870 to less than seven in 1900. Overproduction was partly to blame; the yield was five and a half million bales in 1880 and nine and a half million twenty years later.

Agricultural diversification, begun in the nineties, probably was inspired more by the slow accumulation of capital, the development of transportation facilities, and the appearance of the boll weevil than by the oft-repeated resolutions of the Grange and other organizations that the farmers should grow more corn, plant more orchards, and tend more truck gardens.[5] The weevil crossed the Rio Grande River from Mexico in 1892 and moved slowly northward across Texas—then producing nearly one-fourth of all the cotton of the nation—and eastward toward the Mississippi. Before long vegetables, fruits, and other new crops were being planted in the pest-infested fields.

Tobacco. After the war the center of tobacco production shifted from Virginia, Maryland, North Carolina, and Missouri to Kentucky, Tennessee, and southern Ohio, and Louisville became the most important inland tobacco mart in the nation. The great fields of from one hundred to five hundred acres occasionally seen along the coast in prewar years disappeared, but everywhere hard-pressed landowners and share tenants whose soil was unsuited to cotton began after 1865 to cultivate tiny patches of from one to four acres in desperate efforts to obtain much-needed cash. When carefully

[5] Leonora Beck Ellis wrote in the *Review of Reviews* for July, 1900, that it had required a generation for the South Atlantic and Gulf States to grasp fully the truth that unaided agriculture with an all-cotton policy was leaving the South poorer and poorer each year. The section, she said, had convinced itself that it was better to sell its fleecy staple at the best obtainable prices and let others spin and weave and trade in the "output of the money-making but vulgar factories." The fact is that southern agriculturists had long resented the forces that tied them to cotton. Change could not be made until surplus capital was available to individuals, but surplus capital could not be accumulated by individuals until a change was made. The South was poor, and poverty can afford few diversions. A tremendous power was necessary to break the chain of circumstances that bound the southerner to his cotton field. The factories that eventually grew up in the section were for the most part built by alien money.

tended, tobacco brought a higher financial return in proportion to the ground used even than vegetables; because of the immense amount of work involved, however, it remained, generally speaking, always a supplementary rather than a major interest in agriculture. Rarely did total sales in the country exceed sixty million dollars.

The per-capita consumption of tobacco rose enormously after the Civil War, and European demands grew rapidly. Nearly half the entire southern crop was exported, about one-third going to England. In America smoking came to supersede chewing as a national habit. Especially popular were cigars and cigarettes, the manufacture of which stimulated the production of certain foreign and native plants in widely scattered areas North and South. Bright flue-cured tobacco, used chiefly in cigarettes and granulated smoking mixtures, was produced in North Carolina, South Carolina, and southern Virginia; Burley, valued for navy plug and cut plug, in the limestone regions of central Kentucky, southern Ohio, and parts of West Virginia and Indiana; and dark tobacco, exported in large amounts, in western Kentucky, Virginia, Tennessee, and Indiana. Florida and Connecticut produced special wrappers for cigars; Cuban Sumatra leaf, grown under canvas, sold for as much as four dollars a pound. Lancaster County in Pennsylvania (home of the stogy), Onondaga County in New York, southern Wisconsin, and the Acadian region in Louisiana grew appreciable crops.

As tobacco mounted in economic importance, giant warehouses appeared in the chief production centers. Here agents from the great manufacturing companies bid against one another as staccato-voiced auctioneers sold the huge baskets that lined the floors. By 1895 the farmers were beginning to complain that the tobacco trust was beating down prices, and a few years later agrarian organizations began militant protests against the oppressors.

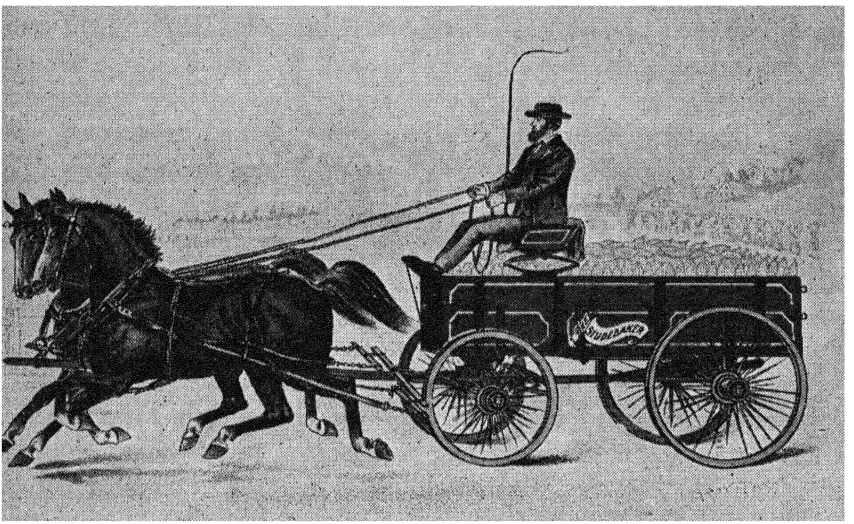
Increasing Livestock. Domestic animals, used in tilling the new fields and in feeding the new city population, increased as agriculture expanded. Growth was particularly rapid in the West, reaching in the nineties more than one hundred per cent in many of the plains states. Even in the disrupted South there were gratifying gains. The total value of livestock in the country rose from a billion dollars in 1860 to nearly three billion in 1900. Only in the industrially dominated North Atlantic section were no gains made; in fact, Maine, New Hampshire, Rhode Island, New York, and Pennsylvania suffered actual losses between 1890 and 1900. Animals improved in quality also. By 1880 American trotting horses had been developed to a degree "unprecedented . . . in American history"; in the late seventies Iroquois beat on English tracks the best the British could produce. Shorthorn cattle, the original stock of which had been imported from Eng-

land about 1800, were before the middle of the seventies being exported to European breeders. In 1873 an Englishman paid forty thousand six hundred dollars for a prize milk cow at a New York sale.

As industrialization and urbanization of the nation progressed, the importance of various domestic animals changed drastically. The plodding ox, beast of burden of primitive pastoral and forest people, almost completely disappeared except in New England and a few southern and western states. Horses and mules, though everywhere the chief reliance of the farmer for power, had begun to decline in total value by 1900 as electric streetcars, steam engines, and other mechanical devices lessened their usefulness in town and country. Hogs, cheaply grown and easily butchered, still supplied the agrarian with his principal item of food; on city tables, however, pork was being displaced by fresh beef as mechanical refrigeration, artificial curing, and rapid transportation became available. Sheep were no longer significant in the domestic economy of the home because the spinning wheel had long since been relegated to the attic, but wool for the textile mills and lambs for the packing houses were in great demand. While the largest flocks ranged the dry plains of Montana, Wyoming, and New Mexico, considerable numbers were grown in the corn states, especially Ohio. By far the most outstanding economically of the domestic animals were cattle. In 1900 they were worth almost as much as all other livestock combined. Although the lowing herds continued to move northward from Texas and neighboring grazing states as they had in "the day of the cattleman," it was the cornfields of Iowa, Kansas, Nebraska, Illinois, and Missouri that actually provided the packing houses with prime steers and calves for the steaks and roasts that changing urban habits made necessary.

Dairying too grew rapidly. Developing transportation facilities and expanding city markets led to the establishment of new processing factories over the nation. The industry, as it had always done, tended to concentrate along the Atlantic seaboard from Massachusetts to lower Pennsylvania and throughout the general southern line of the Great Lakes to Wisconsin, Iowa, and Minnesota, but by 1900 nearly eighty per cent of all the agrarians were obtaining much-needed cash from the sale of dairy products. Moreover, scientific breeding and the introduction of machinery increased profits. The centrifugal cream separator, first used in Europe, furthered the marketing of cream (begun about 1875), and the butter-fat tester, invented by Dr. S. M. Babcock of the Wisconsin Experiment Station, freed the farmer from impositions by the cream buyer and enabled him to cull his herd wisely. Dairymen's associations advocated cleanliness and standardization and eventually gained enough political strength to force through Congress

a tax on oleomargarine, commonly referred to as "bogus butter." In 1899 the country's total milk yield was more than seven billion gallons, and although factory production was growing apace, that year a billion pounds of butter and sixteen million pounds of cheese were made on farms. The combined sales of dairy products amounted to about two hundred and eighty million dollars annually.



Courtesy The Studebaker Corporation

FIGURE 11. THE FAMOUS STUDEBAKER FARM WAGON

Agrarian incomes were further augmented by the disposal of a large part of the more than a million dozen eggs gathered each year. Poultry raising was concentrated in the regions where grain was cheapest; Kansas City shipped eastward in 1900 over seven million pounds of dressed and more than a million pounds of live fowls. The development of cold-storage facilities aided the farmers immensely by enabling them to send fresh chickens from the West to New York markets and by equalizing in part seasonal demand for eggs.

Educational Progress. Scientific agriculture had become the concern of many people even before the Civil War, but the ordinary farmer paid little attention to the declining fertility of the soil until late in the nineteenth century. "Down to this time," wrote F. A. Walker about 1880, "our apparently wasteful culture has . . . been the true economy of the national strength; our apparent abuse of the capital fund of the country has, in fact, effected the highest possible improvement in the public patrimony. Thirty-

eight noble States, in an indissoluble union, are the ample justification of this policy. Their school-houses and churches, their shops and factories, their roads and bridges, their railways and warehouses, are the fruits of the characteristic American agriculture of the past. But from a time not far distant, if indeed it has not already arrived, a continuance in this policy will be, not the improvement of our patrimony, but the impoverishment of our posterity."

Fortunately Congress was interested in preserving the agrarian empire. In 1862 it created the Department of Agriculture (raised to cabinet rank in 1889) and passed the Morrill Land-Grant College Act. The latter, sponsored by Justin S. Morrill of Vermont and Jonathan B. Turner of Illinois, provided for the appropriation of public lands for the maintenance of agricultural and mechanical colleges in the various states. These institutions, sanctioned by the Grange and other farmers' organizations but looked down upon by the older universities because they emphasized purely practical subjects, ran a devious course for several years. Not all of them profited from their national legacy. As financial assistance from state governments and from Washington increased, however, they managed through payment of high salaries to attract competent teachers and became important factors in agricultural progress.

Another step forward was the establishment of experimental stations supported by federal funds. With the passage of the Hatch Act in 1887 scholars and quiet researchers began the long and sometimes unsuccessful battle against the enemies that attack the flora and fauna from which man derives his subsistence. Their achievements were from the first miraculous in many instances, though the boll weevil, the chinch bug, rust, and other widespread evils, like the common cold among human beings, refused to be eliminated. Efforts were made too to determine by actual trial the types of plants and culture best suited to particular regions. Long series of field tests were conducted, and searches were made over the world for disease-resisting and drought-resisting species of crops. In fact, every farmer became in a small way an experimenter for the nation; throughout the last years of the nineteenth century it was not unusual to see a majority of the congressmen sitting at their desks addressing small packets of seeds to their constituents while the business of government was going on. The agriculturist learned before 1900 how to make the traditional two blades of grass grow where one had grown before, but the burden of his complaint was that he sold the two for less than one should bring.

Mechanization of the Farm. Everywhere but in the cotton South the use of machinery contributed to the swelling harvest. The problems of planting

and reaping were dissipated by the introduction of laborsaving devices. Without them the entire population of the nation could scarcely have grown and gathered the four-billion-five-hundred-million-bushel cereal crop of 1900.

Mechanization was rapid after the Civil War. The value of reapers, mowers, plows, and other implements on farms rose from two hundred and forty-six million dollars in 1860 to seven hundred and sixty-one million forty years later. Sales were especially large in the North Central and the Western States. There were many reasons for the growing popularity of agricultural machinery. Effective salesmanship cannot be overlooked; agents painted glowing pictures of the pleasures afforded by relief from back-breaking labor. Manufacturers added further temptation by devising a relatively easy method of installment buying with rates of interest that were low in comparison with other monetary charges. Also significant were changing social habits. Women and children, while they still lent a hand in time of emergency, no longer felt themselves a regular part of the field force. Boys and girls spent more and more of their time in the schoolroom, and housewives found that improving standards of living kept them busy in their homes. Moreover, farm hands in America were, unlike peasants in Europe, capable of handling simple machinery; only the reaper concerns maintained factory-trained mechanics to visit the harvest fields at regular intervals.[6] Last, and probably most important, was the desire of the agrarians to get along economically. By mechanization the farmer hoped both to lessen his labor costs and to increase the size of his crops. He succeeded chiefly in tying a millstone about his neck, for as prices fell, he made new purchases in order that he might produce enough additional salable goods to pay for what he had already bought.

Machines for every conceivable agricultural need appeared at one time or another during the half century preceding 1900. By November, 1899, more than sixty-five thousand patents had been issued for various farm implements. Wheat binders, listers, gang plows, disk harrows, adjustable-tooth harrows, two-row cultivators, ditch diggers, corn planters, potato planters and diggers, hay tedders and loaders and stackers, corn binders and huskers and shellers, manure spreaders, feed choppers, and cream separators were among the outstanding new implements. Of these, binders received the most attention. Invented before the Civil War, they came into common use after the conflict was over. No more dramatic trade battles have ever been

[6] An agent of the McCormick Harvester Company estimated in the early nineties that in some western communities the cost of this service per harvest amounted to eight per cent of the original cost of the machine to the buyer.

fought than those engaged in by McCormick, Deering, Wood, Osborne, Champion, Hussey, and the Marsh brothers in the wheat fields over the world. Public demonstrations were staged in which, strangely enough, the makers drove their machines into fence posts and trees to prove their ability to reap or tied them back to back and pulled them to pieces to show their stability. Agents scoured the country farm by farm in search of customers. They lauded their own products and were not above buying judges in open trials or spreading discontent among owners of rival products.

The first wheat harvester was a simple device. The grain, struck by a revolving reel against a rapidly moving blade, fell upon a low platform, from which it was raked by hand while the machine was in motion. Men following behind, stooping as they walked, gathered up the sheaves and bound them. Soon the Marsh brothers installed revolving canvas belts that carried the cut grain upward over the newly added driving wheel and dropped it on a platform, where two men sat and bound it into bundles. The next step was Charles B. Withington's invention in 1872 of a wire binder, which McCormick put on the market five years later. In many a field incredulous farmers watched the Withington binding arm—placed where formerly the two men had been—grasp a bundle of the loose wheat, tie it around the middle, and pitch it upon the stubble. Claims of grain growers that bits of wire in the straw injured their cattle and grumblings of the men who operated the threshers at the loss of time involved in removing the wire were obviated when in 1880 William Deering at the old Marsh factory at Plano, Illinois, built into a harvester a twine binder devised by John F. Appleby. There were protests for a time because crickets ate the thread, but chemistry came to the rescue, and "cricketproof" twine soon assured the supremacy of Appleby's contrivance.

Corn, unlike wheat, was usually harvested by hand at the farmer's convenience. The stalks were of little value except for grazing in the late fall, and the ears did not damage after ripening. Furthermore, the grain brought so little in the market that investment in expensive binders would have been poor economy. On September 14, 1896, a McCormick agent wrote the factory from southern Indiana: "Thirteen cents is about the price farmers can get for corn in the bushel, and they will not spend much money for machinery to handle either their corn or fodder. As a matter of fact, good corn, ten miles in the country, will not bring enough in the market, to pay for shucking and hauling, and with this fact before us, we could have no expectation of a farmer selling enough corn, this year to pay for one of the machines." By 1900, however, corn harvesters were being sold.

The effects of agricultural mechanization on the farmer in the years

between 1865 and 1900 are difficult to determine. Machinery, while it saved a great deal of time and drudgery and contributed materially to the creation of a mounting surplus, was not alone in stimulating production. The rise of factories, the expansion of cities, and the changes in urban habits also were significant. It is interesting to note that though the grain grower could produce with the same amount of labor twenty times as many bushels of wheat in 1894 as he had been able to produce in 1840, the smothering excess was no greater in the wheatlands than in the cotton empire, where hand labor was still the rule. The husbandman was being overwhelmed by the spreading business structure and by world competition, which technological advancements made keener each year. It may be that material improvements brought him little real happiness; in fact, the inventive genius that made possible new plows, harrows, mowers, and reapers may have enabled him merely to trade back-breaking toil for financial burdens equally onerous. Instead of bringing prosperity, machinery often appeared to strip the agrarian of his farm and turn him and his children into tenants or factory wage earners. The number of share croppers in the United States practically doubled between 1880 and the end of the century. Everywhere the percentage of farmers who owned their land was declining; throughout the South and to some extent in the North Atlantic States nearly half the farms were tilled by renters. Slowly the "ill omen for the Republic" was creeping up the Mississippi valley and along the Pacific coast.

The farmer, like the boy who had been lured to town by the shining towers of industry that then refused to give him a chance to earn his living, may have been led by mechanization into progressive unemployment. Unlike the boy, however, he did not join the bread lines but continued to toil for bare subsistence. Within a generation students of economics were beginning to wonder if industrialization of the nation was bringing concentrated ownership to the rural areas as well as a dependent labor force whose meager pay was little above the simplest needs and whose hope of possession was beyond realization. But wealth has seldom under any system been the lot of the plowman. Throughout American history the agriculturist except in time of war has lived out his Biblical seventy years in laborious and too often ignorant poverty.

The Grievances of the Farmers. In spite of their fond belief—still prevalent at the end of the Civil War—that "in the order of nature the Creator hath ranked the vocation of Husbandmen first among the employment of mankind," the agrarians, as though caught between unceasing upper and nether millstones, were ground season after season more painfully into

bitter poverty. Farms expanded and crops increased, but wealth refused to grow; each harvest the returns from a load of corn or wheat or cotton grew less. The forces that spread cities over the land and challenged the farmers to provide food and fabric for the new urban dwellers also raised up corporations and combinations that stripped the tillers of their substance. Convinced that manufacturers, bankers, speculators, industrialists, and politicians were preying upon them, many agriculturists began to feel that the ill winds that blew them grief would never stop. Slaves to the earth, they fought desperately—in an age when monopolists in a closed national market dominated the sale of manufactured goods and when world markets, influenced by stock gamblers and dealers, determined the prices of farm produce—to maintain themselves in an extractive industry, in which costs inevitably move upward as production grows.

Economic Troubles. Farming at best was filled with annoyances. Landlord and tenant quarreled incessantly, each certain that he was being imposed upon by the other. Croppers complained that they lived in miserable shacks, and owners declared that when good houses were provided, window frames soon went for firewood and doors for such unintended uses as flooring for cotton pens. "The Negroes won't work as they ought!" was the constant wail of the southerners, themselves for many years under the watchful eyes of Reconstruction politicians. Planters mourned as they saw their fences tumble down and poor crops grow up in their fields; perhaps it was unavoidable poverty that made them "skin the Negro" and the Negro "skin the land." Agricultural labor throughout the nation was poorly paid and was woefully inefficient. "The Old Granger," a Kansas reformer, forced to take a hand in the cultivation of his crop, wrote in his diary:

> Here's the old farmer all weary and worn
> Who leased out his land for a share of the corn.
> But floods in the Spring his renters dismayed,
> And sad was their plight as they talked and delayed.
> Then into the service as quick as a wink,
> They pressed the poor Granger before he could think,
> And now at the front he valiantly leads
> With his gallant old horse in fighting the weeds!

Nature too, particularly in the West, tormented the agrarians. Their capital investment washed away as winds and rain eroded the soil. Always there was danger of crop failure. Often floods wreaked havoc in plowed fields, cold spring days caused seed to rot in the ground, early frosts nipped the grains before they matured, and droughts blasted the crops. No one knew when the grasshoppers would descend on his fields. In 1874 millions

of these voracious insects came out of the western sky in some sections and ate every living plant. Despite efforts to burn, scare, and drown them, so great was the destruction they left in their wake that relief funds were collected throughout the nation for the unfortunate sufferers. Winters brought peculiar hardships. Fuel was expensive, and occasionally the driving, biting, blinding snows and winds locked the farmer helpless in his home while his animals froze to death and his family suffered from want of food or medical attention. It was frequently impossible to go from house to barn; neither man nor beast could long endure unsheltered the winds that sometimes swept the western plains. The agrarian could not blame the railroads, the middlemen, the bankers, or the industrialists for the calamities that came out of the heavens; nevertheless, his bitterness toward them increased because, he said, had their greed been less, he could have endured the trials of nature.

Another fertile source of economic discontent was the impositions incident to industrialism. Lands intended for the use of the farmer, according to the Homestead Act, were preempted by railroad corporations and speculators. The railroads charged excessive rates for taking the products of the fields to market and collected exorbitant tolls for returning manufactured goods to rural depots. In effect the agrarian made delivery on his sales and called for his purchases, however distant. The result was, of course, that what he bought at his neighborhood store was very high and what he sold was very low. The poorer the transportation facilities, the more pronounced the divergence. Often the grain grower in Kansas or Iowa, for instance, found his product selling for only a third of the market quotation in the East. Furthermore, elevator operators, knowing that the farmers must sell their wheat as soon as harvested, paid poor prices at best and then furthered their profits by grading the grain too low.[7]

Manufacturers too took their share of the farmer's money. They charged outrageous prices for their goods and hounded their debtors when times were hard. "Wring the money from the hands of those owing us," directed a McCormick official in January, 1873. Few implement concerns sued except under extreme provocation, yet the agriculturists regarded dealers as their natural enemies. "I made every effort to compromise the losses with your 'bull-headed' agent Beardsley," wrote Ignatius Donnelly to a Chicago firm. "I offered at one time to settle if he would throw off the interest. He would not yield a cent. He seemed to think his mission was not to treat your customers fairly and popularize your machinery but to press debtors to

[7] Wheat was graded both by weight and by appearance. The buyer had only to claim that the grain was musty or frosted to justify the grading.

the wall." Middlemen also collected their toll; invariably the farmer found that hundreds of people dipped into his produce as it went to market and added new costs to the manufactured goods that returned in its stead.

Financial Hardships. No matter what wealth he possessed in land, the agrarian was eternally plagued with the problem of paying his debts. Deflation, overproduction, and a variety of other factors he did not understand made it necessary for him to use ever-increasing amounts of the products from his fields to meet the demands of his creditors. Mortgages became each year heavier burdens, for prices throughout the three decades after the Civil War moved slowly and dishearteningly downward, and debts contracted in hope became hopeless burdens. The hundred and fifty-two million bushels of wheat grown in 1866 sold for two hundred and thirty-two million dollars; the four hundred and sixty million bushels produced in 1894 brought six million dollars less. Before the middle of the nineties the West was complaining of "eight cent corn, ten cent oats, two cent beef and no price at all for butter and eggs," and the South was seeing for the first time five-cent cotton. The farmers derived no consolation from the assurances of the economists that the costs of manufactured goods too had declined; they had no money with which to buy regardless of the offerings. Even the government made sport of their tragedy and printed as representative of the returns to agrarians the quotations on big-city markets without first deducting transportation charges, merchants' profits, service fees, and a host of other exactions. One may read in the *Statistical Abstract of the United States* for the year 1900 that the price of corn in 1896 was thirty-five cents, though thousands of documents attest the fact that the grower in most cases received less than ten. During the decade the statisticians had they wished could have seen many a western family after a frugal winter supper gather around a fire built of corn that had been laboriously and carefully tended through long summer days but which would not pay the cost of marketing.

Taxes were heavy. In contrast to the business man, who could pass a part of his levies on to his customers, the only recourse of the farmer, said the Grange, was to plow "deeper and longer the furrow." Interest rates were still more obnoxious. The Baptist Church in Kansas was in 1871 paying fifteen per cent plus ten-per-cent commission for money with which to carry on the work of the Lord. Individuals in the West often were charged as much as twenty-five per cent plus commission. Rates, however, were nowhere uniform. For example, Germans were favored strikingly over Scandinavians, two equally hard-working farmers were treated unequally in many cases because one was in direr need than the other, and politicians

frequently obtained cheap money because of their willingness to defend the lending group. Little or no credit was given beyond the towns lying along the ninety-ninth meridian, which runs through the western Dakotas, Kansas, and Nebraska. Throughout the West chattel mortgages tied the debtors to their soil.

Social Monotony. Farm life was monotonous. In the thickly populated areas many amusements were available, but the tired horse could not at the end of the day be driven far. And there was little time or money to spend. Young boys and girls throughout the agrarian regions grew restive as the flood of magazines and newspapers that depicted the attractions of the city increased. Lonely indeed was existence on the arid plains, where prized pieces of furniture dried out and collapsed, clothing yellowed with repeated washings in alkaline water, and women's hair turned into wiry strings. Flowers that had grown in eastern yards were whipped into shreds by the raging winds before they could bloom. Houses were far apart, and social intercourse was limited. In the summer everybody was needed in the fields; in the winter the biting cold kept people close to their firesides. On January 1, 1884, with the thermometer at twenty below zero, a Dakota woman wrote in her diary, "We are all frostbitten even to Roxy, the dog, and Bjone, the Cat." From the Dakotas to Texas snows that blocked the roads and blizzards that endangered life added fuel to the blazing discontent of the farmer because they tied him at home when he might in his hours of idleness have been talking over with his neighbors means of escape from economic burdens.

The Agrarian Panaceas, 1867-1890. *The Agrarian Orders.* The protests, born of distress, that arose among the agrarians after the Civil War took various forms. Year after year as poverty became more apparent and abuses more evident, the demand for effective organizations with which to fight the trusts and the monopolies grew stronger. The Patrons of Husbandry, commonly called the Grange, was the first postwar agricultural order established; founded in 1867 by Oliver Hudson Kelley, a clerk in the Department of Agriculture, it had as its chief purpose to improve both the economic and the social life of the farmer. Kelley had boundless faith in the justness of his cause, and early in 1868, with two dollars and a half and a ticket to Harrisburg, Pennsylvania, in his pocket, he left Washington determined to work his way westward to Minnesota, organizing local and state granges as he went. Results at first were discouraging, returns often being insufficient even to pay the postage bill. By 1870, however, local organizations had begun to spring up throughout the nation, and by 1875 membership numbered more than seven hundred thousand.

While its popularity rested primarily upon the economic dissatisfaction of the agrarians, the Patrons of Husbandry fascinated the discouraged tillers of the soil. It admitted both men and women and was nonpartisan as well as secret. With officers decked in regalia and ritual carefully guarded, the meetings gave courage to those who wished to speak out and self-confidence to the timid. Picnics provided relief from monotonous labor and fed the socially hungry. But that was not all. The order taught the farmers to work together, to study their peculiar economic problems, to read books and papers, and to pay attention to their material, social, and cultural welfare. In Illinois, Minnesota, and neighboring states it began an attack on the railroad corporations that eventually resulted in the "granger laws." In the South at each monthly meeting committees reported on agricultural progress, the state of the crops, quarrels between members, relief to the needy, and the conduct of business enterprises such as money lending, cooperative buying, and insurance. Recommendations were made concerning business firms and doctors to be patronized, and year after year the need for diversification of crops and preservation of the soil was reiterated.

The Grange began to decline before the end of the seventies, but at least until the century was over there were always militant orders of one type or another to fight for the cause of the farmer. Small political groups with specific reforms in mind were especially numerous; of these the National Greenback party, chief advocate of paper money, and the "Anti-monopolists," implacable foe of rings and trusts, were the most notable. In addition various more or less permanent societies and associations sprang up that did what they could to relieve rural distress. Only the Farmers' Alliance, however, was comparable to the Grange. Unfortunately the two were often in bitter rivalry, and after 1880 the former, because it openly urged a progressive political program, dominated the scene. The origins of the Alliance are not very clear; in fact, work in the various geographic sections seems to have been little related. For instance, Milton George, editor of the *Western Rural,* built almost single-handed the order in the Northwest, and C. W. Macune was for a time at any rate a powerful factor in Texas. The consequence was a lack of cohesion and understanding. Northern and southern branches were never united, and there were many wholly independent bodies such as the Wheel, the Sheaf, the Farmers' Union, and the Colored Farmers' National Alliance.

The activities of the Alliance[8] were even more diverse than those of the

[8] The two most important branches of the Alliance were the National Farmers' Alliance, usually called the Northern or the Northwestern Alliance, and the National Farmers' Alliance and Industrial Union (the F. A. and I. U.), commonly referred to as the Southern Alliance.

Grange. Monthly meetings and periodic picnics gave social diversion, while circulating libraries, newspapers, magazines, and regular "lessons" concerning the evils of wealth and the glories of the agrarian cause both widened the farmers' outlook and spread the demand for reform to the remotest settlements. Members, gathered in the schoolhouses, no doubt sometimes read and recited in unison:

QUESTION What is the most important object of the Alliance?
ANSWER To educate its members on questions of domestic and political economy. . . .
QUESTION How will an increase in the volume of currency increase the price of the products of labor?
ANSWER By changing the relative value between money and commodities. Both are subject to the law of supply and demand. When the supply is equal to the demand a proper and equitable relation is established between the two, and labor is properly rewarded for its efforts.

Perhaps easier to comprehend was:

QUESTION Who dictates the action of congress?
ANSWER Wall street.
QUESTION Who dictates the policy and platform of both parties?
ANSWER Wall street.
QUESTION Who dictates candidates for president and congress?
ANSWER Wall street.
QUESTION Who dictates the laws?
ANSWER Wall street.
QUESTION Who controls the business of the country?
ANSWER Wall street.
QUESTION Who puts a price on every man's labor by controlling the volume of currency?
ANSWER Wall street.
QUESTION Who has more power in this country than is possessed by the King of Prussia or the Queen of England?
ANSWER Wall street.
QUESTION Who says the tariff is the important issue and the people ought to engage in a Kilkenny fight over it?
ANSWER Wall street.
QUESTION Who will own this country body and soul in a few years if the people do not defend their interests and liberties?
ANSWER Wall street and the devil.

Suggested topics for essays distributed through newspapers and official bulletins and circulars set the farmers to reading with determination. Community needs were openly discussed, and private relief was given wherever the condition of local treasuries permitted. Cooperatives, exchanges, and other business establishments were set up in many states, and vigorous

political campaigns for economic reforms were launched. Major interests varied from section to section, but everywhere the national monetary system was condemned, alien ownership of land was decried, concentration of wealth and ownership was denounced, inequality of taxation and discrimination in interest rates were censured, and dealers in futures were scathingly upbraided. Strong pleas were made for government control of railroads, trusts, monopolies, and other "oppressors of the people."

Although ridiculed by statesmen and financiers, the subtreasury proposal, first presented in December, 1889, was probably the most important sponsored by the Alliance. The plan envisaged government warehouses where the farmers could deposit such nonperishable products as wheat, corn, oats, barley, rye, rice, tobacco, cotton, wool, and sugar and receive immediately in legal tender eighty per cent of the value thereof. The scheme, because it contemplated freeing the farmers from the hold of monopoly-controlled elevators and supplying them with badly needed money for meeting maturing obligations at harvest time without dumping crops upon glutted markets, struck deeply at the Gordian knot that bound the agrarians so helplessly to their creditors. Not until a quarter of a century later, however, was the idea to receive serious consideration from Congress; the first warehouse act was passed in 1916.

The Cooperative Enterprises. The various agricultural orders all attempted to enter the business field. Members of the Grange, seeking to escape from the grasping hands of local merchants, began in the early seventies to appoint purchasing agents and to set up cooperative stores. They hoped, first, to save money by dealing directly with the manufacturers and, second, to avoid the levies of speculators and middlemen on their sales through sectional exchange of farm products. Community buying proved of real value. For many years farmers were often to be seen assembling in rural schoolhouses or Grange buildings to receive "soda, coal oil, pepper, matches," and other commodities that lodge officials had bought on order. Cooperative stores were reasonably successful for a time; in some states they did an annual business of half a million dollars or more. In a few cases business agents were maintained in the chief commercial centers, and Mississippi, at least, had a representative in Liverpool to look after consignments of cotton. Insurance companies, elevators, gristmills, packing plants, and factories also were established.

Encouraged by the opening of Montgomery Ward and Company in Chicago in 1872 with the declared purpose "to meet the wants of the Patrons of Husbandry," the grangers began the next year a determined campaign against the high cost of farm machinery. Manufacturers, hopeful

at first that the farmers would quickly learn that "resolutions would not cut grass," soon discovered that they faced a powerful attack. In April a McCormick salesman commented of the grangers in Iowa, "There is no doubt but that they will influence trade very materially this season, in fact they are doing it now"; and early in June another wrote from Indiana: "The agricultural trade thus far has been slaughtered. As each successive implement was needed down went the price; first the old ground plows then the planters and now the cultivators. The latter is now being sold to farmers at retail for five dollars less than last years wholesale prices to agts. Small manufacturing firms and scary week kneed agts have done the work." McCormick, in spite of warnings that the leaders looked "like men who meant business," tried desperately to stem the tide of opposition, but even he was at last forced to make concessions. Many companies sought to evade the dilemma by appointing Grange officials as dealers; the solution was inapplicable where sales forces were already in operation. An effort to soothe the buyers by offering a discount of ten per cent for immediate payment failed because interest rates on outstanding obligations were too high to make the proposition tempting. The final result was a general reduction on all implements, prices sometimes being cut in half.

As the Patrons of Husbandry declined, the rising Alliance took up the fight. State and local orders in the eighties built exchanges, cooperative stores, and factories. Financial assistance was given hard-pressed members about to lose their lands. "I can plainly see," remarked an Alliance storekeeper, "that if present conditions continue to exist it is only a matter of a short time until all the land of the United States will be owned by the money power of this country and Europe." Alliance treasuries were too feeble to render effective aid to the host of mortgage-laden farmers in the South and the West, but for nearly twenty years the organization fought stoically for economic reform.

Accomplishments of the Business Enterprises. It is difficult to determine just how much the cooperative movement helped the agriculturist. That substantial price reductions were obtained on implements and machinery in spite of opposition from manufacturers and local merchants is obvious. Appreciable savings were made too in the purchase of groceries and incidental home supplies, and harness, twine, cotton ties and bagging, fertilizer, and other farm necessities were bought advantageously. In addition indirect gains were considerable. The mere fact that there were stores catering to the farmer prompted manufacturers to produce special lines of goods at reasonable rates to attract the purchasing agents, and the knowledge that orders might go elsewhere forced local dealers to trim their

margins of profit. Yet agrarian business enterprises sooner or later ended in defeat. The attempts of the Iowa Grange to manufacture binders ran afoul of patent laws; stores, whether operated according to local agreements or on the Rochdale plan, failed, generally because of lack of interest, poor management, or inability to collect outstanding debts; and banking, insurance, elevator, and other financial projects were unsuccessful, chiefly on account of inadequate cash reserves.

The farmers faced overwhelming odds in their efforts to relieve their economic distress. They were not business men, and consequently they fell an easy prey to the dishonest. Their inexperience was harmful in other ways. They helped themselves to small amounts of "tobacco, cheese, crackers, etc." from the shelves of the cooperatives without realizing the financial loss entailed in their combined innocent pilferings. Too, they occasionally ordered expensive machinery and then, lured by cheaper prices elsewhere, refused to stick to their bargains. Furthermore, serious dissensions were always brewing. The leaders of the cooperative projects knew that in order to prosper they must follow ruthlessly the principles of merchandising, and therefore a majority of the community stores charged regular prices and also demanded cash over the counter. But what the poor farmer thought he needed most was cheap groceries and liberal credit. He was not interested in future dividends. The principal reason for the inability of the agrarians to solve their problem of poverty, however, was the fact that they could do little more than apply a surface palliative to a deep-seated trouble.

As the decade of the eighties drew to a close, discouragement in the rural districts increased. The Alliance and kindred organizations turned in desperation to the Populist and other new parties and began in the early nineties a political revolt that ended only with the defeat of William Jennings Bryan in 1896.

Chapter 21

THE WAGE EARNER IN THE INDUSTRIAL ERA

The Wage Earner on the Eve of the Civil War. The industrial development that followed the Civil War brought to the wage earner an aggressive consciousness of his ills and produced a definite labor movement that had for its goal the economic betterment of the working class. Labor troubles had been present since colonial days, but it was the rise of cities that created sufficient unity to make general action possible. The expression "the rights of labor" has not always been a commonplace. In fact, until comparatively recent years society refused to recognize the presence of a distinct laboring group. Wage earners were merely individuals who were temporarily employed by others until they had set themselves up in businesses of their own. The belief that every deserving man had it within his power to become a property owner was universal; failure to do so was conclusive evidence of a lack of initiative. Hardships and problems were for the worthy only stepping-stones on the road to greatness. The laborer himself was first to deny that he was born to toil and die in poverty amid the whirling spindles and grinding wheels of the factories.

There was some truth in this fiction that grew up in the early years of the nation. Before 1860—and even long afterward—the wage earner often labored alongside of the man for whom he worked, sharing in his economic troubles and sometimes falling heir to the establishment through marriage with the owner's daughter. Regardless of how seldom it occurred, acceptance of this happy ending as a social possibility was of immense importance. Moreover, if dissatisfied for any reason, one might with little capital move elsewhere and start an independent enterprise or strike out for the frontier, where physical strength was frequently the determining factor in success. The girls who wove for a pittance in the cotton mills of New England were far from convinced that they were laborers; they were merely exercising their traditional thrift in working for whatever they could get until marriage came or until they took permanent seats in the "old maid's" chairs at rural firesides. Unfortunately, few people were willing to admit that the miserable families that clung to the edges of the

textile towns were already tied by unbreakable bonds to the factory system.

That there was only a sporadic labor movement before the Civil War does not mean that those who sweat long hours for their bread had no dreams of a better life. Although wages and working conditions in northern factories were appallingly bad, not more than a handful of reformers devoted themselves to the problems of labor. As the hope of the poor to share in the wealth of the nation failed to materialize, however, the wage earners slowly turned to united action. But the handicaps that faced them were many. Their most capable and energetic leaders often slipped into the ranks of the capitalists; society was indifferent to their welfare; and most statesmen saw only good in the growing mills and factories. The government of the United States, conceived in democracy and dedicated to individual liberty, could not in justice to the theory of its creation, said the employers, concern itself with the difficulties or misfortunes of any particular class. Thus labor was forced to fight its own way through fat years and lean; the wage earners bartered their brawn in the open market and sometimes bid against their fellow workers. Never adequate, the returns from a long day's drudgery grew less as laborsaving machinery displaced workers or put in their jobs immigrants or women and children.

Labor in the Civil War. Labor opposed the fratricidal conflict that threatened in the late months of 1860, and in the border states and throughout the North in general it called upon Congress to accept the Crittenden Compromise in an attempt to maintain peace. But when Fort Sumter was fired upon in early 1861, the wage earners took up arms in defense of the Union. Throughout the war they found themselves hard pressed for existence, for prices jumped upward faster than wages. Since jobs were easily obtained, protests against conditions were frequently made. Labor organizations grew with rapidity; in 1864 alone they increased in number from seventy-nine to two hundred and seventy. Demands were made for unity, and through the untiring efforts of W. H. Sylvis the short-lived National Labor Union was created at last in 1866.

The financial situation in the country contributed materially to the hardships of the wage earners. Inflation, though perhaps inevitable, was hastened by the issuance of greenbacks. This paper money, looked at askance by the financiers because it had behind it only the credit of the government, fluctuated radically in value according to the uncertainties of the battlefield. Reckless printing of state bank notes, especially in the West, added to the confusion. Prices soared to dizzying heights, and speculation ran wild; while the gold bulls of the market place were selling their government short at a profit, workers were in some cases finding it impossible

to buy the necessaries of life. The draft seemed to emphasize distinctions. Men who could furnish substitutes or pay the government three hundred dollars apiece were excused from service; those who could do neither were sent to war, their pay becoming in effect less day by day as goods grew dearer. Riots broke out in eastern cities, strikes flared up in the factories, and everywhere workmen began to demand shorter hours and higher wages.

Postwar Urbanization and the Labor Movement. The rise of the city was significant in the development of the labor movement after 1865. Throughout the century each census revealed an ever-augmenting stream of human beings rushing into the metropolitan centers. Because city traction facilities were incapable of transporting large numbers of workers any appreciable distance, population concentration, especially on the fringes of the industrial sections, was unavoidable. In the poorest quarters conditions were deplorable; there slums sprang up and spewed out into the hot, dirty streets a host of unkempt children whose parents could give them few of the material blessings with which the nation was filled. But urbanization brought with its many social misfortunes opportunity for workmen to discuss with one another their troubles and made it evident that the wage earners, like the farmers, were plagued with scarcity in a land of apparent plenty. Year after year the towering spires of industry mounted heavenward, and by 1890 great mansions of wealth had begun to appear on the "Gold Coast" in Chicago, Fifth Avenue in New York, and Beacon Street in Boston. Concurrently the tenement sections became more crowded and squalid. The milk, eggs, vegetables, and fruits that insure good teeth, strong bones, and healthy bodies were unattainable. Slum homes were so constructed that children enjoyed little sunshine until they grew old enough to hold their own in the open streets; fortunately paving was bad in the poor sections, and traffic moved slowly.

Immigration and the Labor Force. The migration from northern and western Europe that had poured into the country before 1860, when industry was only slightly developed, continued after the Civil War. Before long, however, fundamental changes were noticeable, and hostilities already aroused grew serious as incoming destitute from central and southern Europe began to beat at the factory doors. Telegraphs, trains, and ships having made of the earth "a vast whispering gallery," these poor of the Old World came seeking bread in the storied land of wealth of which they had heard.[1] Native workers complained that industrialists even while

[1] Actually the news of economic opportunities in America reached the European poor through the agents of factory owners looking for cheap laborers, steamship companies solicit-

demanding protective tariffs against the cheap products of Europe were importing Austrian, Hungarian, Bohemian, Polish, Italian, and Russian peasants to operate their machines in order to swell profits. The flood of migrants became a deluge as the century ended; each week many thousands sailed out of Liverpool, Bremen, Hamburg, Antwerp, and smaller ports. Although most of the new arrivals had been farmers in Europe, in 1900 two-thirds of the foreign-born lived in cities.

The sheer magnitude of the immigration sometimes threatened to overwhelm the labor market. The fourteen million people who disembarked along the Atlantic between 1861 and 1900 and spread over the land "like the locusts of Egypt" not only created perplexing social problems but also forced native Americans from their jobs. Their willingness to toil long hours for little pay reduced the level of wages and encouraged sweatshops; the number of factory workers employed in the clothing industry actually declined in the decade of the nineties. One must not suppose, however, that all were economic castaways. Minnesota, Wisconsin, South Dakota, and neighboring states gained thousands of substantial farmers, and the names of foreign-born Americans are inscribed on the roll of honor of every industry in the nation. But for the most part the human beings streaming into America from the Old World during the eighties and nineties were poor and unlettered individuals who for generations had followed without hope of change the grooves worn by their ancestors. Brawn was their only asset, and they did not realize that it was bartered at the factory doors against the economic welfare of their fellow wage earners. Perhaps industrial progress was bound to increase the demand in certain fields for the ignorant and the cheap. Obviously the rise of factories, mills, and shops created new jobs of every description; still it may be, roughly speaking, that when the machine took up the skill that had once belonged to the workman, the workman in many cases tended to become as crude as the tools his predecessor once had used. The fight to prevent this unfortunate and undesired situation was carried forward by a small number of labor leaders and by a few students of economics who perceived the fact that because production could never get far ahead of consumption, the prosperity of the manufacturer and indeed of society in general was closely related to the material well-being of the worker. Too, statesmen began to cry that the democracy was being subverted by a host of people who could never understand the principles of a republic. By

ing steerage passengers, and transcontinental railroads wanting farmers for their lands. Boasting letters of already settled immigrants to relatives at home also were important.

1900 it was evident that the "melting pot" was beginning to fail, and protests against the incoming aliens grew in volume.

Although some state laws had been passed before 1850, the first federal restrictions on immigration were those levied against the Chinese in the early eighties. Thousands of these Asiatics had come to California during the gold rush, when labor was badly needed. After the war Leland Stanford and other captains of industry imported more thousands as pick-and-shovel workers on the eastward-moving transcontinental railroads. When the embankments had been thrown up and the other heavy construction work finished, the Chinese, seeking some means of livelihood, began to crowd Americans out of their jobs. Hostilities flared immediately; in 1871 a race riot broke out in Los Angeles in which several people were killed, and for ten years there was no peace on the coast. For a time attempts were made to control the influx of people from the Far East to America by treaty, but Californians, offended both by Oriental habits and by the ability of the Chinaman to live on an inconceivably small wage, induced Congress in 1882 to suspend immigration of Chinese workmen. In the same year a law was passed forbidding the entrance of physically and morally unfit Europeans and permitting a tax of fifty cents on each incoming individual. In 1885 industrialists were prohibited from importing foreigners under contract. Other restrictions followed through the years until at last in the twentieth century the great American home of the oppressed swung to its doors with its closing economic order.

The Demands of Labor. By 1870 probably a majority of the wage earners in the United States were in favor of an eight-hour day. Many people believed that the reduction would bring about a decrease in production and eventually an increase in jobs; in 1887 the American Federation of Labor officially declared that "so long as one man who seeks employment cannot find it, the hours of labor are too long." A greater number, however, may have approved the proposal because the extra leisure would offer opportunities for social and cultural betterment. "I am decidedly in favor of shorter hours and the piece-work system," wrote a Pennsylvania laborer. "Shorter hours for rest and recreation, and social and mental improvement to look after, guide and instruct our children, and to improve and elevate our general condition." But employers were not easily convinced that less work for the same pay was economically sound. Furthermore, they insisted on their inalienable right to run their own businesses without interference and advice from their wage earners. They had in their observations, they asserted, "yet to find that ten hours of diligent, faithful labor is a burdensome tax upon the vitality or energies of any

class of men," and they were not impressed when the editor of the *Voice,* a Boston labor paper, suggested that their statement was "as if the fisherman should testify that it did not hurt eels to be skinned."

A demand for higher wages too found popular support among workers, as did also opposition to monopolies and trusts. The National Greenback Labor party of Tennessee in its 1882 platform declared: "Civil Government should guarantee the divine right of every laborer to the results of his toil, thus enabling the producers of wealth to provide themselves with means of physical comfort, and the facilities for mental, social and moral culture; and we condemn as unworthy of our civilization the barbarism which imposes upon the wealth producers a state of perpetual drudgery as the price of bare animal existence." Labor leaders, hoping to prevent reductions in wages and seeking to increase the purchasing power of the wage earner's dollar, boldly condemned the importation of Europeans and urged the establishment of cooperative stores, shops, factories, and mills. A few people took up the radical program of Karl Marx and Ferdinand Lassalle. Native Americans, however, were little interested in foreign economic or political panaceas; they were concerned merely with sharing in the fruits of industrial progress.

Wages and Working Conditions. Although many workers were content with their lot, the life of the ordinary laborer in postwar years was not easy. "The whistles everywhere sounded at seven a. m.," says Professor Nevins, "at noon an hour was allowed and at six in the evening the ten-hour day was finished." Two dollars was regarded as good pay for the long day, and some worked much longer for less. Drivers on horse cars and stages in New York, St. Louis, and other large cities received weekly wages ranging from nine to twelve dollars a week for sixteen hours of duty daily. Even so, they were better off than those who labored in factory, mine, and mill. Throughout America able-bodied men in sundry industries, particularly the textiles, earned sometimes as little as forty cents a day. Foremen in Michigan paper mills were paid two dollars a day, but they were often employed not more than three or four days a week. Others in the same shops were fortunate to receive on Saturday night as much as three or four dollars. Day laborers in the coal mines of Tennessee worked under dangerous top for from fifty cents to one dollar and seventy-five cents a day, and farm hands were well-paid at fifteen dollars a month.[2] In every occupation the poor were all too apparent. An official of the Mis-

[2] Farm hands often worked under yearly contract; the agreement of 1876 between J. B. Ballingsley and Dan Smith of Texas reads: "JBB is to give Dan Smith one hundred and fifty dollars for the year beginning Jan 1 1876 & ending Dec. 31 1876 is to furnish him 4 lbs bacon or Equivalent in other good meat per weak & 1 peck of meal per weak. He is to

souri Bureau of Labor Statistics wrote in 1883 that the workman "cannot support himself and family on the wages paid him—but little more than that paid boys and girls or women. His children are taken from school and put into establishments to help along. All are compelled to work day in and day out, and oftentimes far into the night, for six days in the week throughout every month in the year. Thus he goes on through life, his children growing up in ignorance and exposed to all the moral infections and physical poisons and wrongs attending their unnatural situation, whilst he himself can hope for little better than that if he is not overtaken by death before old age comes on and the decrepitude sure to follow from hard work and few comforts, his last days will be spent in the almshouse." Relatively few people ever became actually dependent upon charity for their existence; blighting poverty, however, was widespread in a nation that boasted inexhaustible wealth. The unskilled, overlooked by the unions and scorned by the well-to-do, were especial objects of pity; said an editor in 1888, "they are labor, pure and simple, like the mules and cranes and the tram cars, to be bought at the cheapest figure and tossed away when . . . incapacitated."

Women and children suffered still greater hardships than did men. At a peculiar disadvantage in bargaining with their employers because they were tied to their homes, they toiled long hours for pitiful returns. In dry-goods stores and in shops they labored from early morning until late at night without rest, and sometimes there was not even a place to sit down for a moment. They often earned not more than three dollars a week. In the cotton and silk mills they were particularly ill-paid. The average wage of silk winders in New York in 1884 was sixty-five cents a day. In the early nineties women in Indiana received in some cases only twenty-five cents for ten or twelve hours of labor. Girls in Michigan paper mills worked for as little as thirty-five cents a day, their weekly earnings frequently not exceeding a dollar. Children got from thirty-five to seventy-five cents. Small Negro boys in the newly built textile shops of the South were occasionally given less than a penny an hour.

But it was in the sweated industries where the most wretched surroundings prevailed. Wages here were for the most part on the piece-rate basis, and the labor was usually done in the home, where it was most difficult to observe and where reforms were hardest to make. Women, trying to eke out a few pennies with which to buy food or to add a mite to family savings, worked far into the night in poorly lighted rooms. They were

advance ½ of wages per month if called for. All loost time to be deducted in proportion to what wages are worth at the time the loost time took place."

indeed "sisters to Tom Hood's slaving seamstress," and the rich if they heard their dolorous cries of poverty heeded not. Many of them made shirts and overalls for seventy-five cents a dozen, and thousands covered buttons, fashioned artificial flowers, sewed neckties, and did countless other things for which they received scant compensation.

Working conditions were even more deplorable than the low wages. In few places was attention given to health or social welfare. Sanitary conveniences were almost entirely lacking; dangerous machinery was unguarded; ventilation, light, and fresh air were not considered essential; and accidents were accepted as a matter of course. Adults were usually able to fend for themselves, but the effects on children were regrettable. Boys and girls "of all ages and all conditions" were "worked as so many beasts of burden." No provisions were made by law for their comfort; they labored in ill-kept rooms "without fire in January and without ventilation in July." All too often their bodies became under long hours of drudgery twisted and misshapen. "We are weighing and measuring factory children at a great rate," wrote Florence Kelley of the Office of Factory Inspector in Illinois in October, 1893, "and shall publish photographs of deformed children found in the cutlery trade where every boy yet found has shown the same deformity of the right shoulder and one youngster, having worked from his 11th birthday, is now, at 15 an actual monstrosity unfit for work for the rest of his life!"

The miserably paid who toiled amidst disheartening surroundings were also miserably housed. No company-owned shacks that stood precariously on their feeble stilts about mine or mill were ever so squalid and mean as the tenements of the slum dwellers in New York, Boston, Philadelphia, Washington, Chicago, and other leading cities. Poorly lighted and often equipped with neither water nor heat, these shocking structures were from cellar to roof veritable babels of humanity. Birth was commonplace, and death stalked through every street. Typhus, smallpox, and other loathsome diseases spread through the odorous alleys. Decomposing garbage lay undisturbed in front of every house. In New York in 1866 "some fifteen hundred loads were removed from the Fourth Ward in a few days, and yet some streets were still ridged two feet high with the deposits"; four years later slum-ridden Philadelphia carted off "a thousand loads of filth a day over a period of two and a half months."[3] Murder, assault, lechery, robbery, drunkenness, and other offenses against society were everyday occur-

[3] See ch. xii in Nevins, *The Emergence of Modern America, 1865-1878* (New York: Macmillan, 1932; vol. viii in *A History of American Life*); see also Jacob Riis, *How the Other Half Lives* (New York: Scribner's, 1891), chs. i-iv.

rences. So long as great numbers of city wage earners dwelt in such utter poverty, leaders could do little toward uniting labor in a common cause. The real problem involved was, in fact, a social one.

While not, technically speaking, slums, the poorer sections of inland mining and steel-making towns too were dismal places. A reporter wrote in 1888 of the homes of unskilled workers in Pittsburgh:

> Following the north shore of the Monongahela eastward from the South Side bridge, a row of aged and decrepit shanties is reached. They are filled with pallid humanity, but not overstocked with furniture or the comforts of life. Black with age, paintless, carpetless and uncomfortable, these little habitations hug the side of the hills and suggest the nests of the cliff swallows. In summer they are dreadful places to live in. The bare hills tower on each side, making a sort of urn, in which the hot sun turns the dense air fetid. The sewage runs through open gutters. Dishwater and slops are tossed into the streets from the doors and windows, and a good, hard rain storm is as great a blessing here as amid the tenement districts of New York's uncleaned streets.
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> The student of human life does not have to resort to any stratagem to discover the sort of existence which is had in this sorrowful side of the smoky city. A walk through the street tells all. There are no disguises. The bare, brown doorstep, the table seen through the open doorway, the frowsy bed standing by the open window, all bear their testimony of a comfortless life in plain view of the passer by. You may know how much or how little the families have to eat; you may count the household goods or the children or the many dogs and cats, or you may know how many times the growler crosses the street to the saloon, if it goes at all, and who gets the benefit of its contents. Courtship and marriage, sickness and sorrow, deaths and births—all go on in the purview of man, for poverty can afford no secrets and the cliff dwellers of the Monongahela are very poor. Luckily for them the great body of the people have eyes which see not, and the enforced publicity of their life is little harassed by impertinent curiosity.

But living conditions were not everywhere bad, and the evils that accompanied the rapid spread of industrialism were by no means universal. On the whole, American workers were happier and more prosperous than those in any other country in the world. Even large plants in the suburbs of the great cities were surrounded by comfortable houses. Henry Disston, whose Keystone Saw Works in Tacony, near Philadelphia, still clung to the apprenticeship system of training workmen, advanced money on easy terms to members of his factory force for the purpose of buying homes. Other individuals and concerns provided attractive dwellings, libraries, hospitals, and social and recreational centers for their wage earners. Before the opening years of the nineties, however, charges of extortion were being hurled at employers in many cities. A particularly bitter controversy raged in the "model" village of Pullman outside Chicago, where workers claimed that they were being charged outrageous prices for rent, groceries, and gas.

Unionization of Workers. Unionization made rapid progress during the Civil War and for a short time thereafter. The directory of trade-unions printed in *Fincher's Trades' Review* grew in size from half a column in June, 1863, to a seven-column page in May, 1865. In 1867 the Knights of St. Crispin, a union of shoemakers that was soon to become outstandingly important, was founded. Federation too was attempted. The International Industrial Assembly of North America met in Louisville in 1864, and two years later the first congress of the National Labor Union assembled in Baltimore. Little was accomplished in either case, and a third effort to unite all craftsmen was made on the eve of the panic of 1873. On May 3 a call was issued to every trade-union in the United States to send delegates to a meeting to be held in Cleveland on the fifteenth of July. Strict pledges were made that the organization should never "become the tail to the kite of any political party, or a refuge for played out politicians, but shall to all intents and purposes remain a purely Industrial Association, having for its sole and only object the securing to the producer his full share of all he produces." But faced by heavy odds, the experiment collapsed under the weight of the financial upheaval that fell upon it in its birth. Fusion with the Industrial Brotherhood and with the Sovereigns of Industry failed to preserve its existence.

The Disastrous Effects of the Panic of 1873. The panic of 1873 with its succeeding discouraging years brought tragedy to labor. In 1873 less than one-third of the usual railroad mileage was constructed, with the result that nearly half a million construction workmen alone were thrown out of employment. Factories and shops one by one closed down as surplus goods piled up in the warehouses, and fires went out in furnaces and forges as orders from industry ceased. Increasing numbers of hungry men and women, unable to find work, began to demand food and shelter from society. Bread lines appeared in the cities, and the "tramp evil" came to plague the country. Socialism and radicalism spread quickly among the poverty-stricken.

Employers, hard pressed by creditors and deprived of markets in spite of drastic reductions from accustomed prices, vigorously resisted the demands of labor for mere subsistence and drove whatever bargains they could. The unions melted rapidly away. Industrialists too fell before the angry economic forces. Year after year business grew worse. Pig iron, for instance, which had sold for fifty-three dollars a ton in the fall of 1872, was selling six years later for sixteen dollars and fifty cents when buyers could be obtained at all. Failures moved upward as prices declined. More

than ten thousand firms collapsed in 1878 with liabilities of over two hundred thousand dollars, a sum not exceeded in the panic year.

Under the circumstances owners of factories, mines, mills, and shops found it easy to accuse individuals and local unions of trying to impede economic recovery by demanding excessive wages. Moreover, they pointed with telling emphasis at the unsocial episodes with which labor in general was credited. The most important of these were the activities in the Pennsylvania coal fields of the Molly Maguires, or Mollies, as they were usually called. The organization had been violent from its inception. In Civil War days it had led the opposition against the federal draft; and as coal mining became more and more vital to industry, it turned its energies against the operators. In desperation the officials of the Reading Railroad appealed for assistance to the Pinkerton Detective Agency, which sent James McParlan, posing as a fugitive counterfeiter, to live among the Mollies until he had secured sufficient evidence to convict the leaders. In May, 1876, the detective, minus his disguise, took the stand as prosecutor's witness in a series of sensational trials that ended only after ten men had been sentenced to death and many people over the nation had become convinced that labor organizations were a menace; no testimony was brought out as to the tragic conditions that had stirred the miners to crime.

Another succession of occurrences that incensed employers was the railroad strikes of 1877. Workmen, fighting hopelessly against the poverty that had struck the nation, disputed the right of the railroad operators to reduce wages. The operators, however, saw no reason why they should not "control their own business," and in so doing they employed strikebreakers and Pinkerton agents. Eventually the national government sent troops to coerce the laborers into peace. The effects were distressing. Indeed, before the panic had run its course, the entire labor movement had been temporarily discredited; workingmen's organizations had been driven into secrecy; radicalism, violence, and bitterness had become all too common; and the idle and hungry men who tramped the streets, hung about public squares, and sometimes joined mass meetings in protest against their economic condition had been labeled dangerous agitators. Yet the persons who suffered most were those who had peacefully sought only bread for themselves and their families. The times were painfully out of joint, not so much from exploitation by any group as from new social and economic developments that had fallen with astounding rapidity on the people and that few comprehended. Old agrarian ways were outmoded; the sheriff, keeper of the peace in a farming society, was helpless in the new urbanism.

The Knights of Labor. The Noble Order of the Knights of Labor was founded in 1869 by Uriah Smith Stephens. Real growth did not come, however, until the beginning of the eighties. Stephens, a native of Cape May, New Jersey, had in his youth been trained for the ministry. He never forgot the altruistic expressions or the mystical formulas of his early education. Every member of his organization was impressed with the common brotherhood of laborers, and Biblical passages were read as a part of the opening service. Candidates became full-fledged "Knights" when the "Master Workman" after an elaborate ritual declared: "On behalf of the toiling millions of earth I welcome you to this Order pledged to the service of humanity." Anyone who worked or had worked for wages was eligible to join. Neither race nor sex was a barrier to admission, and both the skilled and the unskilled were welcome. Bankers, lawyers, doctors, and liquor dealers—regarded as parasitic or unmoral—were forbidden entrance.

The injunction of secrecy that the directors, fearful of the prevailing opposition to labor unions, imposed upon the Knights of Labor was partially responsible for the slowness of its growth in the beginning. Lack of aggressiveness was another deterrent. Stephens, being a tailor by trade, gathered about him at first mostly garment cutters. Eventually other workers were invited to participate as "sojourners" in the hope that they would later "swarm" with their own groups and so carry forward the "noble and holy" cause of the workingman. A third hindrance was administrative jealousies; the Philadelphia and Pittsburgh district assemblies—numbers one and three—battled viciously for leadership. In addition society in the seventies suspected that every labor leader was a radical. Many people did not stop to question Allan Pinkerton's statement that the Knights and similar organizations had risen from the Commune and had in mind "the destruction of all government by the ballot and if that shall fail, by force, when the proper opportunity arrives."

The year 1879 brought the resumption of gold payments and the beginning of a short period of prosperity. Discontented groups that had been held in leash for several years by economic conditions broke into open revolt. Unionization made rapid progress. The radicals, boldly declaring that America was slowly resolving itself into classes on the basis of wealth, began aggressive action. Labor in general grew restive as riches appeared to concentrate in the hands of a few. And so it was that when hard times returned in 1883, workmen, seeking to protect the few recent gains they had made, flocked into the new order. A series of successful strikes helped immensely. By 1886 the membership of twenty thousand of five

years before had increased to more than seven hundred thousand; the unskilled, believing they had at last found a champion, joined the order in large numbers. For a time Master Workman Terence V. Powderly, who had succeeded Stephens in 1879, took a vigorous hand in various strikes and attained considerable success in local political contests. In the Kentucky elections of 1886 John G. Carlisle, national statesman and Speaker of the House of Representatives, narrowly escaped being beaten by labor's candidate, an unknown woodworker. That same fall Henry George, economic reformer, polled more than sixty thousand votes in the New York City mayoralty campaign.

The middle eighties marked the climax of the Knights. By 1890 their numbers did not exceed a hundred thousand. The labor movement, however, was not abandoned; another order was moving upward.

The American Federation of Labor. One of the most successful organizations that arose out of the divergencies and confusions of the eighties was the American Federation of Labor. It violated no established traditions, and, by abjuring politics and adhering closely to the practical ideals of shorter hours, better wages, and more jobs, it avoided any fundamental program and was therefore flexible enough to adjust itself to whatever exigencies it met. "We have," said one of its leaders, "no ultimate ends. We are going on from day to day. We are fighting only for immediate objects—objects that can be realized in a few years." Thus no one could say that the principles of the order were revolutionary or that its existence was a standing menace to property owners.

Although it had been created in rudimentary form some five years before, the American Federation of Labor actually came into official being at Columbus, Ohio, in 1886. At its head was Samuel Gompers, English-born workman of Dutch-Jewish descent, who had for many years been active in the Cigar Makers' Union in New York. He was ably assisted by P. J. McGuire, Adolph Strasser, and others. The organization was, as its name suggests, built on a federal basis. In other words, it was made up of many separate trade-unions whose general policies were directed by a central governing body. Its purpose was to guide labor in such a manner as to win the greatest benefit for all. One of the most serious problems that had to be faced was that of disciplining the workingmen. Gompers had seen many strikes called for personal and sometimes petty reasons, and he had seen labor destroy property and bring upon itself the disapproval of society. These things he sought to curb; having himself often been hungry in the dirty lower East Side of New York, he was convinced that bread was the first essential of any eventual progress. He believed too

that unless his federation had the sympathies of the public, the efforts of his lobbyists in national and state legislatures to obtain eight-hour-day legislation, child-labor laws, compulsory-education statutes, and other measures of value to labor would be useless.

Basically the A. F. of L. hoped both to make jobs and to secure the right to control in some measure working conditions. Two broad policies were established: first, the advocacy of mutual agreements with capital by which the rights of labor might be protected and, second, the accumulation of a fund—collected from all members—from which wage earners might draw sufficient money for subsistence while involved in approved strikes. Contracts, however, were often misunderstood or even deliberately broken, and the associations that the factory owners built up in their own defense were far more effective than those of labor. The industrial captains knew intimately many congressmen and local officials; they possessed able lawyers; they could, when necessary, hire private guards and detectives; and, unfortunately for all concerned, they could sometimes call the troops of the United States to their aid. But whatever their inequalities in strength, labor and capital went at each other hammer and tongs in the decades of the seventies, eighties, and nineties.

Militant Labor, 1877-1894. Strikes prior to the Civil War had been on the whole only local disturbances in the economic order. Until business became in the years after 1865 the dominating factor in the life of the country, wage earners had been relatively few in number and had felt little or no responsibility for the welfare of one another. It was the panic of 1873, perhaps, that served to turn labor and capital into distinctly divergent paths. In 1875 and 1876 small strikes were staged in the anthracite fields of Pennsylvania, in the textile mills of New England, and on the railroads, particularly in New Jersey and in Michigan. Some were won and some were mercilessly suppressed, yet everywhere unity was strengthened and the seeds of protest were sown.

The Railroad Strikes of 1877. The first great industrial conflict on a nation-wide scale occurred in 1877. Trouble began in the East when the Pennsylvania announced a wage reduction of ten per cent. Other lines rapidly followed suit, and workmen from the Atlantic to the Missouri grumbled ominously when they learned that their pay, which had already been cut ten per cent at the beginning of the panic, was to be reduced again. On many roads the men were pressed by poverty both because wages were low and because working days were few. Firemen and brakemen on the Baltimore and Ohio averaged in some instances little more than forty dollars a month, an amount insufficient to meet the expenses

of room and board at distant stations and at the same time maintain a family at home. Operators too were frequently in desperate financial straits. Companies were often in bankruptcy. Still the New York Central, for instance, could have saved far more each year by simply decreasing its annual dividends to six per cent (half its stock was water) than it did by instituting wage cuts—and nobody would really have suffered thereby. As it was, the operators, the wage earners, and the public were, when the smoke of battle had lifted, poorer than before by many millions of dollars.

Violence first broke out on the Baltimore and Ohio on July 18. Workmen refused to permit freight trains to leave their stations until wages had been restored. President Hayes quickly ordered two hundred and fifty federal troops to Martinsburg, West Virginia, and the governor of Maryland called out his entire militia. At Cumberland the United States soldiers were beleaguered by a mob and were rescued with difficulty. At Baltimore the state forces were attacked by infuriated strikers and forced to take refuge in private homes. Leaving dead and wounded in its wake, the demonstration spread westward to Pittsburgh, where the Pennsylvania had in June reduced wages ten per cent and had early in July issued an order creating "double-header" trains, effective July 19. Each of the new freights was to be made up of thirty-four cars and two engines instead of seventeen cars and one engine. The change threatened the jobs of many conductors and brakemen. With the first efforts to operate under the new system the strikers closed the switches. The mayor of Pittsburgh, sharing the feeling of the people that the Pennsylvania road had discriminated against them in the matter of rates (especially in the contest with Cleveland over the refining industry), gave only perfunctory aid to the forces of law, and troops from the district declined to take active part in suppressing the turmoil.

Six hundred and fifty militia, dispatched from Philadelphia to restore order, arrived in Pittsburgh on Saturday afternoon, July 21. They appeared just as the workers were leaving the mills and factories and were at once assailed by a clamoring throng and driven into the roundhouse and the machine shops. Under cover of darkness the unruly crowd grew larger. Gun shops were raided, buildings were set ablaze, and cars of burning coke were shoved against the roundhouse. Soon the soldiers were fighting desperately against fire as well as mob. At seven-thirty the next morning, after having been exposed for hours to rifle fire and blinding smoke, the weary militia withdrew across the Allegheny River, leaving the angry rabble in charge. All day long the destruction continued. Cars were broken open, looted, and set afire. Quiet returned only after citizens had armed

themselves and joined the police force and General Hancock had called for immediate service all the available United States troops of the Atlantic department. In the meantime two thousand freight cars, one hundred and twenty-five locomotives, two roundhouses, several machine shops, the Union Depot, a grain elevator, and many other important buildings had been reduced to ashes. Furthermore, a score of people lay dead as a result of the encounters between strikers and the soldiers.

But peace was not yet returned. Bloody and disastrous outbreaks occurred at Reading (Pennsylvania), Buffalo (New York), Zanesville, Columbus, and Toledo (Ohio), Louisville, Indianapolis, Chicago, St. Louis, and San Francisco. The quarrels were nowhere soon forgotten. Although the public was in sympathy with the strikers, cities turned to building armories and judges to resurrecting the old doctrine of malicious conspiracy in attempts to maintain traditional order. Society, while wondering why the ways of justice should be so costly, began to demand that capital pay serious attention to its economic responsibilities.

The Troublous Eighties. The eighties were scarcely less tumultuous than the seventies. The financial revival of 1879 collapsed before the end of 1883, and labor again became impatient. In May, 1884, Union Pacific repairmen in Denver, led by Joseph R. Buchanan, editor of the *Labor Enquirer,* struck against a wage reduction. Within thirty-six hours every shop from Omaha, Nebraska, to Ogden, Utah, had been closed, and in three days the strike was over. The incident served to advertise the Knights of Labor. Thousands of new members were promptly enrolled; others joined when a second strike was won in August after the dismissal of certain employees who had been implicated in the troubles in May. Encouraged by success, the Knights were ready by March, 1885, to defy Jay Gould throughout the extent of his rail empire. In October, 1884, and February, 1885, wage reductions had been announced on the Missouri, Kansas and Texas, on the Wabash lines, and on the Missouri Pacific, and all pleas for restoration had been disregarded. On the afternoon of March 7 workmen at Parsons, Kansas, dropped their tools at the signal of a whistle and walked out of the shops. The strike spread quickly to Atchison and then beyond the borders of the state to Sedalia and Kansas City in Missouri and Fort Worth and Denison in Texas. On the ninth the men were offered their pay and notified that they were discharged, but they "refused to receive the one or to recognize the other."

The events of the early days of March, 1885, were unique in American labor history. For the first time a well-organized and carefully led group of workmen calmly challenged simultaneously over a wide territory the

power of a great industrialist to manipulate wages and days of work. The strikers throughout the conflict behaved commendably. They maintained an executive committee with sole authority to act, requested of every person involved full protection of public and private property, and insisted upon order and decency. But railroad authorities doggedly held that every man must return to work before any discussion could be undertaken; to do otherwise, they argued, would be to admit that the company had surrendered its right to manage and direct its own affairs. Furthermore, professing to believe that the peace of many communities was being violated by the illegal holding of shops and trains, they called upon the governors of Kansas and Missouri for militia and intimated that federal troops were needed. State officials, however, were not sympathetic. No laws were being broken, and no property was being destroyed. "The strikers," wired Governor Martin of Kansas, "are sober, intelligent, orderly men, who have always, heretofore, been loyal to their employers. They are such employees as any private citizen would be glad to have. Their character and intelligence deserve respect." At last on Sunday morning, March 15, high officials of Kansas and Nebraska (including the governors) met R. S. Hayes, spokesman of the Gould system, in St. Louis, and that afternoon news went out to the men that their demands for restoration of wages, time and a half for overtime, and reemployment without prejudice on account of the strike had been acceded to by the railroad. On Monday afternoon the trains began to move again on regular schedule. The strike was over. Labor had conducted itself with wisdom and had won not only its immediate objectives but the respect of the public as well.

In spite of the fact that the disagreements had ended in "a complete surrender on the part of the Company," within a short time rumors that leaders of the Knights of Labor were being quietly discharged began to circulate. A strike was precipitated in August when the Wabash, seeking to cut expenses by lessening the labor force rather than by reducing wages, dismissed practically all its workmen at Moberly, Missouri. Failing in their efforts to obtain a conference, officials of the Knights of Labor at once sent out a command that any member "in the employ of the Union Pacific and its branches and Gould Southwestern system or any other railroad, must refuse to repair or handle in any manner Wabash rolling stock until further orders from the General Executive Board." Jay Gould, faced with the possibility of idle trains on twenty thousand miles of road, agreed to meet the discontented men directly. With no governors, state officials, or other intermediaries present, the strikers forced the railroad to agree to take back the discharged workers, asking "no questions" as to whether

they belonged to the Knights of Labor or any other organization. Labor had brought a great industrial captain to taw, and the press cried its achievement throughout the nation.

But adversity fell upon the Knights as quickly as success had come. Early in 1886 Martin Irons led a strike on the Texas and Pacific. "Personally honest and probably well-meaning" yet "overbearing and tyrannical,"[4] he adopted the reformer's characteristic contempt of compromise, and the quarrel, interspersed with outbreaks of violence, dragged along for two or three months before sputtering out with no results. Gould had recouped his losses. Employers, pointing with emphatic vigor at the growing arrogance of labor leaders, the increasing radicalism of the unlettered rank-and-file workers, and the thoughtlessness with which strikes in some cases were being called, easily convinced those charged with the maintenance of peace and order that their fears for the public safety were not unfounded. Many people agreed when a railroad president declared in 1886, "I don't think we could operate our road fifteen minutes after the militia is withdrawn," and a few were inclined to feel that he was correct when he added, "It may be, too, that the strikers will burn up our shops before this 'circus' is over." Even the sympathy labor had won from society in the first few years of the decade was alienated by a series of dramatic outbreaks that flared up in Chicago.

The Haymarket Affair. No single episode in American labor history, perhaps, ever startled the public so completely and so rudely out of its complacency as did the Haymarket affair. The incident was blamed chiefly upon the rising radicalism of the day. Anarchism and syndicalism, presumably looking to Europe for their guiding principles, had been developing rapidly for several years. In 1883 the International Working People's Association was founded at Pittsburgh. It soon shifted its headquarters to Chicago. The organization, commonly referred to as the Black International, appealed to the laboring class in strong language. Early in 1885 the *Alarm,* published in Chicago, advised its readers that dynamite was the "stuff." Said the editor, "Stuff several pounds of this sublime stuff into an inch pipe . . . plug up both ends, insert a cap with a fuse attached, place this in the immediate neighborhood of a lot of rich loafers . . . and light the fuse. A most cheerful and gratifying result will follow."

Conservatives were sure that no real American would believe such twaddle. Their faith was rudely shattered, however, when on the evening of May 4, 1886, the majesty of the law was summarily disputed in one of Chicago's public parks. The occurrence was the tragic climax to a series

[4] Commons and associates, *History of Labour in the United States,* vol. ii, p. 383.

of labor conflicts. For three months a strike had been in progress at the plant of the McCormick Harvester Company. In addition on May 1 eighty thousand Chicago workmen had walked out of their shops demanding an eight-hour day. Turmoil swept over the city as wage earners, anarchists, and employers fought openly or secretly for advantage. On the night of May 3 a skirmish between scabs and strikers broke out at the harvester works. Four people were killed by the police while order was being restored. The more radical of the strikers felt, with some justification, that the agents of the law had committed ruthless murder. The next night a meeting of protest was held in Haymarket Square. Except for a seething undercurrent of passion there seemed no reason for anxiety. Mayor Harrison was present for a time, but when the crowd, having exhausted its bitterness, began to drift away, he departed. A sullen rain promised to disperse those who remained, when suddenly a cordon of a hundred and eighty policemen appeared on the grounds. A bomb was hurled into their midst. One officer was killed, seven were mortally wounded, and sixty others were seriously injured—indisputable evidence that the impossible had happened in America.

The instigators of the Haymarket affair came to trial while Chicago was still panic-stricken and hysterical. No one has yet discovered who threw the one small missile that destroyed much of labor's gains and made it difficult for society for many years to evaluate without prejudice the temperate demands of the great body of wage earners. Eight anarchists charged with the crime faced a picked jury without the slightest hope of mercy or justice. All but one were sentenced to be hanged because through their teachings "somebody, not known, did throw the bomb that caused Degan's death." Thus was placed at the door of radicals the blood that had been shed. Among the sufferers were thousands of sober and decent workmen who were asking for nothing more than a fair share of the worldly goods of a nation bursting with wealth.[5]

The Strikes of the Nineties. Labor was restless in the years after the Haymarket affair, and open warfare broke out again before the end of the decade. Demands for shorter hours were renewed in 1888; few advantages, however, were won. In 1889 the Amalgamated Association of Iron and Steel Workers in Pennsylvania wrested some concessions from the Carnegie Steel Company without violence, but the day of concessions was over. In

[5] There were numerous local strikes during 1887 and 1888. Discouraged by the labor controversies, a few famous industrial houses closed their doors. The most notable case was that of the Sandwich Glass Company of Massachusetts. The workers quit while an important order for glass lamps was being filled. The owners announced that the fires if allowed to go out would never again be rekindled. They kept their word.

that year H. C. Frick, bitter foe of labor and uncompromising defender of the rights of the employer, became manager of the great steel empire of Andrew Carnegie and soon called for the dissolution of the union. Three years of controversy and argument came to an end when the workers at last on June 29, 1892, walked out in ostensible protest against wage cuts, although they were also asserting their right to organize.

Frick had already hired three hundred Pinkerton agents to defend his mills. The men arrived at a little town on the Ohio River below Pittsburgh on the night of July 5 and were towed in barges up the Ohio and the Monongahela to Homestead. At four o'clock the next morning the determined miners engaged them in a bloody battle and drove them away. Six days later eight thousand militia came to take up the cause of the private detectives. An anarchist's attempt to assassinate Frick offended the public, and in November the discouraged laborers, faced with a depleted treasury and the approach of winter, called off the strike.

On July 11, the day the Pennsylvania National Guard reached Homestead, Governor Willey of Idaho wired President Harrison: "This morning riot and bloodshed by the miners at Couer d'Alene district commenced." Using dynamite and arms, the workers had their way until put down by federal troops dispatched from Fort Snelling. In August the railway switchmen in Buffalo began what proved to be an ineffectual fight for a ten-hour day. At the same time the coal miners in Tracy City, Tennessee, rose against long-standing impositions and the state-wide system of convict labor through the leasing system. After seizing the mines, the strikers freed the prisoners; at Coal Creek they liberated fifteen hundred in a body. The workmen, however, were no match for the military forces. The operators soon sent their leased convicts back to the pits, and the company store and the company weighmen—cankerous sores in the life of the miner—were retained.

Hardly had the tempestuous year 1892 come to an end when the panic that had been threatening since 1890 broke. On May 4, 1893, the National Cordage Company collapsed, and with it the general stock market. Before relief came in the fall, the West and the South had been reduced to virtual poverty, and the wheels of industry in the East had almost ceased to turn. Unemployment increased rapidly as unwanted goods piled up in warehouses, shops, and yards. Men wandered the streets in search of jobs, and boys took to the open road. Yet the American Federation of Labor managed to weather the storm. President Gompers justifiably boasted at the annual meeting in 1893: "It is noteworthy, that while in every previous industrial crisis the trade unions were literally mowed down and swept out

of existence, the unions now in existence have manifested, not only the powers of resistance, but of stability and permanance."

But there was a rough sea still ahead. In 1894 nearly seven hundred thousand workers were involved in disastrous labor disturbances. On April 21 some hundred and twenty-five thousand miners struck in Ohio, only to find their cause lost before midsummer. The industrial and agrarian unrest was made more apparent by the little "armies" that began to form over America and march toward Washington. From California, the Pacific Northwest, and the plains region small groups of the discontented set out on the long trek eastward. Hurried on by each succeeding town through which they passed, they made rapid progress. Although they occasionally took possession of trains in the West, the "petition in boots" walked from Chicago. Jacob S. Coxey and his followers from Massillon, Ohio, caused the most perturbation among the lawmakers and the factory owners of the industrial East. The entire movement evaporated when Coxey was arrested, fined, and imprisoned for stepping "upon certain plants, shrubs, and turf then and there being and growing" on the grounds of the capitol. The end came without government officials' realizing that the participants were more than vagrants who had formerly taken their food from the henroosts and their beds from the haymows of America, as was suggested by the editor of the liberal *Nation*.

While Coxey was being shuffled off to jail, trouble broke out in Chicago. On May 11 the workers at the Pullman Palace Car Company went on strike. The laborers, compelled to live in the little town of Pullman that the great industrialist had built for them, were not convinced of their employer's benevolence. Opinions concerning the "model village" on the edge of Chicago differed widely, but the wage earners, at least, felt that the homes, "open stretches of lawn, flower beds and lakes" with which they were provided did not compensate for the impositions they suffered. They asserted that Pullman kept spies to watch the women returning from Chicago to see that they brought in no purchases from outside stores, that rents were higher than in neighboring towns, and that the cost of heating and lighting were excessive because the gas was kept under abnormal pressure. A prominent railroad official is said to have declared that "the town of Pullman is not American. The people do not like to be prescribed to certain walks on the street, to have their churches built for them, and their graveyards made ready for them. In fact, a man at Pullman can neither keep a chicken nor a dog nor any living thing. . . . He is not a freeholder and consequently loses part of his manhood."

Whatever the fundamental grievances, the Pullman strike was precip-

itated by a drastic decrease in wages made while the company was still paying its accustomed dividend of eight per cent. Efforts to secure comparable reductions in rents failed, and attempts to arbitrate were ignored. In late June the American Railway Union, led by Eugene V. Debs, refused to haul sleeping cars, and the strike spread to Chicago. The action of the railway workers was purely sympathetic and to the conservative people of the city wholly incomprehensible. Although there was little violence, the property owners were convinced that "hoodlums" in the city awaited only an opportunity for pillage and arson. In the excitement of the moment sober workers assembled in mass demonstrations were, according to the headlines, "Mobs Bent on Ruin." As the trains one by one came to a standstill, the forces of the law turned upon labor without mercy.

The injunction, an ancient instrument of the courts, was called into use; in a vicious "gatling gun on paper" issued July 2 it was directed that all persons refrain from interfering in any way with the business of the railroads and that every striker who spoke to a fellow worker of their common cause be considered an offender of the courts, liable to arrest and sentence without trial. Thirty-six hundred deputy marshals were created by the government to help keep order, but they were selected, armed, and paid by railway officials. The judiciary, in spite of protests, became an agency of tyranny rather than of justice. Judge Grosscup wrote to Walter Q. Gresham, Secretary of State, on July 26: "I am not prepossessed in favor of this injunction method of repressing violence, and hope that Congress will enact a criminal code to protect inter-State commerce and the mails. It is altogether wrong to call the Judges into the midst of such a turmoil and compel them, apparently, to take sides. It identifies them personally with the one side, and no amount of argument or enlightenment will ever teach the other, that they are not partisans. If this injunction method goes on, it will in the end, destroy the efficiency of the courts as courts, by destroying the confidence of a large portion of the people in their impartiality."

President Cleveland, unwisely advised by his Attorney-General, Richard Olney, sent United States troops to Chicago. In vain did Governor Altgeld, Eugene Field, Clarence Darrow, Jane Addams, and other liberals argue that the armed forces of the nation were not maintained for the purpose of subduing men and women who were merely demanding what they believed to be their human rights. The soldiers, called out ostensibly to keep the mail moving, proved in reality instigators to violence. Their presence infuriated the lawless element, and soon the city was in the grip of terror. Even the relatively peaceful were goaded to fury. And so it was

that while the sky was reddened by burning cars in the train yards and blazing buildings at the World's Fair grounds and rumors flew thick and fast that the homes and shops of the wealthy were to be destroyed, many inhabitants of Chicago murmured sincere thanks that Grover Cleveland had had the courage to defend them in their hour of need.

Before the end of July the strike collapsed throughout the nation. Millions of dollars' worth of property lay in ashes, many workers were jobless and destitute, and Debs was in jail. Society had learned little, however, and labor had gained less. At one time or another during the next half-dozen years more than two million wage earners quit their employment, but their protests were smothered by the noise of politics.

Labor at the End of the Century. In many ways the labor movement made quick strides forward between 1865 and 1900. Nevertheless, at the turn of the century workmen were for the most part still unorganized. No single group was entirely to blame. Unionism infringed upon long-established principles of individualism; furthermore, it may be that it was contrary to certain political ideals that the founding fathers of the government had set forth. Opposition came from many quarters. Industrialists regarded any association of laborers as socialistic, unpatriotic, and detrimental to progress. "I am opposed to anything that takes away the personal or individual rights of a man, whatever position he may occupy," wrote Clem Studebaker to Andrew Carnegie in 1893. "The mistake that the laboring man makes is to allow himself to be controlled by an organization that prevents him from going directly to his employer and making his own bargains." Many wage earners repeated in one way or another the same thought; probably a majority were deeply suspicious of unions and union leaders. Even the public felt that organizations were primarily for the unsuccessful.

Tragically enough, few people realized that economic conditions had materially changed, that in spite of the increase in physical goods the nation was drawing each year nearer a static point beyond which the liberties of individuals in search of gain would be decidedly hampered. The disappearance of the frontier was only one evidence that economic opportunities were closing. Whether they knew it or not, the industrialist and the wage earner were no longer capable of bargaining directly with each other. They had been split apart by the very size of the business unit and by the introduction of impersonal management in the form of boards of directors who must deliver profits to their stockholders. Cultural and material advancement too was helping to cause unavoidable dissension between employer and employee. Schools, books, newspapers, shows, trains, and other developing assets of the nation made workmen, once contented with few worldly

things, dissatisfied with their meager possessions. Perhaps Ignatius Donnelly presaged the partially accepted modern theory that every individual is entitled to a decent existence when he wrote in 1892 that "the world has reached a pass where we cannot have peace without prosperity."

The extent to which strikes and violence prompted the enactment of beneficial legislation is a subject of argument. It is obvious, however, that under the leadership of humanitarian and social reformers many helpful laws, state and national, were passed between 1865 and 1900. Congress in 1868 limited the laboring day to eight hours on public works and in 1892 extended the provisions to all government employees. Arbitration in case of labor disputes on interstate carriers was provided by the Erdman Act of 1898. In 1866 Massachusetts prohibited the employment of children under ten years of age and a few years later restricted the working hours of women in textile mills to ten a day. Many other states passed similar laws. Bureaus of labor were set up, factory and mine inspectors were appointed, working conditions in hazardous occupations were regulated, and payment in cash was in some cases made obligatory. Yet the legislation helped only slightly. The courts were the greatest handicap to progress. Justice, working within a rigid framework of government long established, seemed unaware of new social philosophies that were growing up. Judges made strange decisions. New York in 1882 passed an act forbidding the manufacture of cigars in tenement houses. Its purpose was to check the growing sweatshop system, but the court ruled: "It cannot be perceived how the cigarmaker is to be improved in his health or his morals by forcing him from his home and its hallowed associations and beneficent influence to ply his trade elsewhere." In Pennsylvania a statute prohibiting the payment of miners in truck orders was described as "insulting and degrading," and in Illinois legislation restricting the working hours of women was pronounced unconstitutional because women, according to the court, had the same liberty of contract as men. Theodore Roosevelt aptly remarked that the judges "knew legalism, but not life."

While the lawmakers were enacting social legislation, many employers were trying honestly to improve the lot of the workmen. By the middle of the eighties a large number of the major business institutions of America, including department stores, railroads, coal mines, and steel mills, had made some provisions for encouraging the provident and for taking care of the ill and the needy. Some companies supplied easily financed houses; built hospitals, libraries, playgrounds, and recreation centers; created benefit associations; and founded savings-fund, relief, and accident societies. Frequently substantial assistance was given in instances of injury and death.

The difficulty was that the wage earner resented doles and gifts and the industrialist was incensed by lack of appreciation of his gratuities. The employees often suspected that the object of the employer was "not to administer benefits pure and simple, but to sugar over a hard contract, or to get more than a fair equivalent from him in the way of more work." The Pittsburgh *National Tribune* expressed the somewhat questionable attitude of some labor publicists when, in commenting on the opening by a certain firm of a hundred-thousand-dollar clubhouse for women employees, it demanded: "Give the working women sufficient wages so that they can pay for music, lectures, books, and other means of improvement. Don't lower their self-respect by giving them a cup of coffee for one cent, or a sirloin steak for eight cents, but let their wages be sufficient to enable them to buy good food at the regular market rates. Let labor be self-supporting, and do away with the idea that the rich employer can take two dollars from his workers if he only returns fifty cents in charity."

The employer did, in fact, openly refer to his benefit payments of various kinds as "charity," and he readily admitted that assistance was usually given only to the "faithful." But he must not too readily be labeled an oppressor. As a rule, those who gave the most aid to their workingmen also paid the highest wages. The fact remains, however, that by 1900 labor could no longer tolerate an existence in which the welfare of the worker depended wholly on the personal whims of the "boss"; nor could management, much as it may have desired to do so, deal with individuals. Although the perplexities had been apparent for many years, the way out was not easy. Industrialists were prejudiced against unions unless they controlled them. Workingmen quarreled among themselves as well as with their employers. Progress brought fresh hostilities and causes for controversy, and, notwithstanding many gains, labor, no less partisan and selfish than capital, entered the twentieth century with profound new problems before it.

Chapter 22

PROTECTION IN THE INDUSTRIAL AGE

Tariff and Industry. The significance of the tariff in the economic development of the nation between 1865 and 1900 is still a subject of controversy. The chief contention of the Democrats during those years was that American industrialists, safe behind a customs wall that could not be scaled by European competitors, levied tribute in the form of excessive prices on goods sold to the common man. The Republicans, on the other hand, argued vehemently that high tariffs benefited both the industrialists and the laborers. In fact, the panic of 1857 gave their party soon after its founding opportunity to declare itself both the savior of the manufacturers and the friend of the workers. Horace Greeley insisted that the calamity was a result of the low rates established in 1846, while Andrew Gregg Curtin, gubernatorial candidate in Pennsylvania at the end of the decade, spoke much of "the vast heavings of the heart of Pennsylvania whose sons are pining for protection to their labor and dearest interests." Lincoln's nomination in 1860 was partially due to Pennsylvania's trust in his soundness on the tariff, and Mark Hanna in 1896 was following good Republican doctrine in trying to distract attention from the money question by shouting for "McKinley and prosperity."

It is not strange that the tariff was an important question in the years after the Civil War. The United States was rapidly becoming a great manufacturing nation, and the rising industrialists eagerly sought closed markets in which to sell the product of their mills. The customs dues may be likened to a hinged door through which must pass all incoming goods. If duties are low, entrance is simple; if duties are high, the door may become a barrier, partial or complete. Factory owners, with protection already at hand in the Morrill tariff and with powerful influence in political as well as in economic life, were dominant figures everywhere. Their argument that infant industries could not compete with the low-cost production of Europe was in some instances perhaps justified, and nationalists had a point in asserting that diversification of industry made for strong home defense. But the problem was complex. Many American plants were already

well established. Furthermore, the higher the duties, the less the foreign trade in general and therefore the fewer the sales abroad. Factory owners did not mind, for their sales were for the most part made at home, and anything that tended to create monopolistic conditions was welcome. Agrarians, on the other hand, were penalized, for they disposed of large amounts of their total production abroad. The prices of the goods they sold were fixed in foreign trading centers beyond the reach of national tariff laws, but the prices of the goods they bought were set in a circumscribed domestic market in which the upper limits were determined by the protective rates that the Republican party as a political institution was able to maintain.

Tariff was a reality little affected by theory, and its influence on the trend of manufacturing, on the welfare of the worker, and on the course of foreign trade was obvious. That competition was abolished is denied by the swelling stream of money into the treasury. It is clear, however, that a few major industries in particular were able to reap rich profits from the excessive protection that Congress provided, often without regard as to whether there was foreign competition or not. The situation had its beginning in the Morrill tariff of 1861, introduced in the session of 1859-1860, which became law a few days before the inauguration of Lincoln. The rates were moderate, but each succeeding Congress throughout the war felt impelled because of the pressing need for money to raise the duties. In August additional levies were made on tea, coffee, sugar, spices, India rubber, and other important articles. A year later these taxes were further enlarged, and the free list was greatly reduced. In June, 1864, the "war tariff" was enacted. Its chief purpose was to protect American manufacturers while they were subject to heavy internal revenue taxes, then rapidly becoming an important source of income.[1] Duties in some cases amounted to as much as one hundred per cent.

Tariff Readjustments after the War. When the Civil War was over, the exorbitant and odious internal taxes were lowered on many articles, and steps were taken to retire the greenbacks. The emergency duties on importations should have been adjusted at the same time, but during the bloody days between Sumter and Appomattox industrialists had learned the

[1] In 1864 receipts from customs dues totaled slightly more than one hundred and two million dollars, and receipts from internal revenue taxes amounted to one hundred and seventeen million; in 1865 customs receipts dropped to less than eighty-five million dollars, while internal revenue returns rose to more than two hundred and ten million. Liquors (including beer), tobacco, checks, incomes, amusements, documents, many manufactured articles (sales), and other miscellaneous items were taxed. The tariff rates averaged about forty-seven per cent.

real value of protection. Owners of mills, shops, and factories, using a patriotic shibboleth of devotion to the Union, confused the laboring group and prevented the farmers of the South and the West from uniting on any reform program. Rates were raised instead of lowered. The wool growers and manufacturers secured special legislation that placed the heaviest burdens on the cheapest (and therefore most-used) grades of cloth. Congress passed over President Johnson's veto a measure of unjustified protection for copper, although the United States possessed the greatest mines in the world. Steel, nickel, marble, and sundry other products were eventually added to the favored list. The few reductions obtained in 1872 and 1875 were insignificant.

The first efforts at tariff reform were led by such vigorous intellectuals as David A. Wells, Edward Atkinson, E. L. Godkin, William Graham Sumner, and Horace White. But actual revision could be made only in Congress, and there William R. Morrison of Illinois did yeoman's service in the cause. With no immediate hope of effecting substantial changes in the protective system he kept prodding away at the incongruities of the existing laws. He and his friends struck telling blows by forcing their opponents to defend indefensible rates on specific articles. "Set the Republicans to vote against repeal or amendment [of the duties on essentials]," advised Wells in the late seventies, "and you have them in a tight place for the Presidential campaign. . . . One or two more duties on highly protected articles repealed, and the protectionists will begin to fight among themselves." Yet reductions were obtained only on quinine.

By 1880 political control by the business interests of the nation had begun to weaken. Liberal Republicans, loosely organized, had for some time been challenging the tariff policy of their party; Democrats were making effective use of the congressional roll calls; and stand-pat Republicans, fearing a break in the system, had voted for protection on articles which needed no protection. Most important of all, in 1881 a surplus began to pile up in the treasury. Everyone knew that the government raised its money chiefly by taxes, and a cash balance far in excess of its needs meant that unnecessary tribute was being wrung from the people. In order to divert suspicion from the tariff, protectionists began publicly to weep over the internal revenue levies. Posing as the friend of all the oppressed, they cried loudly for the immediate repeal of these "war taxes." The plight of the poor was presented in touching editorials.

In a time of profound peace [wrote the editor of the *Post-Appeal* of Atlanta, Georgia] the workings of this system have plunged North Georgia into a state of almost constant guerrilla warfare. Our sturdy mountaineers never understood

the internal revenue system. In the pursuit of what they considered an honest business they broke through the cobwebs of the law, and when attacked in their mountain retreats fought like brave men in defense of their property and their liberty. It is true that a mistaken view of their rights placed them on the wrong side of this matter, but it is impossible not to sympathize with them. The vigilant raiders of ex-Collector Clark have brought death and destruction to many a happy home in North Georgia, and today hundreds of good citizens of Georgia are languishing in Northern penitentiaries. The abolition of this war tax with its war-like methods of enforcement will be hailed with delight by good people everywhere. Its continuance can serve no good purpose, and nothing but evil can result from it.

But pleas for removing taxes from whisky and tobacco fell upon unheeding Democratic ears as long as heavy duties continued to be imposed on clothing, dishes, blankets, pots and pans, fencing wire, tools, and other essentials of ordinary economic life. The Republicans themselves were seriously divided. "The lamentable fact is," commented one senator, "that we have not a solid majority in favor of protecting our great industries, iron, steel, woolens etc." The strength of the opposition grew daily. Western newspapers ceaselessly demanded that the "needless incubus of a war tariff in time of peace" be taken from the backs of the farmers.

Defeated in their attempts to choke off revenue by repealing the internal revenue taxes, the protectionists turned to spending the surplus, and appropriation bills passed rapidly in spite of presidential vetoes. Still the income of the government remained embarrassing; even boards of trade in eastern cities began to protest against the swelling flood of money pouring into the treasury.

Republican Efforts at Tariff Reform. Immediately on coming to the presidency in 1881 after the unfortunate death of James A. Garfield, Chester A. Arthur embarked upon a policy of economic reform. In his first message to Congress he warned the members of that body of the dangers of unreasonable expenditures and urged the appointment of a commission to study the tariff question with a view to making reductions. His recommendation, however, met with strong resistance. Manufacturers opposed any change in a system that worked to their advantage. Democrats, suspicious of Republican intentions, objected to the method proposed. The common people, they declared, knew where taxes hurt most, and their will was best expressed by the representatives they had sent to Congress. Further, they argued, a commission would cost the country two hundred dollars a day and succeed merely in delaying needful legislation. The party was fearful too that the interests of the wealthy industrialists alone would be considered.

The unskilled and unpretending laborer who guides the plow and gathers the harvest [said Representative Carlisle of Kentucky] is as much entitled to the protection of the law and to the encouragement of the government as the scientific artisan who has mastered all the mysteries of the craft. Each one of the busy millions who helps to create and distribute the varied products of this wonderful land of ours has an undoubted right to demand an equal participation in all the advantages conferred by the laws of his country; and I repudiate every definition of American industry or American labor which excludes a single honest and useful occupation. Whoever challenges the right of the humblest citizen, whatever may be his trade or occupation, to an equal participation in the benefits conferred by the Government so long as he bears an equal share of its burdens, denies the equality of man; whoever asserts that one class of men or one species of industry has a right to exact tribute from another for its own benefit, or has superior claims upon the consideration of the Government, asserts a doctrine utterly at war with the first principles of our political system.

The misgivings of the Democrats were to some extent justified when the commission was finally set up. John L. Hayes, secretary of the Wool Manufacturers' Association, was named chairman, and a majority of his associates were, like him, protectionists. While the nine appointees of the President were making their investigations during the summer of 1882, Congress plodded ahead. Republican leaders endeavored to perform the miracle of openly proving to the nation that the economic welfare of the people was uppermost in their minds at the same time that they were secretly demonstrating to "the business men of the country" that their party was the only friend of industrial progress. They sought to force through both houses tariff increases on certain favored products before the commission could act. Their opponents were quick to protest. "Why this hot haste to comply with the demands of the manufacturers of hosiery and knit goods?" asked Carlisle. "If the people at large can wait . . . for justice at the hands of the commission, why cannot the manufacturers and advocates of the commission wait also? If this Congress is the representative of all the people . . . it will treat them all alike. . . . This legislation is all on one side. When the consumer asks for a reduction of duties upon his clothing and the tools and implements of his trade, the doors of the committee-rooms and the House are slammed in his face, and he is told to carry his complaint to the commission." The voters approved the stand of the Democratic reformers; in the November elections the Republicans lost control of the state governments in New York, Massachusetts, Pennsylvania, Connecticut, Michigan, Kansas, Colorado, and California.

As soon as Congress reassembled in December, the Tariff Commission submitted its report, in which, as an unwilling "concession to public senti-

ment," reductions were recommended. Bills were pushed forward in both the House and the Senate.[2] There was no time to waste, for the session was by law required to come to an end not later than March 4. But legislative wheels turned slowly. The Republicans, especially in the House, were mercilessly goaded by the Democrats. When they attempted to raise the duty on castor oil, "Sunset" Cox of New York chided them for trying to destroy an "infant industry." Roger Q. Mills challenged them to produce the western man "who will have the temerity to vote to increase the duty on fencing-wire and then return to his home on the prairies that stretch toward the setting sun and tell the people whose only dependence for fencing their farms is wire that he bowed the knee to the Pennsylvania Baal." The editor of the *Nation* made sarcastic mention of their "tender solicitude" for the comfort of the "working classes." In spite of opposition, the Senate bill, based on the recommendations of the Tariff Commission, was passed before the end of February and sent to the House. Being only mildly protective, the measure never got beyond the Speaker's table; displaying an ingenuity that would have done credit to a more experienced legislator, Thomas B. Reed of the Committee on Rules obtained the appointment of a conference committee to adjust disagreements that had never occurred.

With the fate of the tariff in the hands of a small number of congressmen, lobbyists rushed upon Washington to fight for the cause of protection. From Ohio came the "wool trinity"—Columbus Delano, William Lawrence, and David Harpster—and other industries too sent their best men. When the committee was through with the bill, the rates on many articles were higher than either the House or the Senate had demanded. The industrialists, backed by a few powerful statesmen, had given another demonstration of their influence in the democracy. In the early dawn of March 4 (still, because there had been no adjournment, the legislative day of March 3) the tariff of 1883 became law. A week later Justin S. Morrill wrote a Philadelphia friend: "We made all the amendments in Conference Committee that could be made with any possibility of carrying the bill through the Senate. . . . It was impossible to perpetuate the war rate of duties." Republican opportunities, however, were past; in the fall elections of 1882 the southern Democrats had for the first time since the Civil War won a majority in the House of Representatives, and they lost no time in pressing their advantage.

[2] Forbidden by the Constitution to originate revenue measures, the Senate attached its tariff plan to an old bill already before that body. The proposals followed closely the recommendations of the Tariff Commission.

Democratic Efforts at Tariff Reform. The first significant step of the Democrats in their fight for tariff reform was the election in December, 1883, of John G. Carlisle of Kentucky as Speaker of the House. Progress thereafter was slow, for the protectionist Democrats, led by Samuel J. Randall [3] of Philadelphia, who was as ardent an advocate of high tariff as was his Republican friend William D. ("Pig-Iron") Kelley, held the balance of power. Moreover, Congress was woefully inefficient. Both houses had been dominated since 1860 by a handful of individuals, and all business had come to be conducted in the committee rooms, where the great manufacturing interests, said many, had complete control. Bills could be killed without further ado by the mere refusal to report them out of the committee to which they were assigned. Congressman James A. McKinzie described the Committee of Ways and Means as "the equal if not the superior of any grave-yard that has existed since the ancient and unknown artificer conceived the idea of the Catacombs of Egypt." When an ambitious member "drafts a measure looking to revenue reform and presents it to the House in the morning hour of Monday," he declared, "it is no stretch of the imagination to say that he can detect the dolorous notes of the 'Dead March in Saul' as the Clerk sings out, 'Ways and Means, and printed.'" But the reformers pushed on. In February a bill "to reduce import duties and war-tariff taxes" was introduced in the House by William R. Morrison, chairman of Ways and Means and therefore leader of the tariff-reform forces on the floor. The measure provided that existing rates should be lowered twenty per cent, and in order that the cry of "persecution" by business might be forestalled the stipulation was made that no duties should be less than those established in the Morrill tariff of 1861.

The Morrison bill ran a fretful course. The lobbyists, known at the time as the "third house," fell upon it without mercy. Leaders in the sugar, iron, and wool industries not only exerted effective pressure upon individuals in Congress but also spent money surreptitiously on educating the public. James M. Swank, secretary of the American Iron and Steel Association, confided to Senator Morrill on May 6: "This Association can not *directly* engage in the distribution of your speech, as we have many Democratic members, but we occasionally 'whip the devil around the stump.' On Saturday last I gave Mr. McPherson $2,000, which our Democratic members will know nothing about. This money is to be used for the distribution of just such speeches as yours." The vote on the Morrison bill

[3] The disastrous panic of 1873 had brought the northern Democrats into control of the House. With the exception of one term, Randall had been Speaker since December, 1876.

came at last, and Randall and his forty followers[4] one by one joined the Republicans, thus enabling them to repulse the threat to protection. The tariff reformers, beaten but not discouraged, carried their fight to the national convention that summer. Henry Watterson's "tariff for revenue only" plank was lost in the shuffle, however, and the party entered the campaign with nothing more definite than a "reform" candidate.

When Grover Cleveland was elected to the presidency in November, 1884, the Democrats decided to postpone further tariff action until Congress convened in December, 1885. Early in 1886 Morrison, again chairman of the Ways and Means Committee, attempted for the second time to force a tariff bill through the House. After weeks of debate the protectionist Democrats, heedless of demands that they support their party instead of Pennsylvania iron and steel, Ohio wool, West Virginia coal, Carolina tobacco, and Louisiana sugar, for the second time united with the industrial Republicans and smothered the hopes of the reformers. Yet all was not lost, for the President was converted to the cause. With deepening interest the Chief Executive watched Congress dragging along its barren way during the summer of 1886. He knew that labor disturbances, gold losses from government coffers, agrarian discontent, and a swelling surplus in the treasury were evidences of maladjustments in the nation. The tariff, he eventually concluded, was a question whose importance he had overlooked. In his message to Congress in December he stated his belief that "when more of the people's sustenance is exacted through the form of taxation than is necessary . . . such exaction becomes ruthless extortion"; he condemned the accumulation of huge fortunes by private individuals because they hindered "the natural growth of a steady, plain and industrious republic"; and he put into simple words the long-professed doctrine of his party that the tariff was a tax "as certainly as if it was paid at fixed periods into the hands of the tax-gatherers."

A few days later the Republicans, once more with the help of Randall and his friends, blocked the efforts of the reformers to revive the Morrison bill. The Philadelphia "half Democrat," his followers reduced to twenty-seven and much of his power gone, attempted in the closing weeks of the session to obtain the repeal of internal revenue taxes. Carlisle, however, met him at every turn with determined opposition; he flatly refused, so long as the people bore "odious burdens" imposed by the protectionists upon the necessities of life, to recognize any representative who sought to secure

[4] Randall's followers varied in number from time to time, but in the beginning they ranged close enough to forty for the reform Democrats to speak much of "Ali Baba and the forty thieves."

increased appropriations or to lessen the levies on tobacco or whisky. He is said to have declared of the Republican efforts to introduce legislation reducing the internal revenue taxes that no man "with that damned bill in his hands will ever be recognized." One congressman "walked for two hours up and down in front of the desk, entreating, cajoling, and ejaculating, and in the end tore his bill into fragments, and deposited them as a protest at the Speaker's feet." March 4 came again with no reductions in the customs dues.

The summer of 1887 was a period of vigorous tariff conflict. Throughout the country the Democrats, aided by the reform press, were marshaling their forces. The congressional elections of November, 1886, had for the third time in succession given the party control of the House of Representatives. Morrison and other leaders, thanks perhaps to the liberal use of protectionist money, had, it is true, been defeated, and even Carlisle was not certain that an unknown carpenter of Covington had not retired him from politics. But the losses were partially made up by the fact that President Cleveland was at last throwing all his energies into the fight. In a "swing around the circle" that took him into the West and the South, the Chief Executive pleaded earnestly for party unity. Everywhere the reform movement was gaining strength; many people hitherto uninterested began to suspect that manufacturers were robbing the public. "The fact is," said *Puck*, "this whole high tariff business, honest enough in its inception, no doubt, has become an out-and-out swindle and humbug. It began in the 'protection' of certain industries—that is, of the capital engaged in certain industries. Now it goes wholly to the enriching of a few industries—or monopolies, rather—that are in no further need of protection; that are rich and strong, and daily growing richer and stronger. The capital invested has long ago turned itself over and over and over again, and at every turn it has rolled over itself another thickness of a coverlet of wealth. It needs no protection; but it is protected. Its employees are not protected; neither are the people who buy its productions."

Realizing the danger that lay ahead, the advocates of high tariff busied themselves desperately. For months industrial organizations in the manufacturing cities had been assiduously mustering their defenses in preparation for the Democratic attack. Columbus Delano of the Wool Growers' Association and James M. Swank of the American Iron and Steel Association were conducting a relentless publicity campaign; students at the University of Pennsylvania were burning midnight oil in efforts to win the two-hundred-and-fifty-dollar prize that the American Protective League of Philadelphia (whose membership fee was a hundred dollars a year) had

offered for the best essay on the benefits of protection; and Republican correspondence was seething with half-matured plans for eliminating the surplus by such means as building a great coast defense (thereby helping the makers of iron and steel), creating a shipping fleet that would be the envy of the world, opening rivers and harbors, giving a public building to every town that wanted it, and reviving the distribution bill of 1836. The Grand Army of the Republic had written a pension bill that promised to be in Washington with the earliest congressmen. Even the coal miners in Virginia and West Virginia had been stirred to action by propaganda against free coal, and the farmers on the hillsides of Virginia, Tennessee, and North and South Carolina had been induced to threaten vengeance upon the only party they had ever supported if the tax on tobacco was not immediately removed.

There were, however, serious breaks in the protectionist ranks. A majority of the Republican congressmen from many western states were in favor of reform. Manufacturers in Boston, Lynn, New Haven, and other eastern cities were beginning to question the wisdom of high customs duties. Tariff, said Charles Francis Adams, had within two years increased the price of steel rails from twenty-eight to forty-two dollars a ton. The "bloody shirt" could no longer divert the attention of the rank-and-file members of the party from their economic welfare to the burned-out issues of the Civil War. Moreover, no common agreement could be reached as to how to maintain protection and at the same time lessen the revenues. The proposal to remove the levies from whisky and tobacco while sugar still bore a heavy duty met with strong objections. "This platform appalls me," wrote a man who had helped nominate Fremont and Lincoln. "Free whiskey, dear food, dear clothing, and this . . . the Grand Old Party!" "Smokers and chewers," contended Representative Hitt of Illinois, "can bear the tax. . . . They can let cigars alone, & whiskey too . . . but the table is in every house & the sugar tax falls like a poll tax on each human being. . . . There is little difference between the quantity of sugar eaten by the richest man in America & that eaten at the humblest table of his poorest tenant." Even John Sherman, pillar of Republicanism, grumbled at taxing the public "so enormous a sum as fifty millions a year on an article of prime necessity." But many of his colleagues believed that reductions on any article meant a crumbling of the whole protective system. Party arguments and dissensions grew so wearisome that George F. Edmunds, leading statesman, finally complained that the bickerings were convincing the country that the whole high-tariff project was one of "incapacity, cowardice, and trickery."

When Congress opened in December, 1887, the Democrats were ready for a concerted attack upon the protectionist stronghold. Speaker Carlisle, contrary to the usual custom, announced definitely the reform program that his party planned to enact during the ensuing session. He pointed out, however, that there was no intention on the part of the Democrats to disturb business or bring a financial depression, which would strike severely at the people who suffered most from tariff exactions. Upon those who labor for wages, he declared, "must always fall the first and most disastrous consequences of a monetary crisis; and they, too, are always the last to realize the benefits resulting from a return to prosperous times." Determined action was clearly indicated. The next day the President's encouraging message—devoted entirely to tariff reform—was read to Congress. The challenge of the Democrats was complete.

In spite of the vigorous beginnings, a tariff bill was not presented to the House until April 2, 1888. Roger Q. Mills had prepared the measure without testimony from the industrialists, thus ignoring the lobbyists. Great was the criticism. The Speaker of the House, nevertheless, stood loyally by the chairman of Ways and Means, insisting that the action was warranted because the greasy mechanic, the soil-stained farmer, and the tired laborer never presented themselves at the "hearings" to state their cause. But in endeavoring to make only moderate revisions the reformers had taken upon themselves a heavy burden. If tariff was altogether wrong, no rates could be easily justified; besides, inconsistencies were bound to occur. "If 30 per cent is outrageous on Republican Epsom salts, why is 55 per cent any less so on Democratic castor-oil?" was only one of the many embarrassing questions asked. Too, there was difficulty in defending the maintenance of the internal revenue taxes, for their existence made many commonly used articles more costly than they should have been. The Republicans accused their opponents of economic ignorance, openly charging that their tariff proposals had been drawn up by free-trade theorists or interested importers, all dominated by British arguments. Nevertheless, the provisions were the work of men who were probably more sincerely interested in removing needless taxes from the ordinary American than was John Sherman when he suggested to his political friends that levies be removed from all tobacco except cigars that sold for ten cents and upward "and a clear speech made that will show the workingman who uses tobacco to chew and smoke in pipes or 5 cent cigars, that the Republican party is anxious to lift all the tax possible from him."

Real debate on the Mills bill began on April 17. The fundamental contention of the Democrats was that the protective system took from the

poor their sustenance and gave it to the wealthy.[5] The tribute the laboring man paid as a part of the price of the meager goods he bought was, said the opponents of protection, never returned. The reformers sought to demonstrate conclusively that the tariff was indeed a tax paid as truly, as the President had suggested, as though given to the tax gatherer at stated intervals. The Republicans were in a quandary. They could no longer talk of "infant industries" with confidence, for the nation, just then rounding out its first century of growth, abounded in huge industrial plants clamoring for higher rates. Nor could they in the presence of a growing surplus deny that the tariff was a tax. Under the circumstances they chose to assert without reservation that the benefits derived from protection were shared with the workingman in the form of higher wages and more working days. Cartoons depicting the poverty-stricken wage earner under free trade as contrasted with the happy and prosperous laborer guarded by high customs walls were spread over the nation. The Democrats at least were unconvinced. The wealth of the industrialists was obvious, but it was difficult to discover comparable riches among the wage earners.

Facing an antagonist whose basic power was drawn from the owners of factories, shops, and mills, the tariff reformers kept doggedly on. They insisted that continued exaction of vast sums of money from the people for the purpose of favoring a small economic group would bring dire consequences in the future. Speaker Carlisle pointed out to his fellow congressmen that if the government could rightfully exercise its taxing authority for other than public purposes, it could exercise also its spending authority for other than public purposes. "So long as this policy shall continue," he argued, "not only will largesses and bounties for the promotion of purely private interests be demanded, but new fields for the exercise of legislative power and new objects for the appropriation of the public money will be discovered." Just fifty years later his own party was demonstrating beyond the shadow of a doubt the accuracy of his prediction.

The vote on the Mills bill came in the hot days of July. For the first time in eight long years of earnest effort a Democratic tariff measure won a majority. Already, however, the presidential campaign had begun, and

[5] Senator Vance of North Carolina wrote to the Gentle and Dove Manufacturing Company, Andover, Massachusetts, on May 31, 1888: "I have your printed circular of May 10th, in which you inform me that the protection afforded by the Tariff has never been sufficient to make the weaving of Flax goods profitable, and that you started business in 1835. I am very sorry to learn it. Having suffered for your country by running an unprofitable business for 53 years, I think you have done enough and ought to be excused. I advise you to quit immediately and to go at something in which you can make a living. Even the common man for whose benefit you have lost money for more than a half century has no right to call on you for further sacrifices. Take my advice and quit rather than ask Congress to lay a further tax on the people to support you."

the Republicans fell on the Mills bill in the Senate and tore it to pieces and then turned to the voters of the nation for support. The Democratic President and the Democratic House of Representatives were routed.

The McKinley Tariff. Although Grover Cleveland won a majority of the popular vote in 1888, the Republicans regarded their presidential victory as a mandate to raise the tariff. Even more important in shaping the party program was the urgent necessity to relieve the overflowing vaults of the treasury. Knowing that the Democrats had used the surplus "as the fulcrum wherewith to apply the free trade lever to dislodge the protective system," the Republicans were determined to reduce government income. But because of party principles they could not adopt the simple solution of lowering the tariff. Accordingly William McKinley presented in Congress in December, 1889, a bill providing for rates so high that imports would be restricted or entirely prohibited. Bounties were given to the manufacturers of sugar and of tin plate. The free list was enlarged. Furthermore, duties were placed on agricultural imports as proof to the farmers that the party was interested in their welfare.

The tariff was shoved through the House with startling rapidity. Bewildered Democrats saw "Czar" Reed, the new Speaker of the House, blast the "disappearing quorum" [6] at a stroke and compel his enemies to become unwilling cogs in his legislative machine. They could never quite comprehend Reed's statement that the people had demanded protection, for the tariff reformers had for eight years held a greater majority than the Republicans possessed at the time. Only the silver advocates in the Senate were able to check the progress of the McKinley bill, and they merely delayed it until they had obtained concessions in regard to the government's purchase of the white metal.

The Republican tariff measure, coupled with swelling appropriations and huge expenditures in the purchase of bonds in the open market to uphold the staggering financial system, effectively wiped out the surplus. It brought, however, disaster to its makers. Manufactured articles became dearer daily. John Wanamaker, member of the cabinet, advised the patrons of his Philadelphia store to buy "before prices go up." Public indignation rose with the mounting cost of living. Housewives interested themselves in politics when tinware peddlers—inspired, it is said, by the reformers—

[6] The "disappearing quorum" was the term applied to a device for delaying legislation. While votes were being taken, congressmen would either absent themselves from the House or sit silent in their seats, thus giving a member of the party an opportunity to demand a roll call, which required an hour or so. Carlisle, believing that there was no way in a democracy to force a member to vote against his will, had permitted roll call after roll call. See James A. Barnes, *John G. Carlisle: Financial Statesman* (New York: Dodd, Mead, 1931), chs. vii and ix.

blamed their higher prices on the tariff. Harrison's philosophy that cheap goods make cheap men was an ineffectual vote getter in the campaign of 1890, and when the people went to the polls in November, the Republicans lost the House by two hundred and thirty-six to eighty-eight.

The Wilson-Gorman Bill. In the fall of 1892 the Democrats returned their majority to the lower house and gained the Senate and the presidency as well. Never since the Civil War had the party been in such a favorable position. But the financial situation in the country was desperate. The surplus was gone, and fear for the gold standard had grown to an alarming extent. When Cleveland took office, there was in the treasury only twenty-four million dollars above the hundred-million gold reserve regarded as necessary for preserving the value of the greenbacks. On April 23 gold fell below the established reserve, and soon the darkening cloud of disaster that had hung over the nation since 1890 broke in full panic. In 1894, after the monetary troubles had somewhat abated, William L. Wilson, chairman of Ways and Means, introduced a tariff-reform measure in the House. The changes proposed were moderate. Rogert Q. Mills, in fact, declared that the bill was only a Sabbath Day's journey on the way to reform. "Marse Henry" Watterson too was displeased, and he protested volubly against "Trojan horse" strategy in the age of Carnegies and Goulds. Nevertheless, protection was lessened. The free list was enlarged, and, in order that badly needed cash might be provided for the treasury, the internal revenue levies were increased on tobacco, alcoholic liquors, and playing cards. In addition a tax was placed on all incomes above four thousand dollars a year.

After strenuous efforts the tariff reformers passed their bill and sent it to the Senate, where it fell immediately into the "talons" of Arthur P. Gorman of Maryland and Calvin S. Brice of Ohio, both Democrats, and Nelson W. Aldrich, Rhode Island Republican. The six hundred and thirty-four amendments that were soon voted destroyed the original bill completely. Lobbyists as well as senators were busy; before the measure had been long in the upper house, ugly rumors began to spread that the slimy trail of the trust had smeared Congress and reached dangerously near the White House. Many people were sure that Carlisle, now Secretary of the Treasury, had been in collusion with the guardians of the sugar interests. The Secretary was exonerated, but that certain senators had reaped personal gain through unethical purchase of sugar stock was clearly established. President Cleveland became so disgruntled that, perhaps unwisely, he wrote Representative Wilson a letter in which he denounced the Senate bill as involving "party perfidy and party dishonor." Nothing,

however, could save the work of the reformers. Indeed, the fate of any tariff measure in the congressional arena of this generation was scarcely less cruel than that which befell the gladiators in the days of ancient Rome. There was some justification for the feeling that it was the great "interests" that sat close by and gave the signal of death or mercy.

After a long, hot, trouble-filled summer the Wilson-Gorman bill went to the Executive Mansion. Bitterly disappointed but helpless to better the situation, the President allowed it to become a law without his signature. Notwithstanding all their efforts the reformers had failed again, and there was little hope for the future. The Democratic party was rapidly breaking to pieces over the money question. To make matters worse, the Supreme Court ruled the income tax unconstitutional and thereby made it impossible for the government to obtain sufficient revenues to meet its expenses. Financiers had from the beginning objected to this new levy on their wealth, and when the case came before the Supreme Court, Joseph H. Choate, distinguished lawyer whose eloquence had steered John D. Rockefeller past the shoals of a congressional investigation, defended the rights of the property holders against a "communistic march," which, he said, must be stopped "now or never." The court agreed. An evil day was approaching, declared Justice Field—a day when the poor and unlettered would fix the taxes. By a vote of five to four the judges of the nation's highest tribunal threw back the "assault upon capital," which James Stillman of Wall Street had a year before described as an "unjust discrimination" that would array "the honest thrifty people of the whole country against those who are responsible for it."

The Democrats gave up the tariff fight. And well they might. A majority of the voters had lost their interest in the customs dues. Westerners in particular had long since abandoned the belief that tariff reform would help them; they now saw surcease of unrecompensed labor and freedom from grinding monopoly only in the free coinage of silver at sixteen to one.

The Dingley Tariff and the End of the Century. The congressional elections of 1894 removed the Democratic party from power in the House of Representatives, and two years later Grover Cleveland was retired to private life. Although the chief issue in the campaign of 1896 had been the money question, President McKinley looked upon his election as a demand for protection. In a special session of Congress "Czar" Reed pushed the Dingley tariff bill through the House in thirteen days. After some delay in the Senate it became a law before the end of July. The rates established were higher than any ever previously enacted by Congress.

The passage of the Dingley bill ended an epoch in American tariff

annals. Before the spirit of imperialism that arose about 1900 had spent itself, the old leaders of tariff reform were dead and the South had taken on an industrial complexion strange in the cotton fields. Because of or in spite of high tariff the nation lived with reasonable economic satisfaction in the years between 1865 and 1900. Today society seems to agree that the Republicans were correct in declaring that legislators may act for the benefit of special groups and that the Democrats were right in asserting that such power should be used for the benefit of those who share least in the blessings of prosperity. Yet whether or not "the mother of all trusts is the customs tariff law," as W. O. Havemeyer, president of the American Sugar Company, once said, it is obvious that the golden age of protection saw the financial barons and the great corporations rise to power. It is obvious too that tariff was determined as much by politics as by economics.

Chapter 23

MONEY AND POLITICS

The Money Controversy. National quarrels over money provoked even more bitterness than did those over tariff in the busy years after the Civil War. Much was said concerning *cheap* money and *dear* money, and charges of ignorance and indolence hurled at debtors by creditors were answered with accusations of dishonesty and thievery. A satisfactory medium of exchange both as to quantity and as to quality is essential in the prosperity and happiness of a people. The price the producer receives for the fruits of his labor, the amount the purchaser pays for the goods he buys, and the interest rates extracted from the borrower are determining factors in economic development. When particular groups are unable to obtain with their incomes the necessities of a decent material existence, acute disagreements arise in regard to the currency. Farmers of the South and the West and workmen and salaried individuals everywhere were between 1870 and 1900 hard pressed financially. The former had in the palmy days of the war invested rashly sometimes and therefore may have been in part to blame for their own troubles, but the latter had done little to contribute to their unfortunate situation. The fact was that fundamental changes were sweeping the country. Industrial growth, financial concentration, and an oversupply of products from the farm lands of the new West were disrupting the old order. The nation was undergoing a transformation from a rural to an urban culture with all its implications. Those responsible for the administration of government, seeing only the wounds of a recent bloody conflict as the cause of the prevailing discontent, replied to the cries of those who were finding it difficult to get along with shouts for reforms in what they regarded as Civil War monetary evils.

Quarrels over Deflation. The first financial argument after Appomattox centered around the retirement of the greenbacks. Basically the controversy that soon enveloped the nation turned on the quantitative theory of money. Reduced to its simplest terms, the essence of this theory is that wages and prices depend directly on the amount of money in circulation. Obviously, then, retirement would mean a return to the values of 1860, which had been left far behind during the war. Prices were already falling, and westerners, unable to grow enough grain and livestock at prevailing

quotations to meet maturing obligations, demanded more rather than less paper money. They were supported by southern agrarians, by easterners whose sterile acres had been driven out of cultivation by virgin soil beyond the Mississippi, and by laborers and small debtors in general. A majority of the people honestly believed that the greenbacks had been their greatest friend in their struggle for existence in the dark days between 1861 and 1865, and they desired a restoration of peace without a collapse in their ability to buy needed goods.

The farmers at least had a cogent argument against the retirement of the greenbacks. During inflation when wheat, for example, was two dollars a bushel, the agrarian who could grow two hundred bushels received four hundred dollars for his crop. Even after paying two hundred dollars on interest, taxes, and other fixed charges, he had two hundred with which to purchase much-needed essentials for his family. If, however, wheat, because of a return to gold values, brought only one dollar a bushel, he would after paying his fixed charges have no surplus with which to obtain clothes, books, farm implements, and other products of mill, shop, and factory regardless of how cheap they might be.[1] But conservative statesmen and leading financiers of the East maintained that real prosperity was impossible except under a sound currency system, though "sound" unfortunately meant merely traditional. They predicted that inflationary extravagances would soon bring national tragedy unless gold values were quickly reestablished.

The Panic of 1873. Before 1870 a merry whirl of speculation, reckless purchase, and widespread corruption did indeed begin in the business and industrial world. The number of firms in the country increased from four hundred thousand to six hundred thousand in 1871 alone. A total of twenty-three thousand miles of railroad was built in the first three years of the decade. Europe poured money eagerly into American enterprises and shipped abnormal quantities of goods to American storekeepers. The merchandise balance against the United States from 1870 to 1873 was four hundred and twenty-two million dollars. Even the government prospered. Treasury coffers were fuller than they had been for many years, and the war debt was being retired at a rapid rate. Between March 1, 1869, and December 1, 1870, payments amounted to one hundred and ninety-one million dollars. The Secretary of the Treasury recommended a reduction in taxation.

[1] A modern parallel was seen at the end of the second World War, when workers demanded a five-day week or less at the same pay they had been receiving for six or seven days because they feared any monetary reduction would mean a smaller real income even though prices in general might be lowered.

Many people were alarmed rather than pleased by the situation. The apparent prosperity, said David A. Wells, special commissioner of the revenue, was an indication not of healthy growth but of an unhealthy fever induced by inflated paper currency; furthermore, he continued, the unseemly scramble for riches was leading energetic men to desert pursuits directly productive of wealth for occupations connected with commerce, trade, and speculation. Although this shift into nonproductive jobs was probably only a harbinger of coming economic changes, there were grim warnings that trouble was approaching. The number of failures of commercial houses in the country leaped from two thousand nine hundred and fifteen in 1871 to four thousand and sixty-nine in 1872. The losses in the latter year aggregated more than one hundred and twenty-one million dollars. Debts too were piling up. Between 1868 and 1873, loans and discounts of the national banks rose two hundred and seventy million dollars, or more than forty per cent. Careful financiers grew ever more fearful that a day of reckoning would come and find the nation unprepared. Rumors that additional greenbacks would be issued by the treasury added to their anxiety.

The evils of what some called an inflated currency were, however, not the sole cause of the panic of 1873. The roots of that disaster were deeply buried in Civil War developments at home and in unstable economic conditions abroad. The United States had emerged from four years of conflict with its financial society thoroughly disrupted. Old dogmas had been forgotten, and new canons of prudence had not been learned. Moreover, political control had shifted to new groups, and monetary domination had passed into the hands of the ambitious but inexperienced. The greenbacks were not responsible for the low state of national morals, nor did paper money alone father the gold corner of 1869, the Whisky Ring, the Salary Grab, and the other rotten schemes that venal politicians and money changers foisted upon the country. Even had there been no inflation and no corruption, financial problems of a serious nature could scarcely have been avoided. As the farms were pushed on beyond the Mississippi, it became more and more difficult for eastern financial centers to provide the agrarians with money. Each spring and fall cash was needed to plant and harvest the crops, but as soon as those tasks were over, the idle dollars made their way back to the Atlantic coast, where New York, Boston, and Philadelphia bankers could hardly put them to work before they had to be called in and shipped to the South and the West again.[2] Except for the

[2] Money shipments from New York to the interior spring after spring and fall after fall in the years after the Civil War tell an interesting story. It is significant that tragedy whenever it

incidental and wholly unplanned expansion and contraction that accompanied the workings of the high-tariff and internal revenue systems, money was inflexible in quantity, and when emergency demands came simultaneously from widely separated geographic districts, everybody was bound to suffer.[3] Often banks with abundant assets were forced to close their doors while relief was on its way from distant depositories. The monetary system was hopelessly inadequate, and government officials, charged with the welfare of the people, were so overwhelmingly convinced that natural laws would care for the financial needs of the farmer, the laborer, and the industrialist alike that they refused for forty years to make any substantial changes.

There were economic troubles too. In spite of seeming prosperity, the nation had reached a stage where heavy expenditures without regard to immediate profits were necessary. Expansion was irresistible, yet peopling the West in a day when churches, schools, printing presses, and similar cultural institutions were regarded as essentials was an arduous undertaking. Manufacturers built on future hopes, and transportation magnates laid tracks into fertile though unfruitful lands whose wealth could never be realized until freight cars from the East made buying and selling possible.[4] Unfortunately a greedy few tried frequently to profit in a situation in which legitimate profits were not to be had. The result was that particularly in the West industrial dishonesty and agrarian poverty were widespread.

Unforeseen calamities also fell upon the country. A disastrous fire in Chicago in the fall of 1871 enormously increased the already too large floating indebtedness of the nation, and a like catastrophe in Boston the next year not only caused much private loss but in addition added further worries to the overburdened insurance companies. Desperate winters on the plains in the early seventies and a plague of grasshoppers that came

fell upon the financial world generally made its appearance in April or May or in September or October.

[3] The tariff exactions in particular kept a constant stream of currency flowing into the government vaults. The resulting contraction was sometimes helpful and sometimes harmful. During emergencies when money was badly needed by the people, the only effective governmental means of adding to the circulating medium were buying bonds and increasing appropriations.

[4] The powerful factor of geography in the various stages of development in the nation should not be forgotten. Navigable rivers, fed by hundreds of small streams, encouraged settlement in the land just west of the Allegheny Mountains. The swelling crops soon outran the marketing facilities by water, and surpluses piled up to profit the railroads when they tapped the region. On the Great Plains rivers were lacking. Real settlement, therefore, was practically impossible until railroads were available. And so the tracks that crawled into the West after 1865 found no profitable cargoes, for they either went ahead of the population or carried the settlers with them.

out of the summer sky in 1873 practically stopped payment on eastern debts in many sections of the West. Jay Cooke, sensing disaster months before real trouble appeared, instructed (in greatest secrecy) his housekeeper at his famous mansion on Gibraltar Island at Put in Bay on Lake Erie to practice severest economy.

The United States was not alone in her troubles. The Civil War, the French fiasco in Mexico, the Austro-Prussian War, the Franco-Prussian War, and the English expedition into Abyssinia had disrupted finances throughout the world. Furthermore, the opening of the Suez Canal and the exacting of a heavy indemnity by Germany from France had seriously disturbed the existing economic organization. Corruption and speculation were universal, and reaction swept over all countries.

The "summer stupor" that took possession of Wall Street in June, 1873, was, under the circumstances, not unexpected, nor was it surprising that gold soon began to flow outward to Europe to an alarming degree. When in early autumn the West began to call for money with which to move the crops, the strain was too great for the financial structure to bear. On September 8 the New York Warehouse and Securities Company collapsed, followed on the thirteenth by Kenyon Cox and Company. Stock prices declined sharply as nervous holders sought to sell. Europeans joined in the rush to cash in on investments before further losses were involved. On September 18 the New York branch of Jay Cooke and Company failed; the great financier, who was entertaining President Grant at Ogontz, his suburban home, when the news arrived, shortly afterwards sorrowfully ordered the doors of his Philadelphia bank swung to. Interest rates along the Atlantic seaboard rose to dizzying heights. Loans could be obtained only in small amounts. Property could not be sold except at drastic sacrifices; N. H. Wing, money lender of Greenwich, New York, observed on November 3 that for him to collect twenty thousand dollars at that time would ruin twenty people. Over the country banks closed up, and even the greenbacks went into hiding. Business men for a while could neither buy nor sell. Farmers were unable to pay their debts or to meet their tax bills. "Collections positively counted upon have failed for the time," complained a Virginian, "and I am like a boat on a lee shore." Slowly the paralysis crept into the remotest districts. "The 'Panic' has overtaken us," wrote a resident of rural Michigan on December 2; "money has disappeared, lumbering operations are suspended, and there is scarcely sufficient activity in Elm Hall to break the snow."

Although the worst evils of the financial crisis were soon over, recovery was protracted. Five painful years passed before business began to regain

confidence. Everyone bought as little as possible and sold whatever he could. A leading financial journal estimated that during the first calendar year after the calamity Americans reduced their private expenditures by at least four hundred million dollars. The slack in consumption that accompanied this enforced retrenchment, however, caused an accumulation of unwanted goods and brought unemployment and lower wages. Stagnation overspread American industry. "The whir of the spindle, the quick flight of the shuttle, the ponderous blow of the triphammer, the click of the sewing machine, and other usual sounds of happy and profitable industry are heard no more," commented an editor, "or are heard only at intervals, as 'short time' compels joyless holidays; and the lights of the furnace, the kiln, the forge, and other places where fire and steam are men's obedient and untiring servants, have gone out." An estimated three million workingmen lost their jobs between 1873 and 1876. It seemed that the dark days would never end. Failures in 1878 exceeded in liabilities those of the previous year by more than forty million dollars. Brigandage, crime, and beggary sprang up to harass the nation.

The bitterness engendered by the panic, especially among the farmers and laborers, did not disappear for several decades. Yet there were some results that bankers, business men, and statesmen at least regarded as beneficial. Prices were for the first time since 1861 brought into conformity with those of Europe; the unfavorable balance of trade that, because of inordinate importations, had existed since the war was reversed; and the value of the greenbacks was so enhanced that "sound money" advocates believed that the country could "with little strain and no serious damage . . . pass . . . into the safe and tranquil haven of specie payments."

But the agrarians did not want the restoration of specie payments; to make the greenback dollar worth one hundred cents in gold would, they said, reduce the prices of farm products below costs of production and give the rich further opportunities to gobble up their helpless creditors. They vigorously disputed the statement made by the Secretary of the Treasury, Benjamin H. Bristow, in 1874 that "no nation can long neglect the wholesome maxims, founded upon universal experience, that uphold public credit without suffering financial disturbances and bringing serious consequences upon its people," and they denied that the history of "irredeemable paper currency repeats itself whenever and wherever it is used" or that "it increases present prices, deludes the laborer with the idea that he is getting higher wages, and brings a fictitious prosperity from which follow inflation of business and credit and excess of enterprise in ever-increasing ratio, until it is discovered that trade and commerce have become

fatally diseased, when confidence is destroyed, and then comes the shock to credit, followed by disaster and depression, and a demand for relief by further issues." They could see no connection between their pleas for a money that had brought them apparent surcease of poverty and the Secretary's statement that the use of "such a currency tends to blunt the moral sense and impair the natural self-dependence of the people, and trains them to the belief that the Government must directly assist their individual fortunes and business, help them in their personal affairs, and enable them to discharge their debts by partial payment."

The debtors were not asking for a partial discharge of their debts; all they desired was that they be permitted to pay their obligations in the same money they had borrowed. After working long, laborious hours and spending little because they had little to spend, neither the farmers nor the wage earners could find any justification for Bristow's further remark that "paper currency begets the delusion that the remedy for private pecuniary distress is in legislative measures, and makes the people unmindful of the fact that the true remedy is in greater production and less spending, and that real prosperity comes only from individual effort and thrift." Both farmers and laborers were fully aware of the fact that the advocates of sound money were in times of trouble always the first to call for assistance from the government. They knew that protective-tariff laws and various executive actions were direct results of requests for aid by industrialists and business men. Some had begun to suspect that in an industrial society unusual savings in periods of stress were, like runs on a bank, productive of more rather than less evil. Taking up their only offensive weapon, the ballot, the discontented swept the Republicans from the House of Representatives in the fall of 1874.

Resumption of Gold Payments. The Republican members of the "lame duck" Congress that met in December, 1874, began at once to lay plans for recapturing the popular vote. Early in 1875 they passed a bill providing that on January 1, 1879, the nation begin to "redeem in coin the United States legal-tender notes then outstanding, on their presentation for redemption." Political factors were involved, but resumption day was postponed for four years chiefly in order that the Treasury Department might have opportunity to gather in sufficient gold to meet expected demands. The delay came near proving disastrous. The advocates of paper money launched an immediate effort to remove the law from the statute books before it became effective. Month after month the attack continued, and occasionally it seemed as though those who desired specie payments would be defeated. The situation was thoroughly discouraging. Demands

for the free coinage of silver were growing in intensity daily, and business men were not certain that the petition presented by a western senator asking that the government pay at the nearest post office ten dollars to every man, woman, and child in the United States each Saturday night was not an expression of the general wish of the people. John Sherman, appointed Secretary of the Treasury in 1877 when President Hayes came to office, faced a trying task; before the end of December, 1878, however, he had gathered into the government vaults a reserve of one hundred and fourteen million dollars, and the premium on gold had completely disappeared.

January 2, 1879, came and passed without any great run on the treasury by eager people wanting to change their greenbacks into coin.[5] In fact, even in New York, home of the money changer, more gold was deposited than was withdrawn. Resumption was nevertheless still uncertain. Because of general financial alarm abroad there was danger that Sherman's reserve might be lost to Europe; for several months exports continued alternately to exceed imports. The foreign crop situation eventually saved the day. Spring rain and fog so damaged the growing grain in the food-producing regions of England that in midsummer the Archbishop of Canterbury directed that prayers be offered at the altars of British churches for fair weather and a bountiful harvest. Much the same situation prevailed on the continent. By August the food shortage was acute, and America, blessed with a surplus, began huge exportations of cereals. In September the net balance of gold in favor of the United States was more than twenty-seven million dollars; never again did so much of the precious metal reach our shores in so short a time until the panic month of August, 1893. The value of the greenbacks was assured.

But the advocates of paper money were not completely defeated. They secured the passage of a law that provided that the amount in circulation when resumption began should never be lessened. Many evils flowed therefrom, for, much like personal checks that could be cashed over and over, the greenbacks became to the treasury an endless claim on its gold.[6] The reserve set up to insure their redemption became an ever-fluctuating barometer that for twenty years struck terror into the hearts of the opponents of "easy money" as it periodically slipped downward toward the hundred-million minimum and wobbled up again.

[5] January 1 was not only New Year's Day but Sunday as well.

[6] The greenbacks outstanding on resumption day amounted to $346,681,016. They had been redeemed several billion times when President Roosevelt finally stopped gold payments.

Silver: The Bland-Allison Act. While the Treasury Department was preparing for resumption, hard-pressed advocates of the "rag babies of the Civil War" began an earnest search for a reasonably priced dollar with which to liquidate their debts. They found a ready means of relief at hand in the rich store of silver discovered in the Rocky Mountains in 1875. Mushroom mining towns sprang up overnight; Deadwood in South Dakota and Leadville in Colorado poured upon the market a flood of the white metal. Although little was known about silver at the time,[7] any money that promised no unwarranted profits to the bankers was welcome, and the precipitate fall in the price of silver that began concurrently with new discoveries gave the necessary element of cheapness in comparison with gold. The results were that in the middle seventies westerners in general and farmers, debtors, and laborers in particular began to proclaim the merits of "the dollar of our daddies," and congressmen launched a bitter attack on their associates who a few years before had omitted the silver dollar from the coinage list, thus perpetrating "the crime of 1873."[8]

The chief sponsor of silver in Congress was Richard P. Bland of Missouri, whose devotion to the cause was soon to win him the sobriquet "Silver Dick" Bland. He and his followers, encouraged by western miners, were resolved to secure legislation that would permit those who held the metal to take it to the mint and have it coined into money in unlimited quantities at the ratio of sixteen ounces of silver to one ounce of gold. They were firmly convinced that the total sum of money in circulation determined prices and that only through an increase in the currency could the process by which the "plutocrats" of the East were swallowing up the farms of the agrarians and the shops and mills of the owners of small businesses be stopped. They demanded a currency that would be responsive to the needs of the people in a economic structure that was coming more and more to dominate their material and social existence. They denied the necessity for a fixed metallic base in which redemptions could be made for any or no reason; they perceived no justification for

[7] Only eight million silver dollars had been coined in all the history of the nation, and they had disappeared in 1834, when a new ratio law made them slightly more valuable than comparable gold coins. The coinage of fractional silver pieces had, however, been rather large in amount; after the passage of the ratio law of 1834 the coins had been deliberately lightened so that they would not be melted and sold as bullion. The Civil War drove all metal into hiding, and fractional paper was not replaced by silver until after the resumption law of 1875 was passed.

[8] In 1873 Congress revised the coinage laws. Silver dollars, since they had not been in general circulation for nearly forty years, were omitted from the official list of coins that were to be freely made at the mints on presentation of bullion. Silver advocates soon became convinced that this action was deliberate on the part of the gold men, and they therefore labeled it "the crime of '73."

paying the public debt in gold when it had been contracted in paper worth from fifty to eighty cents on the dollar in that metal; they were convinced that the lawmakers had the power and the right as well as the duty to regulate the circulating medium so as to prevent exactions by a privileged few; and they saw in the credit of the government a more flexible and adequate guarantee of just value than could ever be established on an unpredictable and severely limited gold supply alone. Furthermore, hating monopoly, they interpreted the insistence on a gold standard as a conspiracy of the greedy of Wall Street in New York and Lombard Street in London to subjugate the poor of the world.

On the other hand, men of means, investors, and financial statesmen and scholars believed that a dollar derived its value from its bullion content and not from any evaluation that a government had stamped thereon or on its paper representation. Pointing to the fact that sixteen ounces of silver could not be exchanged for one ounce of gold in the markets of the world, they declared that the free-coinage scheme was purely an inflationary one that would eventually, as silver grew cheaper, bring hardships to rich and poor alike and perhaps drive the nation from the gold standard entirely. But the silverites, caring little about world markets and knowing only that the price of silver seemed always to maintain a close relationship to the prices of the oats and corn and wheat and cattle that the farmers sold, forced through the House of Representatives in November, 1877, a free-coinage measure. In the Senate William B. Allison of Iowa obtained an amendment restricting governmental purchase to a minimum of two million and a maximum of four million dollars a month. In spite of the admonition that there was "a thunderstorm brewing in the West, and . . . somebody is likely to be hit by lightning unless they concede the just demands of the people," President Hayes vetoed the Bland-Allison Act when it came to his desk. Congress, however, quickly overruled him, and the bill became law in February, 1878. Nevertheless, as the years went on, each succeeding Secretary of the Treasury bought month after month only the minimum amount of silver. The increase in silver money did not, in fact, balance the withdrawals. The per-capita circulating medium, contrary to popular opinion, declined rapidly for several years and did not equal that of 1865 until after the end of the century.

The Distressing Eighties. The year 1879 brought both resumption and prosperity. Before September the steel mills of the nation were crowded to capacity, and orders for rails were being placed in Europe. Stock exchanges and brokers' offices were flourishing; the total sales and total value of sales in the early eighties were not again reached until 1898. Clear-

ing houses were busy, government coffers were overflowing, and railroads were being constructed at the rate of thirty to fifty miles a day. But the good times were soon followed by depression. Scarcely two years after the passage of the Bland-Allison Act the Secretary of the Treasury, who had countenanced if not supported the bill, said in his annual report to Congress: "The coinage of gold at Philadelphia had to be made subordinate to that of silver, in order to comply with the requirements of the law directing the purchase and coinage of $2,000,000 worth of silver bullion each month." The mere physical problem of storing the Bland-Allison dollars became increasingly more serious. The coins were put into circulation with difficulty, partially because of their unwieldiness and partially because of the fear for their value that had been built up in the minds of the people by the gold advocates. Financiers of the generation were positive that the laws of money were as immutable as the laws of nature. John G. Carlisle, forgetting national bank notes, gave simple expression to the philosophy of the day when he said, "This is a great and powerful government, but there is one thing it cannot do—it cannot create money."

Whether silver was responsible or not, the country experienced grave financial disturbances before the end of 1883. Deposits amounting to more than thirty-three million dollars disappeared from the banks in the first few months of 1884; the gold balance in the treasury declined persistently; and business, hard hit by the tragic failure of Grant and Ward in May, slowed down to a snail's pace. In November the people, discouraged by the economic conditions, offended by the evidences of corruption and privilege that were everywhere apparent, and tired of a party that had grown stale in office, elected a Democratic President for the first time since 1856. The last words of the departing Republican administration concerning finances were pessimistic. Hugh McCulloch, Secretary of the Treasury, gave warning in his final report that a severe panic or an adverse current of exchange "might compel the use in ordinary payments by the Treasury of the gold held for the redemption of the United States notes [greenbacks], or the use of silver or silver certificates in the payment of its gold obligations." There was, he said of the large surplus the government held, "no plethora of any kind except of silver dollars, for which there is no demand." Actually, he asserted, the danger was imminent if not immediate that silver and not gold might become the standard of value.

President Cleveland, though he may have suspected that silver money was not wholly to blame for the depression of the middle eighties, believed that a large gold reserve was necessary for economic stability and progress. Hoping to conserve the scanty supply of the metal by curtailing its outflow

from the treasury, he prohibited by executive order further redemption of United States bonds. Because income exceeded ordinary expenditures, the surplus thereafter grew rapidly, but unfortunately silver piled up faster than did gold. What was needed was some means of forcing the public to accept the Bland-Allison dollars instead of returning them as rapidly as possible to the government coffers. It had long been known that bills of small denomination seldom came back to the treasury until worn out. After 1886, therefore, no more one- and two-dollar greenbacks were issued, and those that came into the treasury were replaced by large bills. By 1887 a vacuum had been created into which were poured the newly printed one- and two-dollar silver certificates. Cleveland's monetary course, however effective, did little toward lessening the fear of the wealthy concerning silver and nothing toward appeasing the clamoring West. In fact, the entire decade of the eighties was a period of painful contradictions. Disagreements as to what governmental policies would best serve the nation brought on sharp quarrels and too often provoked pedantry in the East and fanaticism in the West.

The Sherman Silver Bill. The Republicans returned to power in 1889. Though forced by western senators[9] to do something for silver in return for support of the McKinley tariff bill, they avoided free coinage by passing in 1890 the Sherman Silver Purchase Act. This new compromise measure provided that the government buy at the market price four million five hundred thousand ounces of silver each month. Treasury notes having full legal-tender value were to be issued in payment for the bullion. Except for creating a market for practically the entire output of American silver mines, the law succeeded only in further endangering the existing financial system. Congress, declaring that it was "the established policy of the United States to maintain the two metals on a parity with each other," directed the Secretary of the Treasury to redeem the treasury notes of 1890 in gold or silver at his discretion. Yet it was obvious that real equality could mean only that the choice of metal desired lay with the holders of the notes. Thus the legislation of 1890 both intensified the threat that silver would eventually submerge completely all other money and supplied the public with another means of raiding the gold reserve.[10]

[9] The admission just at this time of six new western states—North Dakota, South Dakota, Montana, Washington, Idaho, and Wyoming—was of extreme significance. The twelve additional votes gave the balance of power to the senators from the West, who bargained shrewdly with eastern members of the party.

[10] The preponderance of silver money was becoming daily more apparent; in 1882 gold had exceeded silver by three hundred and eighty-four million, but by July 1, 1892, the difference had been reduced to one hundred and seventy-four million.

Previous to 1890 the public could obtain gold from the treasury only by presenting gold

The Growing Financial Dangers. The financiers of the country daily grew more alarmed as a combination of circumstances stripped the treasury of its surplus and made payments in silver more than a possibility. The Republicans in Congress were primarily to blame. When they had momentarily placated the westerners in their midst by agreeing to the Sherman silver bill, they passed the McKinley tariff measure, which seriously reduced government revenues. And, as if that were not enough, they embarked on a program of reckless expenditures that soon prompted the apt phrase "billion dollar" Congress. In addition a financial stringency, induced in part by cessation of English purchases of American railroad securities, made its appearance. By July 1 the usual demands of the South and the West for money with which to move the crops began, and before the end of August call-loan rates had advanced to one hundred and eighty-six per cent. The Secretary of the Treasury in a frantic effort to force money into circulation went into the open market and bought government bonds at a premium. Panic conditions lasted throughout September and October, but, except for decided repercussions from the failure of Baring Brothers in London, they had about disappeared by November.

The year 1891 opened in gloom. The government no longer had the power to draw into its coffers vast sums of money with which to protect itself and business. Gold, moreover, was moving to Europe in a swelling stream, and, because the perturbed bankers refused to supply the metal from their vaults, it was of necessity taken from the sadly depleted reserve in the treasury. Disaster was, as in 1879, averted by mere chance; soon large shipments of gold were pouring into eastern ports in payment for American grain sent abroad to relieve a food shortage in Europe. The relief was only temporary, and before long President Harrison, acting on permissive rather than compulsory legislation, ordered the redemption of more bonds at a premium in an effort to keep the staggering business structure on its feet by adding to the quantity of money in circulation. Day after day the treasury balance slipped downward, and silver, piling up in eastern bank vaults when it was no longer actively needed, became a constant reminder that gold redemptions were in danger.

The goal toward which political financiering had been pointing for many years was reached by the middle of 1892. During July redemptions

certificates or greenbacks. Although they could not be retired and therefore could be redeemed over and over again, the greenbacks were limited in amount by law. The gold certificates outstanding were completely controlled by the Secretary of the Treasury. These partial safeguards, however, were made ineffective by the Sherman Silver Purchase Act; treasury notes of 1890 increased month after month with no possibility of cessation except by repeal of the law, and financiers doubted the ability of Congress to undo what it had done.

exceeded those of any previous year; at last the people had begun the test of whether the government could redeem its ever-accumulating promises to pay in gold. The law required that the Secretary of the Treasury reissue greenbacks when they were redeemed and stipulated that the treasury notes of 1890 must be maintained at a parity with gold. These notes therefore became buckets on an endless chain that during periods of alarm relentlessly emptied the treasury of its precious metal as they flowed in for redemption, out to the people, and in for redemption again. With many kinds of money in circulation, only a part of which, according to the financial philosophy of the day, was actually worth its face value, few could be in doubt as to the ultimate results of redemption. The government could neither replenish nor protect its inadequate supply of gold. The metal was all moving outward; none was moving in. In June, 1890, gold or gold certificates had made up approximately ninety-five per cent of the money paid to the customs collectors at New York. By June 1, 1892, the amount had fallen to eight. In the meantime the percentage of treasury notes of 1890 in incoming revenues had risen from three per cent in the first month of their creation (August, 1890) to forty-nine per cent in June, 1892. Had the Secretary of the Treasury been able to lock these paper demands on his reserve safely in his vaults, he could have checked the run on his gold; as it was, lack of other money with which to meet his maturing obligations forced him to return them to the public. Although a hurried silver meeting was held in Europe at the insistence of the United States, no agreement was reached concerning the use of silver in international transactions.

On February 1, 1893, the gold in the treasury was within eight million dollars of the hundred-million reserve commonly accepted as necessary for financial safety. Secretary Foster, attempting to obtain relief through an exchange of legal tenders for gold, rushed off to New York for a conference with the bankers who, when treasury coffers were full, had been selling their bonds to the government at a handsome profit. He also endeavored to secure congressional authority for a bond issue and, in anticipation of favorable action, ordered the Bureau of Printing and Engraving "to hasten the preparation of the designs and plates in every possible manner." Both he and President Harrison, thoroughly dismayed by the failure of the heavily indebted Philadelphia and Reading Railroad on February 20, were watching the gold reserve with unconcealed anxiety, hoping against hope that March 4 might come without an actual crash. Secretary Foster frankly stated that his greatest wish was to pass his

office on to his successor before the little gold in his keeping had been exhausted.

The Democratic Heritage, 1893. When Grover Cleveland came to the presidency on March 4, 1893, the treasury possessed only nine hundred and eighty-two thousand four hundred and ten dollars in gold above the hundred-million reserve; all other money amounted to slightly more than twenty-four million, almost half of which was in small coins. Speculation grew as to what the course of the government would be when the reserve fell below one hundred million. The amount had been established solely for insuring the value of the greenbacks; and if the gold could be used for no other purpose, then holders of government bonds and treasury notes of 1890 could no longer look forward to gold payments, nor could treasury officials well meet current expenses. The situation viewed from any angle was alarming. Europe now felt that America was definitely committed to a silver policy; gold redemptions had become a fixed habit; no immediate way of increasing the revenues was at hand; the government had no power to borrow money for meeting current expenses; there was no clearly authorized means of building up the redemption reserve; and a dangerously large number of congressmen were openly hostile to the gold standard. Besides, the financial community, compelled to use paper since that was the only wieldy medium of exchange, grew ever more fearful lest a crash come and leave it holding a large amount of depreciated currency.

The financiers complained dolefully that "everybody is at sea like a ship without either compass or rudder, simply drifting from day to day because of ignorance as to what the Secretary of the Treasury will or will not do." Aggressive action, however, was difficult. Whether the executive branch of the government defended or deserted gold, national tragedy was perhaps impossible to avoid. Secretary Carlisle did nothing except to suspend further issues of gold certificates and to announce in unfortunate phraseology that the treasury notes of 1890 would be redeemed so long as there was gold "lawfully available." The statement jarred the already frayed nerves of business but did not greatly increase redemptions at the subtreasuries.

The Panic of 1893. The gold reserve in the treasury fell below one hundred million dollars on April 22, 1893. For a moment, as if the public was waiting to get its breath after the shock, nothing happened; soon, however, began a mad scramble for gold which, before it ended, drove all currency out of circulation. On May 4 the National Cordage Company collapsed and with it the general stock market. In the urban centers of

the land long lines of harried individuals stood waiting before the bank windows to demand their money, thus making inevitable the overwhelming grief that was to come. From May 4 to July 12 deposits totaling in excess of one hundred and ninety-four million dollars were withdrawn from national banks alone, and proportionate sums were taken from private institutions. Resources of the national banks decreased four hundred million dollars between September 30, 1892, and October 30, 1893. Thirty-three stocks shrank an equal amount. Call rates in New York rose to seventy-four per cent as business and industrial houses closed their doors. The forty-one million dollars in clearing-house certificates that were issued brought little relief. Liabilities of failed concerns stepped upward at a dizzying speed: eight and a half million in April, seventeen and a half million in May, thirty-three and a half million in June, and seventy-three million in July. During the summer seventy-four railroad corporations with more than thirty thousand miles of track passed into the hands of receivers. The government paid out in the course of the fiscal year one hundred and two million dollars in gold in exchange for greenbacks and treasury notes of 1890.

Poverty spread over the nation. It was almost impossible to make collections. "Fortunate is the note," remarked the editor of an implement journal in bitter jest, "that can truly say 'I know that my Redeemer liveth.'" Unemployment grew daily. Soup kitchens in the East were crowded, and on July 23 bread money was solicited at church in Denver for the first time in the history of the city. Men and boys wandered from place to place in search of food. In the vast agrarian empire between Chicago and the Pacific coast, farm products could not be moved because there was no money with which to pay freight charges. Around Minneapolis the great millers bought wheat from local farmers with scrip, which they promised to redeem later. In the South few could buy or sell on account of the scarcity of currency. Taxes could not be collected, schoolteachers could not be paid, and in many sections the people faced destitution and loss of property. Demands for moratory laws staying foreclosures for debts increased daily; some efforts were made to suspend the courts temporarily while legislators were deliberating. Governors were occasionally to be seen on Wall Street pleading with the bankers for funds with which to save their states from bankruptcy.

There was little that the Treasury Department could do during the acute period of the panic to bring relief. Secretary Carlisle set the Bureau of Printing and Engraving to work turning out national bank notes, but the dearth of money in circulation persisted because they were immedi-

ately hoarded. Since there were no available funds in the treasury, the Harrison palliative of buying up government bonds at a premium could not be resorted to; not a single month from June, 1893, to July, 1894, showed a surplus, and the gold reserve was continually tapped in order that government expenses might be met. Only the fact that people were hiding their money and not seeking redemptions saved the treasury these trying days.

The Repeal of the Sherman Silver Law. President Cleveland, convinced that the Sherman silver law was responsible for the ills that had befallen the nation, decided to force repeal of the obnoxious legislation as soon as possible. On June 30 he issued a proclamation summoning Congress in special session on August 7 and then slipped quietly away to New York to board the private yacht of Commodore Benedict, where surgeons were waiting to remove a virulent growth from the roof of his mouth. The operation was performed while the vessel moved slowly up the Hudson. A few days later, the public still unaware of what had happened, the Chief Executive was established at his summer home at Buzzards Bay in Massachusetts. Secrecy was maintained lest further alarm spread over the country: the Vice President, Adlai E. Stevenson, was a free-silver advocate who had been nominated for the purpose of winning western Democratic votes.

When the legislators assembled in Washington in August, the gold men talked much of "American honesty" and "financial honor." The silver followers, on the other hand, longed volubly for "another revolution of 1776" to free the nation from the tyranny of Wall and Lombard Streets. Each group sincerely believed that it was fighting for the welfare of the people. But Bland and Bryan and their agrarian friends in Congress were overwhelmingly outnumbered by the representatives of the thickly populated East. Repeal soon passed the House. In the Senate, however, the westerners had the advantage, and the argument raged on for weeks. Allen of Nebraska after talking for nearly fifteen hours closed with the comment that he "might embrace the opportunity to say a few more words on the subject." "The Sampsons of the Senate," said a correspondent, "are slaying the Philistines of gold and silver with their own jawbones." The long struggle ended only after the delay and uncertainty had aroused popular indignation in the business and financial world and stirred President Cleveland to use all his executive powers to compel Congress to act. The Treasury Department was especially distressed; Conrad N. Jordan of the New York subtreasury wrote Assistant Secretary William E. Curtis late in October: "We are still 'sledding on thin ice,' which I

suppose must last until Congress acts. 'How long! O Lord! how long!'"

The repeal bill passed the Senate on October 30 by a geographic rather than a political vote. The East was relieved that the great silver danger was ended. The West, on the other hand, was convinced that the poor must rise in open revolt if they were not (as they had long prophesied) to become abject slaves of the moneyed conspirators.

Repeal actually had little effect upon the country. It helped the financial situation not a whit. Although money began to come out of hiding as soon as the acute spasms of the panic were over, there was no way by which the treasury could build up its reserve fund. Customs dues were paid almost entirely in paper, and issuing a "specie circular" would have brought as much disaster as it had in the days of Jackson. Gold to meet increasing redemptions could be obtained, if at all, only through a sale of bonds.

The Sale of Bonds for Gold. Knowing that under the circumstances he could not long maintain the gold standard, Secretary Carlisle in December, 1893, recommended to Congress that "the third section of the act to provide for the resumption of specie payments, approved January 14, 1875, which confers authority upon the Secretary of the Treasury to issue and sell certain descriptions of United States bonds, be so amended as to authorize him to sell, at not less than par in coin, bonds to an amount not exceeding $200,000,000, bearing a lower rate of interest and having a shorter time to run than those now provided for."[11] The Secretary, anticipating the cry that the rich were seeking to profit from the misfortunes of the government, suggested that bonds if issued in denominations of twenty-five dollars and multiples thereof "could be readily disposed of through the subtreasuries and postoffices without the agency or intervention of banks or other financial institutions and without the payment of commissions." The only answer to his request was "Gold is a badge of oppression."

On January 17, 1894, the reserve stood at sixty-nine million dollars, redemptions were being made to the extent of about a million dollars a day, and for weeks the gold certificates in circulation had exceeded the total gold coins held by the government. That day the Treasury Department announced that it would sell fifty million dollars in bonds for gold at a rate that would yield investors three per cent. The issue, sold only after

[11] There were many difficulties to be faced in selling bonds. In the first place, it is doubtful that the congressmen who voted for resumption in 1875 had anticipated the sale of bonds except for the purpose of actually establishing specie payments on January 1, 1879; in the second place, the three classes of bonds authorized bore four-, four-and-a-half-, and five-per-cent interest; and, in the third place, probably a majority of the people of the United States saw in a bond sale no aid to the poor but only profit to the rich.

a last-minute appeal to New York bankers, succeeded in lifting the reserve within a few weeks to slightly above one hundred million dollars. Before autumn of this unfortunate year of silver bitterness, strikes, industrial armies, and tariff disappointments, however, the gold had been carried away again. With the reserve at sixty-one million dollars Secretary Carlisle on November 14 announced a second bond issue of fifty million. Bidding for "all or none," a syndicate of New York bankers took the entire amount. Westerners heaped biting criticism upon "this Judas Carlisle" and "the coarse brute Cleveland."

The two sales did little good. The business life of the nation regained no appreciable confidence, industrial activity remained at a low ebb, and economically the nation made no progress. Professor J. Lawrence Laughlin well said at the time that "to push the reserve slightly above the $100,000,000 by a small issue of bonds, inevitably followed by its disappearance below the line, impresses no one very forcibly." Indeed, Cleveland and Carlisle were attempting to hold back with a sieve the flood of disaster that threatened to destroy what many considered the only sound standard of value. Day after day greenbacks in endless procession were redeemed in gold. But because they could be neither retired nor withheld from circulation, the burden on the reserve never grew less. Moreover, when a bond sale was announced, many people rushed to the subtreasuries to get gold before making their bids. The unsuccessful bidders never returned the metal, and too often the successful merely presented their paper money at one window of the treasury, took their gold, and bought bonds at another.

On December 4, 1894, when the last payments were made on the second bond issue, the gold reserve stood at one hundred and eleven million dollars. Within scarcely more than a week, however, redemptions again began in earnest; a total of thirty-one million dollars was withdrawn before the end of the month, only nine million of which was exported. The new year brought no relief. With the gold standard wavering in the balance, Secretary Carlisle again asked Congress for a satisfactory bond authority and was answered with an unlimited-coinage bill. There was not the slightest hope of legislative assistance. John Sherman said of his fellow senators on the Finance Committee: "A measure which all can approve can not be reported unless there is attached to it a proposition to make the free coinage of silver at once the law of the land." Even then the halls of the House were resounding with the declaration of "Silver Dick" Bland that "never, never, in a time of profound peace, will I vote to issue one bond by this Government for the purpose of securing gold in order that the country shall remain upon a single gold standard."

The situation became so critical that on January 28 the President sent a special message to Congress on the state of the finances. Though firmly convinced that the thoughtless and unruly westerners alone were responsible for his fiscal troubles, he unknowingly criticized his eastern "sound money" associates and exposed the basic evils of the financial structure and philosophy of the day when he said in closing that "the most dangerous and irritating feature of the situation . . . is found in the means by which the treasury is despoiled of the gold thus obtained without cancelling a single Government obligation and solely for the benefit of those who find profit in shipping it abroad or whose fears induce them to hoard it at home."

The Syndicate Bonds. On January 31 the reserve fell to forty-five million dollars. Once again rebuffed by Congress, the administration turned, much against its will, to the two greatest private financiers in America for aid. Assistant Secretary of the Treasury Curtis hurried off to New York to talk gold to J. Pierpont Morgan and August Belmont, who, according to the silverites, had been waiting, premeditated greed in their hearts, for this sorrowful day. Curtis, who during the trying months of 1894 had borne the brunt of financial negotiations with the capitalists, spent many trying hours on Wall Street in an effort to save the crumbling gold standard. Through hard work and patient persistence, for which he has received little credit, he did more perhaps than anyone else to save the nation from financial collapse in the early months of 1895 when he induced the New York bankers to undertake the task of supplying the treasury with gold. Notwithstanding the fact that the subtreasurer in New York had reported that he might have to suspend gold payments within forty-eight hours at most, Secretary Carlisle decided even after Curtis' negotiations were practically completed that "a sale through a syndicate arrangement made in advance" was inexpedient and proceeded with plans for a public issue; vigorously opposed to secret monetary dealings by the government and no doubt influenced by press reports of "dark lantern" finance and "goldbug" machinations, he wrote Morgan and Belmont on February 3 that "in this attempt [by open sale] to re-establish the reserve and maintain the public credit, we hope to have your co-operation and the co-operation and support of all others interested in the financial affairs of the country." But a public sale was impossible because the treasury could not withstand the increased redemptions that always accompanied this method of replenishing the government coffers. And so it was that President Cleveland, Secretary Carlisle, Assistant Secretary Curtis, Secretary Lamont, and Secretary Olney met with Morgan (representing both himself and Belmont) and Francis

Lynd Stetson, his attorney, in a dramatic session at the White House on the morning of February 8, 1895, at which time it was agreed that the bankers and their European correspondents should deliver to the government three and a half million ounces of gold (slightly more than sixty-two million dollars) in exchange for four-per-cent bonds.[12] The financiers solemnly promised to protect the treasury from withdrawals during the summer and to obtain at least half the gold from abroad. Authority for the entire transaction was derived from a forgotten Civil War statute that Assistant Secretary Curtis had discovered.

President Cleveland's curt announcement to Congress that he had bought gold privately with bonds from the two greatest bankers in America brought a storm of protest, and the sale a few days later of those same government obligations at a handsome profit released a veritable flood of indignation. Probably a majority of the people believed that the financiers had deliberately "choked the government" in its hour of need, and the silver forces grew apace.

The Hundred-Million-Dollar Issue. Although Morgan and Belmont routed the treasury raiders for a time and kept their agreement to maintain an adequate gold supply until October, 1895, midnight of January 5, 1896, found Secretary Carlisle writing out the prospectus of the fourth bond sale of the Cleveland administration. The reserve stood at sixty-one million dollars and was falling daily as redemptions increased; the panic conditions induced by the President's belligerent message to Venezuela in mid-December had not disappeared; and eastern financiers were fearful that the public credit might again become endangered. The East was pleased and persistent rumors in the West that another syndicate deal was being contemplated were stilled when Carlisle's statement that a hundred-million-dollar public bond sale would be made appeared in the newspapers on the morning of January 6.[13] But the troubles of the treasury were not over. Temporarily at least, the thousands of people who wanted to help by purchasing bonds merely made the situation worse. Their frantic search for gold soon ran the price of the metal upward, and greedy money changers again benefited at the expense of the nation by selling gold at a premium

[12] A provision for three-per-cent interest if the bonds were made payable "in gold" was defeated by Congress.

[13] Morgan and other New York bankers had been urging the administration for several weeks to sell them bonds privately; their motives were, they declared, wholly unselfish. Cleveland and Carlisle, however, in spite of the fact that private sales profited the government most, refused to consider any proposition other than a public issue. Joseph Pulitzer is often credited with having prevented another syndicate deal, but his great newspaper crusade merely advertised the fact that a few individuals a year before had made a handsome profit by buying government bonds.

or by providing at a price greenbacks and treasury notes to holders of nonredeemable paper that they might raid Carlisle's small gold supply in order to buy his bonds. The money dealers knew their business. One New York concern set up its tables in the halls of the subtreasury building and hawked its wares under the very noses of government officials. On being driven away—after stripping the reserve of more than ten million dollars—members of the firm complained that they were being deprived of their liberties!

The bids when finally opened proved gratifyingly large in number and in amount. The issue was oversubscribed by more than five hundred and eighty-eight million dollars. Measured by the amount of gold obtained in proportion to the bonds sold, however, the sale was the least efficient of the four. Furthermore, in spite of Joseph Pulitzer's spectacular appeal, the public had actually given little aid. Ninety-seven million of the total returns of one hundred and eleven million dollars came from New York City, and that mostly from the men who from the beginning had been supplying gold for the government vaults. Nor were redemptions greatly lessened. Only the fact that a national political campaign in which the fate of the gold standard hung in the balance was in progress prevented another issue of bonds. So desperate was the plight of the government that throughout the summer of 1896, while William Jennings Bryan talked silver to tumultuous crowds over the land, a committee of New York bankers, headed by J. Pierpont Morgan, with power to direct national finances dominated the United States Treasury Department.

The Effects of the Bond Sales. The four years of the second Cleveland administration—though a period of "profound peace"—had seen the public debt increased by more than two hundred and sixty-three million dollars in a series of hopeless efforts to maintain the gold reserve at a fixed amount. Secretary Carlisle said of the legal tenders that had caused him so much trouble: "The notes are redeemed, but they are not paid, and if our legislation is not changed no matter how often they may be presented and redeemed hereafter, they will still remain unpaid. . . . The government has undertaken to keep an unlimited amount of circulation notes equal in value to gold coin, and at the same time it has no legal authority to compel anybody to give it gold in exchange for the notes, or to pay gold on any demand due to it. The obligation is all on one side and the power is all on the other." The problem was simply stated. The solution of refusing to pay gold into private hands by way of redemptions, however, was, whatever its appearance today, not an easy one. The doctrine of individual democracy and the philosophy that money was not subject to

social direction bound the nation inescapably to the past. The tragedy was that while the poor suffered and Cleveland, Carlisle, Curtis, and a host of others made heroic efforts to maintain stability and order, no constructive steps were taken to discover the roots of the evil that was plaguing the people. Accusing each other of ignorance and greed, the silverites and the gold followers brought into the open in the summer of 1896 the political conflict that had been raging under cover for at least three years.

"The Battle of the Standards." *The Contending Forces.* The political contest of 1896 had its origins in other years; long before the repeal of the Sherman Silver Purchase Act and the bond sales argument drove the gold and silver followers into two distinct and belligerent groups, economic developments had pointed toward an approaching battle between rich and poor. Labor not only had become partially organized but also had come to be resentful of the impositions it suffered. National agrarian expansion had reached a point where to go further meant at best painful experiences. Though there was romance as well as glamor in the millions of free acres in the West that stretched toward the Rockies, there was also tragedy, for the burdens of building a civilization on the arid plains fell heaviest upon the agriculturists. The railroad magnates, finding little traffic from which to draw legitimate financial gains, garnered fortunes from stock manipulations, extracted unwarranted tribute from the few shippers they served, and paid unjustified dividends on bloated investments. Money lenders sold their cash and industrialists their goods at prices determined by risks over which the buyers had no control. But the farmers could neither shift their responsibilities nor evade the trials of pioneering. Droughts became perennial after the middle eighties, and by 1890 in some sections a recession of the hopeless settlers had begun. In places only hillocks on the lonely plains marked the sites of once-thriving towns, and untilled farms lay desolate in the beating sun. The continuing cycle of agrarian prosperity and tragedy was aptly and vividly pictured in the *Yearbook* of the Department of Agriculture in 1896:

> Year after year the water supply may be ample, the forage plants cover the ground with a rank growth, the herds multiply, the settlers extend their fields, when, almost imperceptibly, the climate becomes less humid, the rain clouds forming day after day disappear upon the horizon, and weeks lengthen into months without a drop of moisture. The grasses wither, the herds wander wearily over the plains in search of water holes, the crops wilt and languish, yielding not even the seed for another year. Fall and winter come and go with occasional showers which scarcely seem to wet the earth, and the following spring opens with the soil so dry that it is blown about over the windy plains. Another and perhaps another season of drought occurs, the settlers depart with such of their

household furniture as can be drawn away by the enfeebled draft animals, the herds disappear, and this beautiful land once so fruitful, is now dry and brown, given over to the prairie wolf. Then comes a season of ample rains. The prairie grasses, dormant through several seasons, spring into life, and with these the hopes of new pioneers. Then recurs the flood of immigration, to be continued until the next long drought.[14]

The farmers in the arid regions knew, however, that their fellow agrarians in other years and in other parts of the West where the rains fell and the sun shone on waving fields of grain were as poor as they. Ignatius Donnelly wrote in his diary on December 30, 1884: "Another day ends the year. A year of labor and struggle and little fruit. . . . I find myself at its close . . . poor and embarrassed, and calculating whether the wheat in my granary (at 43¢ per bushel) and the oats (at 18¢ per bushel) will carry me through the winter. . . . The times are frightfully hard all over the country; and George, my son-in-law, has failed in farming in Stevens Co. Another victim of the R.R.ds and Miller's Rings." As debts grew more burdensome on the plains and wealth piled higher in eastern cities, the burning words "The seeds ye sow another reaps" sank deeper into the hearts of the toilers. Throughout the farm lands people began to gather in the schoolhouses to talk over their troubles. Men and women on a crusade for democracy and opportunity found momentary surcease from social monotony and hope for the future in their simple confessions of economic faith. These honest though sometimes unlettered agrarians desired—as did also the workingmen in factories, shops, and mills—only that national leaders consider their misfortunes and protect them from those who intentionally or unintentionally preyed upon them. Had their pleas been heeded, Woodrow Wilson when examining the processes by which America had achieved eminence might not have been prompted years later to say, "The great Government we loved has too often been made use of for private and selfish purposes, and those who used it had forgotten the people."

The Rise of the Populists. The economically discontented slowly drifted together. In 1891 they officially founded the People's party. Populism swept from the plains into the corn states of the Ohio-Mississippi valley and down into the cotton fields of the South. Everywhere hard-pressed farmers found something to approve in a platform that demanded monetary reforms that would both increase the per-capita circulation of money and take from the banks the power to control the currency of the nation; that sanctioned the unlimited coinage of silver; that advocated a subtreasury scheme that would permit the farmers to receive negotiable receipts on

[14] Frederick H. Newell, "Irrigation on the Great Plains," p. 168.

stored products; that approved an income tax that would force the wealthy to disgorge a part of their holdings; that called for public control of trust-dominated social necessities such as railroads, telegraphs, and telephones; that sought to force the return of lands given unjustly to the railroads and to prohibit entirely land ownership by foreign individuals and corporations; that proposed the establishment of postal savings banks where the people might deposit their little surplus with full confidence that it would be returned when needed; that asked for the direct election of senators; and that promised reforms to labor.

The East promptly labeled the members of the new party "communists" and attempted to cudgel them into obedience. An incensed southern industrialist accused them of subversion. There was, he asserted, "scarcely an organization of any kind in the whole country where capital is employed that does not become obnoxious to this tear-down and agrarian principle, the logic and tendency of which is to destroy all that is worth having, and upset the very foundations of all property, and open the way for anarchy, and a general destruction of all that is stable and good." Eastern editors, financiers, and statesmen spoke much of the "cheating" and "illiterate" farmers. One New York journalist suggested that further admission of states beyond the Mississippi be discontinued until Kansas could be civilized. In the face of tragedy the critics blindly stumbled on, scarcely realizing that the nation faced a real problem that could not be solved by accusations of ignorance.

The agrarians denied charges that they "wanted something for nothing," and they resented the indictments of their motives. They admitted, however, their poverty. Though only a few, perhaps, were actually hungry, politicians—in some cases merely seeking personal gains—had sung the song of oppression until a spirit of pessimism had arisen. Charles S. Gleed was in part justified when he admonished his fellow westerners that if they desired to propitiate their angry economic gods, they should first proffer their political demagogues as a burnt offering. Nevertheless, it is obvious that those who had failed to prosper became daily more convinced that their troubles were due to the impositions of a privileged few. Even in the cities the workers felt keenly their inequalities. "Why," asked the editor of the *Labor Signal* of Indianapolis in 1890, "does Supt. Whitehead permit a street railway corporation to drive lame mules and yet be swift to pounce upon some devil of a teamster whose horse but shares the semi-starvation of his children?"

Harassed by grievances, real and imaginary, the agrarians before the middle of the nineties became convinced that the wealthy of the world

were in a conspiracy to squeeze the poor to death. Americans, they declared, were slaves to the money changers of Europe and mendicants to Great Britain. The repeal of the Sherman law and sales of bonds for gold with which to uphold the gold standard but confirmed their suspicions. Many people were never convinced that Cleveland and Carlisle did not personally profit from their dealings with Wall Street. And so it was that laborers, cotton growers, and western farmers, discouraged with their economic conditions and fed with easily believed half truths, were ready by 1895 to unite their forces to some degree at least in one great battle for "the money of the common man." "Coin" Harvey began to teach lessons in finance in his fictitious Chicago schoolroom,[15] and the National Bimetallic Union took up the cause. One after another of the Democratic state machines in the fall of 1895 fell under the control of the silverites. It was apparent by the opening of 1896 that the conflict over money was to be carried into the arena of popular politics.

The Presidential Nominations: McKinley and Bryan. The leaders of the Republican party, dominated for the most part by Mark Hanna, Cleveland industrialist, assembled in St. Louis in June. However inviting the tariff issue as a major platform plank, the delegates were forced to declare for a gold standard and watch Senator Teller (referred to by the correspondents as "the absconding Teller") and a score of followers march out of the convention hall. William McKinley, in spite of his dubious position on the money question, was nominated on the first ballot.

A few weeks later the Democrats met in Chicago. The overwhelming power of the silverites, which the conservatives in the party had blindly refused to see, was clearly revealed when David B. Hill of New York was defeated for the temporary chairmanship by John W. Daniel of West Virginia. The advocates of the gold standard were helpless. The "Great West" took control of the seething body and wrote a platform demanding the free and unlimited coinage of silver at the ratio of sixteen to one without waiting for the aid or consent of any other nation on earth. Then William Jennings Bryan, "boy orator of the Platte," rose to answer the charges that the party was threatening the business life of the country. The convention was with him as he scored the mighty for having forgotten the simple people. The West shouted approval when he declared: "We believe that the right to coin and issue money is a function of govern-

[15] W. H. Harvey published his famous *Coin's Financial School* in 1894. This little book of something more than a hundred and fifty pages was sold by the thousands. Because Harvey used contemporary figures to ask questions, which he then answered (always to his advantage), many people never knew that the school was merely a figment of the author's imagination.

ment. . . . We believe that it is a part of sovereignty, and can no more with safety be delegated to private individuals than we could afford to delegate to private individuals the power to make penal statutes or levy taxes." The men of toil rejoiced as he closed with the dramatic "You shall not press down upon the brow of labor this crown of thorns, you shall not crucify mankind upon a cross of gold."

Bryan was nominated on the fifth ballot. Within a few days the Silver party and the Populists also made him their standard bearer. The agrarians were prepared to do battle for what they believed to be honest money and honest government. Unfortunately the myths that have grown up concerning the convention have obscured the fact that the nominee and the crusade he led were the products of forces long pent up and not the results of spontaneous emotion.[16] Bryan did not win the nomination by his great speech.

The Campaign. The Democrats[17] perhaps could have won the election in July, 1896, but as the months wore on, a majority of the people, warned incessantly of the calamities that must follow desertion of established monetary principles, turned slowly to the gold standard, which the Republican party was sponsoring. The threat to the existing order enabled the McKinley forces to become the defenders of all that was "sound" and good and to represent the Bryan men as "anarchists" and worse. The gold advocates earnestly believed that they were seeking not only to preserve their own property but also to save the property of the "deluded" brother from himself. Grover Cleveland announced that he would not knowingly be implicated in a condition that would make him "in the least degree answerable to any laborer or farmer in the United States for a shrinkage in the purchasing power of the dollar he has received for a full dollar's worth of work or for a good dollar's worth of the product of his toil." Industrialists informed their workmen that Democratic success would mean closed factories and no jobs. Cyrus H. McCormick, faced by hostile farmers who threatened to buy no more of his machinery, declared without hesitation, "The welfare of our country is to me of higher interest than any personal temporary gains." He and other manufacturers discharged employees who favored silver on the assumption that they were working against the interests of themselves and their employers. Some concerns posted notices that if Bryan was elected, laborers need not return to work after the polls were closed. Economics and politics were astoundingly mixed.

[16] See James A. Barnes, "Myths of the Bryan Campaign," *Mississippi Valley Historical Review*, vol. xxxiv (December, 1947), pp. 367-404.

[17] The conservative Democrats, with John M. Palmer and Simon Bolivar Buckner as their candidates, fought for the gold standard.

The Monetary Arguments. Throughout the campaign the gold followers argued with logic that silver could not be coined indefinitely in large amounts without eventually becoming the accepted monetary unit; the inevitable outcome would be readjustment in the standard of value. Day after day the business interests of the nation told the people through every possible channel that free silver would bring destruction of half their property because the silver in a silver dollar was actually worth only half as much as the gold in a gold dollar. Pension checks, savings funds, life-insurance payments, bank deposits, and all other evidences of human foresight and frugality would, according to the gold advocates, be cut in two or perhaps ultimately thrown away entirely. Bryan's followers, it was maintained, were attempting the impossible in trying to create two standards of value for the same thing. A yard, said the "sound money" men, was thirty-six inches long, and it could never be measured with a ruler only eighteen inches long; such an anomaly would mean, for instance, that every purchaser of cloth would have to buy twice as many yards as before in order to fill the same need. "Intrinsic value" alone was the measure of a dollar, they argued, and the "intrinsic value" was determined solely by what the metal unstamped and unmarked by any government would bring in the markets of the world. Then—and even now—many scholars, wholly unconscious of or unconcerned with the slow but never-ceasing fluctuation in the amount of goods obtained in world markets for an ounce of gold, pretended that when measured in gold the product was as unvarying as the product of a measure forever thirty-six inches long. Business, commerce, industry, and economic life in general, claimed the gold men, could flourish only when there was stability of value and sacredness of contract. Prosperity, they asserted, was impossible with silver as a medium of exchange; gold, progress, and confidence were inseparable. One writer predicted that it would "not be easy for the student of the future to repress a smile when he reads the history of the nineteenth century and discovers that learned men seriously discussed the question, 'How much money *per capita* ought to be in circulation among the people?' "

The gold sponsors were fighting for what they described as the "fundamentals." The silver forces, on the other hand, were avowed defenders of "humanity." They were endeavoring, they said, to prevent combines, monopolies, and "malefactors of great wealth" from forcing the mass of the people into a position of undemocratic servitude to a privileged few. Convinced that "the master screw of all monopolies" was the "money power" that changed "the amount of labor and prosperity in the ambiguous, fluctuating thing that usury calls 'a dollar,' " they demanded an abundance

rather than a scarcity of money and therefore advocated an entirely free coinage of silver. They wanted, as one farmer put it, to reverse the trend of a quarter of a century and make little dollars and big bales of cotton for a while and thereby lessen their unjust financial burdens. "Every man who contracts a debt must pay that debt out of the products of his labor or his business," wrote a silverite. "That debt is computed in dollars. No matter how much they rise in value, no matter how much the price of his products fall, he must pay the same number of dollars. The advantage has been entirely upon the side of the money-lender, the injury altogether upon the side of the toiler and the producer." Bryan and his followers believed that over the world silver was the friend of the poor and gold was the instrument of oppression. Moreover, they denied that the laws of finance were immutable laws and insisted that society through its democratic agents should regulate its medium of exchange for the benefit of the majority.

Although the few silver mine owners involved were no doubt inspired in part by hopes of personal gain, basically the silverites were declaring, first, that the circulating medium had quantitatively not kept pace with the material growth of the nation and, second, that money, since its purpose was to serve all the people, was the business not of individuals but of the government. They saw in a single standard that rested solely on a metal whose production could not be effectively geared to industrial and agrarian progress new opportunities for exploitation by private financiers. And indeed, fifteen years later a congressional investigating committee admitted the existence of a money trust. Nationalization of gold, while it might have helped in the panic of 1893, was at the time probably impossible. Changes, nevertheless, were certainly in order; strangely, the people seemed more conscious of that fact than did public leaders.

The Results of the Election. When election day came, McKinley won by five hundred and ninety-six thousand votes out of a total of thirteen and a half million. It was actually not big business but fear of change that had brought victory. On March 14, 1900, the gold dollar of twenty-five and eight-tenths grains nine-tenths fine was made the standard of value, and the gold reserve in the treasury was increased to a hundred and fifty million dollars and set aside in a separate fund. Perversely enough, however, monetary reforms of the twentieth century have followed the demands of the discontented in the years before 1896.

Chapter 24

BIG BUSINESS AND THE SEEDS OF SOCIAL CONTROL

Business Organization. The administrative structure of the American industrial system in the latter half of the nineteenth century changed as drastically as did the methods of production. In the days when economic life was simple and trade was limited almost wholly to local communities, business institutions were mortal. Founded by individuals or by groups of neighbors as partners, they lived and died and often were interred with the bones of their founders; even when the name passed from father to son, the nature and responsibility were wholly different. As transportation and communication facilities developed, however, and commerce grew and sales of goods from the growing factories spread slowly to sections where the personal reputations of the owners were unknown, consumers came to expect certain inherent values in the products and services they bought without reference to the fortunes or misfortunes of the men who created them. More than that, as output expanded and manufacturers were forced not only to buy increasing quantities of their raw materials far in advance of actual use but also to hazard their judgments on future demands in sometimes distant markets, the need for large and fluid amounts of capital arose. Furthermore, because the recourse of creditors was unlimited, the dangers involved in private enterprise tended to smother risk taking, for when individual or partnership ventures collapsed, the entire possessions, including homes, of all concerned could be levied upon for the satisfaction of debts regardless of degree of ownership.

It is not strange then that the corporation arose early in American industrial development or that it came to dominate the nation after the Civil War. This legal entity or being, formed by interested parties and chartered by the state, had rights and duties of its own, and its span of life was in no way limited by the allotted years of its sponsors. It could sue and be sued, buy and sell, borrow and lend, and enter freely into contractual relations, and no stockholder was personally liable. Investors bought stocks and bonds with the knowledge that while profits and interest might be uncertain, losses could at most never exceed the initial investment. Management

undertook tremendous projects with the assurance that failure could destroy no more than the enterprise itself, though sometimes bitter tragedy followed for those who had provided the money that others ventured.

Actually a corporation was frequently composed of two parts: first, a physical plant that year after year, whether made up of railroads or factories or shops or mills, served the public for good or for evil and, second, a name that was bought and sold in designated units by eager speculators on the stock market. Too often the latter came to overshadow completely the former, and an institution that possessed the necessary stability, permanence, daring, and resources to build a national economic structure became in one of its phases only an aggressive instrument behind which reckless gamblers charged on to the battlefield of financial competition with no greater vision than personal profit. Conquering heroes gathered up their booty, and losers sold out if they could and paid up if they had to. As the conflict grew more intense, the simple corporation proved ineffective, and new offensive and defensive weapons in the form of pools, trusts, holding companies, and supercorporations were developed. Each in a way superseded the other as conditions changed and business grew bigger.

Pools, used chiefly by Michigan salt companies, cordage makers, wallpaper manufacturers, and especially the railroads, were mutual—and unenforceable—agreements between rivals for sharing opportunities and earnings in order to avoid destructive price wars. Violations, however, were numerous, and dissolutions were a common occurrence. A trust was a combination of various companies in which ownership and control of all were vested in a dominating group of trustees who not only provided the stability that pools lacked but maintained uniform price policies as well. Led off by the Standard Oil Company in 1882, the list of trusts lengthened rapidly despite the discovery of Rockefeller and others that it took huge sums of money to achieve their monopolistic ends.[1] Holding companies attained power comparable to that of the trusts with relatively small investments. Through ownership of a majority of the voting stock, often small, they possessed merely controlling interests in their subsidiaries. Occasionally the judicious expenditure of a few million dollars gave dominion over a vast economic empire. Supercorporations, formed by merger or by amalgamation, were gigantic concerns that came up in the nineties and rose to dominance in the twentieth century.

The rapid shifts in the corporate structure, though inspired as a rule by an earnest desire on the part of the business men to meet effectively the

[1] Trusts soon ran afoul of the law and were declared illegal, but the term continued to be applied to all large businesses that approached monopolistic control.

problems presented by changing conditions, did not always contribute materially to industrial progress. Sometimes they were hurriedly conceived to avoid legal restrictions or to win an advantage over a rival. Unfortunately competition by the beginning of the nineties had become in some instances less a stimulant to economic growth than a cause of inefficiency, waste, and even wanton destruction. Bitter rivalry drove many firms into the hands of the entrepreneural financiers; before 1900 great banking houses had become to a large extent industrial overlords of the nation. Concentration in ownership, however, was not primarily the result of personal greed. Technological developments that brought highly efficient yet exceedingly expensive machinery, far-flung national markets that necessitated heavy outlays for distribution, and scattered raw materials that had at times to be hauled long distances from the limited areas in which they were found made economies in production necessary and tended to encourage the growth of immense banker-controlled corporations. Moreover, competition itself, as well as tariff restrictions, patent rights, and antitrust laws, aided the movement. Finally, the very size of the task of turning America's enormous store of resources into goods for the satisfaction of the most avid consumers in the world called for material performance on a grand scale. But the stubborn fact still remains that the stability in production and prices upon which profits depended was maintained by disciplines that were not always socially commendable.

The Masters of Capital. Many of the individuals who built the business structure of America in the latter part of the nineteenth century began their rise to power during the Civil War. These industrial captains, whose mastery the South had sought to prevent, emerged in 1865 as dominating personages anxious to drive industry forward. The Beards say of them: "With capital at hand, with natural resources to be had for the asking or the taking, with stalwart labor ready for the fray, with a vast domestic market assured, with politicians impatient to coöperate and share the fruits, and unhampered by a powerful aristocracy, lay or clerical, attached to other manners and other ideals, American business men leaped forward as strong runners to the race when the news of Lee's surrender boomed throughout the land." [2] Indeed, the story of economic progress in America after Appomattox is both a recital of heartless destruction and brilliant accomplishment and a tale of clashing giants who neither gave nor asked for quarter. Spreading railway empires, growing factories, belching steel mills, deepening oil wells, and pyramiding financial organizations are seen but dimly except through the lives of Morgan, Carnegie, Rockefeller, Hill,

[2] *The Rise of American Civilization*, vol. ii, p. 172.

Harriman, Gould, Vanderbilt, and Cooke and their friends and hated rivals. The business leaders were the most significant figures of the postwar years. Though an occasional statesman stands out in the national pageant, the politicians were on the whole a dull group who were often mere tools in the hands of the money changers. Public honesty had few rewards; a dogged fight against corruption or a powerful plea for decency could not stir the imagination as could a simple physical attainment. The miracles of industrialism were breath taking. Science, vision, determination, and concentration of money brought to millions of Americans material comforts and conveniences that under other circumstances only the rich could have enjoyed. Carnegie boasted with justifiable pride of "two pounds of iron stone mined upon Lake Superior and transported nine hundred miles to Pittsburgh; one pound and one-half of coal mined and manufactured into coke, and transported to Pittsburgh; one-half pound of lime, mined and transported to Pittsburgh; a small amount of manganese ore mined in Virginia and brought to Pittsburgh—and these four pounds of materials manufactured into one pound of steel, for which the consumer pays one cent."

Dealing in millions yet watching every penny, the "steel kings," "coal barons," "railways magnates," and "Napoleons of finance" stalked though the economic world with abandon. Some were indefatigable workers, some were promoters, and some were only opportunists, but all contrived to profit from the wealth of the nation. Though theirs was not the touch of Midas, they prospered nevertheless. Indeed, it seemed to some, especially the farmers, that every act of the national government contributed directly or indirectly to their riches. The Fourteenth Amendment, designed to protect the former slaves by declaring that no state had the right to deprive anyone of "life, liberty, or property without due process of law," benefited only business. Tariffs, in spite of opposition by the people, were yearly made higher through the influence of effective lobbies. States, counties, and towns added to their economic enticements: they voted bonds for railroads, they bid against one another for the privilege of having factories set up within their boundaries, and they offered bounties, gifts, and freedom from taxation to ambitious industrialists. Governors, legislators, mayors, and congressmen were too overwhelmingly concerned with pushing the nation forward to give thought to the future. Some of the young men who went to Washington in the political upheavals of 1874 and 1876 pleaded for honesty in public life, but theirs were voices crying in the wilderness. Stocks were watered, public officials were bribed, and enemies were pitilessly suppressed or ruined with little more response from the public than envious

criticism. The good and the bad were so intermixed that even today it is difficult to say where honor stopped and corruption began.

The Industrial Captains at Work. *Speculation in Railroads.* The basic American railroads were by the end of the nineteenth century virtually completed, but that remarkable feat was in part overshadowed by the tremendous financial conflicts and brazen monetary schemes indulged in by the men who built them. Service to the people was not always a cardinal principle in the minds of the magnates, and in the early years of development more fortunes were made in the inner offices of speculators than were ever gathered in by ticket salesmen and freight agents. Cornelius Vanderbilt, dubbed "Commodore" because he had once owned a fleet of coastal vessels, was one of the first to provide the public with an extensive and unified railroad system. He was also one of the first to garner millions through reorganization and manipulation of rail securities. He became president of the New York and Harlem in 1863 and by means of effective corners raised the price of the stock in two years from thirty dollars to two hundred and eighty-five. When the New York Central fell into his hands, it became possible for him to command a through road to Chicago.

Blocked by Jay Gould, Jim Fisk, and Daniel Drew, Vanderbilt failed in his efforts in the late sixties to gain control of the Erie. Colossal egotist and unlettered blusterer though he was, he was a master at his trade; he knew how to juggle stocks and buy governors and legislators as well as did the lesser tricksters who opposed him. But Gould the farm boy, Drew the cattle drover, and Fisk the Vermont peddler and circus manager were as ruthless a trio of pirates as ever sailed the seven seas. Wholly without legality they printed Erie stocks as fast as the old commodore could buy them. Once after a ten-million-dollar issue they escaped across the river to Jersey City just ahead of the sheriff. A few days later Gould was in Albany with a trunk full of greenbacks buying legal approval of the issue; fifteen thousand dollars a vote was the standard price, yet one individual who had been paid seventy-five thousand to oppose the confirming legislation was persuaded by a hundred thousand in Gould's crisp paper bills to support the measure. Vanderbilt, beaten by his enemies, was forced to accept a compromise by which he was clipped of two million dollars.

The "Erie War" was nevertheless far from ended. Gould and Fisk, seeking further conquests, made use of the printing press between June and October, 1868, to increase the capital stock of the road by many millions. Prices were driven down, but not enough to satisfy the greedy buccaneers; they wanted still more profits through purchases on a wrecked market. Knowing that the banks of New York were always hard pressed for cash

in the fall when the crops were being moved in the farm lands, they deposited several millions of their ill-gotten gains in the most important institutions of the city and then at a critical time asked for repayment in greenbacks. Since greenbacks were necessary for use in maintaining legally required reserves, the banks hurriedly called in their loans before October reports to the government were due. The whole credit structure of the nation felt the impact as the demands to pay up spread from New York over the country. Business ground to a standstill, and prices plunged downward. Thousands of honest people, seeking desperately to meet their obligations, sold whatever they owned at whatever it would bring. In the meantime Gould, Fisk, and Drew, who had used the laws of the United States to beat the game into their trap, sat buying at their own terms. And that was not all. The three gamblers soon attempted an even bigger coup. In 1869 they cornered gold, and "Black Friday" brought bankruptcy and economic tragedy both in America and in Europe. The conspirators indirectly drew the President into their coils.

Fortunately feverish speculation was not universal among eastern railroads. The Pennsylvania and the Baltimore and Ohio, for example, were seldom used by their directors merely as convenient blinds behind which robbery in the world of stocks and bonds achieved a semblance of respectability. They were not, however, above paying bribes in the form of rebates and secret favors to the industrialists for freight. Thomas A. Scott, "Tom Scott of the Pennsylvania," turned with the wind that smelled most of gain; he helped form the South Improvement Company (see p. 486), which, regardless of any soundness in its basic purpose, was as brazen an insult to public decency as the record reveals, and he treated cities where there was no competition (Pittsburgh, for instance) with such contempt as to earn the bitter enmity of their citizenry. Rate wars and special privileges for the powerful were everywhere obvious.

While financiers in the East were in turn swallowing and disgorging stocks and petty railroads, real drama was unfolding in the West. Henry Villard, James J. Hill, E. H. Harriman, and other men scarcely less notable fought their battles on a field half a continent in size. They woke sleepy villages and converted them into thriving metropolitan centers; they peopled the barren plains with farmers; and they tapped the wealth of Canada and the far Pacific Northwest. They played for high stakes, and whoever showed a moment's hesitation fell immediate prey to his ruthless opponents. The conflict raged East and West. Occasionally a special train with a clear line rushed from a construction camp in the shadow of the Rockies to the financial center at the mouth of the Hudson carrying a

builder to fight with the bondholders in defense of his empire. But in spite of vigorous efforts to retain their independence, the western railroads slipped one by one, as did too many of the industrial institutions in America, into the gaping hoppers of the New York banking houses.

Railroad evils were not limited solely to those connected with financial manipulation. Free passes, issued in the hope of gaining political favors and public approval, added to operating expenses large amounts that had to be recouped. Traffic charges were based on what the public would bear rather than on costs. Freight rates fell to absurdly low levels or rose to preposterous heights according to the presence or absence of competition. Because both the Pennsylvania and the Baltimore and Ohio served Cincinnati and only the former touched Pittsburgh, it was often cheaper for Pittsburghers to ship Philadelphia-bound goods to Cincinnati and out over the Baltimore and Ohio by way of Washington or even back through Pittsburgh than to send them direct by the Pennsylvania. Cattle could be shipped from Chicago to New York for unbelievably small sums, but the poor westerners who were so unlucky as to live within reach of only one line bore the losses involved. Besides excessive transportation charges for their grain and their livestock, farmers had to pay higher rates on manufactured goods received at their way stations than did merchants in large cities many miles beyond. In addition important corporations were granted special reductions and at times even indirect tribute from their rivals. Manufacturers who were not powerful enough to bribe the transportation companies frequently found their products stillborn at their factories, and thus an institution that the government had generously aided for the purpose of developing the country often literally strangled national progress.

The railroads themselves were occasionally victims of their own brutal methods. Not only Rockefeller and his oil interests but also steel companies and other powerful industrial concerns sometimes used their profitable cargoes to bargain for financial favors. A rolling mill in Chicago, seeking to squeeze out a competitor in Pueblo, Colorado, without reducing its own profits the necessary six dollars a ton, demanded of Charles Francis Adams, president of the Union Pacific, that he cut his twelve-dollar freight rate in two. "There was no evasion or concealment or circumlocution about it," wrote Adams to Senator Zebulon B. Vance on March 17, 1887. The agent's proposal was, he continued, "that the Union Pacific should break through all its engagements with other lines and reduce its tariff for his special benefit, *or else suffer the consequences which he would bring on it in Washington.*"

Rockefeller and Oil. Black oil gushing out of "Drake's Folly" near Titus-

ville, Pennsylvania, in August, 1859, began an industry that has since spread to the ends of the earth. In that year John D. Rockefeller closed his career as a poor bookkeeper in the Cleveland firm of Hewitt and Tuttle and founded with Maurice B. Clark a wholesale commission house dealing in grain, hay, meats, and miscellaneous goods. Business flourished during the Civil War, and Rockefeller, through opportune sales on a rising market and strict attention to economy, built up sufficient capital to venture into oil refining when the hectic speculation of the first few years had died down. Cleveland rather than Pittsburgh was ideally located to reap rich profits from the liquid wealth that was pouring out of the earth in western Pennsylvania. It was nearer the fields, the Atlantic and Great Western Railroad and other lines were soon providing excellent transportation facilities, and shipments to the thriving port of New York for dispatch abroad were easily made. In 1863 Rockefeller, Clark, and Samuel Andrews built as Andrews, Clark and Company a refining plant in the rising lake metropolis. Two years later came dissolution and the founding of Rockefeller and Andrews. The future oil king, free for the first time in his career from the trammeling influence of plodding associates, regarded the change "'as the beginning of the success I have made in my life.'"[3]

Rockefeller and Andrews quickly grew into the largest refining concern in Cleveland. Soon John Andrews and William Rockefeller were brought into the firm, and a branch office was opened in New York to handle foreign sales. In 1867 Henry M. Flagler joined the group, and the name became Rockefeller, Andrews and Flagler. Continued expansion led to the creation in 1870 of the Standard Oil Company, of which Rockefeller, although ably assisted by his partners, was unchallenged head. Oil has contributed profoundly to social and industrial growth, and Standard Oil has been one of the greatest of the producing and distributing agencies. From the beginning Rockefeller, in spite of the fact that he did not actually play the part, typified better than anyone else the aggressive business leader of the day. Hating waste and the extravagances of free competition, he preferred absorption to the inconveniences of combat. Still it would be an injustice to accuse him of having deliberately broken his competitors. A devout man, he was in his way merely seeking to establish order in the thoroughly disrupted and highly unprofitable refining industry.

The order that was proposed was to be attained through the creation of a widespread and powerful organization that could bring supply into line with demand. No one was forced to throw the results of his years of labor

[3] Allan Nevins, *John D. Rockefeller: The Heroic Age of American Enterprise* (New York: Scribner's, 1940; 2 vols.), p. 191.

into the monopoly, but few were the refiners who did not see that the olive branch that the oil baron and his associates bore was a cudgel. Under the existing conditions of overproduction the strong who wished to stand alone were threatened with destruction and the weak were doomed. Using bargaining power as a ram, Standard Oil, whether it meant to or not, beat down its frail opposition as it lifted itself upward. Since it had profits to offer to those who helped it profit, its road to greatness was filled with special privileges, and special privileges, usual as they were, were unjust. Most deserving of denunciation was a nefarious scheme in the disastrous years of the early seventies that made use of a defunct corporation, the South Improvement Company. In exchange for the privilege of carrying the oil produced by the large refiners, the Erie, the Pennsylvania, and the New York Central agreed to turn back in rebates a substantial percentage (in some cases fifty per cent) of all freight charges paid and in addition to hand over a like percentage of all receipts from their competitors. Though rebates were common, the plan was a shameless one, and when uncovered it brought upon its sponsors an avalanche of criticism that eventually resulted in the cancellation of the charter of the organization.

The matter of the South Improvement Company was only one incident in the battle of Standard Oil to obtain control of refining and to secure advantageous freight rates from the railroads. Rockefeller and his friends, having from the first guarded their earnings carefully, were in a favorable financial position when the panic of 1873 fell on the country. They bought up their hard-pressed rivals. They purchased tank cars, barrel factories, terminal facilities, and anything else that was needed. While fiction and fact are inseparably mixed in the story of the progress of the corporation in the late years of the seventies and the early years of the eighties, it is obvious that the oil monopoly waxed rich—rich enough, indeed, to ignore the storm of condemnation that was blowing up, to harass governmental investigators by conveniently forgetting or by deliberately misleading, and to silence by various means persistent critics. And all the while its financial resources rose astoundingly.

Regardless of the success of Standard Oil, Rockefeller's competitors held on grimly. Occasionally they raised a real threat. Late in 1878 the Tidewater Company started laying tubing from Bradford, Pennsylvania, eastward across the mountains to Williamsport. The Standard Oil Company and the rail lines that tapped the oil fields fought the builders every step of the way. The former bought a strip of land the entire span of the state north and south in order to block construction. The overlooked bed of a creek that had dried up long before provided, however, a crossing, and

at last the task was through. On May 29, 1879, the westernmost pump began to throb. Not many days later a stream of oil was pouring over the Alleghenies and downward to the waiting tanks of the Reading, hitherto unable to share in the rich carrying trade. The victory was an empty one, for within a few short years the new means of transportation had been hopelessly smothered by the great oil octopus; parallel lines had been built and coastal refineries bought up.

By the early eighties the holdings of Standard Oil had become so complex that a new administrative organization was needed. In 1882 the loosely controlled interests of the company were brought into a manageable unit, and thus the oil trust, dominated by Rockefeller, came into being. The real "age of big business' had begun. Standard Oil, unlike many other corporations, was never bloated as to capitalization, but its officials understood as well as any of their contemporaries the value of political influence and were not above carefully watching and occasionally directing the pens of the lawmakers. Growth continued unabated, and soon the giant concern entered the arena of production at the wells. Complaints of the people that the oil "monstrosity" dictated prices without regard to supply and demand and that "the unfair and brutal profits"—averaging forty million dollars a year by the end of the century—were "making multimillionaires of the stockholders" went unheeded.

Before 1900 the monopolistic grip of the trust was shaken by the rapid rise of new oil fields and the determined expansion of the completely integrated Pure Oil Company. Nevertheless, Standard Oil retained its dominance. Cash reserves increased between 1882 and 1895 from fifty-five million to more than a hundred and fifty million dollars. When they became too bulky for profitable reinvestment in oil, they were diverted to other ventures. In 1891 James Stillman, friend and business companion of William Rockefeller,[4] was made president of the City Bank (now the National City Bank) of New York. Fed with oil profits, the institution that had long served the raw-materials merchants of the metropolis became one of the largest banks in America as well as the financial agent of Standard Oil. Before long unbelievably large transactions were being consummated in its inner offices as money of the "Rockefeller crowd" (not including John D.) engulfed the Chicago, Milwaukee and St. Paul, the Union Pacific, the Southern Pacific, the New York, New Haven and Hartford, and other railroads and in addition the Amalgamated Copper Company

[4] The tie between the two men was strengthened by the marriage of Stillman's daughters, Elsie and Isabel, to Rockefeller's sons, William G. and Percy A. Before long William G. became treasurer of Standard Oil.

(controlling Anaconda Copper), the Consolidated Gas Company, and the Edison Illuminating Company. The mighty empire based on oil threatened to dwarf even the financial House of Morgan, most brilliant luminary on Wall Street. Already, however, the founder was completely detached from the business.

Carnegie and Steel. While Rockefeller was building his oil dominion, Andrew Carnegie was laying the foundations of the steel industry. The canny Scotsman, soon to be known as America's most important steel master, had come to the United States in 1848 with his penniless parents and begun work as a bobbin boy in a cotton mill at four dollars and eighty cents a month, his mother augmenting the family income further by taking in washings. By a happy combination of hard work and good fortune he rapidly achieved financial security. After rising to messenger, telegrapher, and railroad division superintendent and branching into the field of speculation, he entered the iron business in May, 1864, with a total investment of eight thousand nine hundred and twenty dollars. Within a decade he was a millionaire several times over. The iron industry, like that of oil, was disorganized and undirected, and in the bitter fights for power that broke out among competitors Carnegie always emerged the victor. He grabbed raw materials, selected energetic and ruthless helpers, and made advances to railroad officials and others in high places who could help him. He purchased ore deposits along the Great Lakes and built ships and railroads to connect the quarries with his mills. He absorbed the coke ovens of the Connellsville district in Pennsylvania, making Henry Clay Frick, former owner, a partner in his business. Frick imported cheap workers from Europe and ruled his labor force with firm and sometimes bloody hands.

Although he never enjoyed a real monopoly of the industry, Carnegie completely dominated the manufacture of iron and steel. The public benefited in lowered prices, but he took heavy toll; his personal profits in 1900 amounted to nearly twenty-five million dollars. Sensing new conflicts for which he had no heart, he sold his holdings in 1901 to the newly formed United States Steel Corporation, whose capitalization of a billion four hundred million dollars topped that of Standard Oil.

The Financial Barons at Work. The industrial captains in their eagerness to build up effective and efficient empires frequently overstepped the bounds of propriety, but financiers occasionally stooped deliberately to petty tricks. The most notorious of the schemes for providing money was the Crédit Mobilier, created by the Pennsylvania legislature especially for the purpose of financing the Union Pacific Railroad. No explanation or claims of risk can make of the corporation anything but a clever expedient for

furthering private gain. The railroad cost, it is estimated, fifty million dollars, yet some twenty-three million additional went as profit to the manipulators. It is said that in 1868 a holder of a single share of stock received dividends totaling approximately three hundred and forty-five dollars and eighty-five cents. Oakes Ames, promoter of the project in Congress, sold or gave to his fellow lawmakers enough stock to insure their interest in keeping the Crédit Mobilier a going concern. Solons lacking ready cash bought shares and paid for them out of the first dividends. When the whole sorry mess was exposed, many people who were implicated refused to admit that they had done anything wrong.

Local railroads were less corrupt financially than large concerns because they played upon more limited stages. Everywhere, however, railroad and industrial promoters were deep in speculation and peculation. Stock watering, bribery, and dishonesty were not unusual. People grew rich in gambling in "Petrolia" as well as in actually delivering oil for the lamps of the world. The juggling of railroad properties by men whom John Moody depicts—not always accurately—as "promoters, reckless optimists, gigantic thieves, [and] huge confidence men" brought into ascendancy America's most notable financial baron, J. Pierpont Morgan. Having hard-working associates at home and influential backers abroad, Morgan built on as wide a scale as did ever the men responsible for the railroads that were stretching their tentacles through undeveloped lands. Scrupulously honest as he understood the term, he was nevertheless brutal. He regarded his fallen competitors as fair prey, he squeezed his opponents mercilessly when necessary to gain his ends, and he manipulated dollars with the cleverness of a magician. Yet withal he stood a pillar of might in a disturbed monetary world. He rescued from what to some seemed inevitable financial destruction not only railroads and factories but even the government of the United States. By 1900 many men connected with the institution had literally worked themselves to death, but the House of Morgan stood unpretentious and imperturbable amidst the temples of Wall Street. Morgan dominated directly or indirectly many railroads, and he was besides the central figure in important banks, insurance companies, steel factories, and miscellaneous mills and shops that made up the warp and woof of American industrial life.

The Consolidation of Business. The rise of great financial magnates and powerful industrial captains wrought profound changes in the industrial structure. Except in remote communities the small individually owned shops of former days began to disappear. Railroad building, oil refining, whisky distilling, wheat packing, and manufacturing of telephones, tele-

graphs, iron, steel, copper, sugar, tobacco, rubber, leather, farm machinery, passenger coaches, electrical equipment, cordage, twine, wire, tin plate, wallpaper, and even bicycles came under the direction of the corporations.

The census reports reveal unmistakably the effects of concentration on the industrial plants of the nation. In 1860 twenty-one hundred and sixteen establishments produced agricultural implements to the average annual value of nine thousand eight hundred dollars; in 1900 the factories totaled only seven hundred and fifteen, but the average value of the output had grown to one hundred and forty-one thousand five hundred dollars. During the same period the number of shops tanning, currying, and finishing leather decreased from fifty-one hundred and eighty-eight to thirteen hundred and six; yet the average value of the goods produced increased from fourteen thousand to one hundred and fifty-six thousand dollars. Although woolen mills diminished by a third, the value of the cloth turned out by the looms more than doubled. There were only a few more iron and steel furnaces in 1900 than in 1860; the average value of the product of each establishment, however, jumped from less than a hundred thousand dollars a year to more than a million. Throughout the industrial regions and the farm lands factories, while becoming less numerous, fell more and more under the dictation of distant magnates. Local business men often became merely superintendents of plants and mills that were owned by financial institutions whose managers were money experts and not industrialists trained in the technical operation of machines.

The Reform Movement. Whatever the advantages of large-scale business enterprise, opposition to pools, rings, monopolies, and combinations and hostility toward concentration of wealth and ownership began to grow vigorously in the early seventies. The farmers led, as always, the vanguard of attack. The agrarians had long felt that they shared unjustly in the economic system. They did not see the somber shadow that world competition was throwing over the prairies, the plains, and the hills and valleys, but they knew that the returns for their labors were woefully small and that their days were ceaseless rounds of toil. Harassed by plagues and droughts, robbed by the "miserable thieves" who were the privileged few, overcharged by village merchants and city industrialists alike, stripped of their money by tax agents and mortgage holders, and sold out to the wealthy for personal gain by their governors, senators, and representatives, the tillers of the soil were thoroughly discouraged and ripe for revolt. In the year that Philadelphia celebrated the hundredth anniversary of the writing of the Declaration of Independence by displaying to the world the fruits of American factories, Stephen Miller wrote Ignatius Donnelly, fel-

low Minnesotan and champion of the antimonopoly movement: "We are all grasshoppered to death, and probably could only about pay your expenses for the trip, but we must have lectures and addresses to keep our disheartened people from despondency, and, some of them, from bad [political] associations." There were reasons for complaint; "the sufferings of the people of Minnesota, at the hands of the thieves, will never be told—nor a hundredth part of them," bitterly confided Donnelly to his diary years later. The oppressions were universal throughout the farm lands. From the unprofitable fields of every section of the nation came protests against what many felt was a needless poverty. "What we sow," said the farmers, "others reap."

The wage earners too were convinced that the sweat of their brows but filled the purses of the rich. Condemning "the barbarism which imposes upon the wealth producers a state of perpetual drudgery as the price of bare animal existence," the National Greenback Labor party declared in 1882 that in spite of "the enormous increase of productive power, the universal introduction of labor-saving machinery, and the discovery of new agents for the increase of wealth, the task of the laborer is scarcely lightened, the hours of toil are but little shortened and few producers are lifted from poverty, into comfort and pecuniary independence." "We are not content," the party platform continued, "to endure further discipline from our present actual rulers, who, having dominion over money, over transportation, over land and labor, and largely over the press and machinery of the government, wield unwarrantable power over our institutions, and over our life and property." A few years later Senator Vance of North Carolina openly bewailed the fact that though the physical integrity of the Union was strong and material progress noteworthy, "the land is full of monopolies & money combinations on the one hand, and honey-combed with restless labor organizations, socialism and discontent on the other."

Despite the efforts of Vance, John H. Reagan of Texas, young Robert M. La Follette of Wisconsin, and a handful of other members of Congress to dissipate embattled privilege, wealth became increasingly arrogant. "Corporations, which should be carefully restrained creatures of the law and servants of the people," stated President Cleveland in his annual message to Congress in 1888, "are fast becoming the people's masters." Nowhere was this truth more obvious than in the West. Dr. W. W. Mayo, whose sons were to make Rochester, Minnesota, a world shrine for ailing humanity, wrote at the end of the decade, "This town is the headquarters

for the R. R. and the wheat ring and these corporations hold us with an iron grip."

In the great cities resentment was fast welling up against the greedy and the corrupt. Rings and cliques in every metropolitan center stole the hard-earned money of the taxpayers and gave them little in return. The "utilities" were frequently dominated by financial speculators who took advantage of their monopoly powers to reap private gain. Major control of the new electrical industry, including appliances, slipped quickly into the hands of the General Electric Company and the Westinghouse Electric and Manufacturing Company. Since the price of the new energy was beyond the purse of the ordinary workman, gas remained "the poor man's friend." Thousands of people still used kerosene lamps in 1900. The street-railway systems because of their essential character in an expanding urban world offered a peculiarly inviting means of extortion in the unsocial capitalistic society of the late nineteenth century. A few speculators ruled public transportation in many cities and towns throughout the nation. They directed too local governments in many instances, and hence paving and other improvements that were supposed to be made in exchange for exclusive franchises were often forgotten. The builders kept construction costs at a minimum without regard to future service.

At the height of their economic glory the principal street-railway systems were controlled primarily by six men: John Dolan, William L. Elkins, Thomas Fortune Ryan, William C. Whitney, Peter A. B. Widener, and Charles T. Yerkes. Elkins and Widener, grocer and butcher respectively, rose to power in Philadelphia and then branched out to New York to join Whitney and Ryan in the formation of the disreputable Metropolitan Street Railway and its various subsidiaries. Yerkes in his younger and less experienced days was sentenced to seven months in prison for embezzling public funds in Philadelphia. Thereafter he was more discreet. He bought from the aldermen of the city of Chicago rights to streets the public had built and then openly began to follow his own formula for making money. From the strap hangers he extracted whatever dividends he could and from his friends his profits. "Success in my business," he declared, "is to buy junk, fix it up a little and unload it upon the other fellow." The Chicago system, "fixed up a little," was unloaded on Ryan and Whitney, and then Yerkes departed for London. Mark Hanna of Cleveland, Roswell Flower of Brooklyn, and Patrick Calhoun of San Francisco were lesser figures in traction manipulations chiefly in the amount of capital involved. Fares were not excessive in comparison with charges for other new serv-

ices. Obvious corruption, however, added fuel to the rising flame of discontent.

Farmers, city dwellers, and practical politicians were joined in their protests against the unhealthy course of national events by a few brilliant reformers. Henry George, one of the most outstanding of the social philosophers, was particularly aggressive. To him poverty was the most enervating thing in all society. Man, he believed, could hope to make no effective use of his gifts while driven by the angry pangs of want. "The poverty to which in advancing civilization great masses of men are condemned," he asserted, "is not the freedom from distraction and temptation which sages have sought and philosophers have praised; it is a degrading and embruting slavery, that cramps the higher nature, and dulls the finer feelings, and drives men by its pain to acts which the brutes would refuse." Man, looking forward at the potential marvels of the industrial age, he argued, should have thrilled "as one who from a height beholds just ahead of the thirsting caravan the living gleam of rustling woods and glint of laughing waters." The huge machines with their "muscles of iron and sinews of steel" should have lifted him from want; they should have been untiring slaves "making the laborer's life a holiday realizing the golden age of which mankind have always dreamed. . . . For how could there be greed when all had enough?"

Yet, said George, teeming industrialism had brought only the same dull, deadening pain and keen, maddening anguish that "hard times" had always connoted. And in the very places in which benefits should have been most apparent—in the cities where population was densest, wealth greatest, and the machinery of production and commerce most highly developed—"there were to be seen the deepest poverty, the sharpest struggle for existence, and the most enforced idleness." Many people have denied the wisdom of the philosopher's economic proposal of the single tax as a solution of society's evils, but no one has effectively refuted his social diagnosis.

Henry Demarest Lloyd, Jacob Riis, Edward Bellamy, Ignatius Donnelly, John P. Altgeld, and James S. Hogg were among the other reformers of the period who concerned themselves with the welfare of the human race and the evils that were following close on the heels of monopolies, trusts, and consolidations of modern industrialism. Donnelly, a native of Philadelphia, moved to Minnesota in 1857 and a short time later wrote: "Here I am but twenty-six years old, and I have already acquired a large fortune. What shall I do to occupy myself the rest of my life?" The boom town in which he was interested failed, however, and he spent his remaining

years mourning the fact that money was available only to those whose economic position enabled them to exploit the poor. His paper, the *Anti-Monopolist,* lustily carried his doctrine to sympathetic westerners and brought down upon his head bitter criticism, especially from the "village traders," who, contended Donnelly, resented his "disturbing the placid surface of peaceful robbery."

State Regulation. The first legal action against the privileged industrialists and financiers was taken by the states. Agrarian legislatures in the Mississippi valley in the early seventies passed laws restricting the abusive practices of the railroad and elevator corporations, and in 1876 in the case of *Munn* v. *Illinois* the Supreme Court of the United States upheld the right of the farmers to defend themselves against the impositions, direct and indirect, of the transportation companies. Hogg, attorney-general of Texas in the late eighties, attacked with a courage that no amount of opposition could smother the "monopolists and cormorants" who were overrunning his state. Calling upon all who had "the backbone to grapple with rogues in behalf of the general masses," he led his "boys from the forks of the creek" into Austin and as governor eventually brought under control the rail magnates, the money lenders, and the life-insurance companies; determined that "*justice* shall be done by the railways to the state," he at last forced the directors to disgorge millions of acres of land that they had gobbled up. Altgeld defied the factory owners and wrote into the statutes compulsory consideration of the social and health problems of women and children in the shops, factories, and mills of Illinois. Local governments elsewhere passed controlling measures. New York, Louisiana, and Massachusetts, along with other states, attempted by judicial or legislative means to curb the growing combinations; Kansas in 1889 enacted the first of the antitrust acts that soon spread over the nation.

But the leaders of the militant agrarian organizations, the directors of the aggressive liberal political parties that were beginning to arise, and the reform members of legislatures were no match for the men who owned the trusts so long as the moneyed interests could from lenient states secure charters that gave them operating privileges good anywhere in the nation. New Jersey, for instance, remained for years a haven for those whose business conduct ran contrary to the will of the poor democracy. Moreover, the Fourteenth Amendment offered to corporations a refuge within the Constitution. Clever lawyers, well paid for their services, defended the industrialists faithfully; when unable to argue legal rights, they turned to innocence of motive. Unfortunately they were able to undo much that was done.

National Legislation. The rising opposition to great corporations, particularly those concerned with interstate commerce, was quickly felt in Congress. The pressure increased as state laws were overthrown or made inoperative, and in 1886 a Senate committee reported that "upon no public question are the people so nearly unanimous as upon the proposition that Congress should undertake in some way the regulation of interstate commerce." The Interstate Commerce Act, signed by President Cleveland in February, 1887, was the result. It specifically prohibited such evils as pools, rebates, and discrimination between shippers and required that all charges be "reasonable and just," that special rates for long hauls be discontinued, and that all tariffs be publicly displayed. Within a short time, however, the act was effectively nullified by judicial decisions, and the administrative agency, called the Interstate Commerce Commission, was left but an empty gesture. In 1890 the Sherman Anti-Trust Act was passed. The law, though a sop to the public, was of little value in the control of the huge corporations of the nineteenth century. Cases brought before the courts were until the days of Theodore Roosevelt and William Howard Taft dismissed with monotonous regularity.

Government restrictions, in fact, served neither to check the abuses that were being practiced nor to prevent the growth of concentration. The people of the United States, whatever their lots, were thinking too much in terms of private gain and too little in terms of social welfare. There was glamor in wresting riches from the great national storehouse, and there was glory in climbing from poverty to wealth. That those riches were not shared equally, however, brought much dissension in the democracy; the poor were prone to shout "thief" when they failed to get along and the successful to cry "persecution" when they were restricted by legislation. In defense of themselves the masters of capital pointed with just pride at increasing conveniences and decreasing prices. They argued with firm conviction that economic advancement was impossible as long as production depended on small industrial units whose unceasing rise and fall made for both costly goods and perpetual uncertainty. They asserted with logic that financial reserves sufficient to weather the storms and stresses inherent in business were essential. They declared with assurance that any governmental regulation of economic life would smother not only profits but private initiative as well.

The Business Man and the Business Structure. The contribution of the great men of business to economic life in the years after the Civil War is obvious in many ways: in the swelling stream of goods that poured out over the land, in the growing transportation and communications facilities,

in the increasing number of stores and other distributive outlets in city and hamlet, and in the decreasing costs of production. Nowhere else in the world did the thoughts and energies of man provide such wondrous wealth of material things; nowhere else did such a large part of the population share in the existing riches. While every individual, even the humblest, added something by his work to the mighty forces of progress, it was the unceasing labors of a handful of industrialists and financiers with unbounded dreams for the future who built the basic foundation of the modern material nation. Those who planned the steel mills, the giant refineries, the railroads, and the spreading plants were not of the idle wealthy. They and the workmen who kept the pounding wheels in motion brought previously unknown physical comforts to all and built an economic structure that was in the future to demonstrate its ability to defeat those who would by physical force destroy the democracy.

There were, as one would expect, vulnerable spots in the armor of self-defense that the industrialists threw up around themselves in the years between 1870 and 1900. Social consciousness as well as material wealth arose in those three decades. The two were not always compatible, and sometimes vigorous conflicts arose. Controls were needed, but, as is usually the case when any group in the nation grows to power quickly, restrictions were resented. The business men were not alone in their protests, for many people felt that individual initiative and enterprise were the basic principles upon which progress rested. Distinguished scholars of Columbia, Harvard, and Yale, steeped in the philosophy of Herbert Spencer, took up the cause of economic liberty. They could not, however, make the points of the case so clear—or, incidentally, the weaknesses of the arguments so apparent—as could the captains of industry. An agent of an eastern business house wrote Senator Allison from Dubuque, Iowa, in September, 1888:

> I see that the Senate proposes taking up Sherman's bill against Trusts. . . . There never was a more absurd craze than this, and if the proposed restrictive action is carried out surely more ill than good must come from it. You know as well as I know, that few men are going to invest money in any manufacturing enterprise if there is to be a rigid inhibition by law of all agreement or understanding or combination with others in the same line to protect themselves from threatened disaster. Such combinations are no new things. We have had them for years and decades, and nobody until recently dreamed that they were doing harm. Everybody knows that like the protection of the tariff, they create stability of production and profits and prices, rather than high prices and great profits—that they cheapen production, and give the consumers the advantages of that fact, rather than the reverse. That they prevent these successive evils of great

production, disastrous prices, the crushing out of the many and then the enriching of the few through high prices and inordinate profits. There is nothing that business needs so much as stability, and yet this proposed legislation is a lurid inscription over every industry declaring that there shall be no stability of production, or price or profit in it. How that can be best for the general good is more than I can conceive.

Take any of our industries here in Dubuque, for instance. . . . All have gone through disastrous periods of competition and wars in rates and prices. All have been driven into combination to save themselves from absolute disaster. Is there the remotest evidence that in that combination and resultant protection, the general public has been robbed or harmed? We all know that every one of them is working still upon narrow margins and small profits, and that in this stability which combination has given to them, the public is reaping the reward of continuous low prices instead of vacillations of a short period of low and a long period of high prices through the bankruptcy of the weak by the assaults of the strong.

The great bugbear of "Trusts" grows out of the Standard & Cotton Seed Oil combinations and yet what harm have they done to the people? I am not very familiar with the operation of the Cotton Seed Oil Trust—but the Standard has been very familiar to all. But the tentacles of the Octopus have not been injuring the conveniences of petroleum. It has made coal oil almost as cheap as water, and its pipe lines and thousands of appliances for manufacturing and distillation, only profitable to a great combination, have unquestionably lessened the cost of its important product to the many millions of poor who are the great consumers. Why should you legislate against such a result as that? Is the welfare of a few isolated producers and refiners of petroleum to weigh more than the great mass of the consumers of that product? You have partly cut off all transportation favors which undoubtedly helped to build up the Standard. Of that every other producer and shipper had a right to complain. But wherein is the public injured by that vast concentration of capital and methods and appliances that enable the Standard to give to the world an article of universal need at the prices made possible only through these cheapened methods of production?

In all the history of the world combination of capital has resulted in cheapened production. That is its advantage and power. Why should the legislature now be called in to deny to the people this power of cheap production? How is it that of a sudden all theories upon this point are to be overturned? Why must every industry be relegated back to an indefinite number of weak and isolated units? And who is to say and how decide, how minute the sub-division must be before it is safe under this law against concentration? If a great capital and mammoth combination is dangerous in one degree, is not a little capital and moderate coalition dangerous in a relative degree? And where will you end? Will you declare unlawful the agreement of two farm neighbors coming to town with two loads of potatoes, or three loads of cabbage, or two loads of wood to ask a given price—or two stock shippers each shipping a car of cattle and agreeing to stand to a certain price—or two grocers agreeing to sell A or B or C sugar at the same price—punishable by fine or imprisonment? If not, why not, if you say there shall be no agreement as to the price of coal oil, or cotton oil, or sugar, or salt,

or lumber, or nails, or iron and steel, or wagons, or plows or shovels, etc.? Will you say that mechanics shall have no combination in agreement as to the price of their labor? If not, why not, when you deny to their employers the right to agree upon the price of the product of their labor?

The whole scheme seems to me absurd, inconsistent and impracticable. Combinations have always cheapened production, steadied prices, and benefited manufacturer and consumer alike. Periods of over production and unhealthy competition are more disastrous to the mass than combination and stability will ever be. The howl against trusts is simply a political craze which may stampede the average statesman into demagogical efforts at repression, but will consume itself in a very brief period of trial.

The controversy was not easily settled. The trouble was, perhaps, that the nation faced for the first time the perplexing problem of guaranteeing to an industrial society democratic liberties that had been born in field and forest. It was difficult to distinguish between rights and privileges. Judges, legislators, and executives, dodging their responsibilities, refused to stay what to many appeared to be the eager hands of greed, and the beginning of the twentieth century saw the rise of giant concerns scarcely dreamed of in the eighties and nineties. But the seeds of social control had been planted, though fruiting time was still in the future. Unfortunately the shape of the reforms was in too many cases to be determined not by society as a whole but by individuals and groups, both capitalistic and laboristic, who were interested primarily in their own economic progress.

Chapter 25

THE MATURING ECONOMIC STRUCTURE

Technical Progress. The vast economic structure that grew up in the United States between 1865 and the turn of the century was based in part on mechanical progress. In the report of the census of 1900 it required sixty-three oversize pages to list merely the most salient patents issued in "the industrial arts" during the previous twenty years. The magic wand of inventive genius touched every phase of human endeavor and in all fields not only lessened the laborious efforts of man in his task of earning a living but also enabled him to create adequate physical plants of every description with astounding rapidity. Huge steam hammers that shaped armor plate with a few blows and delicate machines that added columns of figures with lightning speed were among the new wonders. Especially important were improvements in the application of motive power. Steam engines became more efficient and powerful, and the internal-combustion engine as well as the dynamo made its appearance.[1] Even the forerunner of the American bulldozer that during the second World War altered the face of the earth in many strange lands had come into use before 1900. Everywhere one turned, in fact, there were evidences of physical progress.

The Growth of a National Railway System. Foremost, perhaps, among the material accomplishments of the captains of industry in the years after the Civil War was the development of a reasonably satisfactory transportation system over the nation. Although the basic roads north of the Ohio and east of Chicago had been built before 1860, the rail empire was at the beginning of the postwar period still in its infancy. Engines were wheezy and inefficient, steel had not yet come into use, roadbeds were poorly constructed, bridges were built of wood, and the dimly lighted and inadequately heated coaches were wholly uncomfortable. Time-consuming stops and changes interrupted long journeys, and varying gauges prevented the shuttling of freight cars from one line to another. Furthermore, since

[1] The gasoline engine upon which modern motor transportation rests never became important in industry. The Diesel engine, invented by Dr. Rudolph Diesel of Germany in 1895, became, however, a significant source of power in small plants. The first one to be used in America was installed in 1898 in the brewery of Adolph Busch in St. Louis.

there were no through shipments of goods or baggage, individuals had to accompany their cargoes or hire others to supervise their transfer from one road to another. Within forty years, however, all was changed. The amount of track in use grew from thirty thousand miles (most of which was east of the Mississippi River) at the end of the war to a hundred thousand by the early eighties and nearly double that figure by 1900. The western plains, deserts, and mountains were threaded by a network of steel, and the North and the South were tied together at many places. Physical equipment was greatly improved, and shipments were made without regard to the number of roads involved.

The Transcontinental Railroads. Most ambitious of the huge postwar transportation undertakings was the construction of a road to stretch from the Mississippi to the Pacific. Plans had been under discussion for at least a decade before the Civil War, but notwithstanding the serious problems of national defense presented by the discovery of gold in California and the admission of that state into the Union, the scheme to join East and West had had many opponents. In 1848 the New York *Herald* had declared, "This whole project is ridiculous and absurd. Centuries hence it will be time enough to talk of such a railroad." Nevertheless, before the coming of peace in 1865 work on a transcontinental line had begun.

The Union Pacific, its sponsors financed by the notorious Crédit Mobilier and tempted by promises of rich bounties from the national treasury, started in real earnest at the end of the war to move out across the open plains. At the same time Leland Stanford and Collis P. Huntington, encouraged by prospects of generous gifts from Washington, began to build the Central Pacific of California eastward through the Sierras. On the far slopes of the Rockies "pigtailed Chinese . . . border ruffians and broken men from Europe, talking together in a mixed dialect mostly oaths," put down day after day the lengthening rails, while slowly from Council Bluffs, Iowa, Irishmen and discharged soldiers pushed the Union Pacific westward, a host of parasites following them and winning for the itinerant construction towns along the route the name of "Hell on Wheels." The two tracks met near Promontory Point in Utah, and the golden spike that joined the rails was driven on May 10, 1869. The old West was split in twain, and shortly thereafter came the prosaic plow and binder that were eventually to drive the romantic red men and their greatest asset, the buffalo, into oblivion.

Soon other transcontinental roads were under way. The Southern Pacific, tying together a network of several units and linking New Orleans and other Mississippi River commercial centers to the West Coast; the North-

ern Pacific, extending from Lake Superior across Minnesota and the Dakotas, up the Yellowstone, and over the Continental Divide to the Puget Sound region of the new Northwest; and the Santa Fe, running from Atchison on the Missouri through Topeka and Dodge City, up the valley of the Arkansas to Trinidad, Colorado, and over Raton Pass to Santa Fe and Albuquerque to connect at last with the other lines to the California coast, were, in spite of the panic of 1873, finished by the middle of the eighties. By 1900 the Great Northern had spanned the Rockies to stretch onward through Spokane to Portland and Seattle.

Sectional Developments in Railroad Building. Sectional building too was in progress. In the East the Pennsylvania, the Baltimore and Ohio, the Erie, the New York Central, and other roads not only spread out locally to tap desirable economic centers or to avoid use of competing facilities in through connections but also thrust main lines westward into the rich upper Mississippi valley. In the South a host of economic and geographic factors delayed rail development. The seaboard, served reasonably well by coastwise trading ships, made only slow gains, and growth west of the Appalachians was far from rapid. Before the end of the century the cities of the cotton South were tied at several places to the commercial network of the nation and coastal lines were being consolidated. Speculative hopes and economic rivalries brought feverish progress in the Mississippi valley, especially west of the river, where the population was rapidly filling up the land to the foothills of the Rockies. The Chicago, Burlington and Quincy, the Chicago, Rock Island and Pacific, the Chicago and Northwestern, the Fort Worth and Denver, the Illinois Central, and the Louisville and Nashville were only a few of the giant corporations whose rails bound the agrarian heart of the nation into a whole.

Mechanical Improvements in Railroads. The expansion of the railway system was accompanied by many mechanical improvements. The iron rails that had slowly displaced the wooden stringers covered with strips of iron that had been in common use before the Civil War were themselves displaced by steel as the Bessemer and open-hearth processes were developed. Rails, since they were the most important single factor in safety, were made sturdier decade after decade as engines and cars grew heavier and speeds increased; their maximum weight rose from about sixty-five pounds per yard in the early seventies to around one hundred pounds in the early nineties. The appearance of comfortable coaches encouraged passenger traffic. "Pullman" cars, introduced shortly before the Civil War by George H. Pullman, who pioneered in the introduction of dining, drawing-room, and reclining-chair cars as well, won quick

approval from those who could afford to use them. Even the day-coach travelers who slept in their chairs enjoyed new luxuries. The Pintsch system of lighting with oil gas that had driven the awkward lamps of other days into disuse was itself in some cases superseded by electricity in spite of the high cost involved, and the cast-iron stove that broiled the nearest passengers while permitting the farthest to freeze was before 1900 abandoned in favor of steam. Swiveling trucks at the ends of the cars and steel springs instead of the India-rubber buffers used before 1860 greatly reduced the jerking motions of the trains. Vestibules supplanted the old open end platforms and lessened the danger of telescoping in accidents. The development of adequate means of ventilation was long delayed.

The new physical equipment of the railroads included also safety devices that both reduced the hazards of travel and facilitated the movement of freight, far more important economically than passenger traffic. The invention of the air brake by George Westinghouse was a basic step in the building of heavier engines and cars. Operated by pressure generated at the engine, this first brake, patented in 1868, was not thoroughly satisfactory because braking pressure was applied successively from front to rear rather than simultaneously throughout the train and because cars that became detached were wholly without control. What was needed was a mechanism that would instantaneously brake each car as brakemen had done singly and manually in earlier years. Before long Westinghouse solved the problem by equipping each unit of the train with its own braking power, regulated by constant air pressure from the engine. Whenever the pressure was released, whether intentionally by the engineer or accidentally by the breaking of a coupling, individual air-pressure reservoirs on every car behind the point of release immediately and automatically applied the brakes. The lumbering trains were thus brought under complete control, average speeds were increased, and the number of accidents was lessened. Automatic couplers, evolved after long experiment, saved time and obviated the necessity of stepping between the cars, which had frequently resulted in loss of life or permanent injury. Block signals were of aid in protecting passengers and crews and made it possible to run trains at closer intervals than before. The railroads were slow, however, to adopt the self-operating electric type.

The growing use of steel was of no small import in reducing accidents and in hurrying the great freight and passenger trains over the land. The Pressed Steel Car Company of Pittsburgh, using sixteen tons of sheets a day, was in 1900 the largest single consumer in the world. In that year the people of the United States traveled more than a billion and a half

miles and shipped in excess of a hundred and forty-one billion ton-miles of freight.

Railroad Financing. The American railway system was probably fittingly described in the report of the census of 1900 as "the most progressive and among the most perfect in the world." But no matter how remarkable the success of the builders, the story of its development is studded with corruption. Even had there been no greed, however, the problems encountered could scarcely have been less staggering than they were, though total costs would certainly not have been so large. Construction, especially in the West, was often pushed into lands whose economic wealth had yet to be realized; only through the expenditure of huge capital sums without hope of immediate returns could the spreading farms of the plains region ever have been brought to fruition or the Pacific coast been tied to the East. In general the puffing trains pulled after them the population that tilled the fields and founded the towns, and for that reason expenditures long preceded receipts. Obviously the needed money had to be obtained from profits already made if the nation was to complete its expansion. And so it was that private individuals, both American and foreign, invested their savings and a few staked their fortunes in the creation of a transportation system beyond the Mississippi that was in reality to serve all the people. Prodded by statesmen whose interests were not always wholly national, the government too proffered its help; in the first years of transcontinental construction it donated millions of acres of land to the projects and granted subsidies of more than sixty-four million dollars in the form of interest-bearing bonds that were eventually to be repaid. Unfortunately too much of the liquid assets of the nation in the early seventies went into the railroads and other nonproductive enterprises or, worse still, into the pockets of their promoters, and the resulting financial crisis of 1873 stopped the workmen abruptly and swept thousands of miles of road into bankruptcy. Indeed, every financial disturbance whatever its cause had its immediate repercussions in the offices of the railroad builders and along the lengthening tracks. Investors lost heavily, and with the flood went also the hard-earned dollars of farmers and small-town dwellers who, eager for some means of shipping their goods, had voted local bonds for encouraging transportation facilities that often never materialized. In spite of the tremendous difficulties encountered, the American railway system was by the turn of the century essentially complete.

The Inland Waterways. One of the results of the rapid spread of the railroads over the nation between 1865 and 1900 was the slow smothering of the traditional water traffic on which inland people had depended for

many years. The quickening tempo of national life had even before the Civil War left the steamboats and the canal barges behind, and vigorous efforts of private individuals and annual appropriations voted by Congress for physical improvements in postwar years could not save them from rapid decline. Before 1880 the day of the passenger boats was over. The glamor of the floating palaces had faded, for society rode the sleeping cars and even the dramatic captains had lost their dignity. But freight traffic had not altogether disappeared; in some cases its lessening importance was only relative. Even on the upper Mississippi, which suffered heavily, tons of water-borne local freight were still fed to river towns and industrial products were supplied to isolated communities. On the lower Mississippi cotton traffic reached a peak in 1880, when a million bales were unloaded at New Orleans. As in the case of grains, shipments thereafter grew less year after year. Yet the loss in general was not so large as on the upper part of the river, and before 1906 towboats pushing great fleets of barges piled with coal, petroleum products, and building materials were plying the muddy waters in a revival of trade.

Because of increased coal shipments total traffic on the Ohio and its tributaries fell but little. Coal tonnage moving out of Pittsburgh by water rose from one and a half million in 1870 to two and a half million ten years later. Barges towed in groups of three or four from the mines on the Monongahela to Pittsburgh were there formed into fleets of twelve to sixteen and floated downstream to market; those destined for the lower Mississippi were at Louisville combined into groups of sixteen to twenty or more. Before 1880 a tow consisting of thirty-eight units covering a surface eight hundred and twenty-six feet long by two hundred and sixty feet wide left the Kentucky metropolis at the falls of the Ohio carrying nearly seven hundred thousand bushels of coal. Competition was impossible when the boats could put down the fuel at New Orleans, two thousand miles from the mines, at sixty cents a ton. Water traffic, however, was limited to a few items. Packaged freight, small bundles, and even corn, wheat, and cotton were everywhere being hauled by the railroads, and by 1900 the rivers, though still serving as arteries of commerce, were feeble competitors virtually forgotten by all but those who lived on their banks.

The canals too declined drastically in importance. In spite of the fact that tolls were in some cases entirely removed, only in a few favorable locations were they able to meet the demands of the hurrying commerce of the new industrial age. The Erie, which had once been the busiest commercial highway between the East and the West, lost much of its

supremacy, though it still carried considerable cargoes and in the summer season delivered large numbers of excursionists to Chautauqua, New York, for the educational programs. Steam-powered boats were introduced as early as 1870, and in the nineties attempts were made to use electricity on a modified trolley-car principle; but the railroads that paralleled the waterway continued to transport ever-increasing amounts of the goods that flowed through the great Mohawk valley. Even physical equipment became difficult to obtain, for by 1900 the workmen who had built the floating crafts of other days had turned to new occupations.

The most outstanding of the canals in the agrarian West that managed to survive railroad competition was the Illinois and Michigan, connecting the waters of the Great Lakes and the Mississippi. Completed in 1848, it was in 1880 still expected by its sponsors to become one of the most important channels of commerce in the country. Two years later, however, freight shipments reached a peak, and by the end of the century the dream of eminence had faded entirely. The canals and rivers of inland America carried in 1890 not more than seventy-five million tons of freight as compared with over six hundred and ninety-one million carried by the railroads. Rate wars and unfair competitive practices were in general perhaps little more than incidents in the changing fortunes of the boats and barges. The inflexibility of the waterways, the hazards of navigation, the closing of the streams in some sections by ice, the inconvenience of rising and falling rivers, the damages inflicted on terminal facilities and industrial plants by floods, the difficulties encountered in devising successful mechanical loaders and unloaders for various types of freight, the impossibility of constructing quickly and easily spurs for connecting factory doors with main arteries of transportation, and the snail's pace at which the cargoes moved to their destinations were only some of the major factors that drove the commerce of the nation to the speeding trains. The teeming trade and the pounding factory wheels of the cities that were growing up would probably have spread away from the water fronts even had the railroads not encouraged such movement. The chugging boats, whether on river or canal, could find no place in the growing industrialism, and their disappearance was merely a step in the transportation progress that was eventually to drive too the plodding horse and his burden from the highways.

Transportation Facilities on the Great Lakes. Though the inland waterways were losing their traffic, commerce on the Great Lakes was increasing with remarkable rapidity. The small boats that in the days before the Civil War had carried eager migrants and their possessions westward

to the growing towns in Ohio, Michigan, Illinois, Indiana, Wisconsin, and Minnesota had by 1900 been replaced by a great commercial fleet that daily during the shipping season plied the waters of all the lakes from the eastern tip of Ontario to the farthest reaches of Superior. These "Seas of Sweet Water," as they were called by the Indians, never knew the glamor of inland rivers or the peace of the towpath canals, but in the last years of the nineteenth century they became throbbing symbols of American industrial progress as raw materials poured in and out of the ports and terminals along their shores. Total traffic jumped from approximately four million tons in 1880 to twenty-five million in 1889 and to three times that amount seventeen years later.

Lake freight was always limited largely to a few basic products; iron ore, coal, lumber, corn, and wheat, in the order named, made up an overwhelming part of the cargoes. In 1889 six and a half million tons of ore from the Menominee, Gogebic, and Marquette fields in Michigan poured out through Escanaba, Ashland, and Marquette, their respective shipping points, to Ashtabula, Cleveland, Fairport, Erie, Lorain, and similar ports on the southern shore of Lake Erie and to Chicago at the foot of Lake Michigan. Two and a half million tons of lumber went from camps in northern Michigan and Wisconsin to Chicago and a million tons to Tonawanda, New York. Chicago sent a million and a half tons of corn and three hundred thousand tons of wheat eastward to Buffalo and other milling towns; Duluth and Superior together shipped an equal amount of wheat. The westbound cargoes from the busy industrial centers along the southern shore of Lake Erie were made up chiefly of coal. Buffalo, Cleveland, Ashtabula, and Toledo in particular filled the returning bottoms with fuel for Chicago, Milwaukee, Superior, Duluth and neighboring cities.

Traffic in iron ore and coal grew rapidly on the lakes year after year. Wheat, on the other hand, barely held its own, and corn and lumber declined sharply. In many cases the origins and destinations of the cargoes changed also. In 1906 the ports along the southern shore of Lake Erie were still the most important receiving points, but Lake Superior had pushed Lake Michigan out of first place and was shipping more than half the total freight into the industrial cities, its cargoes having risen in seventeen years from less than five and a half million tons to more than forty million. With the full development of the Vermilion and Mesabi ranges Duluth, Superior, and Two Harbors all forged ahead of Escanaba, Ashland, and Marquette as shipping centers for iron ore. Escanaba, greatest ore-exporting port in the world in 1889, doubled its outgoing cargoes,

yet they were scarcely more than half of those of Duluth alone in 1906.

Other changes occurred also. The more than eight hundred thousand tons of lumber that had gone out of Muskegon on the eastern shore of Lake Michigan in 1889 dropped to less than twenty-nine thousand, and the thirteen thousand tons that had gone out of Duluth rose to more than nine hundred thousand, twenty-five per cent of all the freightage on the lakes. Duluth and Superior in 1906 shipped also eighty-two per cent of the wheat that went into lake commerce, though Chicago continued to dominate completely the shipment of corn. Even the return cargoes changed as to destination. Each year a larger amount of the coal that Buffalo, Cleveland, Toledo, Ashtabula, and other Erie ports loaded on to the ships that poured iron ore and grain into their terminals went to the northern ports of Michigan and the new towns at the farther end of Superior. Only Milwaukee in 1906 received more lake-borne coal than either Duluth or Superior, which together took over a third of the whole.

The phenomenal success of commerce on the Great Lakes rested basically upon the facts that iron and steel were essentials in the industrialization and urbanization of the nation and that the ores from which these metals were made were most economically transported from the great ranges in upper Michigan and Minnesota by water. The railroads that had stripped the rivers and canals of their cargoes and that needed steel for tracks, engines, and cars found it impossible to compete in ore transportation with the plodding boats that plied the lakes. Nor could they provide convenient facilities for the movement of lumber from the shores of Michigan and Superior and the wheat from the fields of upper Minnesota that made up subsidiary parts of the eastbound traffic. Coal, bulky and cumbersome, could not be shipped by land when as return cargo it could as late as 1906 be sent from Buffalo to Duluth, nearly a thousand miles away, for thirty-five cents a ton.

The economies of water carriage were further emphasized by technical progress. Steam tonnage passed that of sail in 1885, and by 1890 steel vessels of large capacity were being built in yards in Cleveland and Chicago, though wood held supremacy until the turn of the century. The boats were specially constructed for the unwieldy goods they carried, and terminals were equipped to hurry them back and forth across the lakes before winter closed up the routes. Iron ore, coal, and grain at the ports were discharged from cars on the docks directly into spouts and chutes leading to the compartments in the long bodies of the waiting whalebacks, introduced in 1888 by Captain Alexander McDougall. At the unloading points mechanical conveyors, buckets, and scoops in endless procession

dipped out the freight. During a trial in the summer of 1887 two thousand tons of ore was poured into a steamer at Escanaba in forty-five minutes, and by 1906 a speed of more than seven thousand two hundred tons an hour had been attained.

Traffic was facilitated also by improvements in the waterways that tied the lakes together. Lake Superior, blocked by the falls in the St. Marys River at its eastern end, was first opened to commerce when Michigan in 1855 completed the Sault Ste. Marie Canal around the obstruction. Wholly inadequate to care for the growing trade that was coming up on the lakes, the project was taken over by the national government and a new lock provided before the shipping season of 1882. Within eight years the movement of freight in and out of Superior jumped from two million to nine million tons, and further enlargements that were in turn soon to be outgrown were under way. Even busier than the St. Marys was the Detroit River, connecting Lake Huron and Lake Erie. This critical link in the commerce of the lakes carried nineteen and a half million tons in 1890 and three times that amount in 1906. The Welland Canal between Lake Erie and Lake Ontario was important also, and other rivers and harbors were of significance. Altogether the government spent on the Great Lakes transportation system before 1890 more than thirty-seven and a half million dollars and twice that amount during the next fifteen years. The total sum, however, was less than the cost of the Suez Canal, and the Sault Ste. Marie alone a decade before the turn of the century was exceeding that great project in yearly tonnage carried.

The Coastal Trade. Commerce along the Atlantic and on the Gulf of Mexico increased rapidly in the last decades of the century. But much of the glamor of other years was gone, for the cargoes were made up chiefly of coal, lumber, stone, ice, cotton, cement, brick, lime, and other heavy and cumbersome products. By 1900 the sailing ships that had long plied between the ports from Maine to Texas were being overtaken in carrying capacity by steamers and tugs that fit into the time-conscious business spirit of the nation. Congress voted large sums of money for improving rivers, bays, and harbors and for establishing terminal facilities. Traffic grew from somewhere between fifty and seventy-five million tons in 1889 to over a hundred and forty million tons in 1906. The Pacific fleet was small, and its growth was slow. The transcontinental railroads bore the bulk of the commerce between the East and the West.

The Highway System. American highways in the nineteenth century added little to the assets of the nation. Long after 1900 except in the cities and in the thickly populated sections of the country they remained,

as they had been in colonial days, mere ribbons of dirt that were in the winter churned into tenacious mud and in the summer beaten into suffocating dust. Year after year the farmer plodded to town and back again with half a load or less because he could haul no more than his tired team could drag up the steepest slope or through the deepest mudhole encountered on the journey. Maintenance was generally the responsibility of local communities; each property holder either paid a small tax or personally contributed two or three days of labor annually. Until well into the twentieth century road overseers in many rural districts in America called their neighbors together once a year for the cooperative task of repairing their roads. Of a total of more than two million miles of highways in the United States in 1904 less than one hundred and fifty-four thousand were hard-surfaced.

Vehicles for Land Transportation. In spite of discouraging highway conditions, vehicles grew rapidly in number in the years after the Civil War. Unlike the great boats that plied the waterways or the trains that sped over the nation, they were owned chiefly by individuals and used primarily for personal transportation. While peddlers and salesmen of other description sometimes drove astounding distances, traffic on the whole was limited to short trips. Except in the West the shrill cry of the coachman who in previous years had hurried his bruised passengers on their long journeys had disappeared, and only in the twentieth century when urbanization reached maturity and roads came to serve effectively more than merely local economic units was capital to be put into fleets of cross-country buses and trucks.

Carriages and Wagons. The one-horse buggy and the two-horse surrey were in the late years of the nineteenth century by far the most popular carriages, though phaetons, runabouts, carts, rockaways, sulkies, broughams, and other varieties were widely used. Peculiarly American, the buggy was in many ways the counterpart of the modern pleasure car. It was of immense importance in the social and economic life of the nation both in town and in country. Sturdy models with iron tires not only served as instruments of personal transit but also provided means of transportation for small items, and stylish numbers with bright paint and rubber tires offered all that even the most dashing youth could desire. Surreys, carrying from four to six people, were essentially family vehicles. Other types were used for pleasure, sporting, and business purposes. All were expensive, ranging from a hundred and fifty to two hundred dollars and more.

Public conveyances and business wagons in the cities were surprisingly small in number. In 1900, for instance, American manufacturers turned out over half a million buggies but fewer than twenty-five hundred hacks, omnibuses, cabs, hansoms, stages, hotel coaches, and opera buses combined. At the same time production of express, baggage, and delivery wagons; furniture vans, wagons, and caravans; drays and trucks; dump wagons and carts; coal wagons and carts; ice, laundry, milk, and pie and bakery wagons; garbage and street-cleaners' wagons; ambulances; fire and police patrol wagons; prison vans; and mail wagons did not much exceed a hundred thousand. Light and heavy farm wagons, however, were in great demand. Some four hundred thousand were being sold annually at the turn of the century. They were used by the agrarian both in harvesting and in marketing the crops and, when necessary, in hauling the family to town, to church, to the country picnic, or to a neighbor's home for a Sunday visit. The Studebaker plant at South Bend, Indiana, was the largest wagon factory in the world, and small shops—some little more than assembling places—were scattered throughout the nation. The village blacksmith and the urban wheelwright did a flourishing repair business. Total capital invested in the carriage and wagon industry jumped from approximately thirty-eight million dollars in 1880 to one hundred and eighteen million twenty years later.

Bicycles. No other means of transportation in 1900 fascinated the American people so much perhaps as did the bicycle; more than a million were manufactured that year, and the money involved amounted to a fourth of that employed in the production of all carriages and wagons combined. The first American to become interested in manufacturing bicycles was Albert A. Pope of Boston. A few years after seeing a British model at the Centennial Exposition in Philadelphia in 1876, he induced a sewing-machine company in Hartford, Connecticut, to begin producing the soon famous Columbian in a corner of its shop. Clubs of cyclists were formed in Boston and New York and elsewhere; a League of American Wheelmen was organized in 1881; and a Canadian began at San Francisco in April, 1883, a trip around the world. Riding, however, was dangerous; even the experts in their gay uniforms sometimes took heavy tumbles.

The bicycle became common only after 1887, when the safety type with two equisized wheels appeared. Within a few years trust-produced bicycles were being exported in large numbers to Europe, and at home the "irresistible" bargain price of fifty to eighty dollars dropped to as little as sixteen for bankrupt stocks as small producers fell before competition from big business. Total investment in "wheels" at the turn of the century

was probably not less than a hundred and fifty million dollars, and it may have been a great deal more.

The fad that had grown so startlingly for a decade soon passed, but bicycles continued to be sold in appreciable numbers. In their heyday they had greatly affected social habits, substantially influenced the good-roads movement, obtained some highway markings and maps and special consideration for tourists at hotels, and brought obvious changes in women's dress.

Automobiles. One saw occasionally in city traffic in the late nineties a laboring automobile. While Cugnot in France, Symington and Murdock in England, and Oliver Evans in the United States had built steam-driven carriages nearly a century before, the modern car had its real beginnings only with the invention in Germany in 1876 by Dr. Nikolaus August Otto of the four-cycle compression-type internal-combustion engine. Improved by Gottlieb Daimler and applied to automobile propulson by Carl Benz, Otto's engine became in time the basic power for highway vehicles. By the early nineties venturesome Americans, including mechanics, engineers, bicycle mechanics and repairmen, and even arms makers, began in tiny shops from Massachusetts to Michigan to attach in a variety of ways power motors to running gears and bodies that except for bicycle wheels in some cases looked much like ordinary buggies, including the dashboard and whip socket. During the decade Charles Duryea, Henry Ford, Ransom E. Olds, Elwood Haynes, the Apperson brothers, Charles B. King, Alexander Winton, Hiram Percy Maxim, and others produced workable if unpredictable "horseless carriages," adapting to their purpose many of the mechanical devices developed for the bicycle.

Public sales of gasoline-propelled automobiles did not begin much before 1900, and even then the demand was small. Expensive, uncertain, and usable only in the hot summer months because of difficulty in starting them, "autos" were purchased at first chiefly by the rich and the foolhardy. No doubt thousands of people saw the "Duryea Motor-Wagon" that Barnum and Bailey's "Greatest Show on Earth" exhibited with its other wonders in the dramatic year 1896; the previous Thanksgiving its maker had in Chicago won a fifty-four-mile race in eight hours and twenty-three minutes of strenuous effort. The grand show at Newport that the Astors, the Belmonts, the Whitneys, the Vanderbilts, the Drexels, and others of the "four hundred" staged in 1899 on their spreading lawns in flower-decked imported cars tended by a multitude of servants merely confirmed the oft-expressed opinion of the middle-class and the poor that the horse would never be displaced. Already, however, the steamer and the battery-

driven automobile had captured the fancy of urban dwellers. Though frequently complaining of the expenses involved, Assistant Secretary of the Treasury William E. Curtis, his mother, and his sister Elizabeth were often seen in their trim "electric" on the streets of Washington during the second Cleveland administration. The wealthy and the aristocratic in every city, in fact, were using the "electric buggy." Business men too turned eagerly to the new means of transportation. In 1897 an electric-cab service with twelve hansoms and one surrey was started in New York, and a few merchants bought electric delivery wagons. But because battery charges lasted at best no more than twenty-eight to thirty miles even on "ordinarily clean streets," electricity was handicapped in competition with gasoline. The fire-spouting steamer did not survive its quieter competitor.

The automobile alone offered a solution to the long-perplexing problem of local transportation that the lengthening railroads had made acute. For those who cared to look, the beginnings of a great new industry were to be seen in the display at the first automobile show in Madison Square Garden in 1900, and the doom of the livery stable with its flies and its odors was to be read in the modest lines that appeared in newspaper advertisements or hung before carriage and blacksmith shops—"All Kinds of Work Pertaining to Automobiles."

The Growth of Communications Facilities. The facilities for rapid communication kept pace with the growing nation in the years after the Civil War. The development of new copper mines and the expansion of the electrical industry made possible the magical wires that tied the people of America together and linked them through trans-Atlantic cables to Europe.

The Telegraph. The simple line that in 1844 stretched the short distance between Baltimore and Washington had by the end of the Civil War become a spreading network of more than seventy-five thousand miles. But existing facilities were wholly inadequate. Fortunately construction of new lines was not the only means of solving the problem. Thomas A. Edison, P. B. Delaney, C. L. Buckingham, and others devised and perfected the quadruplex, the sextuplex, the phonoplex, and the multiplex method of sending an ever-increasing number of messages simultaneously over the same wire. The speed of transmission also was stepped up; four hundred words a minute were tapped out by means of perforated tape, whereas the manual operator could scarcely exceed forty. Special services that have become significant in the twentieth century had their beginnings before 1900. The transfer of money by wire, for instance, was inaugurated in

October, 1870, and in the early eighties cities and towns over the land were receiving daily at noon the correct time.

Like many other enterprises of the day, the telegraph business was dominated by one great corporation. The Western Union Telegraph Company, founded in 1856 through the consolidation of a number of hard-pressed lines in what was then the West and moved from Rochester to New York City a decade later, was never seriously challenged. Backed by the fortune of Jay Gould, it smothered rivals wherever they appeared; of the thirteen and a half million dollars that Americans spent on messages in 1880, twelve million went into the coffers of Western Union. The appearance of the Postal Telegraph Company in 1886—an outgrowth of the Commercial Cable Company, which John W. Mackay and James Gordon Bennett had organized two years before in an attempt to reduce the cost of trans-Atlantic communication—precipitated a vigorous rate war that soon ended in mutual agreements by which Postal maintained its independence, existing major evils (except the franking privilege to favored individuals) were lessened or abolished completely, and a scale of uniform charges was agreed upon. Still supreme, Western Union was at the turn of the century doing four times as much business as its nearest competitor.

The trans-Atlantic cable system was merely the telegraph joining port to port rather than town to town on land. Experiments were first made before the Civil War in bays and harbors along the Atlantic seaboard. A temporary connection with Europe was achieved in 1858, yet it was not until 1866 that permanent contact was established by Cyrus W. Field and his patient associates, who more than once saw their cable break and disappear before success finally came.

The Telephone. The telegraph, like the railroads it followed, was an impersonal instrument, used almost exclusively in the conduct of commerce, industry, and business. The telephone, on the other hand, joined people together in individual communication. The first complete sentence ever transmitted vocally by wire was the practical "Mr. Watson, come here, I want you" that Alexander Graham Bell spoke to his chief mechanic on March 10, 1876. Notwithstanding serious mechanical shortcomings and many court battles between contending patent claimants, the telephone spread rapidly thereafter.[2] Within four years one hundred and forty-eight private and corporate concerns with fifty-four thousand telephones and in excess of

[2] The most important contenders for the honor of having first conceived the principle of the telephone were Charles Bourseul, a Frenchman; Antonio Maucci, an Italian living on Staten Island in New York; Philip Reis, a German; Elisha Gray; Daniel Drawbaugh; Professor Amos E. Dolbear; and Alexander Graham Bell. The courts eventually declared Bell the inventor.

three thousand employees had been organized. More than thirty-four thousand miles of wire—ranging in length from two in Vergennes, Vermont, and in Shelby, Ohio, to nearly five thousand in New York City—had been strung through the cities and towns of the nation. The telephone, said the census report, had become "one of the great interests of the country." Though it still was practically unknown in rural districts, urban Americans everywhere, as Bell and Watson demonstrated their instrument, reflected the astonishment of Emperor Dom Pedro of Brazil, who at the Philadelphia Exposition in 1876 had exclaimed, "My God, it talks!"

The first telephones were crude affairs fitted with diaphragms that served both as transmitters and as receivers. Rented in the beginning only in pairs, they resembled somewhat in principle the modern "talking boxes" used in interoffice communication. One signaled the person at the other end of the line by tapping the diaphragm with a pencil. Before long the wall model with generator and crank by which call bells could be agitated made party lines possible, and the development of central switchboards came to tie entire communities together. The first commercial exchange was installed at New Haven, Connecticut, in January, 1878;[3] the single-sheet directory, containing some fifty names, that was issued shortly thereafter began what has become one of America's big printing jobs.

Improved by Bell, Edison, and a host of other people, the telephone grew rapidly in public favor. Trunk lines were before long linking city to city: Boston and Providence in 1880, Boston and New York in 1884, New York and Washington in 1885, and New York and Chicago in 1892. Central exchanges, soon taken over by women because of the explosive tendencies of the men operators, sprang up everywhere. Growth, however, brought its urban complications. Wires became real problems. In New York as early as 1887 three hundred were sometimes strung along one street on from twenty-five to thirty cross arms, the highest eighty or ninety feet in the air. Snow, sleet, and wind often stripped them from the poles and in metropolitan centers not only paralyzed all communications facilities but halted traffic as well. Cities East and West emerged from the blizzards that struck in the eighties and nineties to find themselves enmeshed in tangles of power and telephone lines as if giant spiders had spun a crazy web over every thoroughfare and track. Streetcars, elevated trains, power plants, and commercial vehicles stood idle until the dangerous threads had been unraveled; the economic losses were sometimes tremendous. Yet even before the

[3] The first exchange was actually installed in May, 1877, in the home of E. T. Holmes of Boston. Holmes, operator of a burglar-alarm business, placed telephones in several banks, where they served as a communication system by day and a burglar-alarm system by night.

situation became desperate, attempts had been made to install satisfactory underground cables. The first "subway" was laid along the railroad tracks at Attleboro, Massachusetts, in 1881, and within a year state laws and city ordinances were being passed requiring that in congested sections all wires be buried. The "dry-core" cable (consisting of paper-insulated twisted-pair wires in sealed leaden sheaths) that evolved from a decade of experiment dispelled the threat that sheer physical difficulties in crowded urban districts would stop further expansion of telephone service.

In spite of their widespread use, telephones, like the new electric lights that were being installed, were enjoyed chiefly by business and commercial houses and by the rich. Rates in the larger cities ranged upward to more than two hundred dollars a year, though limited service was much less expensive; in New York in 1895 fifty calls per month on a party line could be had for seventy-five dollars a year and on a direct line for ninety. At first farmers could not afford the new convenience. After the basic patents expired, many rural communities formed their own organizations and by maintaining their own poles and lines secured satisfactory service for as little as fifteen cents a month per subscriber.[4] But the telephone industry soon became a big business. Theodore N. Vail, thirty-one-year-old head of the American Bell Telephone Company, fought off competition from the Western Union, defended his patents against all comers, vigorously advocated progress and service, and sold his stock at soaring prices. In 1900 the now all-embracing American Telephone and Telegraph Company was created with a capitalization of two hundred and fifty million dollars. By that time more than a million instruments had been installed, pay stations had been introduced, "interior" or "house" systems had been developed, and a few experimental automatic switchboards had been built.

Fire Alarms and Tickers. The fire-alarm system was primarily a telegraphic apparatus that became significant only after urban investments grew large enough to warrant full-time fire departments. In its infancy it was not thoroughly satisfactory; only after years of labor were alarm boxes

[4] The Ohio County (Kentucky) Farmers' Mutual Telephone Company, formed by J. F. Barnes, J. M. Shultz, and others in the early nineteen hundreds, began with one party line of eight people. Within a few years it spread over the entire county with the necessary trunk lines and switchboards. Subscribers could for a time talk free to Louisville, one hundred and nineteen miles away. Each subscriber purchased a three-dollar stock, bought his own telephone, and built his wire to the main line, which he helped maintain. The company, long called the "grapevine," still exists, but it can obtain no reciprocal connections with the Bell system and is therefore limited wholly to local calls; regardless of the number of exchanges through which he must make connections, each stockholder can talk to every other stockholder without charge. Rates, fifteen cents a month in the beginning, rose to thirty-five by the "prosperous" twenties. Many of these community projects were formed throughout the nation—survivals, perhaps, of the logrollings, road workings, and corn huskings of an earlier age.

made simple and effective and receiving mechanisms so adjusted that no two messages, though sent over the same circuit at the same time, ever became confused. Before 1900, devices were worked out for industrial plants whereby the fire signals were sounded and water jets turned on automatically in burning buildings. Movable alarms for storage houses could be set to give warnings by means of the telephone service.

The ticker in its primitive form was developed shortly after the Civil War. The bankers of New York, finding it necessary to keep in constant touch with the clearing house, began to make use of what was called the "bank printer," whereby more than fifty institutions in the city received regularly throughout the day reports on the state of the money market. While the "bank printer" was soon displaced by the telephone, the stock ticker, similar in purpose but wider in extent, remained a permanent part of American financial and industrial life. Originated in 1867, it soon proved far more satisfactory than the army of messengers who had plied constantly between brokerage houses and the exchanges. The first one consisted of a set of dials by which a pointer indicated the changing price of gold. The dials were later replaced by two type wheels—one bearing letters and the other figures—which recorded on paper the prices of stocks as well as of gold. Edison, Field, Scott, Phelps, and Burry through slow experiments eventually converted this crude contrivance into the modern ticker, god of American business that sits in the countinghouses and brokerage offices of every city in the land.

The Growth of Electrical Facilities. Electricity, most facile servant of man, became in the last quarter of the nineteenth century a real instrument of social and industrial progress. Obviously the battery system that had been used in the operation of the telegraph and other simple devices before 1860 had neither the flexibility, the power, nor the cheapness necessary to meet the demands of the new industrial nation. The creation of the dynamo and the transformer and the perfection of alternating current, however, provided all the needed qualities. The dynamo, or generator, unlike the battery, produced by its own mechanism a continuous flow of electricity. Demonstrated in an elementary form by Michael Faraday in England many years before, it was developed in the United States in the decade of the seventies by several individuals working separately or together.[5] The chief difficulty in the beginning was that each installation, much like a

[5] Some of the more important men who worked on the problem were William A. Anthony and George S. Moler of Cornell University; Charles F. Brush of Cleveland; Elihu Thomson and Edwin J. Houston of the Philadelphia Central High School; Edward Weston of Newark, New Jersey; Henry Augustus Rowland of New Haven, Connecticut; Joseph Van Depoele of Detroit; and John Joseph Montgomery of San Diego.

modern farm lighting plant, required a whole generating system, including an engine. Thomas A. Edison, realizing that real success depended upon serving many patrons from a single source, opened in September, 1882, on Pearl Street in New York City the first central power station in America. At about the same time a hydroelectric station began operation in Appleton, Wisconsin. Other cities and towns soon established generating facilities.

The shift from batteries to the dynamo did not solve entirely the problem of efficient electrical supply. Direct current could be sent out not more than one or two miles from the point of origin. Service therefore was at best purely local, and as a consequence every city would need many generating plants. It was the introduction of alternating current in the middle eighties that completed the basic steps in the development of modern electricity: today's great metropolitan plants and long-distance transmission lines were made possible by this pulsating stream of power that reverses the direction of its flow many times a second, the voltage of which can be stepped up and down by use of the transformer. Strangely enough, Edison and other important figures in the industry bitterly opposed the innovation, and in some places the use of alternating current was prohibited by law. Fortunately George Westinghouse fought ahead against all odds and saw his efforts rewarded by the approval that the huge crowds gave his lighting system at the World's Columbian Exposition in Chicago in 1893.

Lighting. The possibility of using electricity for illuminating purposes had occurred to experimenters long before the invention of the dynamo. Few, in fact, of the remarkable devices that came into general use in the years between 1875 and 1900 were actually products of that period. Their beginnings can be found much earlier. Most of the pioneer work was usually done by Europeans, but generally the ideas were translated into practical apparatus by Americans. Though Humphry Davy in England had found as early as 1800 that light could be produced by sending a current through two pieces of charcoal, Charles F. Brush of Cleveland first successfully applied electricity to public lighting.

The arc lamp, consisting of two carbons with ends placed so close together that the current jumped from tip to tip in brilliant sparks, began in 1879 to drive the feeble gas jets from city streets. While workable models had been devised over thirty years before, it was Brush, using a dynamo of his own construction that had won highest honors in an exhibition at the Franklin Institute of Philadelphia in 1877, who perfected the lights until they were commercially marketable. His discovery of a reasonably

satisfactory carbon material in the refuse tanks of the new petroleum industry in his home city lessened the sputtering noises of the burning elements, and his ring clutch by automatically keeping the constantly shortening pencils always the same distance apart reduced the amount of maintenance care needed. In April, 1879, the new era of public lighting was inaugurated to the roar of artillery as twelve lamps were turned on in the public square of Cleveland. Five months before, John Wanamaker, advertiser extraordinary, had installed a plant in his store at Thirteenth and Market Streets in Philadelphia, where on the day after Christmas he invited his customers to view the marvel that made the colors of silks and ribbons—"difficult to see in gaslight"—readily distinguishable. The Brush system soon spread not only over the nation but over the world, even as far as Tokyo and Shanghai. Competitors quickly arose, and before long agents were canvassing cities and towns and business houses everywhere in search of sales.

The arc lamp was extremely popular. A British speaker at the government-sponsored National Conference of Electricians held at Philadelphia in September, 1884, however, expressed the belief that its days were numbered. And indeed the hissing carbons that first challenged the supremacy of gas in American cities were merely a step on the road of electrical progress; they were thoroughly usable only in the open, and even there they required daily attention. The incandescent lamp with a carbon filament sealed in a vacuum bulb brought out in practical form by Edison scarcely a year after the Brush demonstration in Cleveland made modern lighting possible. Like the arc lamp, it was not wholly a product of the time. A number of scientific exhibitions had been given in Europe by various individuals long before, and Moses G. Farmer had lighted the parlor of his home in Salem, Massachusetts, for several months in the summer of 1859. But Edison's incandescent light was the first practical one to reach marketable perfection. Described in 1880 as a "globe of sunshine, without deleterious gases, without noxious vapors, indifferent to wind or weather, requiring no matches to ignite, giving out no smoke or flame, possessing the uniformity and steadiness of the sun itself in clear weather, and withal a light cheaper in production than the cheapest oil," it opened new social, cultural, industrial, educational, and medical worlds. Filaments were frail, yet ten thousand different kinds of plain, frosted, and colored bulbs were soon in use in homes, business offices, industrial plants, advertising displays, telephone switchboards, flashlights, X-ray machines, and surgeons' and dentists' exploratory probes. Cities and towns turned to incandescent lighting for their streets and public squares.

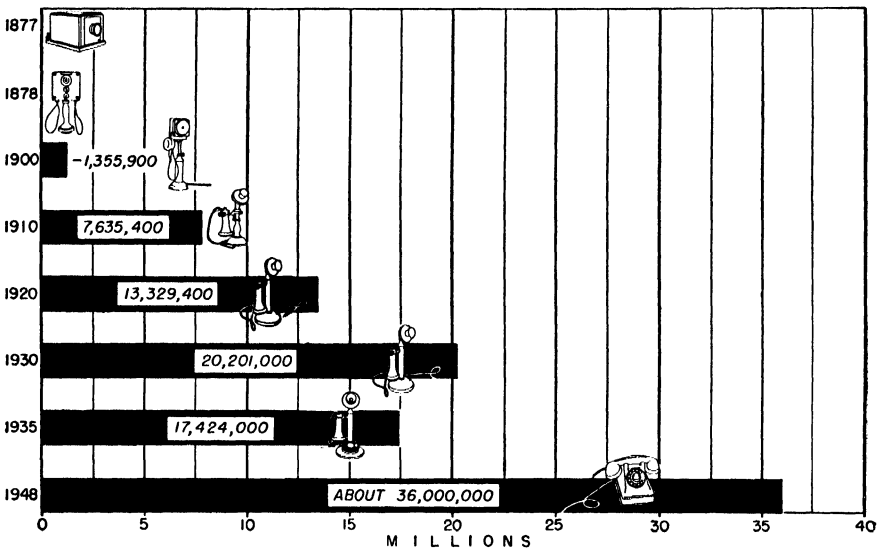
Edison's great invention brought in its wake the fixtures industry. People at first used electricity mainly as an adjunct to oil and gas lamps, twining the wires around their chandeliers and gaseliers. During the nineties, however, the "combination fixture, giving service for both gas and electricity," came to enjoy "universal vogue"; and as oil and gas lamps declined in popularity, the designers of electroliers, freed from the restricting vertical pattern of the gas and oil burners, indulged in "an exuberant fancy to which only cost" set the limit. Lamps that could be carried about and plugged into sockets wherever convenient and switches that turned lights on and off were astounding. Even more so were the words, figures, and sentences that flashed high above passing city throngs. By 1900 ten per cent of the current consumed in New York City in certain seasons of the year was used in display lighting.

Services and Appliances. Electricity played an important part in the changing structure of the city. As land values increased in metropolitan centers, this new power provided a satisfactory means of vertical transportation and thus enabled the buildings to be pushed higher and higher into the air. Elevators with inclosed cars, safety devices, and air cushions were in operation before the dynamo was perfected, but they were expensive and clumsy and were ill suited to the new tempo of industrial life. The first electrically operated installation was made in the Damerest Building in New York City in 1889 by Otis Brothers and Company. By 1900 electric elevators were an accepted convenience, and with the growing use of alternating current they increased rapidly in size and number.

Another convenience that electricity made possible was the mechanical fan, wholly American in idea and development. Crude models were built in the early eighties by Dr. S. S. Wheeler, who attached a battery-driven motor to a small contrivance resembling a screw propeller. In 1888 fans began to be successfully operated from sockets used for incandescent lights. The ceiling model, invented in 1892, was followed by others adapted to desks and brackets. Soon European and American orders exceeded production. As lights, telephones, elevators, fans, call bells, alarms, tickers, clocks, and a host of other appliances became commonplace, architects began to honeycomb walls and floors with tunnels through which passed the copper nerves of the great towers of stone, concrete, and steel that marked the growing cities. Not all the new devices were for general use; some were designed for individual service and comfort. Electric heaters for bedrooms and bathrooms, small stoves and chafing dishes of various descriptions that could be "employed as well in the boudoir as in the kitchen," coffee urns, kettles, and such personal things as curling irons and cigar lighters

made their appearance. At a cost of scarcely more than two cents an hour each, trolley cars were for the first time made comfortably warm.

Industrial Applications of Electricity. *Electrical Heat.* Until 1900 electricity found its greatest industrial use as a source of heat in manufacturing processes and in the reduction of metals and chemicals. Bakers and hat makers, for instance, quickly discovered that they could regulate their ovens and their irons with precision, and, more important, metallurgists and chemists soon found that they could produce in electrical furnaces temperatures of such intensity as to crumble the elements and learn from



Photographs Courtesy the American Telephone and Telegraph Company
Drawings by Dorothy Page

FIGURE 12. TELEPHONES AND THEIR EXPANDING USE, 1877-1948

them their secrets. The new energy opened the door of modern industrial science. Many of the metals, chemicals, and abrasives that are fundamental in present-day progress were first produced in the late years of the nineteenth century.

Practical demonstration of the economic possibilities of electricity came with the construction in 1895 at Niagara Falls of a huge hydroelectric plant that before long was sending its alternating current twenty-five miles away to Buffalo. Factories flourished not only around Niagara Falls but elsewhere too as new plants were built. By 1900 a large part of the copper in the country was being produced electrolytically; carbons for arc lamps were being made at the rate of more than one hundred and seventy-two million annually; aluminum production had jumped to six and a half million

pounds; and carborundum, rival of the diamond in hardness and therefore a valuable grinding and polishing agent that at first was sold by the carat, had because of increased output dropped to ten cents a pound. Calcium carbide, source of acetylene gas, soon to be universally used by coal miners in their lamps, as well as litharge, graphite, sodium, and other chemical and metal products also was being made in relatively large quantities.

Electrical Power. Before dynamos and motors came into use, man had been able to apply only locally the energies that he had learned to harness. The effective reach of belts, pulleys, cogwheels, and shafts had through the centuries been lengthened but little; at best it was much less than the traditional stone's throw. It was obvious that in the new age of urbanization power must in some way be made to stretch its mighty hands far beyond its place of origin and some flexible and easily divided medium of transmission must be developed. The problems were solved when dynamos at great generating stations began translating mechanical energy into electricity that could be sent long distances over copper wires and then by the use of electric motors be retranslated into mechanical energy that would with equal facility serve the owner of the small shop, the captain of industry, the traction magnate, and the busy housewife. The production and distribution of power soon became an industry in itself.

The electric motor was the product of the labor of many people over a long period of time. The first crude model was built in England by Michael Faraday in 1821. A few years later Thomas Davenport began in his Vermont blacksmith shop the first experimental work in the United States. By 1882 the new contrivance was performing many tasks on both sides of the Atlantic, and Americans were predicting that before long it would be operating sewing machines, coffee grinders, and other household apparatus. Electric motors were soon being employed in large numbers for driving such simple mechanisms as elevators, fans, hoisting magnets, tools, and even toys. Before the end of the eighties they were performing the spectacular feat of propelling streetcars on regular runs along the main thoroughfares of a hundred and forty-four cities and towns of the nation. Urban centers everywhere, in fact, turned to the new transportation that the motor made possible. In 1895 an electric locomotive began to haul trains through the railroad tunnel at Baltimore. Even in 1900 a great part of the current developed at the hydroelectric plant at Niagara Falls, center of the electrochemical and electrometallurgical interests, was used for public-service purposes in the town and at Tonawanda and Buffalo. With the development of polyphase wiring and the perfection of alternating current electricity began too to turn the giant wheels of industry.

Office Equipment and Industrial Devices. The mechanization of American business offices proceeded at a rapid pace between 1865 and 1900. The typewriter came into practical use after the Civil War. A machine built by the Remington Firearms Company on principles worked out in the sixties by Christopher Sholes, an erratic Milwaukee printer, and put on the market in the seventies served reasonably well. The self-inking ribbon was invented (1886), the "front strike" mechanism that enabled the operator to see what he was writing was perfected, and machines designed for making entries in ledgers and other record books appeared. The forerunner of the modern addressograph and similar stencil-printing devices was patented in 1867. Particularly useful in the business world were the cash registers and the adding machines that were introduced in the late eighties. The first made it possible for growing mercantile and industrial houses to keep account of individual transactions, and the second provided a means of totaling quickly and accurately the innumerable sums involved in daily sales. Fare registers for streetcars and time clocks for industrial plants made for efficiency and gave further evidence that economic life had grown beyond the bounds of personal trust.

Early talking machines were actually meant for use in business offices. Edison invented the phonograph in the late seventies while endeavoring to build a machine that would repeat Morse code. In 1886 Chichester A. Bell and C. S. Tainter of Washington patented the graphophone, and two years later Emil Berliner of the same city produced the gramophone. All were in the beginning turned by means of hand cranks or else foot treadles similar to those on sewing machines. They filled a social as well as a commercial purpose, for they both supplied private and public entertainment and permitted the business man to dictate his letters and speeches for later transcription.

Miscellaneous Mechanical Inventions. Many other processes and devices that were conceived between 1865 and 1900 deserve mention; some were useful and some were not, but all were interesting. There were, for instance, self-healing pneumatic tires; washers that washed, rinsed, and blued without the necessity of removing the clothes from the machine; armpit shields; electric cutters for use in clothing factories; concrete mixers that mixed as they were rolled to work; magazine and roll cameras, Kodaks (Eastman, 1888), exposure meters, kinetographs, and automatic slot-operated cameras that delivered finished photographs in a few minutes; oil burners for furnaces; bottle caps with thin cork linings as a substitute for expensive cork stoppers; automatic paper-bag makers, packers, label affixers, and fruit wrappers; cigarette machines; envelopes with thread or wire inserts

for "convenient opening"; electrical typewriters; fountain pens; cyclometers, forerunner of the speedometer, that indicated to the bicyclist and the streetcar motorman their speed and mileage; paint sprayers; expeller pencils; telegraphones; prism lights for throwing the sun's rays into the lower rooms and basements of tall city buildings; folding beds; invalids' beds; sectional bookcases (1896); all-glass showcases; self-flushing spittoons; pneumatic dental chairs; and Hartshorn's shade rollers (patented in 1865 and improved in 1884). Ways were contrived for making artificial rubber from corn oil, artificial silk from viscous solutions of pyroxylin, and artificial marble from dehydrated gypsum. Indeed, the simple days of the agrarian nation were over and the basic physical plant of America was reaching maturity.

Chapter 26

CHANGING URBAN AND RURAL LIFE

The Rise of the City. Though not a modern phenomenon, the city in the second half of the nineteenth century became firmly established in western civilization as a dominating factor in human existence. Growth was especially rapid in America between 1870 and 1900. Most individuals, however, fascinated by the glamorous throng that was moving westward, took little note of the great stream of humanity flowing into the cities. At least three-fourths of the population of the United States in 1880 still lived on farms or in villages of less than four thousand, but depleted soil, low prices, high interest rates, competition from other sections, and few opportunities to share in the new riches of the nation were driving an ever-increasing number toward the alluring towers of industry. Throughout New England, along the Atlantic seaboard, and to a lesser extent in the area stretching over the mountains and on beyond the Mississippi, agrarians who had long followed the ancient art of husbandry were deserting their fields for more promising material and social life in metropolitan centers. Running water, electric lights, bathtubs, telephones, pavements, libraries, colleges, and other physical and cultural conveniences were available only where human beings were gathered together in large numbers.

By 1900 the Golden Fleece that had ever lured the ambitious westward in search of free land and economic advancement was to be found in the city. Even the worthless sought to hide their fruitless lives in the solitude and isolation of the crowded streets. The process was not altogether new, but it foreshadowed significant things ahead and in certain sections left behind a strange residue of deserted fields and homes. By the turn of the century only Maine and Vermont north of the Potomac and east of the Alleghenies were predominantly rural. Beyond the mountains Illinois and California alone boasted more urban dwellers than farmers. Towns in the Middle West, however, were growing rapidly; Chicago, led by New York and trailed by Philadelphia, was the second largest city in the nation.

Immigration contributed appreciably to the urbanization of America. In the decade of the eighties the record-breaking flood of migrants into

Atlantic ports exceeded five million, and, though the flow was checked by the panic of 1893, three and a half million more followed during the nineties. Into New York, Boston, Philadelphia, and Baltimore, on westward through Cleveland, Detroit, Louisville, Indianapolis, and Chicago, and northward into Milwaukee, St. Paul, and Minneapolis spread the wave of newcomers; everywhere, in fact, save in the South the foreign-born became an important part of the population. While Scandinavians and other northern Europeans often settled on the spreading fields of the West, many small peasant farmers from central and southern Europe, penniless and friendless, stopped in the cities, and neither they nor their children ever again knew the smell of the soil. They became not only grist for the labor mill but also a source of political strength, for their votes were bought as cheaply as was their brawn. Knowing little of the ways of the new nation that was their home, the immigrants flocked together in close-knit communities, and society—whether individuals profited economically from their toil or not—paid large sums in an effort to solve the social problems that if they did not create they certainly intensified. On South Halstead Street in Chicago eighteen different nationalities clustered around Hull House, and the babel was even worse in many sections of New York.

Urban Material Progress. Material growth in the cities was as astounding as population growth. Each year buildings reached higher into the air and architectural details shifted to conform to progress in engineering science. Department stores expanded into great mercantile marts, apartment houses became cities within cities, and streets in main business and residential sections were turned into boulevards in order that hurrying industrialism might be better served. Except in smaller towns the one long business thoroughfare of earlier years gave way to many centers as stores and shops, each reflecting the economic standing of its neighborhood, grew up. Cobblestones and wooden blocks began to be replaced by more satisfactory paving materials. Asphalt brought in from Trinidad became popular along the Atlantic seaboard in the late seventies, and bricks came into use in the middle eighties, particularly west of the Alleghenies. Rock, gravel, shell, and plain dirt, however, were still predominant, and even some of the plank roads of the thirties survived until near the end of the century. Satisfactory sidewalks appeared only in the larger municipalities. Bridges were built, and parks and playgrounds were to some extent enlarged and beautified; business men began to realize the economic values to be derived from civic betterment.

But few developments were of a permanent nature. Residential districts pushed into outlying farm lands as business houses overran the mansions

of other periods and slums ate into the respectable quarters of other years. The industry and bustle that had once been a part of the water fronts in the heyday of the steamboats shifted to the great freight terminals of the railroads in the poorer sections, where land was cheap and where people could not afford to be annoyed by noises. Acres of tracks, miles of warehouses, and vistas of dirty poverty marked the commercial heart of every metropolitan center; there shuttling engines and cars brought in goods from over the world and carried away the products of urban workers and foodstuffs from nearby fields. Economic splendor, on the other hand, characterized the selling marts where people bought. The general public knew little about the sprawling wholesale and jobbers' depots on out-of-the-way streets, but the new retail concerns revealed to all the restless pace of commerce. Stewart's in New York (acquired by Wanamaker in 1896), Wanamaker's in Philadelphia, and Field's in Chicago were the three best-known palaces of the "merchant princes" of the nineteenth century. They were not only market places where almost any article could be bought; they were also educational centers to which thousands of people flocked annually. Many economic wants were born in the show windows of American stores.

The New Mercantile Outlets. The great mercantile houses that brought glamor to the shopping centers of Chicago, Philadelphia, and other cities and spread the glory of "the ladies' mile" on Broadway in New York were little used by rural and urban poor. There were, nevertheless, fortunes to be made in supplying the simple wants of this vast group of consumers. In 1872 Montgomery Ward and Company, hoping to serve small-town dwellers and farmers, particularly the Patrons of Husbandry, began business in a twelve-by-fourteen-foot room at 825 North Clark Street in Chicago. Before many years had passed, Sears, Roebuck and Company was founded. Utilizing the postal system for delivery service whenever possible, the two concerns flourished in spite of strenuous objections from local merchants and business men. Although free distribution of illustrated descriptive catalogs was not begun until after the turn of the century, buyers ordered in confidence, for both firms stood unfalteringly and unconditionally behind their goods. The mail-order stores offered a larger variety of wares than local merchants could stock and kept prices in isolated communities at a reasonable level.

Chain stores too were an innovation of the second half of the nineteenth century. George Huntington Hartford, a hides-and-leather dealer in New York who branched into the tea business in the late fifties, founded in 1864 the Great American Tea Company, which in 1869 became the Great Atlan-

tic and Pacific Tea Company, the "A & P" of modern America. Competitors soon rose up in search of the patronage of homemakers who were minded to save a penny or so on a purchase. The Kroger Grocery Company came into being in 1882, and the National Tea Company in 1899. Other chain stores designed to meet special demands or to appeal to particular economic groups appeared also. The United Cigar Stores, founded in 1892, reaped a happy harvest of pennies, nickels, and dimes from the tobacco users of the nation.

The most dramatic of the small-sales experiments was that of Frank W. Woolworth, who opened at Lancaster, Pennsylvania, on June 21, 1879, the first successful five-and-ten-cent store. Actually the banner in front of the little establishment bore the words "THE GREAT FIVE CENT STORE." The name had been used at Utica, New York, but few people there had been interested; the thrifty Dutch around Lancaster, however, hurried to the counters. Branches were soon started at Harrisburg and York and other places. The only one that survived at the time was at Scranton, where on November 6, 1880, a "grand bazaar" was opened with a sign across the front that read "Woolworth Bros. 5 & 10 Cent Store." Woolworth, who possessed much of the keen insight of P. T. Barnum, applied to distribution some of the principles that the great industrialists were applying to production. By the end of the century his venture had demonstrated its worth, and eventually the brothers and also a host of relatives and friends gained immense riches.

The Growth of Public Services. The growing material city mothered the utilities as well as a host of other urban conveniences. Adequate water, light, and transportation facilities especially were essential to urban progress. The first, however, was almost universally neglected; improvements in physical equipment did not keep pace with the increasing number of factories, business houses, and homes. Hydrants were located at convenient points in every district to serve the new fire houses (where horses and men on twenty-four-hour duty could be out of the doors with the wagons within thirty seconds after the electrical alarm had sounded), but streets, suffocatingly dusty, were rarely sprinkled, and generally rains alone were relied on to flush away accumulated filth. With the increase in water consumption old sewer systems were enlarged and new ones built. In fact, the disposal of industrial waste became as great a problem as the disposition of human waste had been since cities began. Expenditures for the maintenance of public health everywhere mounted as congestion grew worse. Municipal budgets in many places included appropriations for the inspection of meat, the cleaning of cesspools, the distribution of disinfectants, the proper en-

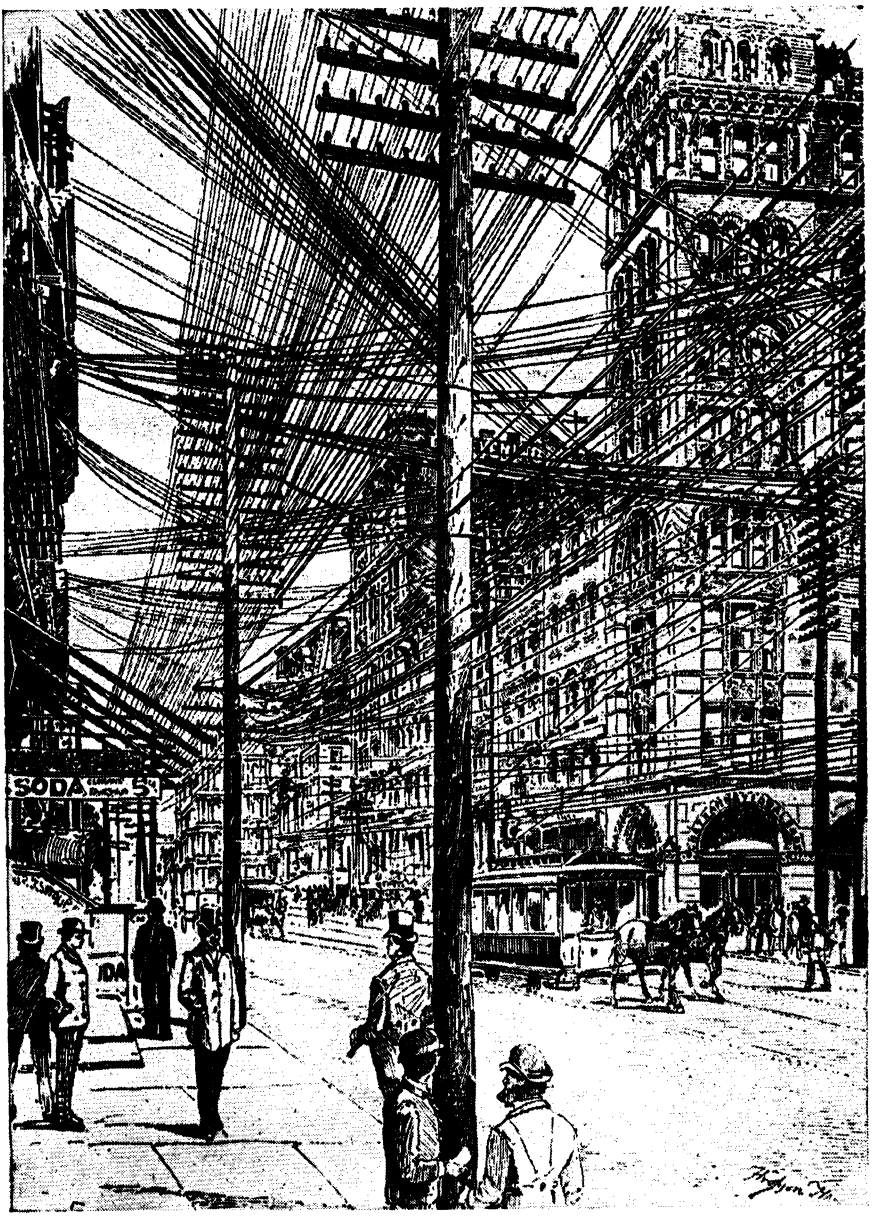


FIGURE 13. TELEPHONE LINES IN NEW YORK AT BROADWAY AND JOHN STREET IN 1890

forcement of quarantine regulations, and the carrying out of general sanitary laws. Purification of drinking water by the English method of slow sand filtration was introduced at Poughkeepsie, New York, in 1870. Some cities established public bathhouses.

The people were far more concerned with lighting by electricity than they were with the problems of public water and health. The city had outgrown oil and gas just as it had outgrown hand-drawn fire trucks and the old oaken bucket in the back yard that no longer existed because of high land values. Within three years after the appearance of the arc and the incandescent lamp in 1879 most towns in the nation either had installed these lights (at least in busy sections) or were discussing the question vehemently in council meetings. The new illumination made city streets and parks not only more attractive than before but safer as well; in some places it was asserted that one lamp was worth five policemen in the suppression of crime. Though Wabash, Indiana (1880), and Aurora, Illinois (1881), both using the tower system, claim priority in lighting the entire urban district, New York City probably led in the installation of traditional street lamps. Between February and August, 1882, a total of one hundred and sixty miles of wire was put up in the region south of Fourteenth Street by the United States Illuminating Company under contract with the city government, and early the next year arrangements were made for erecting seventy Weston arc lamps on Brooklyn Bridge.[1] Already a congressional committee had reported favorably on a bill to appropriate twenty thousand dollars for lighting Hell Gate in the East River.

From New England to California and throughout the Old South electricity was coming to serve the public needs of cities and towns. Moreover, it quickly drove gas, constant threat to life and property, from commercial, business, and industrial buildings in urban centers and soon gained favor among factory owners and workers alike. Even while municipal governments were still legally bound to the gas companies, merchants and shopkeepers frequently supplied their own outside lighting; "King Street, between Broad and Calhoun Streets," it was stated in the *Year Book* of Charleston for 1882, "is brilliantly illuminated up to 11 o'clock every evening, except Sundays, by many private lamps in front of the stores." Capital everywhere poured into the new industry. By March, 1883, there were in the state of New York alone nearly a hundred corporations with an aggregate stock authorization of a hundred and twenty-two million dollars.

Only persons financially interested in gas production made any serious objections to electricity. Their arguments, however, were ineffective, for in the twenty years preceding 1880 nearly a score of theaters in Brooklyn (the

[1] The contract price for lamps ranged generally from forty to seventy cents each per night. The cost was somewhat higher per unit than that of gas lamps, but each unit gave more light than a gas unit.

Brooklyn), Cincinnati (Pike's Opera House), Detroit (the Olympic), and other cities had been destroyed by gas-ignited fires, and during the seventies the annual loss of life and property from explosion in gasworks was particularly large. But electricity did not push its long-established competitor from the field. Cities and towns in many cases continued to rely on their old lamps in some residential sections, and tenement houses were still lit by the feeble flames. Furthermore, the growing popularity of gas stoves provided a swelling market, and new industrial uses consumed large quantities. Though numerous small corporations collapsed, the total consumption of gas was not permanently affected; one observer, in fact, declared that the change from monopoly to competition brought both civility and prosperity.

Urban Transportation. The rapid expansion of American cities created perplexing problems of urban transportation. Laborers who once had clustered around the factory doors and business and commercial men who had lived near their establishments were each decade shoved farther away from their sources of livelihood as cities necessarily sprawled over ever greater areas.[2] The horse-drawn omnibuses and hacks and cabs that had alarmed European visitors by their speed and recklessness in the years before the Civil War were hopelessly inadequate in the hurrying America that came up after that conflict. Wage rates, land values, the extent of the market in which the worker could sell his brawn, the location of plants and commercial and business houses, the ultimate spread of residential districts, and even the effective survival of the city itself were all involved in what appeared on the surface to be the mere physical movement of human beings. No other single urban service was so essential as transportation and yet so utterly beyond the ability of ordinary individuals to obtain for themselves.

The Development of Street-Railway Systems. Rail transportation for urban dwellers had its beginning in New York City in November, 1832, when the New York and Harlem Railroad Company began operation of a horse car, the "John Mason," on a mile of track between Prince and Fourteenth Streets. In spite of the fact that the mayor, the members of the common council, and a number of distinguished guests declared the experiment eminently successful, street railways made slow progress. With

[2] Residential sections sometimes followed the developing transportation facilities, but, generally speaking, they were forced both by the economic cost of land and by the growing demand for an ever larger number of workers to retreat before encroaching industry and business. Except for certain suburban projects, it was on the whole the spread of population that pulled the streetcars farther and farther from the center of town and not the streetcars that lured the urban dwellers outward.

the exception of New Orleans no other city tried the new method of transportation until the decade of the fifties. Between 1855 and the coming of the Civil War Boston, Philadelphia, Baltimore, Cincinnati, Pittsburgh, and Chicago built a limited number of lines. Opposition, however, was vigorous. People in general hesitated to turn the use of their streets over to private monopolies, and property owners in particular feared depreciation of real estate values. Humane individuals protested that horses were burdened excessively in pulling the cars, and even religious objections appeared. In Philadelphia, where congregations could legally chain off the streets in front of their churches during worship, an attempt to operate on Sunday brought prompt arrest of the offending driver and a declaration from the judge that the city had "for one hundred and fifty years obeyed the law faithfully in its observance of the Sabbath, and it is not perceptible wherein either its prosperity or character has suffered."

Though city dwellers soon admitted their error in opposing street railways, the omnibus still reigned supreme in many places when the Civil War was over. But the inability of this "bedlam on wheels" to serve the traveling public was no small factor in bringing its own demise. The situation in New York became desperate by 1867. As traffic increased, reckless drivers dashing along lower Broadway—one each direction about every fifteen seconds during rush hours—became daily a more menacing threat to life and property. Everywhere the horse cars, larger and far more comfortable than the rumbling omnibuses, were gaining rapidly in favor. Boasting elaborate interiors with plush-covered seats, decorated ceilings, and swinging oil lamps and carrying from twenty to thirty passengers (who in cold weather warmed their feet in loose straw on the floor), they reached their height and began their decline by the end of the eighties.

Cable cars had already been in use for several years. After their introduction on Clay Street hill in San Francisco in 1873 by Andrew Hallidie, they quickly spread to other parts of the city and before 1890 were to be found in Chicago, Philadelphia, New York, St. Louis, Oakland, Denver, Washington, Cleveland, Providence, Seattle, Baltimore, and Pittsburgh and elsewhere. Propelled by endless steel cables running in underground conduits from central steam plants, they had outstanding advantages over the horse cars: they were quieter and faster, they were little bothered by snow and storm, they could be run in multiple, and during especially busy hours they could be loaded far beyond ordinary capacity. Notwithstanding frequent mechanical interruptions,[8] the system with its "spacious and hand-

[8] The difficulties encountered in operating the cable cars were staggering. The cars either moved at the speed of the cable or stopped entirely; tremendous strength was required to

some" cars soon won public approval. Many individuals believed that the horse cars were on their way out. And well they might, for as cities grew and lines increased in number and stretched farther and farther away from the barns, the task of providing efficient service became ever more difficult. Epidemics sometimes swept through the stables, disabling or killing many of the hundreds of animals that every large company was compelled to maintain; city transportation became to a burdensome extent a problem of pasturage, hay, corn, water troughs, barns, veterinary service, and horseshoes.

It was the electric trolley, however, and not the cable car that drove horses and mules (the latter used especially in the South) from the street railways. Although electricity supplied by batteries had been employed in several instances before the middle of the century both in Europe and in the United States to run small experimental cars on tracks,[4] electrical transportation became a real possibility only after the development of effective dynamos in the seventies, and even then several years of heartbreaking trial and error were needed in discovering the most effectual methods of generating power and transmitting it to the car motors, which themselves had to be greatly improved.

Probably the first practical electric railway operated by mechanically generated current was built by Siemens and Halske for the Industrial Exposition in Berlin in 1879. Before the end of 1883 this distinguished German firm had constructed an exhibition line at Paris and a short commercial road at Lichterfelde in Germany as well as one in northern Ireland near Belfast. At about the same time Britishers, fascinated by the miniature tracks on the grounds of the Crystal Palace in London, began talking about a road under the River Thames. American inventors too were busy. In 1879 Stephen D. Field began work on plans soon put into operation at Stockbridge, Massachusetts. The next year Thomas A. Edison, temporarily diverted from his lighting experiments, opened for demon-

clamp and unclamp the iron grip that grasped the cables; cables frayed rapidly, and grips wore out quickly; cars, either because traffic interfered or because momentum was lacking, sometimes stopped on turns into cross streets and had to be pulled by teams or pushed by passengers until the new connection could be made; the cables, often as much as seven miles long, had to be inspected every night; and horses frequently caught the calks of their shoes in the slot through which the grip entered the underground conduit. Service, nevertheless, was in many places excellent; the State Street line in Chicago had a capacity of ten thousand passengers an hour.

[4] Among the Americans who developed small cars were Thomas Davenport, a blacksmith of Brandon, Vermont (1843); Moses G. Farmer of New Hampshire (1847); Thomas Hall of Boston (1850-1851); and Charles G. Page of the Smithsonian Institution in Washington, D. C. (1850-1857). Using the tracks of the Washington and Baltimore Railroad, Page ran the five and a quarter miles to Bladensburg, Maryland, in thirty-nine minutes. Robert Davidson of Scotland had used electric propulsion on regular railroad tracks a dozen years before.

stration an electric railway at Menlo Park. Backed by Henry Villard, who hoped to build an electric line in the rich grain section of the Northwest, he devised between 1880 and 1882 several electrically driven cars that hauled successfully both freight and passengers. At an exposition of railway equipment in Chicago in 1883 visitors not only saw the "finest display of electric lighting . . . yet . . . made" but, if they chose, rode on an electric train as well. In June more than twenty-six thousand paid ten cents each to be whisked by "The Judge" around tracks hastily erected in the gallery of the building. Charles J. Van Depoele, a Belgian who had migrated to Detroit in 1868 and moved to Chicago in 1880, had several months before held a public showing of electric cars and is said to have used at the Inter-State Industrial Exposition early in September the first workable contact pole held against overhead wires by spring pressure.

Exhibition lines patronized by the curious were, however, a far cry from full-scale urban systems. To a limited extent at least it would have been relatively easy to use electricity on the railroads with their private right of ways, but it was difficult indeed to adapt the new power to transportation needs on the crowded thoroughfares of metropolitan centers. Third rails could not be used on street surfaces because of the dangers involved, underground conduits were expensive, and city councils in Philadelphia, Chicago, and other places had already by vigorous ordinances directed that poles and overhead wires erected for telephone, telegraph, and electric-light purposes be removed. Furthermore, a maze of technical problems remained to be worked out, and inherent objections to change had to be overcome. But in spite of the difficulties, commercially usable though in some cases temporary lines were between 1884 and 1886 built in Cleveland by Edward M. Bently and Walter H. Knight; in Coney Island, New York City, and Orange (New Jersey) by Leo Daft; in Detroit, South Bend (Indiana), Montgomery (Alabama), Minneapolis, Appleton (Wisconsin), Port Huron (Michigan), and Scranton (Pennsylvania) and elsewhere by Charles J. Van Depoele; and in Kansas City by John C. Henry.[5] Whatever doubts still existed as to the practicability of the electric railway were dissipated when in 1888 Frank J. Sprague climbed the hills of Richmond, Virginia, his cars powered from a simple copper wire overhead. By 1890 "lightning" roads were in operation in fifty-one towns in the nation, and urban electrical transportation was a reality. Notwithstand-

[5] By 1887 there were more miles of electric railways operating under the Van Depoele system than under all other systems combined. The desperate need for efficient transportation facilities in urban centers is well illustrated in the fact that in the year ending September 30, 1886, the street railways of New York City alone carried more than three hundred and twenty-five million passengers, or roughly five times the population of the entire nation.

ing the discouraging financial situation in the country, trolley cars (taking their name from the "troller" or carriage that in early models was pulled by a cable along the overhead power lines) increased in number during the next ten years from twenty-nine hundred to more than fifty thousand. The end of the day for the horse cars was to be read in the advertisements that dotted the newspapers; the Philadelphia *Public Ledger* announced in December, 1895, "$10 up, bargains—200 head of young street car Horses; . . . no offer refused; on account of starting electric cars." The total number of horse cars in use declined from twenty-two thousand in 1890 to fifteen hundred in 1900.

But the development of a satisfactory system of rapid transit for urban dwellers encompassed more than mere physical construction. The rights and duties of the corporations as well as the privileges of the strap hangers and the property owners were involved. Generally speaking, the companies sought and too often obtained long-time franchises without entangling obligations and without stipulations as to the nature of their service. In some places, however, rapid expansion of electric lines brought bitter opposition from civic leaders who saw their cities being further defiled with more wires and poles and their streets being taken without payment for private profit. In Philadelphia John C. Bullitt, armed with petitions signed by thousands of his neighbors, protested against making gifts to the traction magnates (already in arrears to the city by nearly half a million dollars for paving), whose stocks, bought at sixteen dollars and seventy-five cents, were selling in the market at one hundred and ninety-one dollars. He and his friends believed that since the car lines were built only where population was thickest and where streets had been graded and paved, the corporations could afford underground conduits and that it would be no injustice to require them to specify the type and quality of equipment to be used in construction. In most places, however, municipal authorities were less concerned with future service than with immediate financial returns. They hoped that they had discovered in the street railways a new fountain of revenue. But whether levied on earnings, on property, or in the form of license fees on each car in operation, taxes were widely evaded.

In spite of bitter controversy concerning the rights of the corporations, the municipalities, the states, and the general public, the fundamentals of the modern street-railway system had been worked out by the turn of the century. Monopoly, regarded today as "natural" in city services, was well under way, fares on a city-wide basis with limited transfer privileges rather than on distance traveled (as in Europe) were well established, and the principle of public control, effective or not, was commonly accepted.

Even though growth had been marked by corruption and greed and even though some people still argued that only the horse, the cable, or steam was reliable, the nation was proud of its accomplishment. Oliver Wendell Holmes, who had written also of "the wonderful one-hoss shay," commented in *Over the Teacups,* "We ought to go down on our knees when one of these mighty caravans, car after car, spins by us, under the mystic impulse which seems to know not whether its train is loaded or empty." The span of the city had indeed been vastly enlarged.

Elevated Railways and Subways. The electric car, however successful, did not wholly solve the problem of urban transportation. The congestion in great industrial centers increased as the swelling flood of people pushed ever farther from their work filled the thoroughfares and as plodding horses pulling wagons little improved since the early years of the Republic moved the products of the pounding mills of the new age through streets that had been laid out in some cases in colonial days when economic life was simple. While freight flowed with reasonable uniformity throughout the day, human beings rushing to their work in the morning and to their homes in the evening had to be transported within a few hours. Though it was obvious to all that street surfaces, gorged to suffocation, must in some way be relieved, the alternatives—"elevateds" and subways—have except in a few of the largest cities never been widely used. New York City in the late sixties built a short experimental elevated line. It was operated by cables at first, but steam engines soon came to be employed exclusively. By 1880 a twenty-mile stretch of road along Second and Third Avenues on the East Side and Sixth and Ninth Avenues on the West was carrying an average of a hundred and ninety thousand passengers a day. Within a decade mileage had increased to thirty-five and cars were running from one to eight minutes apart from five in the morning until midnight. Brooklyn had put twenty-eight miles into operation. Boston, on the other hand, was still merely making plans. In preparing for its great Columbian Exposition the next year, Chicago in 1892 opened a steam-powered elevated road. Three years later the "el" was electrified, and in 1897 cars began their endless circling of the now famous Loop that is the mercantile Mecca not only of Chicagoans but of all the business West.

Theoretically the subway more than any other system of transportation met the demands of city dwellers. It neither cluttered the air with unsightly structures that deflated property values nor occupied much-needed street space. But subway construction was expensive, and traction magnates, dedicated to the ideal of quick profits and often obligated to make heavy payments to competing roads that they had swallowed up, clung persist-

ently to the relatively inexpensive and easily shifted surface systems. With the addition of overhead wires trolleys could be run on modified horse-car tracks. Even state legislators and city fathers, dominated too often by private interests instead of public good, opposed the idea of subways. It was stark necessity rather than city planning that brought to Boston the honor of having the first underground transportation in the nation. By the middle of the nineties the crooked thoroughfares of the city in the downtown section had become hopelessly crowded, and the cry of the people for help could not be ignored. In spite of objections from business men, who more than anyone else should have understood its value, the Tremont Street subway, a mile and a half in length, was completed in the fall of 1897. More than fifty million passengers were served the first year, and new projects were under way. In March, 1900, New York City, where a subway had been under periodic discussion since the Civil War, launched a thirty-five-million-dollar venture, but, with the exception of Philadelphia, other American cities, burdened with past investments and inclined to hope that motor buses would bring relief, continued to rely on surface or elevated lines for transportation.

Altogether the street railways at the turn of the century made up no small part of the economic wealth of the country. They knit cities together and tied them to their growing outlying sections; interurban trains were beginning to bind thriving towns to metropolitan centers. Notwithstanding the popularity of the trolley, however, the automobile, just being developed, was soon to leave throughout the nation long miles of track rusting in the sun.

The Changes in Urban Life and Their Economic Effects. The material growth of the city in the years after the Civil War was accompanied by profound changes. The rich, the middle-class, and the poor all increased in number and drifted farther apart. Factories, stores, industrial plants, railroad and streetcar lines, and banks and brokerage houses turned out each succeeding decade new millionaires whose domination of economic, cultural, and political life became more and more complete. Progress and poverty, the prince and the pauper were never more real in the history of the democracy. Directories of wealth and catalogs of the socially eligible became among the elite guidebooks to human worth. Brownstone houses, lavishly furnished, came to dot the exclusive avenues from Boston to San Francisco, and the even more gaudy palaces of the *nouveaux riches* stemmed off to right and left. Dress and entertainment were always elaborate and personal expenditures frequently reckless, though the "four hundred," donors of museums, libraries, hospitals, universities, and art galleries and

sponsors of the gifted poor, frowned upon the full-handedness of the unacceptable group represented by such men as "Diamond Jim" Brady.

Idleness and frivolity were, generally speaking, no part of the lives of the men who were forging the sprawling industrial structure of the nation. Opportunity, boundless energy, and a liberal use of money and political pressure when necessary made a few powerful magnates the directors of the economic destiny of America. Great was the rejoicing in the counting-houses when William Jennings Bryan, leading his agrarian army in a challenge against the banker, the business man, and the factory owner, lost the "battle of the standards" in 1896, and the Hamiltonian chorus "Business is business" swelled to crescendo with the passage of the Gold Standard Act four years later. Private fortunes and other wealth also rose and poured out beyond physical plants, building up social and cultural institutions of infinite variety. Sports, amusements, recreational facilities, newspapers, magazines, and hitherto undreamed-of devices for purely personal pleasure and service began as never before to compete with the traditional food, shelter, and clothing for an appreciable share of the purse of every citizen. The very well-being that the city brought as it climbed to supremacy in the last years of the nineteenth century provided the inspiration and partially at least the tools with which plain Americans in the twentieth century were to wrest from the financial captains and the industrial barons economic privileges of their own.

The rising white-collar group and even laborers shared liberally in the fruits of material and cultural progress. Small-business men, many of whom found their shops and their mills absorbed by the spreading octopus of consolidation, forgot their resentment when they beheld the enticing economic vistas that mechanical advancement opened before them. They enjoyed not only new jobs, new products, and new markets but new services as well. Electricians, plumbers, telephone operators and maintenance men, and a host of other skilled workmen were needed; ready-made clothing at reasonable prices filled the stores; fresh vegetables from California and meat from the huge packing houses in the corn belt could be had from the corner grocer and butcher; laborsaving devices of many descriptions were available; and city-wide transportation could be bought at the door for a nickel or even less. Purchases were delivered, and the iceman, the paper boy, the garbage collector, and the ashman made their regular rounds. City dwellers, in fact, had never before enjoyed so many opportunities and so many comforts. The residences of the upper middle class, built in solid rows in the well-to-do sections, boasted reception halls, gilt-framed mirrors, electric lights, porcelain or porcelain-lined bathtubs, furnace heat, and well-

equipped kitchens in which at the turn of a faucet "water flowed into the cook's kettle." Low-priced flats, said the *Scientific American* in its anniversary number of July 25, 1896, possessed more conveniences than had the finest mansions a few years before. The homes of people even of modest means were nevertheless noticeably drab. Relatively few had bathtubs or telephones or awnings to keep out the beating sun, and with light bulbs a dollar or more each and minimum charges rarely less than five dollars a month practically none were wired for electricity. The new trolley that took the family to the park on Sunday was a real blessing.

Only the very poor failed to profit as urban wealth increased. Slaves of their own poverty, their ranks fed by a never-ending stream of immigrants, they were unaffected by the forces that were spreading city population over ever wider areas; as their numbers swelled, they merely packed more tightly into the cheap and shabby tenements that clung to the regions where low rent had dictated also the rise of factories, shops, and mills. In 1900 approximately one of every four persons on all Manhattan Island lived in less than one-twelfth of its habitable area. The situation differed in other cities only in degree. Filth, quarter-in-the-slot gas meters, outside plumbing, and a high incidence of crime marked the slums everywhere. Economically the dwellers in these sections were primarily producers and not consumers; socially they were costly if unrecognized individuals.

The Growth of Cultural and Social Wealth. Although greatly influenced by the overwhelming dominance of business and industry and frequently adversely affected by corruption in legislatures and city councils, growing cultural and social institutions in the second half of the nineteenth century were wholesome evidences that the common man still lived and deserved more than a mere economic wage. Public investments in schools, colleges, universities, museums, art galleries, public parks, and similar projects for civic betterment were enormous, and private expenditures for newspapers, magazines, books, and other means of intellectual improvement reached large sums. Education in particular made rapid progress.

Elementary and Secondary Schools. The annual financial outlay for common schools jumped from sixty-three million dollars in 1870 to approximately two hundred and fifteen million in 1900, and average daily attendance rose from four million to ten and a half million. The high school became not only a point of pride but a community center as well in towns throughout the nation. Even in the rural South, where the economic burdens of war and reconstruction bore heavily upon the people for many decades, the material contributions to education were liberal. Southern cities, following the lead of the North, defied the advocates of "the three

R's" and introduced manual training and other technical subjects. "It is not proposed to turn out ready made carpenters, brick-layers, or engineers from the common schools," wrote the superintendent of schools at Charleston in 1882, "but to teach certain fundamental operations which may be considered the basis of every trade."

Higher Education. Colleges and universities flourished too, and their course of development reflected the expanding economic and intellectual interests of the nation. The monopoly that theology and Latin and a handful of other subjects had held with hardly a challenge was broken as curriculums were enlarged and the elective system, sponsored most vigorously by President Eliot of Harvard, came into popularity. Literature, history, economics, government, the sciences, and practical technical subjects of wide variety attested the fact that this was the age of Carnegies and Goulds and not of the spirit. The venerable and colonial-born institutions for men in the East grew on tuition and periodic beneficences, and Clark University, the University of Chicago, Stanford University, Drexel Institute, the Armour Institute of Technology, and other schools were founded on benevolent gifts; but throughout the farms lands, especially in the Middle West, the agrarians—aided by the Hatch Act of 1887, which set up at land-grant institutions experimental stations for agricultural research, and the second Morrill Act three years later, which subsidized instruction—dipped into their tax purses and built and maintained universities and agricultural and mechanical colleges to which their children, rich and poor, flocked in ever-increasing numbers.

Though separate colleges substituted for coeducation along the Atlantic seaboard, democracy pervaded American scholarship; associations in various fields encouraged interchange of knowledge, and improved equipment furthered specialization. Everywhere the contributions of private fortunes to educational progress were apparent. It was obvious also that one of the purposes of the educational system was to teach Americans how to get along in a business world dominated by individual aggressiveness. Yet the students who emerged from a few notable graduate schools such as Johns Hopkins were soon to lay the foundations for a more equitable society than that in which they lived, and budding scientists from the new research centers were in the twentieth century to show industry how to produce at lower costs as labor, backed by determined unions, ate into incomes through higher wages.

Fortunately the quest for knowledge was not limited to campuses alone. Public libraries, intended to serve the people, appeared in cities and towns throughout the nation, and they were eagerly patronized by young and old

alike. Some were tax maintained and some were gifts of private individuals. Led by Andrew Carnegie, American men of business had before 1900 donated over thirty million dollars toward the establishment of these centers of education. In the decade of the nineties New York, Boston, and Chicago built fine libraries at a cost of two million dollars or more each, and Congress spent at least six million in the erection in Washington, D.C., of a great national institution that remains today the capstone of American scholarship. Adult education was fostered by the spread of the Chautauqua movement, which began at Lake Chautauqua in New York in 1874, and by lecture series that in some cases reached out even to the county seats in the farm lands. One of the most popular speakers was Russell H. Conwell, whose lecture "Acres of Diamonds" provided funds for the founding of Temple University for the education of boys and girls from the industrial workbenches of Philadelphia.

Cultural Institutions. As educational facilities expanded, cultural institutions grew also. The New York Symphony Orchestra, started in 1878 and led in turn by Leopold and Walter Damrosch, father and son, was followed in 1881 by the Boston Symphony Orchestra, sponsored by Henry Lee Higginson of New England's famous banking family. Two years later the Metropolitan Opera House was built by the lavishly rich of New York City at a cost of some two million dollars; that the box holders on opening night represented a total wealth of more than half a billion dollars does not change the fact that a host of simple folk, especially in the twentieth century with its gift of radio, have heard the performances. Chicago, New Orleans, and other cities too came to have their organizations. Musical centers, in fact, sprang up even in the smaller towns, for, in spite of their limited opportunities to enjoy the arts, citizens of the copper districts of Michigan, on the Great Plains, and throughout the farm regions of the Middle West as well as in some sections of the South patronized their "opera" houses as earnestly as did their more opulent neighbors in large metropolises.

Playhouses too were popular. The eighties and nineties were outstanding years in the history of the American stage. Edwin Booth, John McCullough, Joseph Jefferson, and the Drews and the Barrymores were among the great players of the day. Helena Modjeska, Sara Bernhardt, and other Europeans also were eagerly received. Like the tin peddlers of old who ever departed from and ever returned to their Connecticut villages, actors poured into and out of New York in a restless stream as they tried for success on Broadway or took their plays—good, bad, and indifferent—to the inland cities and towns of the nation. Players everywhere were welcome; the Old Chatterton

at Springfield, Illinois, for instance, was known to local supporters at least as "the finest one-night stand in the country." Perhaps American culture was crude and Americans were interested primarily in their own gains, but the willingness of both rural and urban people to pay out their hard-earned money in support of native and foreign artists in every field was testimony to the innate belief that economic progress embraced more than material things.

Newspapers and Magazines. Widening intellectual and cultural interests —along with concern over the stock market, racing results, and business and domestic rumors and scandals in general—added to the demand for reading material. Publishing became by 1900 a significant industry. Total capitalization at the end of the century amounted to more than a hundred and ninety million dollars, and the output of newspapers and magazines exceeded eight billion copies annually. While city dailies (including Sunday editions) accounted for about five-eighths of the total, the weeklies that spread over the small towns and the agrarian districts reached a far larger number of homes. Increased circulation, however, did not bring prosperity to the owners. The invention by Ottmar Mergenthaler of Baltimore in the middle eighties of the linotype that cast a line at a time in molten metal, the development during the same decade of the automatic type-casting machine by Henry Barth of Cincinnati, and the perfection of presses and devices that printed, cut, pasted, folded, and counted newspapers of from four to thirty-two pages at speeds up to one hundred and fifty thousand an hour reduced production costs; nevertheless, publishers were in many cases pinched financially.

Advertising, major source of income, threatened to eat up profits completely as paper prices advanced and subscription rolls grew. This paradox was true for the simple reason that the outlay for materials and labor mounted with each additional copy, whereas income per unit of advertising was fixed. Natural forces that might have pushed rates upward rapidly by way of compensation were in part counteracted by the tremendous bargaining power of the great department stores and other large business houses that had replaced the small sellers of other years. In addition payments to news-gathering agencies rose alarmingly as full accounts of events over the world poured into the papers fresh from the scenes of action. Of these agencies the Associated Press, reorganized as a cooperative venture of newspaper proprietors in 1900 to forestall monopolistic prosecutions, was by far the most outstanding. It exchanged news with the Canadian Pacific Railway (covering the most important parts of Canada) and had contract relations with Reuters (covering Great Britain and her colonies),

the Agence Havas (covering France, Belgium, Switzerland, Portugal, and some sections of South America), and Wolf of Berlin (covering Germany, Hungary, and Austria and to an extent northern Europe and Russia). It received intelligence also from Staffanie of Italy, the Nordischer Telegram Bureau of Russia, the Norsky Telegram Bureau of Norway, the Svenska Telegram Bureau of Sweden, and the Agence de Constantinople of Turkey. Stories from the far corners of the earth ran sometimes as much as four dollars a word, and, in spite of allocation of costs, the burden of each individual was heavy. Moreover, as the influence of editorial pages declined, attention-catching features had to be purchased from the syndicates that were springing up with offerings ranging from colored comics for children to advice to the lovelorn.

The small village sheet, though it probably cost five times as much as a copy of Joseph Pulitzer's *World,* was read as avidly by the people of the community as were the blazing headlines of the new "yellow journalism" by urban dwellers. The economic influence in either case is difficult to measure, but advertising was not without its effects, and certainly vigorous press campaigns, backed by biting cartoons such as those by Thomas Nast, were powerful forces in driving from city, state, and national government venal politicians who were wasting annually millions of dollars of the taxpayers' money. Pungent line drawings in the agrarian press taught the lessons of antimonopoly with effectiveness.

Magazines were scarcely less popular than the newspapers. Some were devoted exclusively to the trades, yet all shaped economic and social habits and practices in one way or another. A liberal use of illustrations added to their attractiveness and in the case of the *Ladies' Home Journal,* for instance, owned by Cyrus H. K. Curtis and brilliantly edited by Edward W. Bok, created new material desires. In the final decade of the century several publishers dropped their prices to ten cents and began an aggressive policy that was to affect profoundly the nation's attitude toward its poor and their economic rights.

The Growing Amusement Dollar. Industrialism brought more than machines, cities, and intellectual and cultural ferment; it brought also new sources of income and new provocations to expenditures. In the wake of laborers and mechanics who were turning out goods undreamed of in previous years came a host of salesmen, attendants, advertisers, teachers, insurance agents (with a policy for bicyclists), librarians, and others who were eventually to overwhelm them in number. Advertisers in particular were an energetic group. They filled the pages of the magazines and newspapers with glowing stories of their wares; they bought testimonials from

ministers and politicians; and they wandered the countryside far and near, leaving on fence post, stone, tree, and barn a blazing name or catchy phrase. The modern crusade for consumer attention had well begun, and time was to make amusements a striking competitor for the surplus dollars of urban dwellers. Working hours had been somewhat shortened, and annual vacations were enjoyed by at least a few; leisure, though shot through with the hustle and bustle of a growing nation, had become to a limited degree a reality. Yearly the stream of coins into the ticket offices of shows, playhouses, and amusement centers grew larger, and yearly the amount of tax money spent on parks, playgrounds for adults, and public institutions increased.

The rich everywhere derived obvious satisfaction from their elaborate and exclusive parties. In New York they followed their fashionable leaders to the opera and ignored occasional newspaper comments that the aura of crisp greenbacks was more noticeable than any deep concern with culture; some spent thousands of dollars annually for tickets to the Metropolitan. Successful business men joined heartily with the wealthy in support of the theater, where boxes sometimes cost as much as twenty dollars a night. The plain middle class enjoyed plays, operettas, and musical shows in the modest price range but on the whole probably preferred "continuous" vaudeville with its jumble of tap dancers, vocalists, jugglers, performing seals, tumblers, trick bicyclists, magicians, comedians, and talking dogs—all for an admission price of twenty-five to fifty cents. Dime museums, circuses, and side shows of sundry description drew large crowds. The very poor took their pleasures wherever they could find them. Unfortunately that too often meant in childhood the street, in adolescence the corner candy store, and in maturity the saloon, where usually a lunch and sympathetic companionship could be had free with a drink. The settlement house was born out of this poverty of social opportunity.

Whatever economic gulf separated the holder of the opera-house box from the patron of the nickel-in-the-slot machine, the ever-swelling crowds that poured into the sports fields, the amusement centers, and the public parks were little concerned with financial distinctions. Sweating urban democracy, in spite of reserved seats and bleachers, found its level at the baseball games. "Mudvilles" throughout the nation had their "mighty Caseys," and in 1876 the first professional league (the National) was formed. Merchant princes and factory workers bet with equal enthusiasm (though with differing sums) on the "sport of kings" as race tracks flourished at Saratoga, New York, Long Branch, Louisville, Chicago, and San Francisco and at various state and county fairs. Football grew rapidly in

favor in college and university circles. The annual struggle between Yale and Princeton on the Manhattan grounds in New York City had by 1897 become "a most prodigious function." The crowd of thirty to forty thousand, packed into the elevated cars "like herrings in a barrel," strained transportation facilities on the day of the game and brought to hotels and restaurants as well as to hawkers of emblems, ribbons, and flags a rich harvest. Amos Alonzo Stagg at Chicago was building up the sport in the Middle West, and it had made its appearance also in the South. Basketball, invented by James Naismith in 1891, provided small towns with entertainment during the winter months and enabled colleges with limited material for the gridiron to strike back at their more fortunate rivals. Other diversions enjoyed by millions of people either as spectators or as participants were boxing, golf, croquet, roller skating, and bicycling, the last two of which had especially large followings.

Scarcely less democratic than sports, though perhaps not so extensively patronized by the well-to-do, were the amusement centers. Coney Island grew amazingly when promoters discovered that decency brought more dimes than vice. By the end of the nineties sometimes as many as a hundred thousand visitors a day poured through the gates to ride on the Ferris wheel, see the electric displays, and enjoy for a few cents each the excitement of thumping seats, jiggling sidewalks, scenic railroads, and a bewildering array of other devices designed to make one part with his money and forget the workaday world. Similar establishments elsewhere were small in comparison, but they offered relaxation to young and old. Public parks, owned by municipalities or by industrial corporations such as street-railway companies, were popular. They were, however, chiefly places of amusement. Before 1870 only three cities possessed great rural retreats within metropolitan limits—Fairmount Park in Philadelphia, Central Park in New York City, and Druid Hills Park in Baltimore. Boston, St. Louis, Minneapolis, and San Francisco soon joined the ranks.

Whether measured in terms of expenditures by pleasure seekers or in terms of capital invested in opera houses, theaters, circus equipment, parks, skating rinks, gymnasiums, stadiums, gambling houses, and industrial plants that turned out sporting goods and fun-makers of infinite variety, the recreation dollar by 1900 was becoming an important one. As they turned in their growing leisure hours to cultural and artistic enjoyment or to play, people created employment for actors, musicians, transportation workers, attendants, ticket takers, printers, salesmen, and so forth and began, in fact, what soon became a big business. Everywhere economic life in the cities was undergoing fundamental changes. The new workers

who found jobs in nonproductive pursuits, whatever their nature, were as much a part of the economic structure as were those who created and tended the machines that had driven the farmers and the small-shop artisans from their fields and their benches. Had that not been true, the factories would have been a curse and the machines themselves would have been quickly smothered by the idle.

Rural Life in the Age of Industrialism. The marvels of American industry little affected agrarian life other than to drain away surplus dwellers as mechanization spread; electric lights, running water, fans, elevators, and even telephones and bicycles were for the most part things afar off. Window screens, lawn mowers, and other products that were in the twentieth century to bring great factories rarely found their way to the country. Furniture, coal grates, cheap wallpaper, inexpensive pictures, and a large variety of gadgets were available, yet rural homes were in many cases scarcely better than their predecessors of a century before. The log cabins of the Middle West, however, were being replaced by frame structures, and sod houses, never universal, were disappearing from the plains; the much-decorated Victorian house was occasionally to be seen in rural villages. Though clothing, made in the sweatshops of the cities, was not costly, farm girls were, except on Sunday, poorly dressed. They bought tailored articles from small-town merchants or from mail-order houses when the money was not urgently needed for other things, but a spool of thread and a few yards of cloth were, as they had been since colonial days, frequent items on the list of purchases when chickens and eggs went to market.

In spite of his attempts at mechanization, the farmer was being submerged by the rising city. The magazines, newspapers, and books that came to his door merely deepened his bitterness, for these instruments of culture revealed to him more clearly than ever before his puny share in the wealth of the nation. He became the "hick" and the "hayseed," and his wife each year, it seemed, was bound more firmly to the washtub, the ironing board, the outside well, and the iron stove. His children went to school only a few months of the year; they enjoyed none of the privileges, opportunities, and pleasures that were changing basically urban economic, social, and cultural life. The telephone, the radio, and the automobile, the last two yet to be developed, were the only promises of hope. The agrarian, like the poorer workman in the city, was primarily a producer and not a consumer in material America.

Chapter 27

WORLD TRADE AND THE BEGINNINGS OF IMPERIALISM

Predominantly engrossed in their own problems and fascinated by the growing industrial empires of the East and the spreading fields of the West, Americans, though hordes of immigrants and vasts amounts of capital were pouring into the land from Europe, were throughout the major part of the nineteenth century little concerned as a people with worlds other than their own. Yet military, political, diplomatic, and economic incidents abroad were not lacking. Before the Civil War the Napoleonic disturbances, the revolt of the Spanish colonies in South America, the Greek Revolution, the continental uprisings of the middle of the century, and the Ostend Manifesto, for example, attracted momentary attention. For the most part, however, they remained except for a few individuals things indistinct. Even the stories of adventures of traders who sailed their ships over the seas with a strange assortment of goods (including ice for India) were scarcely heard beyond the ports along the upper Atlantic.

Though international events were no less exciting than those before Appomattox, the generation that came to maturity after Reconstruction had only a fleeting interest in foreign affairs. Forces that were eventually to strip the nation of its proverbially provincial outlook were nevertheless already in motion. They were not wholly American. The passing of the frontier, the growth of a gigantic industrial system, the rise of cities, the appearance of effective communication and transportation systems, the development of a powerful press, and the piling up of goods on farm and in factory, shop, and mill were, as factors that were turning the people of the United States from their own local absorptions, abetted by the restless imperialistic stirrings of European powers whose giant arms stretched out everywhere but into the New World (protected by the Monroe Doctrine) to bring forth new products and create new economic and political appetites. By 1890 the changes were becoming apparent to many. In the previous twenty-five years the dollar value of foreign trade had jumped from slightly more than four hundred and four million dollars to a billion six hundred million. Both politicians and industrialists were becoming con-

scious of international markets and their importance in the material life of the nation.

The American Merchant Marine. American trading ships shared little in the growing commerce of the seas between 1865 and 1900. The merchant marine had suffered severely during the Civil War. Confederate privateers, built for the most part in the yards of England, had driven many sleek sailers and clumsy tubs to foreign registry or sent them to the bottom of the ocean. But more fundamental things than physical losses were involved. Before peace was proclaimed in April, 1865, the British, using iron for construction and steam for propulsion, had become the leading shipbuilders of the world. Furthermore, the venturesome spirit that had led American financiers in the forties and fifties to put their money into romances in sail and call them, for instance, *Sovereign of the Seas, Flying Cloud, Lightning, Golden Light, Quickstep, Hotspur,* and *Lightfoot* had been diverted to other enterprises. The opening of the West, the abundance of free land, and the existence of a war-born protective tariff made construction of transportation facilities, farming, and manufacturing alike invitingly profitable in promise at least. And so it was that agrarians spread on into the plains and that railroads, giant industrial plants, steel mills, oil wells, packing houses, and great milling establishments became the chief concern of men with money. Both capital and labor were devoted almost exclusively to the task of building a national economic plant. Even the government at Washington refused to be concerned about its ailing ocean fleet. A law was passed in February, 1866, prohibiting the return of ships transferred to foreign registry during the war, emergency taxes on construction materials and on tonnage were not repealed for many years, and subsidies, common in Europe, were denied by Congress. Between 1860 and 1900 the value of imports carried in American bottoms fell from sixty-three per cent of the total to less than thirteen per cent, and the exports from seventy to seven. Tonnage declined from about two million four hundred thousand to slightly more than eight hundred thousand, and the value of the cargoes from more than five hundred million dollars to less than two hundred million.

International Commerce. But in spite of an intense concentration on domestic affairs, a drastic decrease in the importance of the merchant marine, and a stiff protective tariff, the foreign commerce of the nation flourished. Exports and imports in general grew larger each year. The outflow of cotton, which had dropped to a tiny trickle after 1860, soon swelled again to a mighty stream. Moreover, wheat, rye, flour, and other

cereals and cereal products began an exodus that shortly brought protests from agrarians abroad. The protests grew as meat and meat products joined the movement of goods into European ports.[1] Fears that food materials from the fresh lands of the new West beyond the Mississippi might completely smother the farms of the Old World were partially forgotten, however, in the alarm that arose over the increasing tide of manufactured items that followed cotton, grains, and meats. Urban and agrarian demands at home combined could not completely absorb the output of American factories, and each decade industrial products made up a greater proportion of the total exports. Measured in terms of dollars, the goods pouring out of the United States to the markets of the world in 1900 were four times those in 1860. But manufactured articles alone multiplied tenfold, rising roughly from forty million to four hundred and thirty-three million. Between 1870 and 1900 the export value of iron and steel and the manufactures thereof jumped from thirteen million dollars to about a hundred and twenty-two million, mineral oils (chiefly for illuminating purposes) from twenty-two million to seventy-five million, copper and its manufactures from half a million to fifty-seven and a half million, wood and its manufactures from thirteen million to fifty million, leather and its manufactures from six hundred thousand to twenty-seven million, cotton goods from less than four million to twenty-four million, oil cake and oil-cake meal from three million to sixteen million, vegetable oils from three hundred thousand to sixteen million, and agricultural implements from one million to sixteen million. Even then the advance agents of the great industrial corporations were just beginning to scour the earth in search of markets and raw materials not readily available at home. It was obvious by the turn of the century that the nation, though exports of manufactured goods still fell far short of those of the United Kingdom, was rapidly becoming the workshop of the world. That breadstuffs and raw cotton still dominated her foreign trade did not lessen the significance of that fact, for the new industrial America was at the time consuming fully ninety per cent or more of the output of her industrial plants while the old agrarian America was sending abroad some twenty to thirty per cent of the wheat, thirty-five to forty-five per cent of the tobacco, and sixty to seventy per cent of the cotton that grew on her farm lands.

Imports too told a story of shifting economic developments as the tide of finished products that had swept into Atlantic ports from colonial days

[1] Many European states, especially in the decade of the eighties, prohibited by law the entrance of American meat and meat products. During 1891-1892 Germany, Denmark, Italy, Austria-Hungary, France, and Spain removed their restrictions on pork.

declined rapidly in proportion to total shipments. The steel, petroleum,[2] sewing machines, electric fans, bicycles, steam engines, and other mechanical goods that flowed out of the country were no surer indications that the nation had ceased to be predominantly agrarian than were the new cargoes that poured in from foreign lands. The United States, whose soil had long been—and for that matter still remained—a world source of cotton and cereals as well as other agricultural products, was drawing each year from the fields and plantations of the earth larger and larger amounts of raw materials for processing in her plants. Sugar and coffee and such items as spices, cocoa, wines, and tea continued important, but hides and skins, raw silk, rubber, wool, and other crude materials were pressing hard on their heels. Although Europe in 1900 absorbed three-fourths of the exports of the nation and provided more than half the imports, America's trade lines were stretching out over the globe in quest of the things that were needed in keeping her factories busy or in search of markets for her ever-increasing manufactures. Asia, which within three decades was to challenge all rivals for supremacy, was already a significant source of supply, and sales were being pushed in Canada, South America, Mexico, Australia, South Africa, and even China and Japan.

The financial balance sheet of foreign trade as well as the nature of the commodities involved underwent profound changes between 1865 and 1900. From the formation of the government until 1875 the United States in general bought more than it sold; during the remainder of the nineteenth century with three exceptions it sold each year more than it bought. The excess of sales of merchandise over purchases in the latter period amounted roughly to four billion dollars.[3] But this did not mean that America was continuously drawing specie from Europe to add to her growing wealth. Import and export payments are only one item among many in international reckonings. Americans owed huge sums in interest on capital that Englishmen in particular had invested in local and transcontinental railroads and other enterprises and also heavy tolls to British shipowners for carriage and insurance charges on the cargoes that flowed in and out of Atlantic ports. Furthermore, American travelers spent reck-

[2] According to the figures furnished the Bureau of Statistics by the Office of the United States Geological Survey in 1900, exports of crude petroleum rose from three hundred and seventy-two million gallons in 1877 to a billion eighty-one million in 1900. More than ninety-seven per cent of total production in the beginning went abroad; forty-five per cent was still being sent out of the country in 1900.

[3] Exports (including gold and silver prior to 1821) between 1790 and 1875 inclusive amounted in round numbers to twelve billion dollars, whereas imports (including gold and silver prior to 1821) amounted to fourteen and a half billion. In the twenty-five years between 1876 and 1900 inclusive imports amounted to seventeen billion and exports to twenty-one billion.

lessly in European cities in an effort to broaden their cultural outlook, which they felt was cramped by materialism at home, and daughters of wealthy industrialists and financiers as wives of impoverished noblemen drew on their family riches to maintain the panoplies of foreign aristocracy. Immigrants sending part of their earnings to their homelands added their pittances to the outgoing stream. Altogether these "invisible" but real items counterbalanced the credit built up by foreign sales, and the nation entered the twentieth century as a "debtor" with her people busy in their fields and their workshops and with some at least convinced that world commerce meant peace and happiness.

The Budding of Imperialism. The term *imperialism* is relatively easy to define but difficult to discuss. In its simplest expression it is the acquisition and usually the government of more or less distant "undeveloped" lands and "backward" peoples for gains, economic or otherwise. Imperialism in action, however, has never been simple. Its ramifications have been widespread and its motivating forces diverse. Moreover, its interpreters themselves have to an unusual degree perhaps been inspired and directed by divergent opinions—opinions that run the gamut of human reason and human emotion; that which has been "civilization" to some has been "exploitation" to others, and that which has been "salvation" to many has been "damnation" to an ever-increasing number.

The expansion of nations possessing the power to push their boundaries outward has been a persistent fact through the centuries. At times it has taken the form of conquest at home and at times of the absorption in one form or another of undeveloped and far-flung places over the globe. Need for population outlets, desire for raw materials that could be made into finished products to appease material appetites, and eagerness for markets where surplus goods might be turned into profits have been primary impulses in foreign expansion, but nationalism, religious zeal, moral fervor, and a host of other factors have been so intertwined with the whole that it is hard to say where one has stopped and another begun or which has been major and which minor. The spread of Europe in the seventeenth and eighteenth centuries to the New World, to India, and to other profitable regions of the earth was directed heavily by the economic theories of the mercantilists. This "old" imperialism ran its course, and in the late nineteenth century the "new" appeared. Dominated by an urban civilization and prompted by nationalism and national interests, states great and small began to push into Africa, Asia, and the islands of the seas and wherever else opportunities seemed inviting. England took the lead, and Russia, Japan, the newly created Germany and Italy, the transformed

Republic of France, and even the United States joined in the hunt. Missionaries, humanitarians, industrialists, and financiers alike were embroiled in the "white man's burden," the search for capital outlets, the demand for new raw products, and the quest for new markets, but material or national gains alone seemed to make imperialistic projects significant. Though the progress of humanity appeared to rest upon the utilization of the riches of the earth, conflict and not peace marked the rise of colonies, dependencies, spheres of influence, and other evidences of political and economic dominance in the new imperialism.

American Imperialistic Ventures before 1898. Notwithstanding the dream of some of the founders of the Republic of making Cuba a part of the new nation, the United States in its early years was too much occupied in developing its own resources and spreading its domain toward the Pacific to be concerned with the affairs of other peoples unless it was those of Canada and Mexico. Furthermore, since the population was chiefly agrarian, the primary need was for the finished products of Europe rather than for raw materials or for industrial markets. Before 1860, however, commercial treaties had been ratified with China, Commodore Perry had forced his way into Japan, Honolulu had become a Yankee outpost, Hawaii had stirred the forensic powers of Daniel Webster, the cry for Cuba had been revived in the Ostend Manifesto and in filibustering expeditions, and American engineers had surveyed a Nicaraguan canal route. It is doubtful that the spirit of modern imperialism was present to any great extent, but certainly a few individuals had sensed already the value of effective bastions on the commercial frontiers of the world.

Alaska. The rise of the United States to world power is generally regarded as having begun with the Spanish-American War, yet the first actual annexation of noncontiguous soil occurred only two years after the surrender of Lee at Appomattox. William H. Seward, Secretary of State under both Lincoln and Johnson, had regarded with a reasonable degree of indifference French efforts to establish an empire in Mexico while the North and the South were locked in bitter combat. But with the return of peace he quickly revived the Monroe Doctrine at home and began to put into effect a clear-cut if somewhat grandiose plan for safeguarding the economic position of the nation in the world. In 1867 he purchased from Russia for seven million two hundred thousand dollars the territory of Alaska. That the financial returns have been tremendous is incidental; international factors and not the presence of economic assets determined the transaction. Except for a few "sour doughs" and seal hunters, a handful of settlers, a small number of government bureaucrats, and a baker's dozen

of diplomats, the people of the United States knew little of the land until the Japanese in the second World War loomed upon this northern horizon, strange in the warfare of nations.

Hawaii. The Hawaiian Islands too were coveted by Seward. This archipelago, lying about fourteen hundred miles north of the equator and some twenty-two hundred miles west of San Francisco, had long been a way station on the highways that traders and whalers had beaten into the Pacific. By 1820 American missionaries had established themselves at Honolulu, and within twenty years the United States, though denying any concern other than the independence of the islands, had declared her guardianship by announcing that possession by any European power would be resented. Located within the political shadow of the Pacific coast and situated squarely athwart the eastern ends of the trade routes of that mighty ocean, the islands were of critical importance. The settlement of Oregon and California and the opening of commercial relations with Japan were irrevocable steps in tying them to the nation. England and France were several times warned away, and in 1854 negotiations for annexation were begun. A proviso that Hawaii should become a state in the Union brought the disapproval of President Pierce, and the project failed, as did others in the midcentury years when slavery and other domestic issues had made expansion unpopular. Seward, in spite of support by President Johnson, was unsuccessful in his efforts to fix a hold on the Pacific. The hopes of President Grant likewise came to naught. In 1875 a reciprocity treaty was concluded which by providing for exclusive trading privileges to both parties and guaranteeing the islands against encroachment by any third party satisfied the basic demands of Americans at the time.

The relation of the Hawaiian Islands to the United States in the post-Civil War years, when industry dominated the nation and aggressive business men shaped diplomacy, was far different from that in the previous days of slow-paced commerce, when wandering traders in sandalwood and other specialities, sellers of cotton textiles from the mills at Lowell, missionaries from New England churches, and sailors from the far ports of the earth had mingled with the brown-skinned, mild-mannered Polynesians—friends of the world—who populated the "Paradise of the Pacific." Nature and climate were partly responsible. Built through the ages by volcanic eruptions that left at varying heights tablelands on which could be grown food products not extensively produced in the United States, the islands became soon after the commercial treaty of 1875 a center of investment for American capitalists. Cane fields in particular flourished,

and by the middle of the eighties pineapple plantations on a small scale had made their appearance. Despite the protests of Louisiana planters, sugar soon made up an overwhelming proportion of the goods that poured into American ports from Hawaii.

The natives profited little from their growing trade. Numbering some two hundred thousand at the beginning of the nineteenth century, their ranks had thinned to slightly more than thirty-four thousand by 1890. Sugar production was from the beginning dominated largely by business-minded sons and grandsons of early missionaries and traders. Their fathers had been advisers to the native kings; they were the directors of the elected legislature that "progress" had brought. With the economic life of the islands controlled by Americans and the fields tilled by Chinese and Japanese laborers, Queen Liliuokalani, inspired by various motives, attempted when she came to the throne in 1891 to remove constitutional restrictions on her power and restore the ancient rule of her people. She met bitter opposition and in January, 1893, was deposed by a committee of public safety whose occupancy of government buildings in Honolulu was facilitated by a detachment of marines from the U.S.S. *Boston*. Minister John L. Stevens covered the provisional government, headed by Justice Sanford B. Dole, with the American flag and wrote the State Department, "The Hawaiian pear is now fully ripe, and this is the golden hour for the United States to pluck it." He meant, of course, that sugar was safe, yet sugar alone was not responsible for the events that occurred. There was in the islands a widespread demand for a stable white government and in the United States a growing realization of the strategic military position of Hawaii.

The new government acted quickly. Within three weeks of the outbreak of the revolution a treaty of annexation had been signed and was on its way to the Senate. But the political wheels in the United States turned even faster, bringing Grover Cleveland (after a four-year absence) to the White House before ratification could be accomplished. Cleveland, often narrow in his concepts but always firm in his convictions, reminded the expansionists that there were international as well as national morals to be upheld. Though plagued by silver troubles, harassed by an empty treasury so far as gold was concerned, and assailed by doubts as to whether he could muster enough power to beat down the protective tariff, which, he was convinced, was enriching the industrialists and robbing the poor, he took time to withdraw the treaty from the Senate, appoint an investigating committee to examine the facts "attending the subversion of the constitutional Government of Hawaii and the installment in its place of

the Provisional Government," and entertain the hapless queen by sending her on a junket down the Potomac past Mount Vernon. Minister Stevens and the business men who had had his confidence and assistance were condemned, but "Queen Lil," bitter and vindictive and determined to behead the native revolutionists, could not be put back on a throne that had been cut from under her. A republic was formed, and during the Spanish-American War a joint resolution of annexation, introduced before hostilities began, was pushed through the Republican Congress. Formal transfer was made on August 12, 1898. The faint clash of empires East and West that was eventually to grow into a mighty holocaust was already to be heard in the protests of Japan against the action of the United States.

Samoa. Far below Hawaii across the equator in the South Pacific the Samoa or Navigators Islands had long attracted the attention of Americans. By the eighteen thirties whalers had begun to use the islands as a refuge and missionaries had started their work among the natives. Not until after the Civil War did commercial interests become concerned. Even then there was little to interest business men, for economic temptations were few. Pago Pago Bay in Tutuila, however, was as critical in the defense of the South Pacific as was Pearl Harbor in that of the North Pacific. Soon officials, military and otherwise, were seeking treaties with native chieftains. Before the end of the seventies an agreement granting exclusive privileges to the Americans was duly ratified.

England and Germany too, not unaware of the significance of strategic harbors in the Pacific, soon sought and obtained special concessions from tribal leaders. In the middle eighties Bismarck, pushed by the pressure of commercial interests into the colonial conflict, stirred up an insurrection in the islands and raised the flag of his empire at Apia. The objections of Secretary of State Bayard, backed by President Cleveland, were in vain, for England, needing support for her Egyptian and Near Eastern ventures, backed Germany. After much bickering among the powers and some unbecoming efforts on the part of each to win the support of rival chieftains, a tripartite government or condominium was agreed to during the Harrison administration. In spite of many irritating incidents, this arrangement, which the United States had entered into only because of fear of losing completely her influence in the islands, worked reasonably well. Such an entangling alliance "with foreign powers in relation to objects remote from this hemisphere" was indeed a departure, and Cleveland, back in the White House in 1893, requested that Congress nullify its action. His recommendation was ignored. Joint rule came to an end in

1899, however, when the Republicans agreed to a division of the islands between Germany and the United States, England obtaining compensation elsewhere. The harbor of Pago Pago, which long before had sheltered whalers and welcomed missionaries, had taken on a new meaning with the growing interest in an isthmian canal. Even Jarvis, Baker, and Howland Islands, west and south of Hawaii, which had been taken over before the middle of the century, were eventually to become important stepping-stones on the airways to the Orient.

Latin America. While events were shaping the course of the nation in the Pacific, interesting developments, formed in part by economic factors, were in progress in Latin America. The countries to the southward, protected by the Monroe Doctrine, were not open fields of international rivalry so far as territorial possession was concerned, but they were fruitful ground for world quarrels. Internal revolutions and the material and political ambitions of Spain, England, and Germany brought many critical episodes in which the United States played in general the part of peacemaker. The arbiter was not wholly unconscious of the commercial gains to be had. James G. Blaine in the early eighties attempted to establish a pan-Americanism that was primarily economic in nature. He sought by reciprocity agreements to reshape the lines of trade in such a manner as to provide new markets for the growing industrial nation. Latin America had long sent small quantities of raw materials northward but for the most part had purchased manufactured goods in the cheap markets of Europe. The unfortunate death of President Garfield removed Blaine from his office as Secretary of State, and not until the election of Harrison did he have an opportunity to launch his program in earnest. Suspicious of the good intentions of their dominating neighbor, the Latin delegates to the first Pan-American conference, assembled in Washington in 1889, rejected Blaine's proposal of a customs union as well as his suggestion of arbitration of international disputes. The Republican party attempted to carry out the plan by legislative measures attached to the tariffs of 1890 and 1897; protectionists in the ranks, however, were not easily overcome.

The relations of the Americas became worse rather than better as the century neared its end. Foreign complications increased also. When gold was discovered in the hinterlands of British Guiana and Venezuela, England laid claim to a great portion of the territory of the latter state. Cleveland, failing in his effort to obtain arbitration of the question, sent a message to Congress in which he bluntly threatened war. At the same time his Secretary of State, Richard Olney, officially declared that the

United States was virtually sovereign on the American continent and that its fiat was law "upon the subjects to which it confines its interposition." Imperialism defeated imperialism; the British were too busy in other places to take up a quarrel with the United States. Trouble was already brewing in Africa, and early in 1896 English-German hostilities were thrown into strong relief by the congratulatory telegram that the Kaiser sent to Kruger, leader of the Boers, on his beating back the Jameson raid in the Transvaal. Under the circumstances Anglo-American relations quickly improved, and the Venezuela dispute was submitted to arbitration. Latin America, however, grew more suspicious than ever of the United States, and there was no thriving trade to smooth over the difficulties.[4] The facts that Mexican resources were with the cooperation of President Diaz being exploited by capitalists of New York and other financial centers and that the nation was moving toward the Caribbean were not overlooked.

The Spanish-American War. The climax of American participation in world affairs in the nineteenth century occurred just as the last of those hundred years were passing. There came at the same time the nation's greatest period of land acquisition in distant places. The Spanish-American War brought under the domination of the United States not only neighboring Cuba but also the Philippines, whose location in the far-off Pacific was unfamiliar even to the President. Moreover, the military forces on the way to Manila took possession of Wake and Guam, and the war spirit hurried the final acts in the annexation of Hawaii and Samoa. The people of the United States were in general little interested in spreading the flag over distant lands of the earth. Nevertheless, forces that had long been in the making were pushing the nation outward. Technical developments in the gathering and disseminating of news were rapidly destroying local frontiers of knowledge; industrialism, grown to giant status, was straining at the leashes that bound it to traditional markets; peculiar products not native to the long-established states of Europe and America were becoming ever more enticing and essential; capital, though there were opportunities at home to be exploited, was pouring into strange places; governments everywhere, stirred by nationalistic ambitions, were reaching out in irritating eagerness to new holdings in Africa and China and elsewhere; and meekness had ceased to be a virtue.

Moral fervor too was expanding its horizons; the responsibilities of

[4] Between 1860 and 1900 the purchases of the United States in South America increased only from nine to eleven per cent. Sales fell from four to two.

greatness bore heavily upon internationalists,[5] and the "white man's burden" appealed to the humanitarian instincts of many. Furthermore, advocates of a "large policy" such as Theodore Roosevelt, Henry Cabot Lodge, Albert J. Beveridge, and others pressed for expansion and grandeur. They drew their inspiration in part from Captain Alfred T. Mahan, exponent of sea power as a determining influence in the course of world history, who urged a big navy with coaling stations in strategic places that would free the fighting ships of dependence on their bunker capacities measured in terms of supply bases at home and thus enable them to guard national interests wherever necessary. Business men and financiers had only to let others build and fortify their economic empires for them.

It was the situation in Cuba that brought the restless forces in America to a focus and provided opportunity for a rapid growth of the imperialistic spirit. Sympathy for an oppressed people and not imperialism, however, was the major factor in stirring popular support of the war of 1898. But that sympathy was created by other than purely humanitarian interests. Spanish rule in Cuba had long been characterized by cruelty, oppression, and exploitation, yet nobody had been especially concerned. The ten-year revolution that broke out in the late sixties had prompted no real protests even though American property was destroyed and the crew of a vessel flying the American flag summarily executed. The uprising that burst forth in 1895, however, brought immediate response. The people of the United States were gravely offended by the actions of "Butcher Weyler," the Spanish general who gathered the noncombatants—men, women, and children—into filthy concentration camps, where many died of starvation and disease. Demands for the liberation of Cuba rose to a mighty chorus.

The dramatic change in American attitude regarding Cuba was the result of many things. The economic interests of the nation in the islands had grown rapidly during the preceding twenty years. Investments had reached some fifty million dollars, and the value of annual trade amounted to twice that sum; sugar had become a firm economic tie that bound Cuba to the United States. Bond sales, filibustering expeditions, and propaganda campaigns played their parts, as did also the plea of the clergy. More important, perhaps, in its popular appeal was the new journalism

[5] Minister Stevens, for instance, wrote after the Hawaiian revolution of 1893 had posed the question of annexation of the island, "I think we should accept the issue like a great Nation, and not act the part of pigmies nor cowards." Tennyson expressed the same sentiment in a birthday poem to his queen when he prayed that England's greatness might not fail by "craven fear of being great." Richard Olney said in an address at Harvard in March, 1898, that "isolation that is nothing but a shirking of the responsibilities of high place and great power is simply ignominious."

that had appeared. Marked by sensationalism, exaggeration, and even falsification at times, the "yellow" press, led by William Randolph Hearst and Joseph Pulitzer, beat incessantly the drums of intervention. February, 1898, was a fateful month. On the ninth a filched letter written by the Spanish minister criticizing President McKinley was printed in the New York *Journal,* and on the fifteenth the battleship *Maine* was blown up in Havana harbor with a loss of two hundred and sixty lives. Events moved quickly, and the nation, ignoring Spain's abject concessions to maintain peace, launched into war in April with the battle cry "To Hell with Spain! Remember the Maine!"—though nobody inquired as to why the ship had been in Havana harbor.

The Spanish-American War was brief but not inexpensive. Thousands of men rushed to the colors, bands played, headlines screamed, and the regulars moved down to Tampa, Florida, to train. The spirit of patriotism was strong. The economic sinews of war, however, were weak. There were few effective rifles to be had, black powder only was obtainable for the volunteers, and the commissary problem was apparently insoluble. Moreover, the troops for the most part sailed off in winter uniforms to fight in a Cuban summer. Khaki, a cotton fabric used by the English in India and called by the Indian word meaning "dust-colored," was introduced in the American army at the time, but the amount of cloth available for importation was small, and production was held up in the military supply depots because the iron in the dye broke the needles in the sewing machines. Yet in spite of difficulties, an expeditionary force landed on the beach at Daiquiri in late June. Both military and political history were made on the battlefields of Las Guasimas, El Caney, and San Juan. On the third of July the Spanish fleet of Admiral Cervera, which had been bottled up in Santiago Bay, bravely attempted escape, only to be completely destroyed. Soon Puerto Rico was taken over by General Miles, and the war in the Caribbean was ended.

The liberation of the Cubans from Spain was merely part of the Spanish-American War. The men of "large vision" in world affairs had seen to that. Theodore Roosevelt as Assistant Secretary of the Navy had in February, 1898, ordered Commodore Dewey to be ready in Hong Kong to begin offensive operations in the Philippines, and so it was that weeks before the blundering expedition got under way in the Caribbean, Dewey steamed into Manila Bay and blew the Spanish fleet there to pieces. The conquering battleships did not then sail out for home but sat flying the American flag in that far harbor of the world where all but native authority had been uprooted. America was face to face with the "new" imperial-

ism, and not only the people at home but the governments of England, Germany, and Japan as well were interested in what course she would take.

The Defense of Imperialism. Statesmen, editors, historians, sociologists, industrialists, and economists pressed to the defense of expansion. "The year 1898 will be one of the epoch-marking years in the history of the United States," wrote John R. Proctor in the *Forum*. "In this year is to be decided the great question whether this country is to continue in its policy of political isolation, or is to take its rightful place among the great World-Powers, and assume the unselfish obligations and responsibilities demanded by the enlightened civilization of the age." Steam and electricity, he went on, had "so drawn the ends of the earth together" that civilized society was fast becoming one highly organized and independent whole. The nation, he argued, if it accepted "the responsibilities thrust upon it by Dewey's glorious victory at Manila," would not only carry freedom to the oppressed but also rid itself of the unrest and internal dissensions at home that isolationism and a narrow political horizon had created. Moreover, if America joined in the bolstering of Anglo-Saxon civilization, "the dangers which threaten that civilization will disappear like the mists of the morning." Dr. Lyman Abbott in the *Atlantic Monthly* pointed out that because the United States was already entangled with all the other countries of the earth "by commerce, by manufactures, by race and religious affiliations, by popular and political sympathies," it was no longer possible to remain aloof from the world, and his sentiments were echoed by Dr. Albert Bushnell Hart of Harvard in *Harper's*. Henry Cabot Lodge demanded "one flag and one country" from the Rio Grande to the Arctic Ocean as well as in Hawaii and Samoa in the Pacific and Cuba in the West Indies.

Economic interests were not overlooked; many individuals were acutely aware of the potential demand for capital and goods in undeveloped lands. "The United States," asserted Charles A. Conant in the *Review of Reviews,* "cannot afford to adhere to a policy of isolation while other nations are reaching out for the command of these new markets. The United States are still large users of foreign capital, but American investors are not willing to see the return upon their investments reduced to the European level. Interest rates have greatly declined here within the last five years. New markets and new opportunities for investment must be found if surplus capital is to be profitably employed." Proctor, forgetting that the limited industrial exports of the nation at the time were of real significance only to the people who bought them, declared that the output

of manufactures had reached a point of large excess "above the demands of home consumption," and Charles Denby, knowing from diplomatic experience that "commerce, not politics," was king in international affairs, asserted, "We are after markets, the greatest markets now existing in the world." Franklin H. Giddings, eminent sociologist at Columbia, saw in expansion economic betterment and improved relations with Great Britain and other nations. Business men, indifferent if not opposed to the war in the beginning, fell under the sway of the great promises of material gain and began to dream of new riches in the Caribbean and westward in the Pacific.

The pressure of the expansionists had its effects, and the treaty ending the war, signed December 10, 1898, stripped Spain of the Philippines and her possessions in the West Indies and confirmed the claims of the United States to Guam. The spirit of liberation that had been so intense at the beginning of the war now found expression only in the resolution to maintain the Teller amendment in relation to Cuba. That amendment declared that the United States disclaimed "any disposition or intention to exercise sovereignty, jurisdiction, or control over said Island except for the pacification thereof, and asserts its determination, when that is accomplished, to leave the government and control of the Island to its people." Strangely enough, only Puerto Rico in the Caribbean, where America had vital interests, was taken over, but in the Pacific, where no real values were at stake, the entire Philippines were annexed. Clearly the United States had entered on a new and complex phase in its international relations. The Stars and Stripes flew over Puerto Rico, Hawaii, Alaska, the Aleutians, Midway, Howland, Baker, Jarvis, Samoa, Wake, Guam, and the Philippines; scanning the globe in 1900, many Americans no doubt caught the spirit of the cartoonist's caption "By Gum, I Rather Like Your Looks."

The Indictment of Imperialism. The entrance of the nation into the field of imperialism was not accomplished without opposition. Protests had been numerous since the beginning of the war, and the Senate ratified the final treaty by a margin of only two votes. Beet-sugar growers in the West and cane-sugar producers in Louisiana saw their investments and their industry slipping away from them in competition with cheap Oriental labor in far-off fields. Tobacco raisers too feared economic loss. Industrialists such as Andrew Carnegie suspected that imperialism would mean the conversion of great industrial plants to munitions factories and shipyards. Many reformers believed that a republic and imperialism were incompatible. Dr. Felix Adler wrote in the *International Journal of Ethics*

that democracy by its very nature was incapable of ruling subject peoples. Furthermore, he asserted, to absorb Orientals would halt social reforms just then beginning. He favored development of home markets in preference to the building up of sales in foreign lands.

Many statesmen in both old parties warned the nation against the new obligations that were being assumed. Senator Hoar of Massachusetts vigorously led the Anti-Imperialist League. Thomas B. Reed resigned his seat in the House of Representatives, where as Republican Speaker he had been an important figure for many years, rather than follow strange paths to greatness. John G. Carlisle, three times Democratic Speaker of the House in the eighties and Secretary of the Treasury under Cleveland in the nineties, opposed too the new departure. Dreams of wealth, of commercial supremacy abroad, of martial glory, and of autocratic dictation in great international councils would bring, he said, only trouble. Expansionists, he declared, must go with arms in their hands, and the only returns would be that the people at large would "simply enjoy the privilege of paying the cost." He could not have dreamed that a reckoning within three decades would show an expense account of more than a billion dollars and a loss of more than five thousand men.

There was perhaps some justification for the spread of the nation into the Caribbean but little for its imperialistic reachings into the Pacific. A purely economic interpretation in either case is open to dispute. New sales were welcome and new raw materials useful, but neither were at the time essential. The machines of American industrialism were not smothering themselves in their own outpourings, nor were their gaping maws running empty. The capitalists and financiers of the day needed no outlets for idle dollars; they were, in fact, just beginning to attain success in persuading people of moderate means that they should invest their money in home industry. Moreover, there was no question of overpopulation. The factories were still hungrily demanding workers, and the wheels of immigration did not grind to a stop for several years. One must nevertheless admit that material factors were significant. Private letters of financiers reveal capitalistic interests, particularly in Cuba and Hawaii. Files of the State Department in Washington show the influence of these individuals on government officials. The name "Dole" on pineapple cans is a memento of economic penetration, and the presence of United States marines in strange places over the world reveals the expansion of the democracy.

There is a strong possibility that the gains secured by force might have been obtained by other methods. Certainly the Philippines have been an

expensive responsibility. Professor Goldwin Smith wrote at the time of the conflict that "in the outbreak of the war which has led to the acquisition of transmarine possessions and to the belief in the opening of an Imperial era, we seem to see, not the finger of Destiny pointing to empire, but the consequences of a popular misapprehension, largely due to the influence of the 'Yellow Press,' whose red extras are hardly a sufficient warrant for a total change in the character, aims, and aspirations of the American Republic." Several years later Professor Samuel Flagg Bemis, diplomatic historian, characterized the acquisition of the Philippines as "the great aberration." Time was to bring new expenditures, new interpretations of the Constitution (the Insular Cases), new foreign economic and political developments, and at last two wars that made of far places unknown in 1898 things familiar.

Chapter 28

TWENTIETH-CENTURY INDUSTRY TO 1929

Industry between 1900 and 1929 followed for the most part traditional lines, yet it developed peculiar characteristics and products of its own. Progress, though lacking in uniformity, was no less remarkable than in the thirty years preceding the turn of the century. Emphasis shifted, however, from the creation of the basic goods needed in the development of a national economic structure to the production of things for personal consumption, and mechanical equipment and methods of operation underwent striking transformations. The clumsy and easily observed machines of other days were replaced by great enclosed banks of complex devices working in perfect unison to produce finished articles. Concentration of ownership continued, and the corporation rose to giant status; United States Steel was only the first of the billion-dollar institutions. Wage earners as never before poured into the factories, shops, and mills. They became, said some, merely robots hurrying at the beck of their metal masters. Indeed, in many cases they left no imprint upon the product of their labor. In cigarette manufacturing, for instance, the worker became scarcely more than an inspector who was except in an emergency totally unconnected with the operation of the nimble steel hands that rolled and packed millions of cigarettes daily.

In many of the heavy industries the gigantic machines grew beyond the power of any laborer to manipulate; the human attendant could command only through the familiar twentieth-century electric button—and if obedience was not prompt and absolute, call a mechanic. In problems too complex for mechanical solution the wage earner became the stationary machine to which the assembly line brought the work to be done. Machinery, nevertheless, did not "take all," as is frequently suggested. It was secondary, for example, in what for lack of a better name may be called the "service industries," such as radio and the "movies." In every field the contribution of individuals was apparent. The accomplishments of the scientist in particular were easily perceived; the rising curve of material output owed much to his toil and his genius.

The Extent of Industrial Growth. It was a combination of machinery, science, capital, and an unusual demand for physical possessions that provided the impulse for industrial growth in the first three decades of the twentieth century. Never before in the history of civilization had so many changes in national economic and industrial life appeared in so short a time. During those thirty years the number of wage earners in the country increased from four million seven hundred thousand to eight

TABLE III

VALUE OF MANUFACTURED GOODS

Item	*1900*	*1929*
Boots and Shoes	$259,000,000	$ 970,000,000
Breads and other Bakery Products	175,000,000	1,500,000,000
Canned Fruits and Vegetables	56,000,000	750,000,000
Carpets and Rugs (other than rag)	48,000,000	176,000,000
Cheese, Butter, Condensed and Evaporated Milk	130,000,000	1,000,000,000
Chemicals	62,500,000	750,000,000
Men's Clothing	276,000,000	900,000,000
Women's Clothing	159,000,000	1,700,000,000
Electrical Machinery and Equipment	92,000,000	2,000,000,000
Flour	500,000,000	1,000,000,000
Paper and Pulp	127,000,000	1,200,000,000
Petroleum Refining	121,000,000	2,500,000,000
Printing and Publishing, Books, Magazines, and Newspapers	344,000,000	2,500,000,000
Slaughtering and Meat Packing	700,000,000	3,400,000,000
Cigars and Cigarettes	160,000,000	1,000,000,000
Worsted Goods	120,000,000	500,000,000
Cotton Goods	300,000,000	1,000,000,000
Silk (including rayon)	100,000,000	750,000,000

million eight hundred thousand, and aggregate annual wages rose from two billion to eleven billion dollars. The total value of goods produced moved upward from eleven billion dollars a year to seventy billion. Though prices changed during those three decades, the figures (Table III) bear testimony to a remarkable progress. But the population between 1900 and 1929 grew only from seventy-six million to a hundred and twenty-three million. It seemed as though all should have had enough, and yet the capacity to consume was still unsated, for the ability of the workman to buy back the fruits of his labors continued to lag behind his ability to produce.

Many factors were responsible for the ever-swelling output of American industrial plants. Especially important was a tremendous increase in power

production. Coal, oil, gas, and water each year supplied more and more energy for the prime movers that hurried the great machines. Production units with self-contained electric motors reduced the need for cumbersome shafts, belts, and pulleys and provided a flexibility hitherto unknown, and

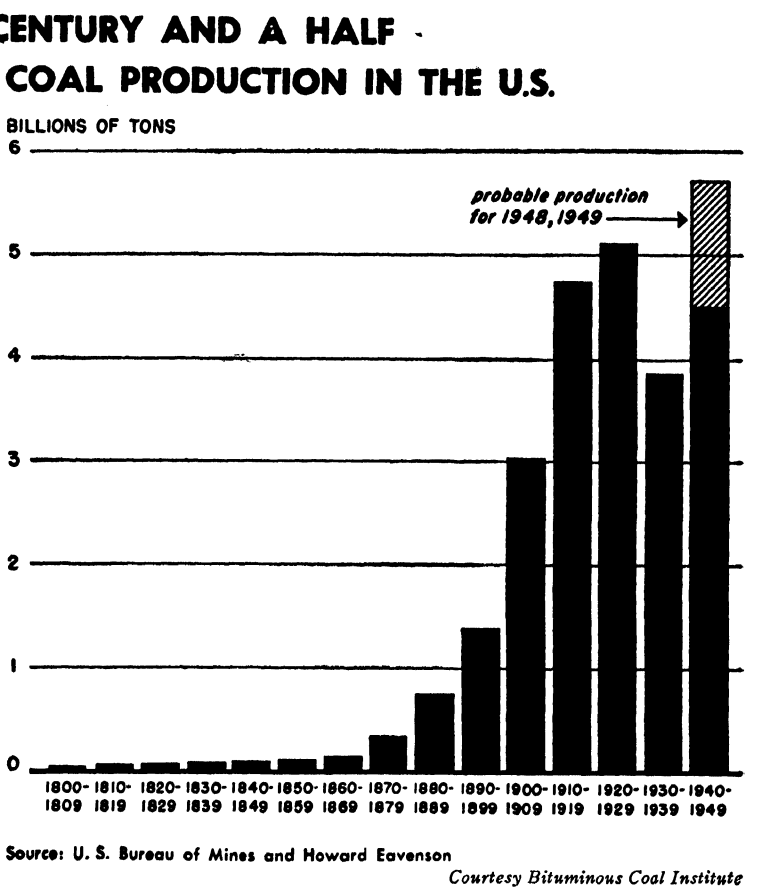


FIGURE 14. COAL PRODUCTION FIGURES

assembly lines and well-planned floor arrangements made for efficiency. Indirect causes also were involved. Installment buying was a powerful sales device; pledging their future incomes, the wage earner, the professional man, and the farmer all bought more than they could afford. Advertising too greatly stimulated demand and hence production. Tempting promises read in the newspapers, on streetcar cards, and on billboards and heard on the radio led people not only to buy but to diversify their purchases as well.

But in spite of astounding accomplishments, industry in the twentieth

century was not uniformly prosperous. Like agriculture, it suffered many ills. The two, in fact, paralleled each other closely in the ebb and flow of their fortunes. In each there was a period of relative prosperity between 1899 and 1919, and in each thereafter troubles came thick and fast. Although business boomed in the fabulous twenties, farmers could not sell their grain and many laborers found jobs becoming more difficult to obtain and pay envelopes growing thinner. The suspicion that the vaunted prosperity of the decade was fictitious except for some real monetary gains on the part of a handful of financial manipulators and much mental enjoyment by a host of money dreamers in the speculative markets of the world was not unfounded. Nevertheless, employment increased in twenty-two of the forty-eight states between 1919 and 1929; it is significant that the most rapid gain was made in the five southern states of South Carolina, Tennessee, North Carolina, Georgia, and Texas.

Characteristics of Twentieth-Century Industry. *Variety and Cheapness of Products.* Statistics as to production are only a part of the story of industry in recent times. Many developments and characteristics mark the period distinctly. Nothing is more striking than the great diversity of products that appeared. New resources were called into being. Soy beans, corncobs, corn and cotton stalks, oak husks, and other things that had once been merely animal food or waste came to be fundamental parts of the factory system. Changes in tools, improvement in the quality of metals, and a willingness to employ scientific knowledge combined with a variety of other things to push the frontiers of mechanical production into every phase of human existence. So complete was this invasion that Americans became for the simplest details of their daily lives almost wholly dependent upon the industrialism that they had created. The self-sufficiency that in large measure had once been a part of the home practically disappeared.

Many of the new items that appeared were inexpensive. The rich, it is true, enjoyed articles of better quality, but satisfactory substitutes were within the reach of the poor. While the Cadillac carried the corporation president to his office, the Ford took the workmen to the plant with equal reliability and with greater economy. The massively carved radio cabinet served its purpose scarcely better than did the tiny plastic box that cost only a few dollars. Treasured stories of the past lost their meaning. Jack and Jill who went up the hill to get a pail of water had no appeal to children who got their water from a faucet, the little red hen that ran to tell the king the sky was falling meant little to readers whose knowledge of hens was limited to those that came from the market already plucked, and the pot that called the kettle black taught no lessons.

The superabundance of products, great and small, each an exact duplicate of others of its kind, had, asserted many critics, brought American economic life to an age of mediocrity by the end of the twenties. Industry, they declared, had in field, forest, mine, office, home, and factory made human beings servants to the pounding wheels. And at times it did seem that machines, as was said of English sheep in the days of the enclosures, had become "devourers of men." Indeed, too frequently they stripped the worker of his job, leaving him unable to buy their outpouring products or pay for their upkeep. Yet no previous generation had enjoyed so many comforts or had such a magnificent opportunity to view the world each day. The man who drove his own car home at night, enjoyed a hot bath in tub or shower, dined on foods gathered from the four corners of the earth, read his paper beside a radio that brought him news from far-away places, went to see a moving picture that gave him talking romance and took his eyes over the world, and at last went to sleep on an inner-spring mattress (vastly more comfortable than the straw-filled tick of other days)—that man may have been a slave to the machine he had produced, but his life could never be justly called mediocre.

Supremacy of Tools and Machines. Industry was characterized also by an abundance of infinitely flexible automatic instruments of production. Machine tools, basic in mass production, were of especial importance. They made metals pliable and therefore increased not only the variety of goods but also the speed and precision of their fabrication. They created machines that surpassed man in skill and made of the laborer an adjunct to their operation as they turned out day after day without cessation articles whose deviations were measured in millionths of an inch. Furthermore, scientific devices were developed that rejected with unerring accuracy products whose faults could never be discovered by the keenest eyes. Progress was not limited to delicate instruments alone; only economic considerations determined the magnitude of undertakings. Monster girders from the steel mills made possible unbelievable bridges. Giant hammers molded complete automobile bodies at a stroke. Voracious scoops, belittling the hand shovel of another age, took up a ton or two of soil or stone at a dip, and great cranes carried Gargantuan loads as if they were trifles.

Mass Production. Although standardization of parts, industrial research, and scientific or industrial management had their beginnings before 1900, mass production attained its modern significance in the twentieth century. Technological progress in the creation of efficient stationary and portable machines and tools (such as the electric drill and welder) were important, but even more so were physical arrangement and what has come to be

called "know how." During 1913-1914 Henry Ford adapted the conveyor belt, long used in simple form by millers and packers, to industrial production. Since his task was the assembling of standardized parts, he standardized his procedures also by placing his workers along a moving assembly line, where each performed a single job. The time required to complete an automobile chassis dropped from fourteen to two man-hours. The idea spread to manufacturing itself, and the continuous-flow process came into being. Everywhere once-complicated production undertakings were being broken down into simple tasks that machines could perform with unbelievable speed and endless regularity. Volume leaped upward. But, said some, monotonous identity had become supreme. That was in part true—yet it mattered little, for newness and not distinctiveness had become the distinguishing mark in possessions. As a consequence used cars and other goods that still had most of their original value were thrown on the market for sale to those who could not afford to follow the buying habits of the day.

Concentrated Ownership. Trusts and monopolies grew bigger as industry fell more and more under the direction of great financiers, who, reaching out to the public for funds with which to maintain their vast empires, formed their supercorporations and sought to win markets through such sales-promotion expedients as advertising, servicing, and packaging rather than through the ruthless price cutting that had characterized the eighties and nineties. Competition did not disappear, but prices became relatively inflexible. Competing brands of similar goods cost approximately the same wherever bought. The stability of which John D. Rockefeller had dreamed in regard to oil had become a reality in the major industries of America. Independently owned producing units were in many cases absorbed by the growing corporations, and few new ones appeared. Consolidation, checked slightly by the reformers in the years before the first World War, flourished under government benevolence after that conflict. In 1933 five hundred and ninety-four corporations—each capitalized at fifty million dollars or more—owned fifty-three per cent of the corporate wealth of the United States. A handful of concerns produced a tremendous proportion of the manufactured goods consumed by the nation. Iron ore, copper, aluminum, coal, and oil as well as money were dominated by a few individuals. Interlocking directorates and the holding-company device extended control without ownership. Six corporations held thirteen hundred and seventy-seven directorships in other businesses, and the banking house of J. P. Morgan commanded directly or indirectly some seventy-four billion dollars of corporate wealth. Power production was almost completely in the hands of a half-dozen financial groups, though in 1931 President Hoover vetoed

a bill for the construction of power facilities with the statement that he was "firmly opposed to the Government entering into any business the major purpose of which is competition with our citizens."

Impersonal Labor. Financial concentration and the rise of huge production units were no more characteristic of twentieth-century industry than was the growth of a laboring body that so far as employer-employee relations were involved was wholly impersonal. Technological progress, while it brought demands for greater skills, made of many workmen simply animated machines who performed at fixed places and at predetermined speeds specific tasks. Pushed out of any possible contact with management except for his immediate foreman, who was often a petty dictator in his own little industrial world, the laborer found no way to demonstrate his initiative or even to voice his grievances. Scientific placement, profit sharing, incentive payments, and similar expedients were in part attempts to lessen these evils that had grown up as a natural accompaniment perhaps of the growth of an economic system to giant proportions. Unions, long known, took on a new aspect—they became a means of equalizing bargaining and a method of self-expression as well. Unfortunately the very size of the laboring body itself prevented full realization of the latter function, and the wage earner found himself limited to group-expression—though the group of which he was a member was sometimes led by individuals whose personal ambitions differed little from those of administrators in any other field, political or economic. Individualism everywhere had been swallowed up by urbanization and bigness; the man of toil in the workshops, as he made no longer with his own bare hands the things he needed, won no longer (even in his unions) his rights with his own tongue.

Migration and Decentralization of Industry. Until recent years industry tended to follow the population westward. In 1850 manufacturing found its center just beyond Harrisburg in Pennsylvania; the center of population fell barely short of Parkersburg in what is now West Virginia. By 1900 the population center had reached Columbus, Indiana, and the center of manufacturing, still lagging, had moved onward to Mansfield, Ohio. The westward movement of nineteenth-century industry, however, turned before 1929 into a general migration that lacked specific direction. Branch factories, aided by improved means of transportation, grew up in every geographic section. Progress was especially rapid on the Pacific coast. The South too became important industrially. Flying in the face of the past, there rose out of the fields once devoted to cotton a host of boxlike factories. From the farms and out of the hills came traditional agrarians to join the army of wage earners and learn new ways of life. Not only did manufac-

turing spread fanwise over the nation; long-established centers of concentration weakened. The amount of meat packed in Chicago, for instance, declined from thirty-five per cent of the total in 1899 to slightly less than nineteen per cent a few decades later, and the percentage of rugs and carpets made in Philadelphia fell from forty-five to twenty-seven. A definite migration from city to country was ended by the depression before either its economic or its social significances could be discerned.

The Growth of Traditional Industries. A detailed account of the expansion of the industries that had their origins and their basic developments in the period between 1865 and 1900 is perhaps needless, yet the genius of invention makes the oft-told story ever new. Certain aspects must be discussed at least briefly, for new machines and techniques furthered outstanding progress in the manufacture of basic goods and in the production of a host of items for personal consumption.

The Metals Industry. Iron and steel between 1900 and 1929 remained key materials; it was during those years, in fact, that wood for the first time became merely an incidental component of most manufactured articles. The Lake Superior district continued to supply a major portion of the ore from which the metals were made, but centers of production shifted strikingly and output expanded enormously. Huge plants sprang up in Ohio, Indiana, and Illinois, especially along the lake shores, to challenge Pittsburgh, home of the "Pittsburgh millionaires" of the Carnegie era. Because of its financial dominance of the industry, Gary, mushroom town built by the United States Steel Corporation on the sand dunes of Indiana just east of Chicago and named after the president of the company, was the most important of the young rivals. While few fundamental changes were made in iron smelting, the open-hearth method of steel production forged ahead of the Bessemer process between 1900 and 1910. Before 1930 many new steels and steel alloys (including stainless steel) had been developed; some were especially useful in the making of tools and cutting instruments.

The combined value of the lesser metals such as copper, lead, zinc, aluminum, gold, and silver was at the beginning of the thirties less than that of pig iron. Two of these metals, however, were of particular importance. As electrical installations, equipment, and devices increased in number and as builders began to substitute copper tubing for the iron water pipes previously used in home plumbing, the consumption of copper leaped rapidly upward. Aluminum too was growing in popularity in spite of its high cost. Manufacturers of airplanes, automobiles, electrical appliances, and radios and even builders of towering skyscrapers found it indispensable, and it brought to American homemakers real aid by providing light-

weight and durable pots, pans, gadgets, and cleaning equipment to replace the clumsy iron and perishable tin of other days.

The Chief Manufactures of Metal. Although in modern times such diverse things as huge locomotives and "Eskimo pies" have occasionally vied with each other for economic attention and the gaudiest novelties have frequently competed with the most basic goods, the progress of man still rests essentially on metal products, notably machines—machines that range from the small and easily manipulated devices for homes, farms, and business offices to the pounding giants in the great factories. The railroads, chief patron of the steel mills between 1865 and the end of the century, had by 1910 reached their peak of expansion. A more extensive use of metal in car frames and bodies and the installation of modern automatic signal devices helped cushion the inevitable decline in consumption, but maintenance of the roads as large consumers of iron and steel throughout the twenty years preceding 1929 rested primarily on the need for parallel tracks and yards and sidings to keep pace with urban growth and for new locomotives and cars to haul the swelling cargoes. Only automobiles made more consistent demands. Tremendous amounts of metal were used, however, in producing the impressive array of other machines of many types that poured from the busy shops of the nation. By the end of the twenties the output of the factories had reached staggering proportions. The value of electrical apparatus and supplies exceeded two billion dollars. Machine tools alone turned out that year were worth more than a quarter of a billion.

Business houses changed drastically as to equipment and personnel as women, replacing the male clerks and stenographers of previous years, became after the first World War essential parts of the new filing-case economy. Typewriters were improved, and partially successful shorthand writers were devised. Dictographs saved time; they enabled the busy executive to separate himself completely from the usual mechanics of correspondence and freed the typists from frequent interruptions. The multigraph, the mimeograph, and other instruments for low-cost copying reduced expenditures appreciably. Computing, adding, billing, bookkeeping, and addressing and mailing machines and automatically operated cash registers cut down enormously the number of worker-hours involved in purely routine duties. Mysterious gadgets such as the electric eye performed strange feats, and mechanical contrivances sorted, counted, and packed dishearteningly mountains of data with astounding speed.

Even the home was in part mechanized. The electric vacuum cleaner superseded the broom and the rug beater; electric mixers and grinders and

automatic lighters and temperature controls lessened the burdens of the kitchen; electric washers and ironers mitigated the labors of "blue Monday," traditional washday. In 1929 American homemakers spent more than eighty million dollars for laundry equipment, about the same amount for vacuum cleaners, and over forty-five million for sewing machines. Only on the farm was the housewife still tied to the ancient past; it required a depression to bring to her a few of the blessings of modern industrialism.

Although agricultural incomes were until 1914 in reasonable balance in the economic system, the restricted output of farm machinery in part reflected the poverty that fell on the farm lands after the war. The slack in demand was less real than it appeared, for in some cases the agrarian, hoping to extract himself from his trouble (see chapter 29), bought in desperation whenever he could. In addition, business-minded corporations seeking to make profits from properties acquired through foreclosures invested heavily in equipment. The number of tractors in use jumped from eighty thousand in 1918 to eight hundred and fifty thousand in 1929. McCormick and Deering (already swallowed up by the International Harvester Company) and J. I. Case and John Deere as well as other concerns far along in their first century of production continued to turn out an ever-widening variety of implements. Nevertheless, the value of farm machinery manufactured in 1929 was twenty-five million dollars less than ten years before.

The Building-Materials Industry. Construction to 1930, especially after 1918, was unusually large in amount. The separation of administration from operation in industry greatly augmented the demand for office buildings; the growth of city and suburban areas that expanding electric, gas, water, telephone, and transportation facilities made possible stimulated the erection of new homes throughout the nation; and the development of the automobile necessitated the construction of many gigantic bridges and thousands of miles of roads and streets.

Most outstanding of the building materials that came into popularity at the opening of the century was cement, a product of the quarries. Its primary characteristic is its ability when mixed with water to harden into a solid mass, called concrete, even when combined with large amounts of sand and stone. Natural cement was used in the days of ancient Rome, and its revival in England in the eighteenth century spread to the United States, where in 1818 Canvas White, aware of the needs of the builders of the Erie Canal, began its manufacture at Fayetteville, New York. It was Portland cement, however, that won for the twentieth century the appellation "the age of concrete." Patented in crude form in England in 1824

and so named because of its resemblance to stone from the Isle of Portland, it won wide popularity. David O. Saylor of Allentown, Pennsylvania, an early experimenter with natural cement, made the first Portland in America. In spite of the fact that he was in 1871 awarded a patent on his process, Saylor, a country boy of limited education, soon ran into difficulties. His problems were solved by John W. Eckert, who, as a chemistry student at Lehigh University, had a short time before made the chemical analyses for the directors of a geological survey that the state had authorized. The cement industry spread slowly from Allentown over the Lehigh valley district of eastern Pennsylvania and into New Jersey. Domestic manufacturers waged for many years an unequal struggle against foreign imports; but the perfection of the rotary kiln in the early nineties substantially improved control over quality, and the Spanish-American War brought government support.

After 1900 the production of Portland moved upward with remarkable speed. The output jumped from three hundred and thirty-six thousand barrels in 1890 to a hundred and seventy-six million in 1928. In the latter year the industry was employing more than thirty-six thousand wage earners with an aggregate payroll of over sixty million dollars, and freight shipments of the product were exceeded only by those of oil and steel. Cement had become an essential in construction; as the woodworker had long before found in iron a malleable substitute for wood, so the mason found in concrete in the twentieth century a pliable substitute for stone and brick. The use of stone, clay (basic material of such items as brick, terra cotta, fire clay, drain and building tile of various types, earthenware, stoneware, china, and porcelain electrical supplies), sand, and gravel continued, however, to grow. The nation paid for those products in 1929 in excess of half a billion dollars.

Consumption of glass as a building material increased rapidly after 1900. In home, office building, and factory there was an ever-growing demand for natural light. Industrial plants in some cases became merely steel skeletons filled in with glass; a baking concern used "Sunshine" as the key word in its name and made advertising capital of its "thousand windows." Panes, originally blown in cylindrical form and then slit and flattened, were now rolled by machine. Production techniques in the making of plate glass also were improved. Huge sheets so free of distortion as to be called "invisible" enabled merchants and shopkeepers to display their wares attractively in windows and show cases. After 1905 the automobile industry became a heavy consumer.

Structural glass of many types was widely employed; it was an excellent

fire retardant, and it permitted the industrial architect to shut out weather, unsightly views, and annoying urban noises without perceptibly obstructing the total amount of natural light available. Glass blocks (not perfected until the early thirties) were developed in 1910. New methods in coloring and grinding mirrors brought possibilities that challenged the imagination of interior decorators. Beautiful porcelain fixtures and accessories for washrooms and bathrooms in public buildings and private homes made personal cleanliness a temptation.

Wood, though superseded to some extent by stone, concrete, and glass, remained essential in economic life. It continued to make up a considerable proportion of all buildings, especially interiors, and it still played the major role in the establishment and maintenance of railroad tracks and telephone and telegraph lines. Few industries were wholly independent of wood. So great was the need, in fact, that conservationists, who first became active in the early years of the century, made forest preservation an important part of their program. And well they might, for by 1899 the center of lumber production had moved over the Alleghenies and on into Michigan, Minnesota, and Wisconsin and southward to swing along the Gulf from Georgia to Texas, including Arkansas and Oklahoma. Thirty years later powerful caterpillar tractors were "snaking" giant logs from the Pacific forests, last timber frontier of the nation.

The Coal-Mining Industry. The quantity of coal consumed increased generally throughout the first three decades of the twentieth century. Competition on the part of other fuels, however, grew more serious each year. Many industrialists found it far simpler to purchase electric power than to maintain their old coal-burning engines, and a large percentage of the new machines that were being manufactured were operated most effectively by self-contained motors. More than twenty times as much electricity was used in 1928 as in 1902; between those years the amount of coal necessary to produce a kilowatt-hour of current was reduced from six and six-tenths pounds to one and eighty-four hundredths pounds. Moreover, home owners turned to oil and gas for heating purposes. Specially designed boilers were built with a view to efficiency and cleanliness, and thousands of coal furnaces were converted into oil burners. The Interstate Commerce Commission estimated at the beginning of the thirties that a hundred and twenty million tons of coal had been supplanted by oil and gas. Only in the great iron mills, where coke remained supreme (though some electricity was used in smelting), did coal hold its own.

Coal mining became partially mechanized before the opening of the twenties. The installation of electric lights, electric cutters, and electric

loaders by the larger companies alleviated the back-breaking labor involved, and the introduction of mine inspectors, mechanical fans, and safety lamps diminished inherent dangers. Nevertheless, the industry remained always a precarious one both for capital and for labor. By 1920 it was dreadfully sick economically. As machinery lessened the need for human energy and competition restricted the industrial coal market, days of work became few indeed. Once or twice a week the workers were called to the mines by the whistles. The rest of the time they gathered in the sun on the hillsides, squatted about the shafts on the plains, or sat on the porches of company stores, where their accounts were usually in arrears. Conditions in the anthracite districts differed vastly from those in the bituminous regions, and wages and living costs varied from section to section; yet everywhere the miners confronted, as they had always done, a basic problem of poverty that was not wholly unrelated to fundamental difficulties in the industry itself.

Petroleum Production. While the coal miners were being forced into progressive unemployment, the oil producers of America were working with feverish haste. Trusting to science or to pure luck, drillers over the land sank holes deep into the sands of the earth in search of new sources of oil. The outflow increased from sixty-three and a half million barrels in 1900 to about a billion barrels thirty years later. Rockefeller and other capitalists of the latter half of the nineteenth century amassed huge fortunes from the manufacture of kerosene (nearly seventy per cent of the crude oil produced in 1879 was turned into kerosene) and lubricating oils,[1] but the petroleum industry of the twentieth century is based primarily upon what was in the early days a waste product. With the invention of the automobile and the airplane, gasoline, long burned at the refineries as a nuisance, became one of the essentials of human progress. Fuel oils too became important; they not only made possible efficient Diesel engines, convenient heating systems, and economical power units but in effect also greatly enlarged the carrying capacity of ships, since bunker space needed for oil was much less than that needed for coal. In addition, scientists produced a bewildering array of by-products from crude oil.

Total investment in the petroleum industry exceeded perhaps ten billion dollars at the close of the twenties. Wells had spread rapidly outward from their original Appalachian location to at least six distinct fields: eastern, midwestern, midcontinental, Gulf coastal, Rocky Mountain, and Pacific

[1] Lubricating oils, although overshadowed in the nineteenth century by kerosene and in the twentieth by gasoline, are perhaps the most important products of the petroleum industry. Without them, even if other fuels were found, all our machines would grind to a stop. Man has not yet discovered in large quantities any available substitute.

coastal. Expansion, however, brought both financial and operative problems. Oil production because of its marvelous growth was regarded as a Cinderella industry. It was, nevertheless, an uncertain gamble. Riches and poverty stalked its development over the nation. Drilling involved geological study, purchase or lease of land, and storage of oil. Many wells were dry; all were expensive. The average outlay for drilling a well before the second World War was about twenty-five thousand dollars, but frequently holes deeper than ten thousand feet ran to as much as half a million. Even when rich pools were struck, hurried competition quickly reduced unit profits. Besides, wells as a rule produced some seventy-five per cent of their total yield within the first twelve months and thereafter lay idle or were pumped at high cost.

Always, however, there was plenty of oil. Overproduction, in fact, had by the early twenties become chronic. A federal oil-conservation board appointed by President Coolidge in 1924 accomplished little. The opening of new fields in California, Oklahoma, and eastern Texas in 1927 completely disrupted the industry. In August of that year the governors of Oklahoma and Texas called out their militias in attempts to close the wells until a fair price level had been reached. Paradoxical as it may seem, the nation even while wastefully grabbing from the earth more crude oil than it could effectively use was daily growing more alarmed for the future. Scientists repeatedly warned the people that the supply was nearing exhaustion. Fear of dependency on other lands had become real by 1930.

Refining too had its troubles. Crude oil is made up of a mixture of hydrocarbons that must be separated into such petroleum products, for instance, as gasoline, kerosene, fuel oils, and tar and coke. Since the amounts required at first were small, this separation was done either by skimming or by distilling. But as sales of automobiles jumped upward, the demand for gasoline unbalanced production. The situation grew worse as the wells moved westward. The heavy oil obtained from the midcontinental and Gulf-coastal fields, the chief sources of supply after 1906, yielded little gasoline by ordinary distillation. It was obvious that if America's newfound means of transportation was to be served without great surpluses of accompanying products being piled up that could be sold only at ruinously low prices, some chemical or physical means of transforming unwanted components of crude oil into gasoline was imperatively needed. The difficulty was partially eliminated by the development, simultaneously achieved by several companies, of the cracking process, in which heavy fractions between kerosene at the one level and tar and coke at the other were chemically broken down into lighter bodies; later heavy fractions

were disintegrated under pressure by hydrogenation. It is estimated that these technical advances saved some six and a half billion barrels of crude oil between 1921 and 1936. Because of wide differences in sectional needs, local problems of abundance and scarcity were never wholly solved. The Pacific coast, lacking coal, required large quantities of fuel oils; the South consumed primarily kerosene and gasoline. In order to avoid surpluses of fuel oils at the refineries that would have to be sold in competition with cheap bituminous coal, Milwaukee, Chicago, and other midwestern metropolitan centers began before the end of the period to import gasoline from Oklahoma by pipe line. Only in the urban East were markets found for all petroleum products.

The Production of Natural Gas. Although used to some extent for domestic purposes as early as 1832, natural gas did not assume real economic importance until the twentieth century. In California in particular and throughout the Southwest in general it began by the opening of the twenties to replace other fuels in home furnaces. Its use grew most rapidly, however, in the industries. Between 1920 and 1930 consumption rose two hundred and sixty-one per cent. The difficulties of distribution were allayed in part with the perfection of leakproof joints in the giant tubes that began to spread from the midcontinental oil field as far north as the cities along the southern shores of the Great Lakes; interconnecting lines made it possible to shift the supply quickly to meet changing demands. By 1930 sales aggregated some four hundred million dollars annually, and pipe-line mileage had reached seventy thousand. But in spite of the fact that the heating value of natural gas is far greater than that of artificial gas, staggering amounts, notably in Texas, continued to be wasted.

The Foods Industry. Among the traditional consumers' goods produced, food and clothing were outstandingly important. Between 1900 and 1929 food began to be processed in large quantities in factories. During those three decades city dwellers became so completely detached from agriculture as to comprehend but vaguely the relation between the soil and what they ate. In many sections of the country even the farmer's wife began to buy much of her bread already baked and, especially in the winter, her jellies and preserves and vegetables already canned. The products of the field were often sold from the farm in the raw state and bought back for the kitchen as manufactured goods. Few were the people at the end of the period who killed and plucked their own chickens, and fewer still those who killed and cured their own meat. Can openers became standard equipment for urban homemakers. The cartoon of the perplexed young cook in a messy kitchen exclaiming, "All this trouble for six lousy little

doughnuts!" depicted the attitude of a hurrying business America that by 1930 was spending more than eleven billion dollars yearly for foods processed in great industrial plants.

The preparation of meats and the marketing of the resulting by-products had become even before 1900 economically the most significant of the foods industries. Ridden by trusts, characterized for many years by a revolting lack of sanitation and health precautions, and directed by a handful of men, the meat-packing industry ran a varied course. The caustic comments of Upton Sinclair and other reformers in the early years of the twentieth century helped in the passage in 1906 of a national law providing for the inspection of all meats destined for interstate commerce. In 1921 legislation was pushed through Congress forbidding packers to form monopolies, manipulate prices, apportion territory, or employ any other of many means of restraining trade. The states, using the police power when necessary, helped greatly in the control of the industry, and the packers themselves, under constant criticism and legal prosecution, voluntarily in some cases restricted their own greedy practices. Growers of animals, however, continued to complain of low prices, and consumers grumbled no less than before at the cost of their roasts, steaks, chops, ham, and bacon. During the twenties such songs as "Tent-cent Cotton and Forty-cent Meat" struck a peculiarly responsive chord in the hearts of depression-burdened southern agrarians.

In spite of effective protests against their monopolistic graspings, Armour, Swift, Morris, Cudahy, and Wilson maintained their domination of meat production. Their plants under public pressure became models of efficiency, and their standards of quality forced smaller concerns to exercise care in processing their wares. These men, possessing huge capital reserves and drawing heavily upon the sale of by-products for meeting operating costs, built up refrigerating and distributing facilities to such a point that even small-town dwellers came to be regular patrons of the butcher shops. By 1930 sales in the packing industry had reached between three and four billion dollars annually.

Cereals did not fare so well as other foods. Early in the twentieth century new dietary habits began to cut heavily into their manufacture, particularly in the case of wheat and corn. White flour lost favor because it was deficient in vitamins and was supposed to be fattening. Meal too declined in popularity except among the very poor. In fact, studies show that as incomes increased, the consumption of cereals always fell. Moreover, as the population shifted to the city and the burden of providing energy for production was transferred to machines, the average number of calories

needed per person grew less. Vegetables, citrus fruits, and breakfast foods came partially to supplant bread and meat. Just before the Civil War Ferdinand Schumacher had begun milling oats, and thus the first thin wedge had been "driven into the solid wall of the stalwart American breakfast." Before long Quaker Oats, "pure and respectable," had appeared, to be followed by Pettijohn's, Ralston's, Mother's, Hornby's, and a host of other packaged cereals. The advertising war for the breakfast market was on before the end of the twenties, and the old-fashioned breakfast was a thing of the past. Nevertheless, bakery products in 1929 were valued at more than a billion dollars; they contained, however, more milk, fats, sugar, and other ingredients in proportion to the flour than similar items a generation earlier.

Butter and cheese making was becoming industrialized before 1900, and the movement of butter fat from the farms to the factories grew tremendously in the first decades of the twentieth century. Processors of dairy products not only bought all the cream that hard-pressed farmers would sell but also waged a legislative battle against the manufacturers of oleomargarine. By the end of the twenties factory production of creamery butter reached a billion and a half pounds annually, and cheese nearly half a billion. Milk is generally thought of in terms of quarts delivered to the doors of urban America, but almost half of the ten billion gallons marketed in 1929 went into manufactured products. Huge quantities were condensed, evaporated, dried, or powdered, and enough was diverted to the freezing establishments to make over a quarter-billion gallons of ice cream.

By the end of the twenties more than two billion dozen eggs and over half a billion chickens were being eaten annually. Turkeys, especially during the holiday seasons, were bought in large numbers also. While eggs, except for the matter of their distribution, were not closely related to the industries, the butchering of poultry became an accepted part of the work of the packing houses. As cities spread and certain racial groups increased in the urban population, great farms devoted exclusively to the raising of fowls grew up in the Middle West and on the fringes of metropolitan centers everywhere. Courses in scientific management and care of poultry appeared in the curriculums of agricultural colleges.

Although the huckster still cried his wares through the streets of America, the housewife by the end of the first World War had come to depend chiefly on the local grocer for her food supplies. The plants of giant corporations and small concerns alike were during the harvest season beehives of industry as human beings and automatic machinery prepared the

products of farm and orchard for canning. Heinz, Van Camp's, Campbell's, Libby's, and many other brands of foods could be bought anywhere in city or town. By 1927 the output of canned fruits and vegetables, pickles, jellies, preserves, and sauces amounted in value to more than half a billion dollars each year; that of canned fish, crabs, shrimp, oysters, and clams exceeded sixty-five million. Tin cans were made by the millions not only for fruits and vegetables but also for chocolate, cocoa, coffee, spices, and other items. Glass containers too were used in great number, particularly for mineral waters and soft drinks, as the corner grocer joined the druggist in satisfying the thirst of restless Americans; more than three-quarters of a billion beverage and milk bottles were manufactured in 1929.

The Textiles Industry. Cloth in the years between 1900 and 1929 was economically scarcely less significant than food. Indeed, more wage earners were employed in the textiles than in any other single industry. Mechanization was rapid, but unit production kept pace with national progress only in the larger factories and mills. In many cases the laboring force was made up of secondary bread earners and of the physically handicapped. Moreover, heritages of the nineteenth century were powerful forces in keeping wages always on a low level and working conditions in a generally unsatisfactory state. Yet the total value of textile-mill products, wearing apparel made of purchased fabrics, and a variety of goods ranging from awnings to waste rose from slightly more than two and a half billion dollars in 1914 to nearly nine billion in 1927.

Manufacturers of cotton fabrics faced especially perplexing problems in the first years of the twentieth century. Though the amount of cloth produced increased rapidly, the demand in basic markets declined. The war that broke out in Europe in 1914 smothered for a time the small export trade and then brought brief prosperity when the United States entered the conflict. With the coming of peace government orders ended. Too, rayon and silk proved vigorous competitors, and changes in styles lessened the yardage of cloth needed. By 1921 idleness began to engulf the overexpanded mills. New England lost her traditional hold on the industry, for owners in desperation shifted their plants to the South, where, at least temporarily, labor costs were lower,[2] taxes were modest, power was reasonable, and state and local legislation was not unfavorable. Equipped for the most part with the latest automatic machinery,[3] the factories that grew up near the

[2] The average annual wage of textile workers in the South was less than seven hundred dollars as against more than a thousand in New England.

[3] Many of the mills, however, were fitted with used machinery taken from defunct northern plants. Labor organizations vigorously opposed this transfer of equipment to the South and in the early thirties in some instances by physical protests prevented it altogether.

cotton fields turned out millions of yards of coarse cloth annually. But in spite of a general rally in 1923, they failed to prosper. Only new demands, perhaps, saved the industry from tragic collapse. By the middle of the twenties the makers of automobile tires were consuming more than a million bales of cotton yearly. The use of cotton fabrics in the building of bituminous-surfaced roads helped appreciably, as did also the introduction of cotton-filled mats in the curing of concrete pavements. Even so, the outlook was thoroughly discouraging before the depression struck in 1929.

War in Europe cut off the foreign wool supply of the United States and pushed prices rapidly upward. The value of the woolen and worsted goods produced rose from two hundred and thirty-eight million dollars in 1899 to more than a billion in 1919. Like cotton, however, wool suffered severely from the whims of fashion after the first World War. The coming of knee-length dresses, silk hose, and silk and rayon lingerie as well as outer garments cut heavily into wool and cotton markets. When furs on women's coats became popular in the middle twenties, the outlay was so great that little money could be spent on the fabric. Textiles suffered too when men abandoned long woolen underwear for a brief one-piece garment, commonly called B. V. D.'s, after the trade name of the principal maker. Modifications in styles in home furnishings also affected the market. As hardwood floors, already in wide use by 1900, gained in favor, rugs replaced carpets, and they in turn were often supplanted by scatter rugs. Everywhere, it seemed, wool was losing out, and many mills were idle in the twenties.

Through the ages silk has been the one cloth consistently associated with luxury. Its growing use in America until the late twenties was no doubt connected with both a changing social concept and a rising national income. In 1900 the use of silk was for the most part limited to the upper social group. Thirty years later every girl regardless of her economic standing felt herself entitled to a silk dress as a part of her birthright. Science bridged the gap between her philosophy and her purse by creating "weighted" silk and "artificial" silk, the latter soon universally called rayon. Cheap but attractive fabrics that had reasonable resemblance to those worn by the wealthy were thereafter available. Woolen "longies" disappeared, and cotton as a cloth for elaborately embroidered and much-belaced underwear lost popularity; rayon "panties" and other "undies," substituting for the more expensive silk, came to be sold over the counters of the bargain stores. Little compromise was made in the matter of hose. By 1920 daughters of even the poorest families, rural as well as urban, were at least on social occasions wearing stockings of real silk. "Runs" and "snags" became

economically important in every family budget; the value of women's hosiery produced in the United States in 1929 was more than three hundred and seventy-two million dollars.

Although much of the labor in the better shops was still done by hand, the making of wearing apparel had by 1929 virtually disappeared from the home and become a big business. Great tailoring houses arose that supplied merchants with such a large assortment of men's suits that with minor alterations all customers could be served; some sold directly by mail or through local agents in small towns. Expenditures rose tremendously not only because men began to be better dressed but also because the number employed in occupations not requiring heavy physical labor increased rapidly. The trend toward factory-made clothing was even more noticeable among women than it was among men. The housewife, while she continued to make limited use of her sewing machine and the local dressmaker, turned to industry for her clothing as she did for her bread and her canned vegetables. Moreover, as the "business girl" became a permanent part of the going economic nation, the labels of exclusive shops marked her progress. Everywhere the voluminous wrappings of other years disappeared, but each individual possessed a far larger number of garments than ever before. Fads and styles added to the variety and thus to the quantity. Producers, anxious to take advantage of the new market that had come up, grew facile in giving through sedate names dignity to such common items as shoddy and muskrat, rabbit, and cat fur. They were not seeking primarily to deceive; they were merely meeting the demands of a nation whose people had become socially unified but were still far from economically equal. Altogether the factories in 1929 turned out women's clothing to the value of more than a billion and a half dollars.

Other Traditional Industries. The industrial output in every field revealed in the first three decades of the twentieth century a remarkable activity. Between 1914 and 1927, for instance, the value of book and job printing was tripled, and expenditures for newspapers and periodicals rose from a half-billion dollars to two and a half billion. Electrical appliances, furniture, silver and silver plate, glassware, stoves and furnaces, clocks, watches, phonographs, pianos, musical instruments, toys, matches, soaps, patent medicines, face creams, playing cards, liquors, golf clubs and balls and shoes, and a host of other things poured from the busy shops and mills and took from the pocketbooks of the people hundreds of millions of dollars annually. Vast sums of money were spent each year on personal indulgences. The cosmetics and kindred items produced in 1929 were valued at over two hundred million dollars; cigars, cigarettes, and tobacco

in other forms at considerably more than a billion. The nation was surfeited with essentials and what a few years before would have been called luxuries. It is true, of course, that much of the merchandise was bought on time and that at last tragedy struck the debtors and took from them their purchases, but that was neither an indictment of the machines nor in any way evidence that man should continue his old and laborious production of the economic goods he needed.

Industries Peculiar to the Twentieth Century. *The Automobile Industry.* The rapid growth of traditional factories in the early decades of the twentieth century was completely overshadowed by the rise of great industrial plants that were devoted entirely to the manufacture of products peculiar to the modern scientific age. The most significant factor in the economic life of the period was the development of the automobile. The "horseless carriage" profoundly affected transportation, both passenger and freight; it brought a quick end to hundreds of streetcar lines in American cities and towns; it changed the nature of the petroleum industry; it determined the course of the great iron and steel mills; it closed the doors of thousands of rural stores, gristmills, and blacksmith shops; it drove horses from city streets and brought garages to take the places of the familiar livery stables; it stimulated the construction of a reasonably unified highway system; it built up the tourist industry; it made rubber a vital raw material; it profoundly affected the lives of urban people; and it ended the isolation of the agrarians. Indeed, few economic, social, religious, or political institutions remained untouched by the new means of transportation.

The automotive industry, though some early plants grew up in Ohio and elsewhere, centered in Detroit from its beginning. Hard-working, greasy mechanics with meager financial resources made the city in a few years the automobile capital of the world. No miner, cattleman, or farmer of the last geographic frontier in the second half of the nineteenth century had gone at his tasks with more vigor than did these men on the industrial frontier of mass production who gambled so recklessly on the future of transportation. They sold cars not even in the blueprint stage and then hurried away with the down payments they had received to buy materials for constructing the machines. The Dodge brothers (Horace and John), Henry Ford, Charles E. Duryea, Elwood Haynes, the Apperson brothers, Ransom E. Olds, Walter E. Flanders, "Little Billy" Durant, Will Metzger, and Barney Oldfield are only the most prominent of the group of pioneers who fought valiantly against heavy odds to build the industry. The public was far from sympathetic; the business of making and selling cars was

referred to at first as the "auto game." Newspaper comment was restricted to an occasional reference in the sports section. It was perhaps the small-town doctor who actually proved the real value of the new self-propelled vehicle.

In spite of opposition and indifference, the automobile by 1914 was forging ahead toward dominance in American economic life, and war clinched the supremacy. The steamer and the electric car had fallen by the wayside. The problems involved in chassis and tire construction had been for the most part solved, and, what was more important, the assembly line had proved its efficiency. Cars made of perfectly tooled and rigorously inspected parts began to roll out of the plants at unbelievable speed. Production leaped from four thousand in 1900 to half a million in 1914, a million and a half in 1916, nearly two million in 1920, over three and a half million in 1923, and four million in 1928. Trucks rose from twenty-five thousand in 1914 to five hundred and seventy thousand in 1928. Altogether, twenty-six million motor vehicles valued at more than three and a half billion dollars were registered in 1929. Furthermore, the industry that year provided employment directly or indirectly for approximately five million persons (one-tenth of the working population) and consumed eighty-five per cent of the gasoline, eighty-two per cent of the rubber, sixty-eight per cent of the plate glass, between fifty and sixty per cent of several types of iron and steel, fifty-one per cent of the upholstery leather, thirty per cent of the nickel, twenty-six per cent of the lead, seventeen per cent of the aluminum, fourteen per cent of the copper, fourteen per cent of the tin, nine per cent of the cotton, and six per cent of the zinc used in the nation. At the outbreak of the depression the people of the United States were spending ten per cent of their income on motor transportation; food alone took more money from their purses.

The Motion-Picture Industry. Beginning almost wholly as a social diversion, motion pictures came before long to affect economic life in some phases almost as much as did the automobile. By 1925 investments in show houses and equipment had reached a total of more than a billion and a half dollars. The "movie" took to the farthest hamlets of the nation style standards that were soon being slavishly copied by city dweller and farmer alike. Beauty shops felt its influence, and even home furnishings were modified. The industry did not stem from the legitimate theater. Producers of "flesh and blood" drama stubbornly refused to become concerned with animated photographs. They scorned the stuffy little rooms into which crowds poured at a nickel admission to see the new wonder of photography. But the nickelodeons were to grow within a few years into magnificent

palaces. Scorned by the bankers, the motion-picture business was developed chiefly by three poor New Yorkers—Adolph Zukor, Marcus Loew, and William Fox.

The first films were produced in New York in vacant lofts, empty sheds, and any other available spots where rents were low. D. W. Griffith and Mack Sennett were two of the earliest directors. Griffith gathered around him such actors as Mary Pickford, Lillian and Dorothy Gish, Mae Marsh, and Lionel Barrymore, while Sennett collected Charlie Chaplin, "Fatty" Arbuckle, Mabel Normand, and as many "cops" and "bathing beauties" as he could profitably employ—a combination of beauty and humor at its lowest level, for which the public gladly paid the bill. Griffith, Jesse Lasky, Cecil de Mille, and Sam Goldwyn were soon turning out imposing films, and they found attractive places in which to show them. The Strand Theater, built in 1914 on New York's Broadway, was the industry's first bid for society patronage. Equipped with a pipe organ, provided with a concert orchestra and soloists, and managed by "Roxy" (Samuel Rothafel, an ex-marine), who trained the house staff in military precision and studied courtesy, it far exceeded in receipts any legitimate theater in the city. The next year Griffith's *The Birth of a Nation* filled the Liberty Theater day after day and night after night at two dollars a seat.

The nickelodeon had grown to maturity and attained respectability. By 1920 it had almost driven traveling troupes from the road and was fast breaking the hold of the stage in metropolitan centers. New York's sixty theaters dropped to thirty, and the ten or twelve that Chicago, Philadelphia, and Boston had each boasted dwindled to three or four. Indeed, economically and financially the "movies" became by the middle of the twenties the most dramatic industry in all America. Producers' profits rose to staggering heights, salaries of individual stars in some cases jumped to well above ten thousand dollars a week, and films began to be exported in quantity. The introduction of the "talkies" in 1927 brought higher salaries, new expenditures for electrical equipment, and greater box-office receipts. Even during the worst years of the depression Americans, buying admissions at an average rate of one hundred million a week, spent more than half a billion dollars a year at picture houses over the land.

The Radio Industry. Transmission by wireless had begun before the twentieth century opened. In 1896 Guglielmo Marconi on Salisbury Plain in Wiltshire, England, sent a message to his receiver two miles away. Three years later regular service was established across the English Channel, and in December, 1901, the three dots of the letter S in the Morse code jumped from Poldhu, Wales, to St. John's, Newfoundland. Growth there-

after was rapid. Although under strict governmental control in all major countries, radio experimentation and development were greatly stimulated by the first World War. When peace returned and regulations were relaxed, a host of amateurs began building crude crystal sets that were more noisy than efficient but were nevertheless thrilling. Manufacturers of parts sprang up to supply the demand of listeners to the crackling dots and dashes of ships at sea and the Arlington time signals. Crude transmitting instruments too were built. Dr. Frank Conrad began to send out from his garage in a Pittsburgh suburb an occasional twenty-minute program of phonograph music. On September 29, 1920, the Joseph Horne department store announced in the Pittsburgh *Sun* that "Amateur Wireless Sets, made by the maker of the Set which is in operation in our store, are on sale here $10.00 up." The radio industry as an advertising, instructing, and entertaining medium began that same year when on November 2 KDKA, the first regular broadcasting station in the world, was opened in East Pittsburgh.

The initiation of scheduled programs by legally chartered business organizations marked the coming of age of radio. The economic consequences were significant. Homemade instruments gave way to factory products built by established firms and marketed through traditional commercial channels. "Aeriola Jr.," made by Westinghouse, was the first mass-produced receiver. It was soon followed by many others, on all of which the familiar earphones were soon discarded. David Sarnoff, later president of the Radio Corporation of America, predicted in 1916 that an aggregate sale of twenty-five million dollars a year was a possibility, but many concerns failed financially in the beginning. By 1925, however, marketing of radio "sets," three-fourths of which were bought on the installment plan, had reached the sum of two hundred and twenty-five million dollars; most of the instruments were made as a new undertaking by manufacturers of other items.[4]

Station incomes increased rapidly. Business men soon began to have their wares mentioned by local announcers much as a few years before they had had their cards projected on the screens in the stuffy little show houses on Main Streets over the nation. In 1926 the now famous NBC began the chain system of broadcasting, and two years later it set up the first coast-to-coast network. Industrialists, sensing the value of the radio as an advertising

[4] The RCA Radiola was produced by a concern that was the outgrowth of the old Victor Talking Machine Company; the Crosley by a company that made precision instruments; the Sparton by the Spark-Withington Company, which turned out automobile accessories; the Atwater-Kent by a manufacturer of automobile ignition systems; the Stromberg-Carlson by a telephone and telephone-accessories firm; the Majestic by the Grigsby-Grunow Company, which made batteries; and the Philco by the Philadelphia Storage Battery Company.

medium, became the financial sponsors of the new science, paying up to five thousand dollars an hour for the privilege of bringing their products to the attention of the public during the course of a variety of programs. Henry Ford is said to have spent for services and artists in 1928 a thousand dollars a minute for sixty minutes once a week in introducing his Model A automobile to motoring America. Each succeeding year programs became more elaborate, and expenditures mounted accordingly. Strangely enough, periodicals shared in the rich harvest of cash for advertising; in 1927 manufacturers of radios and radio equipment paid them more than three and a half million dollars for space in their pages.

The Chemicals Industry. Chemistry, magic key that has unlocked the doors to modern American industrial growth, made slow progress through the years until stimulated by the first World War. Dyes, which before 1914 had been purchased almost exclusively from Germany, came to be produced in domestic plants according to German formulas turned over to the industrialists of the nation by the alien-property custodian. The fact that the cessation of hostilities left the military departments in possession of huge stocks of goods for which they had no need encouraged research. Forty million pounds of carbolic acid in the chemical form of phenol, for instance, was utterly useless, though it had a few months before cost fifty-five cents a pound. Government officials sold the lot at twelve cents a pound, but even at that price there seemed little hope of using the surplus for many years. Turned into phenolic resin in a form called bakelite, however, the phenol found a ready market; radio manufacturers, just coming into economic importance, and makers of electrical equipment, seeking a substitute for hard rubber and porcelain, soon exhausted the supply. The plastics industry was before long consuming each year more phenol than the forty million pounds that had appeared so disturbing in 1918.

The chemists, using carbolic acid (phenol) and formaldehyde, quickly learned how to produce from wood, corncobs, straw, coal, petroleum, skim milk, bagasse, soy beans, and many other things a substance that offered endless possibilities to fabricators because it could be used in fine thread, in thin strips, or in bulk and could be molded to any form. Among the more than ten thousand types of articles made wholly or partially of plastics were radio parts, household gadgets, toothbrush and mirror handles, clocks, buckles, belts, cloth, suspenders, watch crystals, industrial gears, rope, adhesive tape, casings and housings of every description, combs, lamp shades, table tops, refrigerator doors, costume jewelery, tank linings, safety glass, seat covers, inks, paints, glues, food containers, heels for women's shoes, reflectors for highway lighting, wall paneling, floor tile,

phonograph records, furniture, airplane windshields, artificial teeth, fishermen's equipment, beads, buttons, and a multitude of novelties.

Two of the especially interesting new synthetic materials were cellophane and what has come to be called rayon. The first, in fact, was produced in a search for the second. In 1908 Jacques Brandenberger, a French chemist, using the prior discoveries of Cross, Bevan, and Beadle of England, built a machine for the continuous manufacture of the transparent film that in modern economic life has become outstandingly important as a packaging material for foods, tobaccos, and other merchandise. Rayon—though the name was not used until 1924—was first produced commercially in the United States in 1911, but it had been made in Europe before that time, and the conception of a chemically created thread for fabrics dates back at least to the seventeenth century. The silkworm and the spider were the original inspirers of the idea. Robert Hooke, an Englishman, in the sixteen sixties and De Reaumur, a Frenchman, in the seventeen fifties both dreamed of duplicating the feat of the silkworm, and a contemporary of the latter actually spun stockings from spider filaments. Not until after the middle of the eighteenth century, however, was a synthetic thread created. While several people were involved, greatest credit perhaps belongs to Count Hilaire de Chardonnet, a pupil of Pasteur's, who, using the mulberry tree, friend of the silkworm, for his raw material, produced thread in 1884 by squirting a fine spray of the mulberry pyroxylin through holes in a spinneret of his own construction. Five years later De Chardonnet exhibited samples of his new fabric in Paris, and shortly thereafter a factory was established at his home at Besançon in northern France.

The development of the viscose type of rayon, most used today, rests almost wholly on the researches of Cross, Bevan, and Beadle, whose discoveries came into practical use in the early years of the twentieth century. The first factory for the production of viscose-process rayon began operation in 1911. Americans were delighted that a substitute had been found for silk, but they quickly discovered that the new fabric was exceedingly shiny, that it was coarse, and that it possessed little strength, particularly when wet. Soon, however, chemists devised ways of reducing the sheen and of making fine filaments; the spider taught them how to add strength and water resistance by stretching the threads during the manufacturing process. The value of rayon produced in the United States in 1929 exceeded a hundred million dollars.

Chemistry in addition to supplying new materials for manufacturers provided through the laboratory scientific controls previously unknown. More than that, it brightened the farmers' economic horizon. As soy beans

and sweet potatoes were made to yield glue and a host of other industrial products, for example, and furfural was taken from oat husks to improve refining, there was promise that the agrarians might become something more than mere food producers whose markets were perpetually oversupplied. The development of powerful curative drugs (including the sulfa group of the thirties) and the isolation of various vitamins not only lengthened the average span of life but also lessened the economic losses incident to inefficiency and illness.

The Aviation Industry. The first successful heavier-than-air flying machine was built by the Wright brothers, Orville and Wilbur, bicycle mechanics of Dayton, Ohio. Near Kitty Hawk on the coast of North Carolina

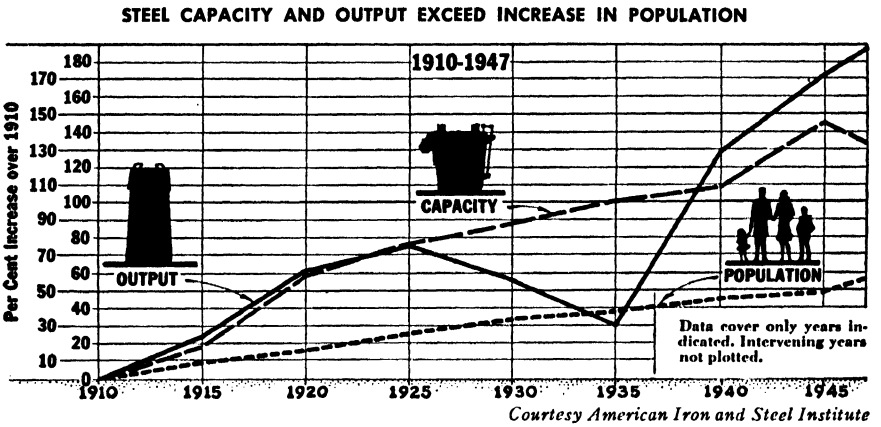


FIGURE 15. INCREASE IN STEEL CAPACITY AND OUTPUT IN RELATION TO THE POPULATION

one December day in 1903 their crude contrivance, propelled by an eight-horsepower internal-combustion engine, flew through the air for a distance of eight hundred and fifty-two feet, remaining aloft for almost a minute.[5] The progress of aviation, however, was astoundingly slow, especially in the United States. The government ordered its first plane only in 1909, and, notwithstanding the fact that the Wright brothers, Glenn E. Curtiss, and

[5] As a matter of fact, the first flight of the Wright brothers lasted only twelve seconds; according to their own statement, however, the machine "raised itself by its own power into the air in full flight, . . . sailed forward without reduction of speed, and . . . finally landed at a point as high as that from which it started."

The Wright brothers profited a great deal from the experiments of others. Otto Lilienthal, a German, and Octave Chanute, an immigrant American, had made especially valuable glider flights during the closing decade of the nineteenth century. In 1896 Samuel P. Langley, secretary of the Smithsonian Institution in Washington, had successfully flown large steam-driven models up to distances of a mile. A full-sized plane in which he attempted to fly the Potomac just a few days before the now famous flight at Kitty Hawk unfortunately fell into the river. The accident was incidental, and Langley deserves a part of the credit for developing the airplane.

others had demonstrated the practicability of flying before 1914, there were only a few planes in the nation at the outbreak of war. Immediately after America entered the conflict in 1917, Congress launched a vigorous mass-production program. Factories, tools, skilled workmen, and aeronautical engineers were lacking, and many costly mistakes were made. Nevertheless, in spite of incompetence and perhaps a measure of indifference on the part of some individuals involved in the war effort, planes were soon being turned out. Eventually a total of eight hundred and sixty reached the front. Automobile manufacturers did an excellent job of providing the American-designed Liberty motor for the fighting craft of the Allies. When the armistice was signed, twenty-four plants with an aggregate capacity of some twenty thousand planes a year were going at full blast.

With peace came collapse in the aviation industry. Military orders were canceled, and there was almost no civilian demand. Although the government between 1918 and 1920 established air-mail routes between New York and Washington, between Chicago and Cleveland, and finally between New York and San Francisco, the feeble public interest in aviation was maintained almost single-handedly by barnstormers flying at county fairs or wherever else they could find paying sightseers or thrill seekers. Financiers and speculators became concerned only after Charles A. Lindbergh, Clarence D. Chamberlin, C. A. Lavine, Richard E. Byrd, and a host of other intrepid explorers had winged their ways over the world.[6] Congress, stirred by popular enthusiasm, began to give tardy assistance. The Air Mail Act of February, 1925, and the Air Commerce Act of May, 1926, granted subsidies to private lines for carrying the mails, created bureaus for dispensing weather information, provided for lighting service and landing fields, and established an Assistant Secretary of Commerce for aviation. Cities and towns voted appropriations for the construction of airports and other accommodations for private corporations. Indeed, the old story of railroad building, speculation and all, was in part repeated in a new setting.

Financing, manufacturing, and distributing planes offered no such drama as did flying them. At first machines frequently were not made until after they had been sold and a part of the money collected. When resources permitted, a surplus stock was built up and a selling structure instituted consisting of distributors and their subordinate dealers and dealers appointed

[6] Satiated newspaper readers heeded little the reiterations of the army and the navy that their fliers had already accomplished in a quiet and scientific manner many of the feats that were causing so much rejoicing. Military authorities, however, were little concerned with the airplane as a significant new instrument of warfare; Brigadier-General William Mitchell, commander of the American air force in the war, was in 1926 court-martialed and dismissed from the service because of his "disrespectful" protests against the indifference of high army authorities.

directly from the factory. As experience demonstrated the fact that cow pastures on the edges of towns were not suitable places from which to take off or on which to land, selling agencies came to be located almost exclusively at regular flying fields, where income was derived chiefly from repairing planes, teaching flying, supplying taxi service, and selling oil and gasoline. The dealers, forced to contract for planes in advance and pay down from five to fifteen per cent of the retail prices, were often in financial difficulties. In fact, the whole problem of economics was the dominating one in the new industry. Manufacturers hoped that the traditional combination of mass production and decreasing prices would bring popular consumption, while the public dreamed of the air filled with happy pilots—speeders, "road hogs," and Sunday drivers included. All were doomed to disappointment. The airplane in its economic aspects resembles the train more than it does the automobile. The complexities involved in safe flight preclude to a large extent individual participation except in purely local ventures. By 1929 a reasonably large number of planes (including what came to be called in the second World War "grasshoppers") were being turned out, but most of them were for commercial use. Many people had begun to wonder if, as in the case of the train a century before, the nation would not have to accept air transportation on a monopoly basis if at all.

Chapter 29

AGRICULTURE AND LABOR TO 1929

Although methods and problems of farming have changed basically but little throughout American history, agriculture, like industry, was in the years between 1900 and 1929 marked by certain characteristics that distinguished it clearly from that of other periods. Outstandingly important among these were, first, the very obvious decline of the agrarian as a significant figure in economic life; second, the use of power propulsion, made possible by the invention of gasoline tractors and trucks and efficient machinery; third, the widespread encouragement by state and national governments of scientific agricultural education in colleges and in high schools; fourth, the modernization of both the farm and the home and the improvement of highways by which rural people came to share in part at least in the art, culture, and conveniences of the city; and, fifth, the increasing feeling of federal responsibility in the farmer's struggle for existence.

The census reports each succeeding decade clearly reveal the lessening role of the agriculturist in the growth of the nation. The downward trend in the farm population in the seventy years following 1850 was merely relative; there was after 1920, however, an absolute decrease in the number of persons engaged in tilling the soil. In 1880 some thirty-five million people out of a total of fifty million lived on farms or in towns of less than twenty-five hundred. In 1930, just half a century later, the actual farm population numbered only thirty million out of a total of one hundred and twenty-two million.[1]

The drift from country to city was perhaps a natural and normal development. The difficulty was that the new commercial, industrial, and business world that grew up swept the farmer into its vortex without making him a partner in its progress. It stripped him of his self-sufficiency and made of him to some extent a specialist producing the raw materials of industry. His wheat and his corn and his oats, his hogs, his cattle and his sheep, his

[1] Census figures are not always comparable. Those for 1880 include not only people on farms but also those in villages of less than twenty-five hundred. Those for 1930, on the other hand, include only those people actually living on farms; the village population numbered about twenty-three and a half million additional.

milk and his cream, his hides, his tobacco, his wool, and his cotton went to the factory, but they brought him an inadequate return. Like the laborer, the agrarian found himself unable to buy in usable form the fruits of his toil, and he had lost the power to create in his own workshop the things he needed. He resented his inferiority. He had from colonial days felt that the very existence of the nation depended upon his labors. If he refused to produce, hunger and want would, he believed, stalk the streets of the teeming cities and bring the inhabitants groveling to his feet. Yet city dwellers, long since unconcerned with the source of their food supply, were not alarmed; they were members of a society that accepted high prices and diversified products as signs of progress.

The new age of which the farmer was a part brought improved means of production in field and factory, but it did not bring comparable increase in consumption. Agrarian output in particular often far exceeded requirements. It is unfortunate from an economic point of view that the capacity of the human stomach has remained unchanged; a family in 1929, generally speaking, could use no more food than one of equal size a hundred years before, although the desire for other goods had expanded enormously. Mechanization, scientific production, and effective preservation were mostly responsible for the surplus food. Machinery not only brought larger farm crops but also reduced the need for working animals; no longer did the farmer have to store large amounts of feed in his barns for his livestock. In addition, self-propelled vehicles destroyed urban sales of corn and hay, once eaten by the horses and mules that drew carriages, cabs, horse cars, wagons, and drays through city streets. Furthermore, the demand for such traditional staples as beans, meat, and potatoes shrank rapidly as the people of the nation began to consume large quantities of fresh and canned fruits and vegetables. Too, with the development of new agricultural regions in Argentina and in the British dominions, Europe bought less from the United States. The American agrarian, his children fleeing to the city, his markets disappearing both at home and abroad, and his material wants increasing, found that his mortgage burden grew no lighter but that the taxes levied upon him for maintenance of the new society in which he lived became heavier each year. It was only natural that he turn to the government for aid; business men had sought assistance long before.

The Expansion of Agriculture. By the opening of the twentieth century desirable land for immediate homesteading was gone.[2] Moreover, the major

[2] Actually more free lands were taken up in the early years of the twentieth century than at any previous time. The acreage in round numbers was: 1895, five million; 1898, six million; 1900, eight million; 1901, nine million; 1902, fourteen million; 1903, eleven million; 1904, ten million; and 1905, twelve million.

crops had definitely found their centers of location; corn and wheat and oats, for instance, had ceased their westward migration as certainly as had the population. But changes were still occurring. After 1900, in fact, there was a revival of agriculture in the East. A great deal of the discarded soil along the upper Atlantic seaboard again went into cultivation. Cotton swung perceptibly back into the heart of the Old South, and vegetable gardens appeared on the fringes of metropolitan areas. The need for milk for the host of city children turned deserted fields in many eastern states into well-kept grazing farms.

Dry Farming. Though the frontier was closed, the agrarian empire in the West continued to spread. The development of what is known as dry farming made possible the utilization of new lands, particularly in northern Texas, western Kansas and Nebraska, eastern Colorado, and various isolated parts of the general subhumid region east of the Rockies. In this type of farming special efforts are made to conserve the little moisture available. Plowing is deep, and the surface of the ground is kept pulverized. Certain kinds of fruits, cereals, and hay as well as Kaffir corn, durum wheat, and some clovers have been grown in this manner. The method was not new at the time; a western editor had described it as early as 1890 as "growing a crop one year and living off the County Commissioners the next three." Actually demonstration farms established before 1900 in several western states had proved reasonably productive.

Reclamation. Further acres were added to the agricultural domain through irrigation. Much of the barren soil in the West lacked only water to make it fruitful. The Reclamation Act of 1902 provided that government funds in some cases might be used for digging ditches and establishing reservoirs. Because of the heavy expenses involved in the mechanical distribution of water, homesteading requirements were modified to suit conditions. But making the desert bloom proved an expensive undertaking, and grandiose plans sometimes did not fit into the fact that there was already an overabundance of agricultural products. By 1930 the federal government had spent more than three hundred and forty-seven million dollars on various projects; state and private investments amounted to large sums also. Altogether the number of acres under irrigation grew from seven and a half million in 1900 to nearly fourteen and a half million in 1910 and to nineteen and a half million in 1930. The total capital involved probably exceeded a billion dollars.

The Mechanization of the Farm. More than half the total land surface

of the nation was devoted to agriculture in 1930[3] as compared with only twenty-one per cent on the eve of the Civil War. Especially significant in the growth was the introduction after 1900 of effective power-driven and power-drawn machines. In many sections horses and mules gave way to engines and to the gasoline tractor that brought almost to realization a dream that was decades old. Long had the western settlers in particular looked with yearning eyes at their spreading acres and wished for some way to plant them all before the season had advanced too far and harvest the grain before it became too ripe. Modern industry, albeit it made of them commercial farmers rather than general agriculturists and encroached heavily on their labor force, now provided them with a plow that would turn as much as a hundred acres in a day. In some cases the plowing, conditioning, and sowing were done in a single operation. The tractor-pulled combine, cutting as much as forty-eight feet in a swath, reaped wheat quickly; besides, it threshed, weighed, and bagged the grain at the same time. Four-row cultivators expanded tillage in the cornfield from five or ten acres a day to more than fifty, and the silo filler became essential. On account of the small value of corn per bushel, huskers and harvesters were in the early years of the century used only to a small extent.

Many machines came into use over the agricultural nation. Potato diggers, sprayers, pumps, milkers, separators, refrigerators, and countless other devices sped the work of the farmer. Only in the Cotton Kingdom, where industrialism was least felt, did conditions remain relatively unchanged. Though the cotton patches had spread into wide fields, sundown still found the roads of the southland crowded with Negroes, hoes on shoulders, wandering home. The ginhouse too was much as it had been throughout southern history. The arrogant "boss man," the sweating Negroes, the great bales, and the mounting piles of seeds, as well as the petty graft, were ever in evidence. Numerous attempts to devise a successful mechanical cotton picker failed, the two most notable deterrents being, first, that the bolls grow over the entire plant and mature at different times and, second, that the reservoir of cheap labor in the South was still adequate.

The gasoline truck and the automobile became in the twentieth century integral parts of the agrarian scene. They were indispensable. The additional financial obligations incurred in the purchase of powered machinery had brought a keen necessity to increase incomes. The farmer could no

[3] This does not mean that half the soil of the nation was being used in the production of farm crops; more than half the land in farms was generally devoted to pasturage, woodland, and other uses.

longer afford to waste a day on a trip to town. He had to rush back to his fields and his labor because he had somehow to pay for the machines that he had bought in order that he might produce more grain to pay for the truck and the automobile that enabled him to hurry.

The Extent of Mechanization. The industrialization of American farms was not uniform even outside the Cotton Kingdom. Horses and mules tended to hold their own where diverse crops were grown and where farms were small, for tractors in the beginning were unwieldy and left

TABLE

Farm Implements and

	Farm Acreage (in thousands)	*Number of Farms*	VALUE OF MACHINERY		
			Total Value (in thousands)	*Per Farm*	*Per Acre*
New England	14,283	124,925	$ 91,880	$736	$ 6.40
Middle Atlantic	35,047	357,603	355,438	993	10.00
East North Central	110,891	966,502	826,208	854	7.40
West North Central	265,487	1,112,756	1,091,602	981	4.00
South Atlantic	86,362	1,058,468	202,948	182	2.30
East South Central	72,814	1,062,214	157,458	148	2.00
West South Central	183,906	1,103,134	336,334	304	1.82
Mountain	157,450	241,314	210,944	874	1.34
Pacific	60,525	261,733	223,838	855	3.69

* Compiled from *Abstract of the Fifteenth Census of the United States,* pp. 528 ff.

much unused land at the ends of rows and near fences. It required several years of painful experience to learn that gasoline power was thoroughly usable only on fairly level farms of three hundred acres or more and even longer to discover that expensive machinery belongs to great industrial enterprises and not to small workers in field or in shop. Community ownership, practiced to some extent, was never widespread, and everywhere as industrial prices brought urgent need for higher incomes, expenditures of individual farmers for mechanical equipment grew larger. Generally purchases were limited in the poorer regions to simple implements, but occasionally the persuasive power of salesmen put into the hands of agrarians machines that they did not need. Henry Ford more than anyone else was guilty of this economic crime. Throughout the rolling and hilly land east of the Mississippi and north of the Cotton Kingdom, where the typical farm rarely contained more than fifty or a hundred

acres of tillable soil, Model T dealers pressed the Fordson upon their neighbors. Ford eventually discovered that it was better to have a happy host of friends, hands on horns, driving the dirt roads of the farm lands than to have disgruntled owners of idle tractors.

The total value of farm implements and machinery in 1929 exceeded three billion dollars. Measured by cost, more than a third of this equipment was located in the seven grain states of the West North Central group—Minnesota, Iowa, Missouri, Nebraska, Kansas, and North and

IV

Machinery, 1930*

TRACTORS IN USE			TRUCKS IN USE			AUTOMOBILES IN USE		
Total Number	*Farms to 1 Tractor*	*Acres to 1 Tractor*	*Total Number*	*Farms to 1 Truck*	*Acres to 1 Truck*	*Total Number*	*Farms to 1 Auto*	*Acres to 1 Auto*
14,109	8.85	1,012.33	37,972	3.29	376.15	89,287	1.39	159.96
81,970	4.36	427.56	120,789	2.96	290.15	316,509	1.13	110.73
249,333	3.88	444.75	198,172	4.83	559.56	876,667	1.10	126.49
318,160	3.49	834.44	180,857	6.15	1,467.93	1,075,578	1.03	246.83
47,376	22.34	1,822.90	94,946	11.14	909.59	481,693	2.19	179.28
24,393	43.54	2,985.03	45,568	23.31	1,597.91	335,003	3.17	217.35
74,100	14.88	2,481.86	96,791	11.39	1,900.03	536,641	2.05	342.69
48,007	5.02	3,279.73	55,742	4.32	2,824.62	183,020	1.31	860.28
62,663	4.18	964.92	69,548	3.76	870.26	240,277	1.08	251.89

South Dakota. This did not mean, however, that other sections were lacking in mechanization In fact, investment per acre and per farm was highest in the Middle Atlantic States. Over the nation except in the South large sums had been spent in modernization (see table IV). The financial burden was a heavy one. In fact, both interest rates and prices were probably beyond the ability of the debtor to pay if he was at the same time to maintain his family in a society in which the standard of living was moving rapidly upward. No one denied that there were risks in extending credit to the farmer, yet neither the financiers nor the industrialists made any effort to ascertain scientifically their extent. Tradition and not knowledge determined the interest rates.

The Agrarian Troubles. Machinery was no royal road to plenty for the agriculturist. Tractors, combines, gang plows, and giant mechanical seeders swelled harvests and reduced enormously the unit cost of production, but markets expanded slowly or not at all. The small farmers who had

hoped through the genius of invention to attain prosperity and happiness soon realized that machines were not altogether a blessing. Their little homesteads were sometimes taken over by the mortgage holders and turned into corporation farms. In some cases they became tenants on the soil they had loved as their own. More than that, their sons whose labors had not been needed at home and who had during the early years of the century gone each summer into the harvest fields in search of ready cash found that combines had taken their jobs, forcing them to join the army of wage earners in the automobile and rubber factories of Detroit, Akron, and other cities. Labor regulations before long severely restricted even that source of income.

As time went on, the agrarians became more bitter and their complaints more vigorous. They felt that the tariff was made for the sole purpose of helping the industrialists; that the financial machinery of the nation benefited only the financiers; that the treasury in Washington in hard times was interested only in giving aid to the bankers and the manufacturers; and that lobbyists were responsible for the inability of their congressmen to obtain alleviating legislation. Moreover, they had seen the laws that had already been passed nullified at least in part by executive action.

The problems of agriculture were perennial, and they became more irritating as rural tribute to urban centers increased. Annually the amount of agrarian rent, interest payments, and profits on manufactured goods that had formerly gone in part to local individuals but now poured into the tills of great banking and financial houses grew larger. Furthermore, the flow of farm boys and girls to the cities swelled alarmingly; each migrant had, it is estimated, cost the community that had reared and educated him at least two thousand dollars. While a small stream of money flowed back into the old homes, the balance was against those who dwelt in the country. The farmers, without a frontier on which to seek relief, were becoming, said some, colonists in an empire whose hub was the cities where lived the business men and the industrialists and were moving, said others, toward the status of the European peasant who for generations before the United States was founded had doffed his cap humbly to the rulers of the land.

The Agrarian Organizations Before the First World War. By 1900 most of the farmers' organizations that had fought for relief during the eighties and nineties had disappeared. New ones, however, arose in the early years of the twentieth century to take their places. Among the largest were the American Society of Equity (known generally as the A. S. of E.), the

revived Grange, the Gleaners, and the Farmers' Union. The monthly magazine of the American Society of Equity with its pictured lessons of equality, the *National Rip-Saw* (journal of the Socialist party) with its pungent editorials, and Eugene V. Debs with his promise that the "horny-handed sons of toil" would some day ride in carriages three hundred and sixty-five days a year rather than the one day of election when the politicians were glad to give them a "lift" made, perhaps, the most effective appeals to the agrarians. Even though improved means of communication brought them closer together than they had ever been, the farmers never realized their dream of building an organization with power to dispute the authority of the banker and the industrialist. Nevertheless, reasonably efficient farm bureaus, cooperative societies for buying and selling, community elevators, and national lobbies were established. Cooperatives for selling farm commodities, especially perishables, proved much more effective than those for buying.

Governmental Aid to Agriculture Before 1920. Even before the first World War federal, state, and local governments became interested to some extent in the plight of the farmer. The Department of Agriculture began what has come to be a constant battle against cholera, Texas fever, the hoof-and-mouth disease, and other costly afflictions of livestock and launched a persistent campaign to prevent the entrance into as well as the spread over the country of plant diseases and pests. The right of quarantine, first granted in 1884, came to be employed more and more as transportation facilities grew.

The land-grant colleges for the most part received little money through the sale of their lands, but succeeding appropriations by national and state governments supplied the necessary funds for their continuance. The passage of the Smith-Lever Act on May 8, 1914, enabled college graduates to carry their knowledge directly to the farmers as county agents and as speakers at farmers' institutes. Three years later the Smith-Hughes Act provided for federal subsidization of departments of vocational agriculture and home economics in the high schools. Many states made agricultural subjects requirements in the curriculums of their secondary schools.

Agrarian problems ran deeper than mere lack of individual skill, however, and their solution therefore involved more than mere knowledge. The farmer who listened to the county agent or to the lecturer at the institute and the lad who attended the agricultural college discovered sooner or later that improved tillage and management called for heavy outlays of capital which they did not possess and which they could not borrow. There were no agencies of the government to which the plowman

could turn in his financial difficulties. He found himself almost solely dependent on the pleasure of private bankers and loan-company officials, who applied their industrial lending practices of thirty, sixty, and ninety days to an occupation that measured its periods of compensation in years rather than days. Even when cash was obtainable on longer terms, notes were subject to renewal with disheartening frequency.

The first national system of agricultural financing was created by the Federal Farm Loan Act, passed by Congress on July 17, 1916. The Federal Farm Loan Board, consisting of five members, was charged with its administration. Loans, made by twelve Federal Farm Loan banks scattered over the country, were negotiated through associations composed of ten or more farmers each. Repayments were made on an amortization plan by which interest and a small portion of the principal were paid at regular intervals. Loans could be had also from joint-stock land banks, which, although their stockholders were usually financial investors, were supervised by the government. In spite of the fact that they could borrow up to fifty per cent on the value of their land and an additional twenty per cent of the value of their improvements, the farmers were not wholly satisfied with the new system. Governmental red tape was annoying, and many times appraisals were disappointing. But whatever the criticisms, the plan proved its worth. At last the agrarians could borrow money at reasonable rates, with repayments ranging over periods of from five to forty years. The specter of foreclosure that had ever harassed the landowners was in part finally laid.

In addition to the long-time land-secured loans that Congress had made possible, the farmers needed a peculiar type of short loan. Frequently they required funds during planting and harvesting; repayment, however, could not be made until crops were sold. Money in such cases had throughout the latter half of the nineteenth century in particular been obtained through the infamous crop liens and chattel mortgages, too often evidences of oppression and harbingers of disaster. Short-time loans were eventually provided through the amended machinery of the Federal Reserve System. They were based, as long before demanded by the Populists, on the products of the farm, warehouse receipts being accepted as security. Before the end of the first administration of Woodrow Wilson a reasonably satisfactory system of agricultural credit was a reality, but the farmers' economic troubles were not ended. Easier money was a temptation to delve deeper into debt. Moreover, when the lending acts were passed, the war clouds of Europe were already threatening to engulf the United States.

Agriculture in Wartime. Less than a fortnight after the German armies invaded Belgium in early August, 1914, Seth Low, president of the New York Chamber of Commerce, announced at a special meeting of his organization that Europe had "placed an embargo on the commerce of the world." The fact was soon evident to every farmer in the nation. Wheat had dropped more than ten cents a bushel, and exportations had drastically fallen off. In July two and a half million bushels had gone to Germany alone; in August not a single bushel entered the German ports. The South in particular suffered from the economic impact of war. In 1913 Europe had taken more than eight and a half million bales of cotton; in August, 1914, exportations of the fiber amounted to scarcely more than eight per cent of those a year before. A bale that sold for sixty-two dollars and fifty cents in July brought only about thirty-six dollars and twenty-five cents in December. Frantic measures were taken in Congress to bring relief to the hard-pressed planters by means of loans on stored cotton. The legislature of South Carolina considered prohibiting any crop at all in 1915. In the end the Secretary of the Treasury in conference with interested individuals drew up a plan for making loans to the growers at the rate of thirty dollars a bale. The people, given an object lesson by the President, were urged to "buy a bale of cotton." Meats and other products too found a closing market, and the situation was aggravated by increases in international freight charges.

But the collapse of the agricultural market was short-lived. Soon the peasant farmers of Europe were called out of their fields into the trenches, and America filled the waiting food bags of the war machine. Throughout 1915 and 1916 exportations grew apace and prices rose accordingly. Then in April, 1917, the United States entered the maelstrom and began arming five million young men for the lords of war. Regardless of the personal tragedies involved, the financial condition of the farmers took a definite turn for the better. A golden stream of money started to flow into the rural homes of the land, and, since taxes and interest charges moved upward less rapidly than prices, agrarians found that they had a surplus of cash when settlements were made. It mattered little that the factory products they bought were dear, for they possessed what they had not possessed before the war—the ability to buy in large amounts.

The farmers never realized the full fruits of the emergency demands. Agriculture was almost immediately nationalized, and Herbert Hoover as Federal Food Administrator was by August exercising dictatorial control over prices and marketing. Growers of wheat were guaranteed two dollars and twenty cents a bushel in 1917 and two dollars a bushel in

1918. Economic forces were not, as in industry, permitted free play, yet no opportunity was overlooked to encourage production. Appropriations by Congress put into every agricultural county in the nation not already supplied agents to teach improved methods of farming, of packing, and of preserving. Boys' and girls' clubs were organized for the purpose of turning young hands to the task of growing pigs, calves, corn, and anything else that seemed to be needed. The civilization that had fought a long hard fight to take women out of the fields now put them back as "farmerettes" with national pride. War gardens sprang up in the cities; daylight-saving time took laborers and office workers to their jobs an hour earlier than usual that they might return home to tend to their tiny plots before the sun had set. Wheatless and meatless days appeared, and the "clean plate" became a virtue. Idleness was a sin, punishable in many states by prison terms and in some by enrollment in the army. The anxious rush to make something grow out of the earth that could be eaten sent plowshares into the unbroken land of the West and turned under the grass that had through the centuries held the sod against the raging winds that whipped the plains.

The prosperity that came to the country was reflected in decided material improvements on the farm. Telephones, automobiles, tractors, motor trucks, running water, and gas and electricity brought urban life to a few in the country; the "hayseed" and the "parlor" scarcely outlived the war. Young sons who were not called to serve in the armed forces—and young daughters as well—went off to the cities to work at high wages. Those who left learned to want what they could not later buy, and those who stayed at home frequently bought (especially land at from two to eight hundred dollars an acre) what they could not later pay for. Trouble was bound to come.

Postwar Collapse. Tragedy, indeed, stalked through the farm lands after the war. In 1920 the agrarians planted their crops at high prices and at harvest time sold them for less than they had received in 1914. That their incomes had declined was not an insurmountable obstacle, for the farmers had borne the brunt of war collapse before. What was overwhelming was that they could not at prevailing prices produce enough from their soil to pay taxes and interest on their notes and mortgages. In 1920 eight hundred and thirty-three million bushels of wheat sold in the market for more than a billion dollars; a year later eight hundred and fourteen million bushels brought only seven hundred and fifty-four million. Returns from corn fell by over eight hundred and fifty-three million dollars and from oats by over three hundred and sixty million. Only cranberries and

onions brought more in 1921 than in 1920; cotton, cranberries, and oranges were higher, but yields were small. Between 1920 and 1925 farms dropped in value by over seventeen billion dollars. More than that, state and county levies were growing year after year; from 1913 to 1922 direct taxes on farm property rose from three hundred and fifteen million dollars to eight hundred and sixty-one million.

TABLE V

PRICES, PRODUCTION, AND VALUE OF CROPS, 1920 AND 1921*

	Market Price		*Unit*	*Production (in thousands)*		*Unit*	*Total Value (in thousands)*	
	1920	1921		1920	1921		1920	1921
	$ ¢	$ ¢						
Corn	67.0	42.3	Bu.	3,208,584	3,068,569	Bu.	$2,150,332	$1,297,213
Wheat	1 43.7	92.6	Bu.	833,027	814,905	Bu.	1,197,263	754,834
Oats	46.0	30.2	Bu.	1,496,281	1,078,341	Bu.	688,311	325,954
Rye	1 26.8	69.7	Bu.	60,490	61,675	Bu.	76,693	43,014
Barley	71.3	41.9	Bu.	189,332	154,946	Bu.	135,083	64,934
Buckwheat	1 28.3	81.2	Bu.	13,142	14,207	Bu.	16,863	11,540
Rice	1 19.1	95.2	Bu.	52,066	37,612	Bu.	62,036	35,802
Potatoes	1 14.5	1 10.1	Bu.	403,296	361,659	Bu.	461,778	398,362
Sweet Potatoes	1 13.4	88.1	Bu.	103,925	98,654	Bu.	117,834	86,894
Cotton	13.9	16.2	Lb.	13,440	7,954	Bales	933,658	643,963
Cotton Seed	22 92	29 72	Ton	5,971	3,531	Sh. tons	136,990	104,560
Hay	17 66	12 10	Ton	89,785	82,458	Tons	1,583,535	998,069
Tobacco	21.2	19.9	Lb.	1,582,225	1,069,693	Lbs.	335,675	212,728
Cranberries	12 28	16 99	Bbl.	449	384	Bbls.	5,514	6,526
Oranges	2 19	2 51	Box	29,396	19,940	Boxes	64,245	49,992
Onions	81	1 31	Bu.	21,343	14,165	Bu.	17,386	18,587
Cabbage	17 90	24 60	Ton	1,105	687	Sh. tons	19,784	16,903

* Compiled from *Statistical Abstract of the United States, 1929*, pp. 694–698.

The perplexed farmer did not know what to do. He could not understand why his land, bursting with eager growth, could be worth so little in comparison with what he had paid for it, nor could he see why his grain and his pigs and his calves and his lambs should with the world hungry sell at such ruinous prices when manufacturers who had reaped rich profits during the war continued to prosper. The myth of overproduction and the reality of world competition could not change the fact that the agrarian was in dire financial straits while his countinghouse neighbor flourished. He turned, as he had done before, to politics for aid.

The Agrarian Panaceas. *The Nonpartisan League.* An aggressive farmers' organization had begun in North Dakota as early as 1915. There peculiar economic conditions created grievances that brought to the fore

Arthur C. Townley, who, with "an idea, a Ford, and sixteen dollars," founded the Nonpartisan League. State-owned elevators, flour mills, cement plants, coal mines, and even a bank, along with a home-building association, a graduated income tax, hail insurance, exemption of farm improvements from taxation, an eight-hour day for women, workmen's compensation, and regulations of railroad rates, made up the major part of the program. War, mismanagement, and organized opposition brought disaster, however, to the inexperienced farmers who tried their hand at politics and business.

The league, notwithstanding its adoption of the name National in 1917, never spread far beyond the northwestern grainfields. Criticism east of the Mississippi was particularly strong because the party principles smacked considerably of socialism and sectional interests. Smothered by the postwar depression, the league together with its economic experiments collapsed. In its place, though it was not a direct outgrowth, arose the Farmer-Labor party. The agrarian and the wage earner had long grumbled at the same injustices, yet the effort to unite them into an effective political force was not successful. It was chiefly the vote of the agriculturists that sent Henrik Shipstead and Magnus Johnson to the United States Senate in the early twenties.

The Cooperative Movement. The farmers in their search for relief turned vigorously to community action in buying and selling. It is estimated that by 1925 one million eight hundred thousand people were members of cooperatives doing a business of two billion four hundred million dollars annually. Growth was attained chiefly through state-wide or sectional expansion of old organizations rather than through the creation of new ones. The dairymen of Minnesota bought from one central purchasing agency, and the fruit growers of California and the apple raisers of Oregon did likewise. All New England was included in a single general cooperative. These businesslike attempts to alleviate an old trouble, while they had gratifying results, were still too limited in extent to be of great value. Moreover, they did not hit at the heart of the problem, which was the creation of markets to replace those destroyed by war. Lack of concern with the ills of the world, a moral conviction that there must be atonement for sins, and a very human desire on the part of the industrialists to fight off through tariff barriers encroachment at home from any quarter prevented the rehabilitation of Europe. The consequent lessening of farm incomes and the accompanying decline in wages made expansion of domestic sales impossible. Efforts to rebalance the national economic structure under such conditions brought peculiar handicaps to

the farmer, who began to feel that he alone bore the burden of readjustment. "The man who drives a city milk wagon gets close to a dollar an hour," declared an agrarian editor. "The farmer who makes the milk is lucky if he gets a dollar a day, and the farmer's day is often sixteen hours long. There is not a man who touches the farm produce from the time it leaves the farmer's hands until it reaches the consumer's table who does not get more out of it for the time and energy put into it than the farmer who produced it. This applies to the trainman, the conductor, fireman, brakeman and engineer, all the way through the various truckmen and dealers down to the delivery boy and cook." [4]

The Farm Bloc. Congressmen from the farming districts were alarmed over the distress of their constituents. Ignoring party affiliations to some degree, they formed in 1921 what newspaper correspondents immediately dubbed "the farm bloc," an informal group that was to prove significant for several years in national politics.[5] These economic sectionalists, led in the Senate by W. S. Kenyon of Iowa and Arthur Capper of Kansas, were responsible for many agrarian laws. The defunct War Finance Corporation was revived in the hope of encouraging exportation of agricultural surpluses; the Secretary of Agriculture was by separate laws given power to prevent manipulation of prices and monopolistic practices on the part of the meat packers (Packers and Stockyards Act) and the grain traders (Grain Futures Act); farm cooperatives were exempted from persecution under the antitrust laws; and in 1923 twelve banks with an initial aggregate capital of sixty million dollars were established (Federal Intermediate Credits Act) for lending to farmers on warehouse receipts and for rediscounting agricultural paper held by regular banks and by trust companies and lending corporations.

A further effort to solve the agrarian difficulties by bringing supply and demand into balance through international sales was made by Senator Charles L. McNary of Oregon and Representative Gilbert N. Haugen of Iowa, who introduced in Congress a plan proposed by George M. Peek of the Moline (Illinois) Plow Company. The originator of the idea, arguing that large exportable surpluses had made the tariffs of 1921, 1922, 1924, and 1926 ineffective, sought to establish high prices at home by disregarding the oversupply. Wheat not needed for domestic consumption, for instance, was to be segregated; the excess was to be shipped over the world and disposed of for whatever it would bring. Losses were to be

[4] Quoted in John R. Commons, "Radicalism and the Farm Bloc," *North American Review*, vol. 217 (April, 1923), pp. 443-448.

[5] See Arthur Capper, "The Farm Bloc. What It Is and What It Isn't," *Outlook*, vol. 130 (February 1, 1922), for a statement of the aims of the bloc.

recouped through an "equalization fee" levied on all wheat growers. But President Coolidge, who could never quite understand why any business not industrial should ask for assistance, twice vetoed the McNary-Haugen bill and thus forced into prominence the "export debenture" scheme, according to which shippers who sent farm products abroad were to receive bounties in the form of "debentures" that they could use in paying import duties on goods bought in Europe. The lower house three times refused to pass the latter proposal.

The End of the Decade. Herbert Hoover made farm relief a part of his bid for the presidency in 1928, and shortly after his inauguration on March 4, 1929, he called Congress into special session. On June 29 he signed the Agricultural Marketing Act, which provided for a Federal Farm Board of nine members. The chief purpose of the new law was to give the occupation of farming economic equality with other industries; the desired result was to be attained "by minimizing speculation; by preventing inefficient and wasteful methods of distribution; by encouraging the organization of producers into effective associations or corporations under their own control for greater unity of effort in marketing and by promoting the establishment and financing of a farm marketing system of producer-owner and producer-controlled cooperative associations and other agencies; and by aiding in preventing and controlling surpluses in any agricultural commodity through orderly production and distribution so as to maintain advantageous domestic markets and prevent such surpluses from causing undue and excessive fluctuations or depressions in prices for the commodity." The outcome was disappointing; in fact, the attempts of the grain- and cotton-stabilization corporations to peg the price of wheat and of cotton through purchases on the open market led to enormous losses.

Actually conditions on the farm had by 1929 begun to improve slightly. Land in some cases had increased in value. But the general situation was discouraging. Prices of grain and other products had gained only slightly. Though large expenditures had been made for complex machinery such as tractors, trucks, and harvesting equipment in western grain states, simple farm implements in many places had worn out and could not be replaced. Radios, automobiles, and other material possessions that a rising standard of living had made necessary were bought sparingly or not at all. Even new pests appeared in the fields. Between 1920 and 1927 the Mexican bean beetle swept from Alabama to the Canadian border, and the no less destructive European corn borer spread from the region around Lake Erie northward into Ontario and southward into Ohio, Indiana,

and Michigan. From the Atlantic seaboard, where it had first been seen about 1916, the Japanese beetle was moving slowly westward, and in the South the boll weevil continued to ravage cotton. A few farmers found relief in specialization as they turned in search of profits to raising blueberries, nuts and fruits, bees, and fur-bearing animals. On the whole, however, the many shifts in agriculture that occurred were merely efforts to escape the hard times that marked the decade. When in the cities the towers of industry toppled and the great financial empires collapsed in September, wheat dropped to a quarter a bushel, cotton plumbed new lows, and corn that winter was burned for fuel. Poverty hitherto unknown fell upon urban and rural people alike.

Urban Labor. City dwellers who depended on their daily toil to bring them the economic goods they needed were, like the farmers in the years between 1900 and 1929, not surfeited with physical possessions. Some were woefully poor. Miserable living conditions, long working hours, and pitifully low wages still characterized the cities of the land long after the turn of the century. But urban people, in spite of the fact that bitter struggles lay ahead, had a more encouraging vista before them than did the farmers. Even though their ability to buy back the things they made was limited, their consumption of the various products of industry that brought service and pleasure to the users was for many reasons far greater than that of the agriculturists. They were to some extent at least a part of the advancing industrial structure. Moreover, the reform movement that had risen out of the fields of the West in the late nineteenth century was eventually to bring its greatest blessings to them and not to its original sponsors. In addition metropolitan centers were growing rapidly, and the very weight of numbers was to become a powerful force in bringing benefits to urban labor. The road upward was nevertheless filled with difficulties. Employers fought relentlessly against unionization, society was not always sympathetic with the cause of the workingman, and machines were slowly stripping laborers of their jobs while creating new ones for which they were often not qualified.

The Labor Force. The number of people gainfully employed in the United States in occupations other than agriculture jumped from about nineteen million in 1900 to more than thirty-eight million in 1930. An expanding population, an increasing desire for material and social betterment, a widening range of jobs, a spreading belief on the part of women that they had a place in the economic scheme, and a swelling tide of immigrants were primary factors in the growth of the working army. While the ratio of women to men in industry did not change greatly,

the female wage earner, especially after the first World War, caused much discussion and created considerable resentment in many quarters. Moralists of the period were inclined to blame the war for loosening the bonds of propriety and for inspiring unbecoming desires for freedom, but young girls and even their elder sisters were indifferent to their critics. Freed of hampering bustles, corsets, long hair, and voluminous skirts and determined to have more of the available goods than the male members of the family could give them, they joined the working force with resolution. "It is not a caprice," declared one of them, "which takes women to the factory loom, to the clerk's desk, to the retail-store counter. It is the harsh compulsion of economic necessity."

Immigration too added substantially to the number of individuals seeking employment. Between 1900 and 1928 eighteen and a half million of the poor of the world streamed into the ports of the United States in quest of temporary or permanent homes. This was roughly four million more than had poured into America in the years between the beginning of the Civil War and the turn of the century. The Irish, Germans, Scandinavians, and other northern Europeans who had once made up the major portion of the incoming throng were now, however, in the minority. The new migration came chiefly from central and southeastern Europe. Austrians, Hungarians, Italians, and the oppressed of the polyglot states of the Balkans were lured westward by hopes of economic gain, and the Jews of Russia and Poland sought to escape the persecutions of a royal dynasty whose cruelties seemed endless. On the Pacific coast aggressive Japanese began early in the century to flow into California to an alarming extent until checked by restrictive agreements and controlling legislation.[6]

The migrants who sought new opportunities in the United States in the twentieth century differed in ultimate purpose as well as in geographic origin from those who had preceded them. Many had only faint dreams of striking lasting roots in the soil and becoming a part of the nation to which they fled. In a touching inscription for the Statue of Liberty in New York harbor Emma Lazarus had written of the "tired" and the "poor" of Europe, of "huddled masses yearning to breathe free," but hopes of wealth to be spent in their native villages, promises of profitable jobs by industry and of fruitful land by railroad corporations, and pledges of cheap transportation by agents of steamship companies competing for steerage passengers were more powerful forces in inducing immigration

[6] In 1907 President Theodore Roosevelt, faced by an international crisis, reached a "gentlemen's agreement" with Japan whereby the Nipponese government was to issue no more passports to laborers seeking to migrate. Congress had already restricted the entrance of Chinese; the original law, passed as a temporary expedient in 1882, became permanent in 1902.

than were visions of liberty. For the most part the new arrivals clustered together according to nationality in the poorer sections of the larger cities and from there streamed into the factories or set up their petty trades.

But the urban frontier, like the agrarian frontier of the West, was closing; the ability of the cities to absorb profitably new workmen whose greatest asset was brawn was lessening rapidly. The basic economic structure had passed the stage where sweat and toil were principal components, and machines were beginning to perform automatically the simple tasks that had once marked the workbench. American labor, fighting to maintain itself against mechanical encroachment and at the same time lift its standard of living, bitterly opposed the incoming aliens. A rising consciousness of poverty, privilege, and individual rights brought protests too from reformers. Slowly there began to grow up the feeling not only that America had drunk her fill of the peoples of the world but also that the world no longer had rich human resources to offer. Between 1917 and 1929 laws moved from restriction based on illiteracy to virtual exclusion.[7] The nation that had gained so much economically from those who had made their way from Europe into its fields and its factories, closed its doors chiefly because of economic reasons.

Jobs and the Laboring Groups. Employment opportunities in the early decades of the twentieth century spread over an ever-widening field. The number of occupational groups as listed in the census reports moved upward from a hundred and forty in 1900 to more than five hundred and fifty by 1930. Actually, however, few new designations occurred. Among the classifications that could not have been generally used at the beginning of the period were cranemen; air-transport mechanics; automobile mechanics in factories, garages, and repair shops; operatives and chemists in rayon and automobile factories; bus conductors; chauffeurs and drivers of trucks and tractors; garage owners, managers, and officials; radio operators; foremen, overseers, and laborers at air fields and in

[7] Taft and Wilson vetoed bills for excluding illiterates. The latter argued that illiteracy was a measure of opportunity and not of ability; Congress, however, mustered the necessary two-thirds vote to overrule him. The first general immigration law, passed in 1882, was based not on restriction or exclusion but on selection in order that only desirables might be admitted. The act of 1917, which required a literacy test, was definitely restrictive; it was exclusive so far as India, Siam, Indo-China, and other parts of Asia were concerned. By 1921 exclusion had come to be a basic principle in all immigration legislation. In that year migrants from Europe, Australasia, the Near East, and Africa were limited to three per cent of the respective nationalities living in the United States in 1910. In 1924 the quotas were reduced from three to two per cent, and, so that northern Europeans might be favored, the census of 1890 was substituted for that of 1910. In 1929 by the National Origins Act immigration was limited to one hundred and fifty thousand a year, based on the national origins of the American people in 1920.

garages, greasing stations, and automobile laundries; county agents and farm demonstrators; chiropractors; and radio announcers, directors, managers, and officials. The trend was obviously away from the shop and the mill. The shift from productive to nonproductive labor was especially apparent in the growing number of persons employed in the various service occupations. The ranks of doctors, nurses, teachers, salesmen and saleswomen, authors and editors, chemists, policemen, firemen, agents and demonstrators, collectors, keepers of pleasure resorts, elevator operators, laundry owners and operatives, laboratory technicians and physicians' and surgeons' attendants, candy and confectionery workers, clerks, bankers and brokers and money lenders, decorators and drapers and window dressers, advertising agents, stenographers, artists and sculptors and teachers of art, undertakers, musicians and teachers of music, and many others expanded enormously. On the contrary, coal miners, boiler washers and engine hostlers, railroad and streetcar conductors, railroad laborers and shopmen, locomotive engineers and firemen, boiler makers, blacksmiths and forgemen and hammermen, agricultural landowners and tenants and laborers, industrial apprentices of all kinds, molders and founders and casters, and similar occupational groups tended to decrease drastically.

The Sellers and Servers. White-collar workers, present in the economic structure since its beginning, rose to outstanding prominence only in the decade of the twenties. Never before had such a legion of people devoted their time to selling, serving, and conditioning society to purchase and enjoy. And that was well, for the industrial plant, equipped with automatic machinery and run on a mass-production basis, no longer (if it ever had) possessed the ability to absorb the great army of workmen eager to obtain the means of purchasing the goods and services that were increasing with astounding rapidity.

One of the most significant developments in selling was advertising. It took possession of magazines, newspapers, roadsides, streetcars, radios, hillsides, and mountain tops and even invaded the skies. Cleverly presented through appeal to age-old vanities, the good qualities of every product were inescapable. The real and the unreal were so intermingled that they could not be distinguished; consumers were actually led to believe, for example, that sunshine could be bought with their soap. There was, however, less competition among different brands of the same commodity than among different commodities. "Oil and gas and coal are fighting for the job of heating the country," wrote one commentator in 1927, and "electric refrigeration and ice are fighting for the job of cooling it." The most dramatic of all advertising was that by air. From the early

twenties the radio carried the world in sound to the homes of rich and poor alike. After 1924 the advertisers' budgets paid the bill; the best and the worst in music, literature, dramatics, sports, and national and world affairs were provided at all hours "at the expense of those who wished to sell toothpaste, cough drops, watches, coffee, carpets, ginger ale, mattresses, life insurance, typewriters, motor fuel and so forth." As programs expanded, amateurs as well as professionals who could catch the ear of the public found a new and lucrative source of employment.

Traditional clerks and salesmen made up an important group. By the beginning of the thirties nearly two and a half million men and women were each day selling to an ever-consuming public from behind counters and desks or as sales agents, canvassers, auctioneers, and demonstrators. The rise of installment buying stimulated business. Automobiles, furniture, electrical equipment, and radios were among the leading products bought on the "deferred payment" plan, but stores large and small as well as dentists and other professional people worked out schemes for luring their customers into buying today and paying tomorrow. Millions lived beyond their means, perhaps, but their purchases increased the demand for goods and swelled the ranks of workmen engaged in servicing and repairing.

Probably even larger in number than the sellers were the servers in the business of transportation, in trade, in the professions, in domestic and personal service, in clerical work, and in offices in local, state, and national government. Men maintained their dominance as doctors, business executives, government officials, university and college teachers, and barbers, for instance; women came practically to monopolize positions in grade schools, beauty shops, public dining rooms, health and social agencies, and business offices.

The Factory Workers. In the nineteenth century it had been reasonably easy to differentiate between industrial producers and other gainfully employed workers. Physical strength had in many cases given legitimacy to the term *laborer.* By the middle of the twenties, however, there was much confusion. Men in steel mills and in mines still relied on their brawn for successful performance of their tasks, but those in giant mechanized plants exerted little more energy than the stenographers in the offices. Moreover, the weekly pay envelope ceased to some extent to set the various workers apart; the terms *salary* and *wage* lost some of their original significance. Nevertheless, industrial wage earners remained a distinct unit, and it was among them that unionization found its greatest stronghold. They suffered most from the marvels of science and invention,

though work was not necessarily scarcer than formerly. The difficulty was that the new machines either could be tended by young labor fresh from agrarian fields and from the ports where the immigrants came in or else required more skill than was possessed by those who had spent years at their trades. Neither private enterprise nor the government felt impelled to help the older workers keep pace with developments, and so the "riddle of the laborer" became more and more complex.

Cultural and educational progress intensified the problems of the industrial wage earners. Workers had better homes and better food than ever before, but they could buy far less than schools, newspapers, "movies," and radios were teaching them to want. There was little unity among those who toiled in factories, and a decided hostility had early developed between the skilled and the unskilled in every occupation. Labor leaders were not always sincere; sometimes they were both greedy and selfish. On the other hand, employers clung with a stoicism that deserved a better cause to their old belief that it was no hardship on a man to work him long hours for little pay. They failed to grasp the fact that industry, since it had passed its most hazardous years and therefore no longer needed to withhold vast sums for expanding plants, for paying transportation charges in an undeveloped country, and for guarding against losses in unknown markets, could apportion a greater percentage of its income to wages than in other years. Organized effectively and supported by a well-established tradition of individualism, they bargained, as Professor Dumond has said, "women against men, Negroes against whites and children against the whole." [8] The results were that laborers enjoyed too few of the comforts and privileges of life, manufacturers were frequently without markets, and the nation was compelled to accept poor workmanship. Inherent conditions made it almost impossible to approach the matter from the standpoint of national welfare. The two groups known as capital and labor fought each other viciously, neither realizing that unwise policies and practices would bring impositions upon all the people, more than half of whom had no voice whatever in the controversy.

Militant Labor. Organized labor, though from the beginning never able to adjust itself to the changing nature of industry or to secure a considerable portion of the savings made possible by mechanization, gained substantially. Workers achieved their ends in part through militant action. Success came mostly in good times; as a wave of prosperity rose into full sweep about 1899, labor began vigorous efforts to recoup the losses it had suffered during the tragic years of the early nineties. Between 1901 and

[8] Dwight Lowell Dumond, *Roosevelt to Roosevelt* (New York: Henry Holt, 1937), p. 353.

1905 more strikes were called than in the entire preceding decade. The United Mine Workers of America, the largest single union in the rapidly growing American Federation of Labor, was particularly active. Some appreciable advances had been made in the late nineties in the bituminous-coal fields of the Middle West, but little had been accomplished in the West Virginia-Kentucky area or in the anthracite section of Pennsylvania. On September 17, 1900, the miners quit the anthracite pits in protest against compulsory purchase at company stores (where powder and fuse and other essential items were much higher in price than elsewhere), against unjust weights, against payment of a dollar monthly each to the company doctor, and against a wage scale that lagged far behind the rising cost of living. Within a week some hundred and twenty-five thousand of the hundred and forty thousand miners in the region were idle. Winning concessions from the railroads—"common carriers that ought to have no interest, direct or indirect, in the commodities they transport"—that owned the mines was not easy. Settlement on the basis of abolition of the sliding-scale system of wages and a ten-per-cent increase in pay was reached on October 17. Millions of conservatives who had feared military interference and a consequent drift of voters to William Jennings Bryan, who was once more a presidential candidate, were greatly relieved.

The makeshift truce between the miners and the operators was renewed in April, 1901, with the understanding that if peace prevailed for a year, the union might receive full recognition. The agreement was forgotten by the "old-time feudal chiefs" who owned the pits, and in May, 1902, the miners, told that there was nothing to arbitrate, again walked out, demanding an eight-hour day, a twenty-per-cent increase in wages, and certain administrative reforms at the mines. Though not at first convinced of the wisdom of the course, John Mitchell, president of the union, led his men for five months in a peaceable fight. As winter—and the November elections—drew near, Theodore Roosevelt in the White House grew alarmed and, with the help of J. Pierpont Morgan and other interested financiers, beat the operators into asking for the creation of an investigating commission. Six months after the miners had gone back to work, a three-year extension of the ten-per-cent increase in wages already granted and a nine-hour day were announced. The union was still denied recognition, but labor was encouraged by the fact that for the first time in history the government had acted positively in the interest of the underprivileged. The President was well aware that the human friendly contacts of other years between employer and employee no longer existed. "There was no

such relation between the great railway magnates, who controlled the anthracite industry," he later wrote in his *Autobiography,* "and the one hundred and fifty thousand men who worked in the mines, or the half million women and children who were dependent upon these miners for their daily bread."

Strikes in many other industries too were in part successful. An eight-hour day was won in several instances, notably by the builders, and in 1909 and 1910 the International Ladies Garment Workers Union gained much sympathy in its protests against sweatshop conditions in New York. Failures, however, were not uncommon. A movement in 1901 to organize the steel workers was defeated by the powerful force of the industrialists, and the United Mine Workers made no headway in its attempts to better conditions in western mines. Corporation-controlled wealth yielded rights to labor slowly indeed. The courts were no small factor in its effective resistance. Injunctions in some cases forbade workmen to speak of the strikes in which they were involved. Judges ruled that both primary and secondary boycotts were illegal and hemmed in picketing with so many restrictions that it was of little value.[9] Organization nevertheless continued a general growth upward; by 1912 approximately one million seven hundred thousand workers had joined the American Federation of Labor, and the four railroad brotherhoods had many members.

Although "in the interest of order" state militia and federal troops frequently interceded on the side of capital in economic conflicts, government was significant in the progress of labor. Social legislation, despite adverse court rulings, grew more and more helpful. Massachusetts and Illinois even before 1900 had been especially active in protecting women and children against the evils of aggressive industrialism. The rise in the first decade of the twentieth century of giant impersonal corporations whose chief concern was profit for the stockholders made regulation imperative. As early as 1902 Maryland tried a limited-compensation law, and within a dozen years Montana, Wisconsin, Washington, Kansas, and New York enacted comprehensive statutes. The old theory of personal responsibility for personal negligence was deserted; the maintenance of injured workmen and their families, whoever was to blame for the disabilities, became in varying degree the obligation of the employers and of society. New laws regulating the employment of children and their hours of work were passed. Machinery for fixing minimum wages for women and children

[9] See especially *Gompers* v. *Bucks' Stove and Range Company,* 221 U. S. 418 (1907), and *Lawlor* v. *Loewe (Danbury Hatters' case),* 208 U. S. 274 (1908).

was set up in Massachusetts and other states. Departments of labor and industrial boards charged with enforcement were enlarged, but, as in the past, their efforts were sometimes futile. Employers too often paid only the stipulated minimum wage.

Congress soon became concerned with the reforms that were being launched. In 1907 an appropriation of a hundred and fifty thousand dollars was made available for a study of child labor. The next year employees both of the railroads and of the federal government obtained compensation benefits through national legislation. The eight-hour day was in 1912 extended to workers on government contracts. Most important of the congressional legislation, in promise at least, was the Clayton Act of 1914 for the regulation of trusts and combinations. The law, in addition to exempting agriculture and labor from its restrictions, positively stated certain rights of the unions. The use of the injunction, odious even to many of the issuing judges, was prohibited "unless necessary to prevent irreparable injury to property"; trial by jury was prescribed for most contempt cases; and strikes, picketing, boycotts, and peaceful assemblage were declared no violation of federal law. In 1915 the La Follette Seamen's Act greatly improved living conditions of seamen in the merchant marine, and the next year the Adamson Act, strongly endorsed by President Wilson, provided an eight-hour day for all railroad employees.

Altogether, state and national legislation aided materially the American wage earner. Even the judiciary, though in upholding individual rights it frequently ignored the factor of social betterment, sometimes rendered decisions with the good of society in mind. In the case of *Muller* v. *Oregon* the Supreme Court, influenced no doubt by the human arguments and statistics presented by Louis D. Brandeis, Boston attorney, upheld a law of 1903 limiting the hours of employment for women. Reverses, however, were common. "Labor's charter of freedom," as Samuel Gompers had characterized the Clayton Act, scarcely outlived the war, and judges in other matters read peculiar opinions in what they declared to be support of the rights of workmen. A law forbidding the hiring of women for night work was overthrown with the remark that when an adult female citizen was prevented from "working any time of day that suits her, . . . it is time to call a halt." The members of the bench apparently saw no irony in the comment of the Chicago *Evening Post* that women must be permitted to work as long as they desired in the sweatshops: "when Dora Windeguth, her employer at her elbow, says that she cannot earn enough in ten hours to live," gibed the editor, "our whole chivalry rises to her

defense; let her work twelve hours then. We have always contended that nobody need starve in America!" [10]

In spite of the fact that the Knights of Labor was dead by 1900, the American Federation of Labor was not without opposition. Gompers' philosophy, strange in a democracy, that workingmen's organizations were not directly interested in politics displeased many people, and his insistence that there was an essential harmony between capital and labor violently offended the radical Marxists. Probably the "grand old man of labor" possessed an understanding of the situation that ran deeper than that of any of his opponents, but he did not perceive that the very structure of his federation made for uncertainty and conflict. His method of patient reform and his refusal to champion the cause of the miserably poor and unskilled were bound to bring contending forces against him. In 1901 the Socialists organized as a political party, and four years later the aggressively radical Industrial Workers of the World came into being. Both were vigorously opposed by Gompers.

The Socialist party grew rapidly. Eugene V. Debs, its perennial candidate for the presidency, won four hundred thousand votes in 1904 and nearly nine hundred thousand in 1912, by which time the organization was publishing "five English dailies, eight foreign language dailies, two hundred and sixty-two English weeklies, thirty-six foreign language weeklies, ten English monthlies and two foreign language monthlies." [11] The *Appeal to Reason* of Girard, Kansas, and the *National Rip-Saw* of St. Louis, each boasting a large circulation, stirred workmen and rural and village people alike. In fact, the party in spirit at least came up out of the fields and the small shops and mills from which had emanated for many decades protests against the greed of the rich. It was as indigenous as (and to many agrarians identical with) the democracy of Bryan. The I. W. W., on the other hand, rose out of the evils that had attached themselves to the money-getting aspects of urban industrialism. Its doctrines were alien to national tradition, and its membership was a heterogeneous mass of migrant workers who struck hard and accepted no quarter, for they considered peace under the wage system impossible. Advocating destruction and condoning murder when "necessary," the "wobblies" kept the Pacific Northwest in turmoil for ten years and then in 1912 and 1913 moved into the textile towns of Massachusetts, New Jersey, and New York, where they made gains only at the cost of ruthless suppression. By 1908 the Socialists, sympathetic from

[10] Quoted in Morison and Commager, *The Growth of the American Republic,* vol. ii, pp. 172-173.

[11] See Louis M. Hacker and Benjamin B. Kendrick, *The United States Since 1865* (New York: F. S. Crofts, 1940; 3rd ed.), p. 430.

the beginning, broke away from them. The separation marks perhaps the dividing line between the radicalism of the nineteenth century and that of the twentieth.[12]

Labor in the First World War. President Wilson, mindful of the needs of the wage earner, appointed as Secretary of Labor William B. Wilson of the United Mine Workers and throughout his first administration consistently encouraged the passage of helpful laws. When war broke out, the A. F. of L. pledged its loyalty to the nation, and the government, conscious of the critical necessity for materials with which to fight, exerted itself in behalf of the workers. A code of principles "basic to a sound national labor program" was drawn up, having as its salient points that industrial disputes should be forgone during the war, that labor should have the right to organize and bargain collectively, that workers should not be discharged for trade-union activities, that regulations as to health and safety in factories should be effectively enforced, that the pay of women should be equal to that of men in similar positions, that eight hours should comprise a day's work, and that workers should be paid wages in accordance with the cost of maintaining themselves and their families in health and comfort. Production moved upward at a rapid rate as men and women throughout the nation turned to their tasks. Unionism, however, was still not welcome in some industries, and strikes were not uncommon. On the whole, wages, except for salaried people such as public-school teachers, college and university professors, and public servants, kept pace with the rising prices. Higher pay, more days of work, and more members of the family employed than ever before made labor comparatively prosperous, and its organizations grew in strength.

Labor in the Postwar Years. Serious economic problems came with peace. As munitions and war-goods factories closed down, the specter of lessening wages and decreasing employment grew more real each day. Women, useful in mill, plant, and office in the tragic days of 1917-1918, threatened to become a surplus commodity, and profitable use of the horde of Negro workers from the South who, lured by war prosperity, had poured into the cities of the North seemed near an end, though the migration from the cotton fields continued. The rapid return of soldiers, sailors, and marines to civilian life further glutted the labor market. The mental resources of

[12] In spite of their determination to overthrow completely the capitalistic system, the I. W. W. ("I Won't Work") "wobblies" performed yeoman though brutal service in reforming to some extent the unhappy state of affairs in the mining and lumbering camps of the West, where wandering homeless laborers without possessions or ties of tradition worked through miserable days of peonage. Both the situation and the remedy, however, were socially regrettable and economically wasteful.

the land had been mobilized on a grand scale to convert the nation into a fighting machine, but little thought was devoted to the task of turning the people back to the ways of peace. Industrialists, burdened with canceled contracts, felt no obligation to dip into their war profits to finance production readjustments, and the government was little concerned. Prices continued to move upward, while family incomes shrank as days of work declined and the number of members employed grew fewer. Every economic group began to take steps to guard its material future.

Unlike the farmer, who could do nothing to save himself, the laborer with a militant machine at his command fought, as he had always done after wars, to maintain the gains he had made. On February 3, 1919, thirty-two thousand textile workers at Lawrence, Massachusetts, walked out in protest against wage reductions and long hours. Three days later a general strike broke out in Seattle, Washington, that paralyzed the city, including the police force, for five days. In September the steel workers for the third time in the century challenged the power of the owners in an attempt to unionize their industry. More than three hundred thousand men left the mills in opposition to a twelve-hour day and a seven-day week, but in spite of aid from union treasuries throughout the country they suffered disastrous defeat. Early in the fall four hundred and thirty-five thousand miners quit the pits demanding a sixty-per-cent rise in tonnage pay and a thirty-hour week. Political pressure and court injunctions smothered the strike; a commission, however, granted some increase in wages. It is estimated that by the end of the year industrial conflicts altogether had involved some four million workers and had cost employers and employees over two billion dollars—nearly a tenth of the total expenditures for the war.

The opening years of the decade of the twenties were turbulent ones. Conditions in the country grew worse as war prosperity evaporated. The reaction fearfully anticipated by many since November, 1918, struck the nation full force before the end of 1920. The farmers' market collapsed, Europe ceased to buy, domestic demands fell off sharply, wages dropped, and the wheels of industry slowed alarmingly. Nineteen thousand six hundred commercial firms with assets totaling in excess of four hundred million dollars failed in 1921, and by the close of the year four and half million workmen were idle. A bank panic was narrowly avoided. More than a million men struck against the hardships that were falling upon them, and the next year the number was even larger. Especially distressing was the situation in the coal fields of southern Illinois, where "bloody Williamson" County won undeserved notoriety.

Between 1923 and 1929 the industrial front was on the surface at least reasonably quiet. Several factors were responsible. The violence that had flamed over the land, regardless of who was to blame, had stirred a desire for peace, though it sometimes took peculiar forms; the acute crisis of 1921 had passed; the company-union campaign of the well-organized employers was succeeding through both coercion and enticing promises; unions themselves were losing some of their aggressiveness as technology stripped many skilled craftsmen of their jobs and the make-up of the working group itself changed drastically in nature; and the people were becoming convinced that the prosperity of the war days could not be made permanent. Disturbances in economic, social, and political life continued. Communism flared up, adding fuel to the labor fires that in 1929 broke out in the textile mills of North Carolina and the mining towns of West Virginia and eastern Kentucky.

No simple explanation of the decade of the twenties is satisfactory. The complexities and the contradictions of the period are not yet wholly understood. The worker, while he was exploited, had more material possessions and more leisure than ever before in all his history. The employer was prosperous, but the glorious days of laissez faire were behind him. The years were perhaps years of blind gropings rather than years of conflict between good and evil. Young and old were confused; the social and the economic were inextricably entwined. Greed was no monopoly of capital, and fanaticism was no exclusive possession of the political moralists who chased Daniel De Leon to Russia and Sacco and Vanzetti to their deaths. It is obvious, however, that traditional philosophies were being questioned even before the collapse of 1929 launched the nation on what Charles A. Beard has called its "Midpassage," though he does not name the farther shore.

Chapter 30

FINANCE AND BUSINESS, *1900-1929*

The Opening Scene. The Spanish-American War and the flowering of American imperialism at the turn of the century completely overshadowed for a time the revolt against the growing power of the financiers and the industrialists. The grinding poverty and the miserable bread lines of the panic of 1893 had disappeared, the Democratic tariff of 1894 had been replaced by the industry-approved Dingley bill, and the gold standard was apparently safely ensconced in national financial history with the passage of the currency act of 1900. Moreover, William McKinley, "advance agent" of better times, and his laissez-faire party were gallantly riding the high tide of prosperity, whose coming, said the business men, had awaited only noninterference with industry. But the lull was only the quiet before a storm; underneath was brewing a determined conflict between the social and the economic thinkers.

The defeat of Bryan in 1896 had marked the end of a dramatic crusade and the end of a generation as well. Although the "Great Commoner" lived on, the twentieth century opened with new reformers and, if not new financiers and industrialists, at least new and staggering methods of manipulation and concentration. There was no doubt that big business held the center of the stage and that new wealth had come to America. Those whose wants had far outgrown their ability to buy, however, felt that material success had come in fullest measure to only a small number. Trusts grew into supertrusts, and millionaires became multimillionaires. Syndicates, mergers, trusts, pools, and communities of interest flashed across the business horizon with such facility as to stagger the ordinary layman. The rapidity with which corporations grew belittled the days that had brought the Interstate Commerce Commission and the Sherman Anti-Trust Act into existence. "Consolidations" and "integrations" soon centered in a few guiding hands the production of a major part of American goods.

Two processes were in progress at the same time: first, industrial enterprises were fast assuming possession or direction not only of competitors but also of all critical economic materials and services necessary for the

fabrication and distribution of their particular products; and, second, all related industries were being consolidated under one financial control or ownership whether the financiers understood the various businesses involved or not. In other words, normally competing units of whatever degree were being united, while production and ownership were being irrevocably separated. Basically the development of large-scale production was within limits natural and desirable. The small shop was incapable of supplying the material goods needed by a society that was constantly raising its standard of living. New physical services, as illustrated by the automobile and the radio, are always expensive, and their rate of appearance is in part determined by the speed with which the prices of old commodities are reduced. Social idealism has not always accompanied the growing capacity to produce. Long before 1900 many individuals—though they were certainly not "robber barons"—had perhaps begun to take too much personal toll both in manufacturing and in financing; unit profits were not kept in line with lessening unit costs.

By the turn of the century the whole business structure had undergone profound change. Administrative offices that had once consisted of one or two cluttered rooms in the same building with hurrying machines had expanded into great temples in the financial centers, far from the scene of production. Twenty-six Broadway, for instance, became known over the world as headquarters of Standard Oil, and other addresses were no less famous. In the central offices general policies were set up; there shrewd men watched public and political sentiment as they played the financial and industrial game with consummate skill. To a large extent the rule of experience was taken over by the rule of science as experts in personnel management, in marketing, in state and national law, in world economic conditions, and in a variety of other subjects—depending on the nature of the business—came to dominate the corporations. Standard Oil, for example, not only sold motorists gasoline and oil but also provided them with carefully planned itineraries, replete with road maps, hotel and restaurant listings, and a subtle reminder that happiness and Standard products were boon companions. So great became the diversity of interests of the corporations that independent institutions grew up solely to serve their needs. Law, industrial-engineering, and accounting establishments, as well as advertising firms, flourished. The business of running business became indeed a "big business" as the economic structure grew to maturity.

The Production "Trusts." It is scarcely necessary to say that only in size was the trust peculiar to the twentieth century. The number of combinations formed during the decade of the nineties exceeded several times that

of the previous thirty years. In 1899 alone ninety-two were chartered, the largest of which was the Standard Oil Company of New Jersey, "one of the richest and most powerful corporations on the globe." Standard profits in 1900 amounted to more than fifty-five and a half million dollars; a half-dozen years later total net earnings exceeded eighty-three million. In 1901—as if to open the century properly—came the breath-taking United States Steel Corporation with the first billion-dollar capitalization. Whereas Carnegie had for the most part limited himself to the making of steel, the new corporation took the additional step of fabricating the metal into tubes, pipes, barbed wire, boiler plate, bridge beams, and countless other necessities of the complicated economic life of the time. It was, in fact, merely the director of a host of related but noncompetitive businesses that had themselves already absorbed their particular rivals in trade. The American Steel and Wire Company (a consolidation of forty-six concerns), the American Steel Hoop Company (near absolute monopoly in its field), the American Bridge Company, and the American Sheet Steel Company were only a few of the component parts of the gigantic organization.

In 1902 the International Harvester Company was created. Firms that had once fought one another without mercy in their efforts to obtain the business of the farmers were at last united. McCormick, Deering, Plano, Champion, and Milwaukee became merely brand names on machines that were now made under the general financial supervision of the "House of Morgan." Slowly all other companies making planting and harvesting implements were engulfed. Eventually, however, the courts ordered the dissolution of the corporation, and it was broken up into the International Harvester Corporation. But government proved an impotent weapon against concentration. Old businesses were absorbed and new ones were launched with abandon. Sometimes there was profit, sometimes loss; many people suspected that over-all social and economic welfare was a minor consideration.

The Financial "Trusts." Any dangers that may have been involved in the formation of trusts so far as manufacturing itself was concerned were dwarfed by the threatening possibilities that came with the rise of centralization in ownership, which for lack of a better term may be called trust concentration. When, for example, the coal trust and the oil trust, along with the gas trust and the power trust, fell under identical control, the complications beggared those of the days of simple trusts. In one instance there was concentration of units of production and in the other concentration of units of control regardless of natural antitheses. Moreover, the drift of financial direction into the hands of a few people was accompanied

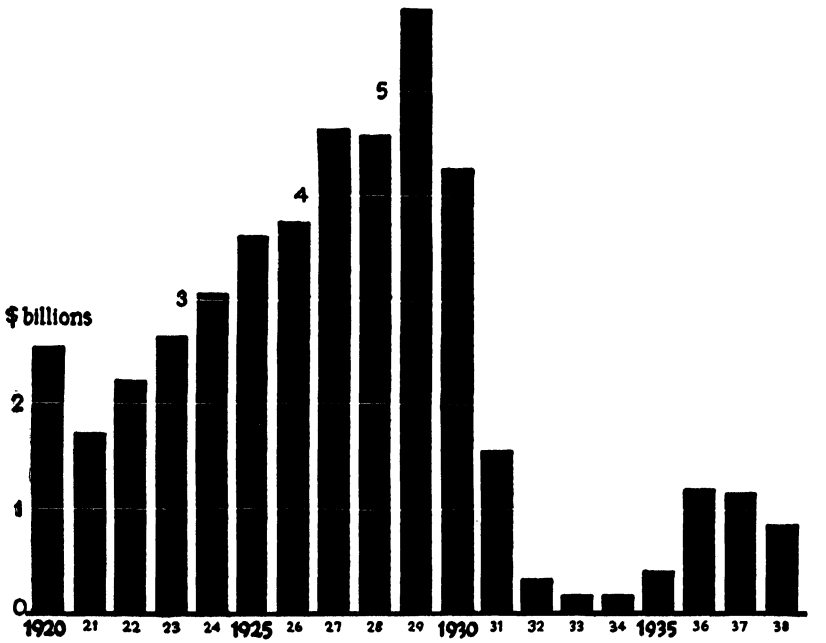
by even more mystifying rites than in consolidation in production. Though the great steel king was ready to quit—on his own terms—Morgan, Rockefeller, and Carnegie were still the financial giants at the turn of the century. Each had been quietly seeking domination of those parts of the slowly congealing private enterprise that in some way or another were related to his individual empire. The stability for which each said he longed never appeared; in fact, necessity for further consolidation seemed to grow more critical as the number of real competitors lessened. In 1900, for instance, when Carnegie, finding orders for steel falling off, purchased a favorable tract of land at Conneaut on Lake Erie and began building a factory for making steel tubes, Morgan's National Tube Company, which had managed to secure its steel elsewhere, saw its doom. Further, when the aging steel master placed himself squarely behind a plan to build a new railroad from Pittsburgh to the Atlantic, the Pennsylvania Railroad Company knew that such a move could mean empty cars. And, last, when the wily Scot challenged Standard Oil's hold on the Great Lakes by building a splendid fleet of ore ships, Rockefeller saw trouble ahead. The outcome was the formation of the already mentioned United States Steel Corporation, which paid Carnegie about four hundred and fifty million dollars for his holdings.

Other corporations sprang from financial necessity. The McCormicks, long famous in the manufacture of agricultural machinery, found their trade seriously threatened by competitors. Unable either to extend their activities into other fields of farm equipment at home or to spread their sales in Europe, they turned to the "House of Morgan" for money. George F. Baker negotiated the creation of the International Harvester Company, referred to above, and Wall Street became in part the owner of factories that made harvesting machinery, to which were soon added harrows, rakes, plows, manure spreaders, and whatever else could be profitably sold to the farmers. Railroad and utility corporations sometimes became pawns in the game of the moneyed interests, as illustrated in the formation of the Northern Securities Company (see p. 652).

Speculation, ruthless enough in the eighties and nineties, ran rampant. Dummy financiers, directed by unseen hands, set up dummy corporations that fleeced the people of millions of dollars, and the manipulators decried the protests of innocent victims. "They have got to wade in and get stuck," declared Henry O. Havemeyer, who had for many years taken care of sugar interests in Congress. Only lack of available capital limited the gamblings. The overflowing treasuries of the insurance companies became under the circumstances a tempting morsel. These institutions were forbidden by law to pour their cash directly into the financial whirlpool, but

the bankers soon found a way to achieve their ends. They established trust companies under the nominal control of insurance firms and were thus able to turn a new golden flow of money into Wall Street. Morgan gained possession of Mutual Life, New York Life, and the Equitable Life Assurance Society. Branch banks operating in conjunction with the trust companies facilitated the dominating march of the masters of capital.

Money and Tariff Developments to 1913. That the conflicts and contro-



Courtesy Machinery and Allied Products Institute

FIGURE 16. DOMESTIC SECURITY ISSUES, 1920–1938
(Refundings and investment trust issues are excluded.)

versies connected with the spread of monopolies and trusts were irritations generated in the process of adapting production to the needs of the time is evidenced in the fact that national wealth more than doubled between 1900 and 1912. Industrial and urban expansion, though sobered momentarily by financial stringencies in 1903 and 1907, continued apace. The vast amounts of money needed in financing the tremendous material growth that was in progress were provided chiefly by Americans, for Europeans who once had held huge stakes in American railroads and other enterprises were now looking toward Africa, China, South America, Canada, and Australia, where competition was mild. Private financing of large-scale industrial projects was no longer possible; with the exception of a few

brilliant examples such as Henry Ford's venture in automobile manufacturing, it was the money of the people that built the new production facilities. Even so, business looked with distrust on any expression of social control, whether state or national. New Yorkers in some instances blamed the meddlings of Theodore Roosevelt for the panic of 1907. Since the stringency was limited almost wholly to Wall Street, however, it is difficult to avoid the feeling that the actions of the financiers themselves were the leaven of tragedy. Plungers and persistent small competitors alike were wiped out notwithstanding the efforts of the Secretary of the Treasury to lend assistance. Many players on the periphery of the golden circle of wealth either collapsed or were swept into the tills of the great financial houses. People began to suspect that a few individuals were gaining an unhealthy monopoly in the money world. In 1913, in fact, a congressional committee openly declared the existence of a "money trust" and announced that four allied New York institutions directed business and industrial concerns whose assets totaled more than twenty-two billion dollars.

The concentration of funds was for the most part a natural accompaniment of a vast industrial expansion; many people were convinced, however, that the whole monetary structure needed to be rebuilt. There was no means by which the currency could be expanded or contracted to meet regional demands, and the machinery for shifting it from place to place as needs arose was, regardless of the arguments of the monetary philosophers, thoroughly unsatisfactory. When stringencies occurred, whatever the causes, few immediate remedies could be applied. Slowly the full significance of the fact that panics fell on the country in April or May or in September or October began to be realized. Congress, conscious of the pressing necessity for adequate supplies of money to lessen the evils of temporary financial crises and to meet the seasonal demands of the agrarians, passed in 1908 the Aldrich-Vreeland Act, which provided for an emergency bank-note currency and—what was more significant—established a National Monetary Commission to study the entire problem. The commission made its report in 1912, and Senator Aldrich promptly introduced a plan for a National Reserve Association, a central bank of rediscount and issue. But the Democrats, successful in the November elections, ignored the Republican proposals.

Closely related to the money problem was the tariff. The Republicans saw in protection the key to prosperity and the source of an abundant revenue with which to meet public obligations and with which to relieve financial stringencies through the redemption of bonds and similar expedients. They had hurriedly pushed through the Dingley bill when they

returned to office in 1897. Nevertheless, the contention of the Democrats that tariff was a tax that stripped the people of their hard-earned money had since 1890 been slowly gaining popular support. The farmers of the upper Mississippi valley in particular believed that duties on imports were directly responsible not only for the excessive prices they paid for agricultural machinery and equipment but also for the rapid contraction of foreign markets. Too, said many, tariff was the mother of trusts. But public clamor could not drive Theodore Roosevelt into politically dangerous controversies. It was not until 1908 that the Republicans finally promised to revise the protective rates; William Howard Taft, nominee of the party, frankly asserted that "revision" meant "revision downward."

President Taft immediately after taking the oath of office summoned Congress into special session. Scarcely three weeks after the legislators assembled on March 15, the Payne bill was passed by the House of Representatives. The Senate, not inaptly called the "millionaires' club," perceived no virtue in reform. Nelson W. Aldrich, immensely wealthy chairman of the Senate Finance Committee, began in earnest to trim the measure to fit big business. Hundreds of amendments were introduced that openly or secretly pushed rates upward; other matters were smothered and discussion was discouraged as the bill was hurried onward. Undaunted by party discipline or the power of the party "boss," however, a small group of midwestern Republicans challenged the industrialists, whose lobbyists for more than half a century had in large part determined the fate of tariff bills. They succeeded only in making the public aware of what was going on; the Payne-Aldrich tariff that emerged from the conference committee of House and Senate was a thoroughgoing protective measure with an average rate slightly higher than that of 1897. National reaction was unfavorable, and the insurgents, as the revolting party members were called, were especially irritated by the fact that duties on wool and other items were unchanged. But the tariff was not all bad. By a flexible provision the President could increase the rates in the case of any nation discriminating against the United States, and a bipartisan board was created for the purpose of making expert advice available to Congress. In addition, as a sop to the reformers, a tax of one per cent was levied upon net incomes of corporations above five thousand dollars a year. Even those good points were soon forgotten in the controversy over Canadian reciprocity.

The Rising Reform Movement. *Theodore Roosevelt and the Muckrakers.* While reform from within the corporate structure might eventually have accomplished much good, a powerful external movement had already begun before 1900. The protests of the westerners of the eighties and nine-

ties were taken up over the land as more people became convinced that evil was abroad. Shortly after the turn of the century a group of journalists and humanitarians, dubbed by Roosevelt "muckrakers" after the character in *Pilgrim's Progress* who could "look no way but downward with the muckrake in his hands," began to probe into the financial and industrial life of the nation. A handful of courageous editors, actuated by both pecuniary and altruistic motives, printed all that came to their desks. Ida M. Tarbell's "History of the Standard Oil Company" began in *McClure's* late in 1902. Already Lincoln Steffens, alarmed by widespread municipal corruption that needlessly took from urban dwellers millions of dollars, had written for that journal some of his series of articles on vice in city government, later published in *The Shame of the Cities.* Other writers too took up the cause of reform in books and articles. Among them were Burton J. Hendricks ("The Story of Life Insurance"), Thomas W. Lawson ("Frenzied Finance"), David Graham Phillips ("The Treason of the Senate"), Ray Stannard Baker ("Railroads on Trial"), Upton Sinclair (*The Jungle*), and Samuel Hopkins Adams, who exposed the frauds perpetrated in the manufacture and sale of patent medicines and in advertising.

The muckrakers had no constructive program. They refused to admit that developments were in some instances merely adjustments to changed conditions, they closed their eyes to all but evils, and they sometimes unintentionally misrepresented the facts. Theirs was a negative rather than a positive contribution. The President himself was not so aggressive as the public believed. The "big stick" was used sparingly and circumspectly on the heads of the financial and industrial leaders not only because there was no inherent evil in bigness but also because reforms in some instances were likely to injure the poor; "the capitalist may be shorn of his luxuries," the wielder asserted, "but the wage-worker may be deprived of even bare necessities."

The Reform Legislation. Since the courts possessed in the Sherman Anti-Trust Act potential authority to control combinations, the reform legislation of the Roosevelt and Taft administrations had to do chiefly with the railroads and public health. Aided by the fact that the transportation officials themselves were desirous of ending certain abuses that cut income, the Elkins bill, sponsored by Senator Stephen B. Elkins of West Virginia, who was himself closely allied with the railroads, was easily passed. It prohibited departure from published tariff schedules (making both shipper and carrier liable to prosecution for violation) and forbade rebates. But the measure proved of little value. The three most-used means of evasion were excessive freight allowances made for short hauls on private spur

lines, sudden changes in rates (taken advantage of by the few who were informed in advance), and heavy payments for "damages to goods in transit," which were little more than refunds.

President Roosevelt, dissatisfied with the results of the Elkins Act, the next year threw his full support behind congressional proposals for further reform. The railroad interests fought vigorously for their "rights"; lobbies again appeared in Washington, and a campaign of "education" was launched on a nation-wide scale. The public was unsympathetic, and in Congress only Senate "standpatters" were impressed. The latter, however, were strong enough to force a compromise, which emerged in June, 1906, as the Hepburn Act. The Interstate Commerce Commission was empowered to determine just and reasonable rates, which, once determined, were to remain effective for two years unless modified or abolished by the courts. It was authorized also to prescribe a uniform system of bookkeeping. Except for "such articles or commodities necessary and intended for use in the conduct of its business as a common carrier," every road was prohibited from carrying anything other than "timber and the manufactured products thereof" produced or manufactured by any company owned directly or indirectly by it. Moreover, free passes were proscribed; governmental jurisdiction was extended to include the regulation of express companies, pipe lines, sleeping cars, railway terminals, and refrigerator cars; and the burden of initiating litigation to test the validity of the commission's orders was placed on the railroads.

Within two years seven thousand five hundred appeals and fifteen hundred formal complaints were entered against the railroads under the Hepburn Act. Rates were reduced in many cases. That control was not yet effective, however, slowly became apparent. Penalties, though severe, could under certain conditions be set aside by circuit judges. Moreover, the carriers could collect published rates regardless of their exorbitance until final governmental decision was rendered; profits in the meantime might more than compensate for judicial costs. In addition, the stipulation that the roads transport no goods in which they were financially interested was evaded through rulings of the judges. And so it was that the proposals of President Taft to establish a commerce court caused no alarm.

The bill that was eventually introduced in Congress was indeed mild. But the Democrats and the insurgent Republicans together overpowered the conservative forces, and the Mann-Elkins Act, which emerged in June, 1910, cut deep into the power of the corporations. The legislation struck effectively at the two fundamental weaknesses in former regulations when it prohibited the railroads from changing announced rates at will and

authorized the Interstate Commerce Commission to suspend tariffs until their reasonableness had been established. No longer was it possible for a favored few to profit from sudden fluctuations in rates or for the railroads to increase their charges when water transportation was tied up by the rigors of winter and lower them when the ice went out in the spring. Furthermore, the long-and-short-haul clause of the 1887 law was stripped of its uncertainties, and telephone, cable, and wireless companies were placed under the jurisdiction of the commission. The Commerce Court, set up to expedite decisions, died within two years; early in 1913, however, a physical-evaluation act, long urged by Senator La Follette, was approved by Congress.

The Meat Inspection Act and the Federal Food and Drugs Act (commonly referred to as the Pure Food and Drugs Act), passed in 1906, were important reform laws. Although inspired chiefly by interest in public health, they were significant economically.

The Courts and Economic Reform. The judiciary in the early years of the twentieth century still lagged far behind popular opinion as to the necessity for some positive control of corporations. The judges were partially to blame for the ineffectiveness of the Interstate Commerce Commission and the Sherman antitrust regulations. The Supreme Court in the E. C. Knight case had in 1895 ruled that an obvious monopoly in sugar refining in Philadelphia was not illegal since no direct relation existed between the manufacture of sugar in Pennsylvania and interstate commerce. Later decisions chipped away at this interpretation of the law, but there was at no time a consistent tendency of the higher tribunals to temper legalism with what many had come to feel was social justice. Theodore Roosevelt, certain that all progress had basic value and that business need not be bad merely because it was big, demanded a "moral standard" of conduct on the part of financiers and industrialists. But an aggressive and positive policy under such an uncertain guide was difficult if not impossible to attain; Finley Peter Dunne translated the President's philosophy in regard to the trusts into the pungent sentence: "On wan hand I wud stamp them undher fut; on th' other hand, not so fast."

The Chief Executive, nevertheless, proceeded in some cases with vigor. In 1902 the Northern Securities Company was brought before the courts, and two years later it was dissolved. In 1905 the Interstate Commerce Commission began a series of active prosecutions that forced some of the railroads, particularly in New England, to relinquish in part their subsidiary holdings. Trusts that controlled the manufacture and sale of such ordinary commodities as sugar, salt, meat, coal, tobacco, blasting powder, and paper

were convicted in several instances and penalties levied. In 1907 Judge Kenesaw Mountain Landis won momentary praise by fining the Standard Oil Company a total of twenty-nine million two hundred and forty thousand dollars on fourteen hundred and sixty-two counts.

The attempts that were made to curb the trusts soon alarmed the business interests. J. Pierpont Morgan hurried to Washington to "fix up" the case of the Northern Securities Company and was much surprised to find that nothing could be done. Other financiers too were concerned. A few, however, remembering past threats and the fact that even "T. R." had sanctioned the absorption of the Tennessee Coal and Iron Company by the United States Steel Corporation, refused to be disturbed by the supposed perils that menaced their financial empires. Harriman, railroad baron, is said to have declared that if he wanted state legislation, he could buy it and that if necessary he could buy Congress and the judiciary as well. And there were reasons to believe that actual dangers were small. The courts decided that the Standard Oil Company had been tried on too many counts and practically nullified the original ruling; legal loopholes were used by the privileged with impunity; and monopoly practices were sustained beyond the reach of the law by informal agreements and secret manipulations. Sometimes it seemed as though prosecutions were only stimulants.

The Political Revolt. The demands of the public for effective control of great corporations grew louder. These demands were made not on the basis of socialism but on the basis of equal opportunity to all as guaranteed in the founding document of the nation. Open revolt broke out in Congress during Taft's administration; and in November, 1910, the voters, angered by the President's defense of the Payne-Aldrich tariff as "the best the country ever had," by his refusal to join the conservationists in their fight to prevent dwindling natural resources from falling into the hands of a limited group of capitalists, and by his apparent support of "Uncle Joe" Cannon, whose autocratic power as Speaker of the House was used to further the interests of the business men in the Republican party, spoke decisively for reform. The Democrats won a majority of sixty-three in the lower house.

Taft, however, at a time when city, county, state, and national taxes were taking ever larger amounts of money from the people just as they were learning to want automobiles and a host of other products of the twentieth century, continued to blunder into political misfortunes. He offended western farmers by advocating reciprocity agreements with Canada, and he alienated his reform friends by vetoing a series of bills that

would have reduced the tariffs on essential goods. Taft was too much a party man and too much a lawyer to understand the storm that was blowing up. Although many of his proposals were soundly conceived, he eventually drove liberal Republicans into running the pugnacious "Teddy" on the Progressive or "Bull Moose" ticket in 1912.

The Wilson Era. The election of Woodrow Wilson to the presidency was not a clear indication that the people wanted a Democrat; it was, however, a mandate to abolish some of the financial and economic evils that had grown up. Wilson and Roosevelt drew an overwhelming majority of the popular vote, and the Senate became Democratic for the first time since 1896. The new President comprehended better than most of his contemporaries the fact that the nation had reached a point in its development where the cost of economic progress must be carefully weighed and where the welfare of human beings must be made a concern of government. In his inaugural in March, 1913, he pleaded earnestly for those individuals who had long been overlooked in the national "haste to succeed and be great." Openly recognizing what was clear to all—that America was peaceful and prosperous—he told his hearers:

. . . evil has come with the good, and much fine gold has been corroded. With riches has come inexcusable waste. We have squandered a great part of what we might have used, and have not stopped to conserve the exceeding bounty of nature, without which our genius for enterprise would have been worthless and impotent, scorning to be careful, shamefully prodigal as well as admirably efficient. We have been proud of our industrial achievements, but we have not hitherto stopped thoughtfully enough to count the human cost, the cost of lives snuffed out, of energies overtaxed and broken, the fearful physical and spiritual cost to the men and women and children upon whom the dead weight and burden of it all has fallen pitilessly the years through. The groans and agony of it all had not yet reached our ears, the solemn, moving undertone of our life, coming up out of the mines and factories and out of every home where the struggle had its intimate and familiar seat. With the great Government went many deep secret things which we too long delayed to look into and scrutinize with candid, fearless eyes. The great Government we loved has too often been made use of for private and selfish purposes, and those who used it had forgotten the people.

A deep interest in things economic was obvious in the program of reform which the President set for his party. Among the matters that needed consideration and alteration were:

A tariff which cuts us off from our proper part in the commerce of the world, violates the just principles of taxation, and makes the Government a facile instru-

ment in the hands of private interests; a banking and currency system based upon the necessity of the Government to sell its bonds fifty years ago and perfectly adapted to concentrating cash and restricting credits; an industrial system which, take it on all its sides, financial as well as administrative, holds capital in leading strings, restricts the liberties and limits the opportunities of labor, and exploits without renewing or conserving the natural resources of the country; a body of agricultural activities never yet given the efficiency of great business undertakings or served as it should be through the instrumentality of science taken directly to the farm, or afforded the facilities of credit best suited to its practical needs; watercourses undeveloped, waste places unreclaimed, forests untended, fast disappearing without plan or prospect of renewal, unregarded waste heaps at every mine. We have studied as perhaps no other nation has the most effective means of production, but we have not studied cost or economy as we should either as organizers of industry, as statesmen, or as individuals.

Tariff Reform. The President appeared in person before the special session of Congress that assembled on April 7, 1913, to press upon the members of that body the importance of reform. The tariff, he asserted, "must be changed to meet the radical alteration in the conditions of our economic life which the country has witnessed within the last generation." "While the whole face and method of our industrial and commercial life were being changed beyond recognition," he continued, "the tariff schedules have remained what they were before the change began, or have moved in the direction they were given when no large circumstance of our industrial development was what it is to-day. Our task is to square them with the actual facts. . . . Consciously or unconsciously, we have built up a set of privileges and exemptions from competition behind which it was easy by any, even the crudest, forms of combination to organize monopoly; until at last nothing is normal, nothing is obliged to stand the tests of efficiency and economy, in our world of big business, but everything thrives by concerted arrangement."

The challenge did not go unanswered by the corporations. A swarm of lobbyists swept down upon Washington. But the Chief Executive, labeling them numerous, industrious, and insidious, warned Congress that it was worthy of note "that the people at large should have no lobby and be voiceless in these matters, while great bodies of astute men seek to create artificial opinion and to overcome the interest of the public for their profit." The lobbyists departed, and early in October the moderate Underwood-Simmons bill became effective with the signature of the President. The new law substantially reduced the levies on critical raw materials and on food products or eliminated them altogether. The free list, long an economic curiosity, was actually made to serve the people. Agricultural implements,

nitrate of soda (used in fertilizer), boots and shoes, fence wire, lumber, the lower grades of iron and steel, wheat, meats, and even sugar [1] and wool, notorious bulwarks of protection, were some of the three hundred or more items exempted from duty. Rates on cotton and wool cloth were lowered. Schedules were clearly written, mostly on an ad-valorem basis, and penalties were provided for refusal to produce adequate records as to the values of incoming goods. The hidden devices and the "jokers" that had marked specific rates were absent. The tariff board of 1909 was abolished, and (in 1916) a bipartisan commission of six was created.

Particularly significant in the tariff legislation of 1913 was a graduated income tax ranging from one per cent on net incomes between three thousand (four thousand for married persons) and twenty thousand dollars to six per cent on those in excess of half a million. This departure in taxation was made possible by the adoption of the Sixteenth Amendment during the Taft administration and necessary by the reduction in the tariff rates by the Democratic Congress under Wilson. Justification of the legislation may by this time have come to be that "the broadest backs should bear the heaviest burden" in the maintenance of the government, but the law of 1894, declared unconstitutional in 1895, was conceived in part as a punitive measure against those who had taken from the poor their hard-earned money. Whatever the principle involved, taxes on incomes have since forged ahead of all other devices for raising funds; even states and cities have resorted to them.

The Federal Reserve System. Less than two months after the tariff-reform bill was passed, President Wilson signed the Federal Reserve Act, which it was hoped would bring an end to many long-standing financial evils. The authors sought, first, to decentralize banking; second, to create a reasonably elastic currency; third, to substitute federal reserve notes for privately issued national bank notes; and, fourth, to place the control of money matters in the hands of the government of the United States.[2] In theory and structure, though not in practice, the new system was simple. The country was divided into twelve federal reserve districts, in each of which was established a central administrative reserve bank having its own governing body of nine directors representing the agricultural, commercial, industrial, and financial interests of the district and serving only

[1] Actually sugar was never admitted free; at the time the tax was to be removed, a deficit in revenues led Congress to retain the levy.

[2] Carter Glass of Virginia was the major figure in the preparation of the bill. President Wilson, William Jennings Bryan, and others, however, were significant advisers; Bryan in particular insisted that there be no bankers on the board and that all notes of issue be governmental obligations. Competing proposals were numerous; especially active in sponsoring countermeasures was the American Bankers' Association.

member institutions, not the public, as a place of deposit and withdrawal. All national banks were required to participate and to contribute six per cent of their capital toward setting up the district bank; private banks were permitted to do so if they chose.

Three of the twelve reserve banks were located along the northern Atlantic seaboard (Boston, New York, and Philadelphia), three in the states of the cotton empire (Richmond, Atlanta, and Dallas), five in what may be called the upper Mississippi River basin (Cleveland, Chicago, St. Louis, Minneapolis, and Kansas City), and one on the Pacific coast (San Francisco). Over all was a Federal Reserve Board, sitting in Washington, made up of the Secretary of the Treasury, the Comptroller of the Currency, and five members appointed by the President.

The word "federal" was aptly used; it was tacit recognition of the existence of radically varied financial needs in the different parts of the country. The decentralization plan that was set up not only silenced the contention of westerners that prosperity was impossible while money was made, redeemed, and controlled by a small area along the Atlantic coast but also, by providing a workable means of expanding and contracting the currency, lessened the likelihood of periodic tragedies. When additional money was needed in any community, local banks had merely to take approved commercial or agricultural paper to their district federal reserve bank and there receive in exchange federal reserve notes obtained on security from the treasury. At the end of the emergency the notes could be returned and the paper reclaimed. District banks, through their power to buy and sell rediscounted paper on the open market and trade in federal securities, could in addition increase or decrease local circulation. No longer did every planting and harvest time disrupt the entire financial machinery of the nation, nor did idle western money glut the tills of eastern bankers. Moreover, a reasonably effective means of meeting the problem of runs on local banks had at last been found.

The new system was not without its difficulties. Cooperation in the large money centers was in some instances grudgingly given. In Washington much argument occurred in the Federal Reserve Board before it was finally admitted that the primary purpose of the new banking system was to serve the needs of the people. Financiers eventually became convinced that national control of banking engendered a stability not obtainable otherwise. But sectional dissension continued. The right to raise and lower discount rates was to a limited extent the right to create or to destroy economic activity in a given area. Communities reveling in a wave of prosperity occasionally found their hopes completely shattered by orders of their dis-

trict boards or by the central board in Washington; the Florida boom, the dreamers of wealth believed, was deliberately snuffed out by federal edict. The Federal Reserve became to citizens in certain sections a greedy financial monster with staggering powers in its twelve great hands.[3] Nevertheless, speculation was checked to some extent, and the traditional gyrations of the business cycle were partially leveled off. Except in the matter of farm credit, the real weaknesses of the system did not appear until 1929.

The Antitrust Laws. With tariff revision accomplished and a new monetary system established in his first year of office, President Wilson on January 20, 1914, spoke again in person to Congress, this time to ask for specific legislation to control trusts and monopolies. Five measures were introduced, but during the long, hot summer of debate they somewhat lost their identity. In the fall there emerged two acts—the Federal Trade Commission Act and the Clayton Act. The first set up a Federal Trade Commission, which was empowered and directed "to prevent persons, partnerships, or corporations, except banks, common carriers subject to the Acts to regulate commerce, air carriers and foreign air carriers" from using unfair methods of competition. The commission, made up of five members appointed by the President for seven years, supplanted the old Board of Corporations of Theodore Roosevelt's administration. For a time it vigorously defended the public against malpractices on the part of monopolists. During Wilson's administration it held over two thousand hearings after official complaint and issued three hundred and seventy-nine "cease and desist" orders against firms for such offenses as unfair competition, misleading advertising, adulteration, bribery, and threats. In cooperation with the Department of Justice it obtained the dissolution of the International Harvester Company and the Corn Products Company and induced Swift, Armour, Morris, Wilson, and Cudahy of the "meat trust" to limit their activities to those closely related to the packing and wholesaling of meat.

The Clayton Act struck heavily at combinations that sought private gain through throttling the free flow of commerce. It prohibited direct or indirect price distinctions that would lessen competition in commodities of "like grade and quality"; it made it unlawful to pay fees of any nature other than for services actually rendered, to discriminate in favor of one purchaser against another, or to offer special inducements not available to all; it forbade sales of any kind based on the "condition, agreement, or

[3] In the 1924 presidential campaign the National People's Progressive party made a bitter attack on the Federal Reserve System. *The Federal Reserve Monster,* a booklet of ninety-eight pages "compiled, edited and published by Sam H. Clark and Wallace Campbell of *Jim Jam Jems,* Bismarck, North Dakota," was issued in large numbers as a campaign document. *Jim Jam Jems* was a monthly publication dedicated to the destruction of the system.

understanding" that the purchaser not deal in competing goods if such action tended to restrict trade; it declared it illegal for corporations to acquire stock in rival firms except as investments; and it outlawed interlocking directorates in corporations where "capital, surplus, and undivided profits" of any one of the institutions involved were greater than a million dollars and in banks where "deposits, capital, surplus, and undivided profits" exceeded five million.

The reformers believed that monopolies had at last been smothered. War, however, practically nullified the legislation, and the languor of the postwar decade prevented revival.

America and the First World War. The conflict that broke out in Europe in the fall of 1914 had immediate economic and financial repercussions in the United States. Exactly four weeks after German troops marched into Belgium, President Wilson appeared before Congress to request additional revenues—a task which, he said, "I wish with all my heart I might have been spared." The unfavorable state of the treasury, he explained, was a result of a decrease in importations, brought about by the extraordinary extent to which the industrial areas of Europe had been affected by the war and not by Democratic reductions in the tariff. Conditions that influenced the whole world of commerce and economic production, he asserted, had arisen that no man had foreseen but that must be faced and dealt with. "The occasion," he went on, "is not of our own making. . . . But it is here. It affects us as directly and palpably almost as if we were participants in the circumstances which gave rise to it. . . . We shall pay the bill, though we did not deliberately incur it." And, indeed, the people did pay heavy tribute to the lords of war before peace came again, for on April 6, 1917, the United States joined the Allies against Germany and Austria and their satellites.

Economic Organization for War. When the nation entered the world conflict, the greatest need of the European powers opposing Germany was for economic rather than for military assistance. The grain supply in England was dangerously small, ships were missing, munitions were scarce, and money was lacking. And so it was that the economic, financial, and business structure of America took up the burden of providing food, clothing, coal, cotton (for explosives), steel (for the ordnance plants), and other critical materials for her allies while building and maintaining a war machine at home. The Council of National Defense, organized in 1916, was already functioning. Composed of six cabinet members and seven civilian experts headed by Daniel Willard of the Baltimore and Ohio Railroad, it made a desperate effort to mobilize industry, but divided re-

sponsibility and internal disagreements soon demonstrated the fact that centralization of authority was needed. Six major agencies were set up that performed, though at heavy cost, staggering tasks in a few brief months.

The War Industries Board. The most pressing problem confronting the country was that of industrial production. The War Industries Board on its creation in July, 1917, assumed dictatorial powers over all material assets. It fixed prices, established priorities, determined the types and quantities of goods that might be manufactured, regulated the flow of war materials to Europe, controlled purchases of all kinds, exercised arbitrary powers over individual factories and mines, and even shaped the lives of many people. Bernard M. Baruch ruled with a heavy hand that would never have been tolerated under other conditions. Leather for shoe tops was curtailed, steel could not be used in women's corsets, tin was forbidden in children's toys, baby carriages were standardized, the number of colors for typewriter ribbons was reduced to five, and pocketknives were severely limited as to type; nothing, it seemed, was too small to escape the notice of the economic dictators. Complaints, however, were few as the power of America was turned to the single purpose of winning the war.

The United States Shipping Board. By April, 1917, German U-boats were destroying more than four Allied ships a day. The United States Shipping Board, set up the previous year, was reconstituted, and, using George Creel's slogan "Ships Will Win the War," it turned vigorously to the business of transporting men and supplies overseas. Working through a subsidiary (the Emergency Fleet Corporation) in order to avoid hampering red tape, it brought under its direction before September, 1918, some ten million tons of shipping. The bridge across the Atlantic was made up of commandeered and purchased boats, enemy vessels interned at the beginning of hostilities, and wood, steel, and concrete vessels from four great shipyards, the largest of which was at Hog Island in the Delaware below Philadelphia, where fifty ways were incessantly busy.

The fleet that carried nearly half the army and all the military equipment of the United States to Europe was built with difficulty. Only after Charles M. Schwab had become head of the Emergency Fleet Corporation was real progress made. Even then construction costs remained exceedingly high; the Secretary of the Treasury, William G. McAdoo, later wrote that he had fancied more than once that the machinery that was being bought must be made of silver instead of iron and steel.

The War Trade Board. Designed to control exports and imports through a rigid licensing system, the War Trade Board, directed by Vance C.

McCormick, carefully watched over both Allied and enemy trading. Certain goods were wholly banned in foreign commerce, cargo space was supervised, and a black list of firms suspected of trading with the enemy was prepared.

The Food Administration. Most dramatic, perhaps, of the various organizations that came into being was the Food Administration. Its director, Herbert Hoover, former chairman of the Commission for Relief in Belgium, undertook the problem of feeding America and her allies. He encouraged production, advocated economy in consumption, and regulated both transportation and distribution of all food products. A licensing system embracing more than a quarter of a million firms was put into force, hoarding and profiteering were condemned, prices of corn and wheat were fixed, and quotas for sugar and other commodities were established. Moreover, the people were urged to find substitutes for certain items or to do without whenever possible; "wheatless Mondays," "meatless Tuesdays," and "porkless Thursdays" were instituted.

The Fuel Administration. Coal was a critical commodity in national production, and war industries ate rapidly into the available supply. To make matters worse, the winter of 1917-1918 was bitterly cold; in many camps guards, generally changed every four hours, walked their posts only once before relief. President Harry A. Garfield of Williams College, director of the Fuel Administration, took drastic steps to save the dwindling coal stock. All manufacturing plants east of the Mississippi were ordered to shut down for five days, "fuelless Mondays" were proclaimed, and daylight-saving time was introduced partly to conserve fuel. Owners of small mines in the bituminous districts were encouraged to increase output and to make new openings. Production in 1918 exceeded that of 1914 by more than a hundred and fifty million tons.

The Railroad Administration. It was soon apparent that the work of the various war agencies, however effective, was about to be nullified by the inability of the uncoordinated national transportation system to perform satisfactorily its work. Troops were delayed, and goods were held up when badly needed. Before the end of 1917 sidings eastward from the Mississippi were crowded with loaded freight cars awaiting opportunity to discharge their cargoes at Atlantic ports. On December 26 William G. McAdoo, Secretary of the Treasury, was made director-general of the new Railroad Administration. Equipment was quickly standardized, terminal facilities were consolidated, needlessly indirect routings were eliminated, and passenger service was subordinated to freight and troop movements. Soon the paralyzing congestion was cleared up and men and war goods were rolling

toward the ships that were to carry them to Europe. The government assumed control also of inland water transportation facilities, express companies, elevators and warehouses, sleeping-car companies, and telegraph, telephone, and cable lines. The experiments were expensive, but efficiency and dispatch were attained.

Wartime Finance. *The Tax Program.* The monumental task of providing money with which to meet the staggering wartime expenditures of the nation fell to Secretary McAdoo. Between the declaration of hostilities in April, 1917, and the end of demobilization in October, 1919, the direct war costs amounted to between thirty and thirty-five billion dollars, a third of which was advanced to England and other allied countries for purchases in the United States. Every conceivable source of revenue was tapped. Postage rates were increased; excise taxes on tobacco and liquor were raised; new duties were levied each year on amusements and luxuries, including theater tickets, admissions to moving-picture houses, railroad and sleeping-car tickets, club dues, telephone and telegraph messages, chewing gum, phonograph records, and whatever else could be found that promised a penny. The tax on individual annual incomes, beginning at a thousand dollars, was advanced to four per cent and the graduated surtax maximum to fifty. New excess-profits taxes ranging from twenty to sixty per cent on net earnings above the average for the years 1911-1913 were enacted. But the "pay as you go" advocates were disappointed; scarcely a third of the required money was obtained by taxation.

Bond Sales. Secretary McAdoo knew how futile it was to depend on current revenues alone for financing the war. He was quickly granted authority by Congress to borrow up to five and a half billion dollars, and new authorizations were given as needed. Beginning in June, "Liberty Loan" succeeded "Liberty Loan" approximately each six months until the fifth or "Victory Loan" of April, 1919. With the exception of the "Victory Loan" each sale was larger than the previous one; all were heavily oversubscribed. Altogether the issues amounted to about twenty-one and a half billion dollars. For the purpose of insuring a constant inflow of money, treasury certificates of indebtedness that could be used in buying bonds or in paying taxes were sold whenever need arose and then retired when funds were at hand.

In no other phase of the war effort was the emotional appeal exploited so vigorously as in the bond sales. All-day rallies, huge parades, trainloads of captured war materials, and appealing posters stirred the hearts of Americans, and veteran soldiers and sailors, professional speakers, ministers, singers, actors, moving-picture stars, Red Cross nurses, and bankers took

their money. Douglas Fairbanks and Mary Pickford both fell in love and sold a fortune in bonds while touring the country. In a single performance at Carnegie Hall in New York Enrico Caruso, John McCormack, and Amelita Galli-Curci sang their way literally into the purses of the audience, four million eight hundred thousand dollars being pledged at once. In city and country alike aggressive committees without careful consideration allotted to each individual his share of the financial burden and all but forced him to take up the load. Bankers too frequently convinced distraught mothers of sons in the service and men and women without money for bread and clothes that they were contributing to victory only when they bought bonds—and loaned them the money at eight per cent! That was a bitter tragedy in a magnificent accomplishment, and it grew more poignant as the poor after the collapse of 1919 were forced one by one to sell their bonds to the more fortunate at far less than the hard-earned dollars they had paid for them. Particularly grievous was the burden on small farmers and on the underpaid professional groups, whose incomes, whatever the statistics, either declined or remained unchanged; they were already pressed down by the evils of inflation.

Contributions to Humanitarian Organizations. In addition to providing the money for actual prosecution of the war, the American people generously supported a number of charitable organizations, whose expenditures ran into hundreds of millions of dollars. The Red Cross not only took care of the needy at home but also followed the fighting forces abroad; its workers stood ready everywhere to serve habitually penniless soldiers, sailors, and marines. The Salvation Army "lassie," whose doughnuts and coffee filled many an empty stomach and cheered many a weary heart, won eternal glory. Among other worthy groups that drew heavily from the public were the "Y" and the Knights of Columbus.

The Economic Problems of Supply. Equipping and maintaining a fighting force of some five million men had far-reaching effects on the economic and financial structure of the nation. Cost-plus contracts in government buying encouraged extravagance, and a greatly enlarged circulating medium combined with other factors to push prices upward. Quality was kept at a satisfactory level with difficulty. Occasionally manufacturers, tempted by rich profits, bribed military inspectors, harassed by the high cost of living, to accept substandard goods. Adequate supplies of raw materials were not always available. Wool, for instance, was desperately needed. Not until the second year of the war did the situation substantially improve; during the winter of 1917-1918 no woolen uniforms or shirts were issued south of Camp Taylor in Kentucky. The question of wages too became troublesome

as the spiral of inflation gained speed. In spite of all the difficulties, however, the swelling stream of men and equipment overwhelmed the Germans. The war ended at eleven o'clock on November 11, 1918.

The Postwar Decade and its Problems. The momentum of war prosperity continued well into 1919, but demobilization brought increasingly acute economic problems. The lucrative employment that the men were to find when the guns were quiet did not exist. Moreover, prices had skyrocketed to unprecedented heights; the government had lacked either the power or the will to control them. Butter in 1919 was over a dollar a pound, and eggs in some places sold for ten cents or more each. The sixty-dollar bonus that each soldier, sailor, and marine received upon discharge bought no more than a decent suit of clothes, not including shirts, shoes, socks, and other accessories. Civilian laborers lost their jobs as factories closed down, and manufacturers with millions of dollars in canceled orders and huge stocks of unsalable goods knew not where to turn. The idealism that had sent men to the battlefield was rapidly fading away. Unfortunately no new nation emerged from the ashes of conflict as many philosophers and mere talkers had predicted. In fact, the old, old problems that have always faced people after battle were present in full measure, for economically reconstruction has ever been the harder part of war.

The Return to Normalcy. Readjustments after demobilization were especially troublesome because of the apparent determination of the country to become wholly conservative. The Republican party, taking advantage of the moment, urged the voters in 1920 to return to "normal conditions and prosperity" by electing Warren G. Harding to the presidency. The results of this course were soon apparent. Industrialists, freed from annoying war regulations, took vigorous steps to preserve and expand their empires. A Budget Bureau, advocated by both Taft and Wilson, was established, but its chief purpose was to put national finances on a "sound" basis and thereby make it possible to reduce the taxes. Lobbyists of the great interests once more descended on Washington, the Federal Trade Commission was rendered impotent, and the United States Chamber of Commerce became the public-relations mouthpiece of the new business America. Sadly enough, the road back to "normalcy" brought rottenness and corruption and a reemphasis of laissez faire. Shocking scandals occurred in the Veterans' Bureau and in the office of the Alien Property Custodian, and three members of the President's cabinet became involved in notorious dealings. Teapot Dome will long remain a measure of the depths to which common decency in public service sank in the early years of the twenties.

Harding died in 1923, but business was not afraid, for Calvin Coolidge was both a scrupulously honest man and a friend of "prosperity." Herbert Hoover, his Secretary of Commerce, became a world salesman for the United States. Special agents attached to consular offices sought out inviting openings for American commerce and American money, and they facilitated loans that would buy American goods. Already the doctrine that wealth at the top would trickle downward and bring riches to all was being rehabilitated; it was made to do service when the depression struck.

The Tariff Problem. Protection was not forgotten in the return to the old order. The troubles of agriculture offered the administration opportunity to bid for the support of the farmers whose affections for the "Grand Old Party" had been somewhat alienated by the reform movement. In 1921 an emergency tariff, hurried through Congress, levied duties on Canadian grain and other imports of foreign food products, as well as on such items as wool and sugar. Prices of wheat and corn and cotton persisted, however, in their general downward trend. The next year the Fordney-McCumber Act was passed. Again the agrarians, who sold an appreciable percentage of their crops in foreign markets, were offered the magic formula that had brought wealth to industrialists when their output was sold chiefly in a protected domestic market. Again the experiment failed, and rural distress continued. Even manufacturers were beginning to feel the effects of a changing material age in which American industrial products were each year playing a more important part in the development of the world. Yet in spite of the growing export of machinery and other finished goods, the protectionists of the twenties outdid the tariff makers of the days of McKinley and Taft.

In May, 1929, Willis C. Hawley of Oregon introduced a new bill in the House. A multitude of amendments pushed the rates upward to fresh heights in tariff history. The theory of equalization that had led Congress in 1922 to authorize the President, with the advice of the Tariff Commission, to shift the duties by half to meet particular foreign situations was completely deserted in a frank effort to seal off competition and thus raise prices. George W. Norris and others openly charged that Herbert Hoover, then President, was lashing the senators into obedience at the command of his masters the manufacturers, and indeed the lobbyists, including Joseph R. Grundy, head of the Pennsylvania Manufacturers' Association, who was soon to be a senator himself, forced through the Hawley-Smoot bill in June, 1930. The Congress that was to have considered farm relief and made "limited changes in the tariff" for the benefit of ailing industries increased protection by an average of twenty per cent above the rates set by the

Fordney-McCumber Act. The protests of more than a thousand economists and of many business organizations and individual business men before long found apparent justification: within two years twenty-five countries enacted retaliatory rates, and American industrialists began to set up giant factories abroad.

The Problem of the Railroads. Reestablishment of private management of the railroads after the coming of peace was not so simple as releasing private business from regulation. Many people during the war had become convinced that general unification of the national system was desirable, and President Wilson declared that it would be "a disservice alike to the country and to the owners of the railroads to return to the old conditions unmodified." After much delay and considerable debate the Esch-Cummins Transportation Act, a compromise measure, was passed in February, 1920. It provided for consolidation and increased cooperation of the roads. Pools and other agreements once outlawed were permitted. The Interstate Commerce Commission still set maximum and minimum rates, and it was empowered to guarantee a "fair return" to the stockholders. In addition the weaker companies were to share indirectly in the excess earnings of the prosperous ones.[4] A Railway Labor Board was established for the purpose of mediating in disputes over wages, hours, and working conditions.

The congressional attempt to solve the railroad problem failed. No satisfactory means of evaluating the roads could be worked out, strikes and labor troubles continued, the plan to aid unprofitable lines collapsed, and an elaborate scheme proposed by Professor W. Z. Ripley for the Interstate Commerce Commission for consolidating the rail empire into nineteen major systems met vigorous opposition from the operators. For a decade the owners of the railroads, content to grumble at the presumed losses during the years of government ownership and to quarrel about government-subsidized competition in motor trucks, refused to modernize their equipment or consider the pleasure of the traveling public. Only in the early thirties did they take steps to bring their facilities into line with modern progress.

The Decline of the Merchant Marine. Efforts of the United States to maintain the supremacy of the merchant marine against postwar European competition were strikingly unsuccessful. When the war ended, the United States Shipping Board owned fifteen hundred merchantmen. The Merchant Marine Act of June, 1920, continued governmental operation of the fleet

[4] The "recapture clause" stipulated that whenever the profits of any individual road exceeded six per cent, the excess was to be divided equally between the corporation and the government. The government's share was used through a revolving fund to assist the weaker roads.

until it could be sold to private companies. By way of encouragement to individual enterprise it also stipulated preferential tariffs on goods imported in American bottoms, closed trade with American possessions to all but American ships, appropriated generous mail subsidies, and exempted from various taxes owners who invested the equivalent in new shipping facilities at home. But sustaining a profitable maritime industry seemed impossible. High tariffs restricted European purchases of American goods, immigration quotas cut steerage passage, prohibition drove tourists into competing vessels, congressional legislation necessitated the payment of wages far above those of other countries, and general operating expenses were heavy. Ships that were to have carried the commerce of the nation were either tied up in idle yards or else scrapped. Henry Ford bought one hundred and ninety-nine as junk at prices even lower than those paid for worn-out pots and pans and broken machinery. Though the Jones-White Act of 1928 increased subsidies and liberalized provisions for loans, shipping lagged everywhere, and the flag that had been seen in the ports of the world in the days of war was seen no more.

The Financial Readjustments. Fiscal problems were in most cases adjusted with reasonable ease. The proposal to reduce taxes on wealth received energetic support from the rich, and opposition elsewhere soon melted away. Secretary Mellon became a hero to business America because he lowered exactions of the government and at the same time paid off a third of the national debt. Even the thievery of the Harding administration had little effect on the smooth-running financial machine, and the bitter protests of the public against the high cost of living slowly subsided. Only the former service men presented difficulties. During the war they had, as a rule, each subscribed for ten thousand dollars of government insurance. When the war was over, the obviously disabled were therefore automatically cared for. There were many, however, whose disabilities were not apparent at the time of discharge. In 1921 the Veterans' Bureau was created to meet the situation, and claims began immediately to pour into the office. Those who could prove disability were either awarded compensation according to handicap rating or sent under a rehabilitation program to trade schools or to colleges and universities. The trainees, who would presumably some day return to civilian life fully able to care for themselves in the occupations of their choice, received a hundred dollars a month each and tuition and books. Claims continued to grow. Dependency payments were increased, compensation rates were raised, medical and dental service was extended, and finally "adjusted compensation" was granted to all members of the armed forces at the rate of one dollar a day for service at home and a dollar

and a quarter overseas. By 1930 total expenditures of the Veterans' Bureau had exceeded five billion dollars. Although much of the criticism that was unleashed was misdirected and many people were too glib in their talk of "gifts," it was evident that in spite of executive opposition the costs of war did not end with peace. The depression further intensified the problem.

The Growth of the Supermonopolies. However disturbed many things in the nation may have been, financial concentration marched ahead unaffected. Consolidations, combinations, and manipulations that would have staggered the reformers in the decade before the war passed unnoticed by the public. At least a dozen corporations were capitalized at a billion dollars or more each. Holding companies, through control of voting stock in subsidiaries, performed marvels in dominating vast economic empires with insignificant investments. Independent enterprises were daily launched, but the mortality rate was extremely high—and those that succeeded were rapidly absorbed by giant corporations, which were in turn directed by the great financiers. Old organizations spread out of their fields and gathered up whatever promised to return profits. The ultimate result of this lateral extension is clearly revealed in the fact that in 1940 all but three of the fifty leading corporations producing fluorescent-light tubes, household and automobile radios, household mechanical refrigerators, electric razors, air-conditioning equipment, and plastics had originally been created for the manufacture of other goods. Small firms making telephones before 1914 had completely disappeared by 1920, and within ten years the Bell Telephone Company owned three-fourths of all the telephones in the United States. By the end of the twenties ninety per cent of all automobiles were being made by three manufacturers, yet several hundred individual concerns had at one time or another been engaged in building cars.

The public was invited to join in the forward march of big business by sharing in ownership. Stocks were sold in every hamlet in the land, and the market sheets in the newspapers became the barometer of national prosperity. Every effort at reform was shouted down. The conservation movement that Theodore Roosevelt had launched in an endeavor to preserve in part at least natural resources was still being questioned in some quarters. The project at Muscle Shoals was regarded only as a means of possible private gain. The attempt of Senator Norris and a few fellow statesmen to make the supplying of light and power a matter of government interest was vetoed by President Hoover on March 3, 1931, with the comment: "I hesitate to contemplate the future of our institutions, of our government, and of our country if the preoccupation of its officials is to be no longer the promotion of justice and equal opportunity but is to be de-

voted to barter in the markets. That is not liberalism; it is degeneration."

The house of cards that had been built up had, however, already crumbled, though the President did not see the wreckage about him. The feverish rush to buy and sell and be rich was not a song of wealth and joy and happiness but a recessional that was to lead through years of poverty.

Chapter 31

THE MATERIAL NATION AND ITS CHANGING ECONOMIC LIFE, *1900-1929*

The Growing Wants of Man. The expansion of the population through the years of American history is easily perceived. The growth of wants, though equally real, is not so apparent. Until the closing decades of the nineteenth century the spread of the settlers from the Atlantic to the Pacific was a dominant theme; thereafter interest was centered primarily on the economic rather than the geographic horizon, and the boundless dreams that had marked the westward movement faded away. Indeed, profound changes were in the making. Women became in the twentieth century dominating economic personages. They were by 1929 spending for cosmetics alone more than two hundred million dollars annually. That was far in excess of the value of all their manufactured clothing in 1900 and nearly twice as much as that of carriages and wagons of every description. Each individual, in fact, had become a greater purchaser than at any time in the past, and the span of his active life as a consumer had lengthened appreciably. The aged, who once had lived on a few dollars a month by doing without, now continued as active buyers. Farm women came to be seen in the beauty shops and the farmers themselves in the clothing stores. A rural lad was as likely to appear at a drug counter asking for "that Amos 'n Andy toothpaste" as was a city dweller.

Everywhere the whirling spindles and the turning wheels of industry poured out new products. Nevertheless, the divergence between things possessed and things desired widened; wants grew faster than did ability to buy in spite of higher wages, lower prices, and easier credit. The very abundance of goods deepened the paradox of poverty in the midst of riches, and the optimism that had prevailed throughout much of the nineteenth century disappeared. In a closing economic order with declining assets, too frequent national economic disasters, and an unbridled publicity of every phase of activity many people began to desert the rugged individualism of the founding fathers and even to question their motives. Some repeated in high places the ancient warning that civilization was running

amuck and must eventually fall by its own weight. There were those who, overlooking realities, longed for the past, when, they said, the products of farm and factory had been cheap; they forgot that grandmother had bought not a lot with a little but a little with a pittance. Astounding transformations had in fact been wrought, and competition for consumer attention had indeed reached a disturbing height.

The Changing Nature of Ownership. The ordinary American in the twentieth century, his desires whetted by new luxuries and conveniences that he frequently could not buy and his mind loaded with financial worries from which there often seemed no relief, found his world turned topsy-turvy. In many instances he had once owned a business in whole or in part. He had been able to visit his shop, his store, or his mill and gloat over its prosperity or grieve over its losses. By 1929 that privilege for the most part was no longer his. Only in his immediate home could he display that which was purely private property. His automobile, his easy chair, his radio, and sometimes his plot of ground and his house were his, but beyond that, impersonal ownership or what the economist calls "liquid claims to wealth" had replaced possessions as the nation had once understood the word. Since the public domain had ceased to attract speculators and since individually owned enterprises (with the possible exception of the small shop) had become extremely hazardous, the investor bought that which was available in units suiting his funds—paper. Few were the things that rich man or poor man could put his hands on and say, "This is mine."

Moreover, personal responsibility was disappearing. In 1900 a farmer could drive his wagon into South Bend and tell Clem Studebaker about the fine quality of the carriage that he had built; a quarter century later one could drive his automobile into the huge factory in that Indiana city and look in vain for someone whose property and repute had been placed at stake in its construction. An official might confidently declare, "*We* are proud of our product," yet no one could say, "*I* built it." The housewife whose prodigious family had been raised on Igleheart's flour could by the end of the twenties claim acquaintance with no one who produced it. The brothers who once had pinched that snowy powder between expert fingers had lost control to General Foods, Incorporated, and laboratories had replaced the family oven as a testing place. Under big business the reputation of the firm that had since 1856 grown on the integrity of its founders came to rest almost solely on national advertising of "Swans Down" for cakes. Before 1929 most of the concerns that had in the past built up envious records had been swallowed up; some two hundred cor-

porations dominated manufacturing, with in reality only the law to challenge their conduct.

As ownership declined, more and more Americans became salaried employees. At least four major factors were involved in the change: first, the drift of the farmer to the city and the consequent shrinkage in one of the largest of the small-capitalist groups; second, the ever-increasing number of men and women who voluntarily or involuntarily turned to the great plants for economic existence; third, the swelling flood of people entering the so-called service occupations such as teaching, researching, doctoring, advertising, and radio engineering; and, fourth, the concentration of management and the accompanying diversification of ownership in the industrial world. Executives held only managerial powers, though frequently they exercised them for private advantage. Their financial investments were not directly related to their progress in the corporations. The situation tended to shift emphasis from production to money making, and, with more cash saved than was invested in plant expansion or in mortgages, especially between 1922 and 1929, a surplus was built up, which, turned into the speculative market, drove security prices upward to fantastic levels.

The Changing Nature of Production and Consumption. Broadly speaking, the basic skeleton of America's economic structure was completed by the end of the first World War. On the whole the usable virgin land had been cleared and fenced; dwellings had been built; city homes and public buildings had been constructed; transportation facilities had been established; and engineering works, factories, distributing plants, stores, and needed machinery had been provided. Some economists argued therefore that the apex of physical progress had been reached and that unless a demand could be created for new goods, the future must of necessity be limited to maintaining a going concern. It was obvious, however, that since the beginning of the nation economic life had had to do with a host of things besides the primary industrial plant. Most significant among these was the satisfaction of individual human wants, and therein still lies an insatiable market. Dr. Harold G. Moulton of the Brookings Institution well said in the middle thirties that "the fact that we have our plant built creates not the necessity for economic stagnation but opportunity for economic progress in the only real sense, that is, higher average well-being for the masses of consumers."

Indeed, changes in consumption were apparent for several years before 1929. Purchases of semidurable goods for current use were gaining rapidly on purchases and savings for future security and on general production

of durable goods. By the middle twenties millions of dollars were being spent on automobiles, radios, telephones, electric light, refrigerators, automatic heat, vacuum cleaners, and countless other items that the conservative rich had repeatedly said were beyond the reach of the poor. Luxuries were becoming common necessities for the simple reason that the chief emphasis of economics was being shifted to a great extent from national development to individual welfare. In other words, wealth was being translated into what was socially called a rising standard of living.

Capital investment in manufacturing facilities had not altogether ceased. Large outlays of cash were required to keep existing plants, machinery, and distributing outlets effective. Furthermore, huge expenditures were necessary in the procurement of gravel, sand, cement, and other items in road construction and in the fabrication of the raw products from which the new material goods were made. Everywhere, however, the outstanding feature of the new order was attention to the personal wants of individuals. It is not strange that food and clothing, which in 1899 had constituted by value nearly fifty-eight per cent of all production, dropped by 1929 to less than forty-four, for real human progress begins not with but beyond the bare minimum essentials. Because Americans had hitherto been overwhelmingly engrossed in the fundamental problems of living and of building a nation, automobiles, radios, telephones, hot and cold running water, bathtubs, screens, lawn mowers, electric fans, and the myriad other luxuries that long years of struggle had made possible and that science had created could at no previous period in the history of the nation have been so economically fascinating. Few people at any other time would have been so much interested in such miracles, and, since they lacked necessities, fewer still would have been tempted to buy. In fact, the shops and mills that in the last quarter of the nineteenth century had begun to make some of these articles that are characteristic of twentieth-century life were of such little note that their story is lost in obscurity, and it is difficult to discover when many of our modern conveniences became important.

More than a mere shift of emphasis in industrial production and consumption was involved in the changes that occurred in the years between 1900 and 1929. A critical element of instability was introduced into the economic system, for some personal desires are extremely flexible. Moreover, servicing and repairing required an ever-increasing number of people. In the past this work had been done by industry in regularly established places and at reasonable cost. Railroads had had their roundhouses and shops and mills their permanent maintenance forces. Services in the home had been rarely needed; the farm and even the town family had been

able to clean out the well when it went dry or to make a new broom when the old one wore out. When expensive and complex machinery began to be owned by individuals, all was changed. The tiniest leak called for a plumber, the slightest break in the vacuum cleaner a repair man, a simple burned-out fuse an electrician, and the smallest trouble with the automobile a mechanic. Much of the savings obtained by the use of assembly lines and automatic machinery was absorbed by the swelling host of workers engaged in the distribution and upkeep of goods. The drift that had been apparent for many decades away from the farm was by 1920 being repeated in a drift away from the factory, and as the number of people entering nonproductive occupations increased, economic interdependence grew more real. By 1929 many observers had become convinced that governmental encouragement of personal purchasing power in some form or other was a distinct possibility in the future and that social pressure for direct or indirect subsidies might become as great as had been individual pressure for protective tariffs in the early days of industry.

The Changing Material Scene. After the first World War slow and traditional material progress gave way to sudden change. Old and familiar economic landmarks disappeared as livery stables closed their doors and noisy drays with their sweating horses were seen no more in the streets. The drug store, the restaurant, the moving-picture house, the bakery, and the laundry, along with giant mercantile marts and huge places of amusement, flourished and in some cases shifted drastically in nature. The drug store, for instance, became for urban people as strange and incongruous a place for the purveyance of human needs as had ever been the general store that at the beginning of the century still stocked clothing, yard goods, pitchforks, shoe pegs, coal oil, fishhooks, and an amazing miscellany of other unrelated items. In the country the rural scene was blotted out by billboards. The "home town" underwent many modifications. The "opera house" of other days turned into the "palace" where cheap films were shown; modern office buildings were erected to house the doctor, the dentist, the druggist, and the telephone operator; and the mill at the end of the muddy main street that until after the first World War sawed hickory stock for ax handles and automobile spokes fell into decay. In the cities the buying crowds increased, and electric signs advertised throughout the night twentieth-century products. High above Times Square, "crossroads of the world," Wrigley and other industrialists told at staggering cost not of spreading railroads and growing factories but of chewing gum, new shows, soft drinks, and other things for personal consumption.

The Spreading Transportation System. *Railroads.* The major steam roads had been virtually completed by 1900, and the drama that had accompanied the expansion across the nation to the Pacific was gone. The speculation and bitter conflicts that had been a part of growth in other days continued, however, as a few financiers fought for dominance. In 1901 a vicious struggle for ownership of the Northern Pacific shook Wall Street. Edward H. Harriman, having just secured the Southern Pacific on behalf of the Union Pacific, sought to block the purchase of a competing road, the Chicago, Burlington and Quincy, by J. P. Morgan and James J. Hill, owners of the Northern Pacific and the Great Northern. Backed by Rockefeller interests, he began a buying campaign that before it was ended sent Northern Pacific to a thousand dollars a share. In order to save themselves from the disaster that threatened from their own folly, the rival groups formed the Northern Securities Company, into which they threw their holdings. The corporation was soon dissolved by the courts, and Congress began to enact restrictive laws.

Attempts to regulate the railroads before the first World War were of doubtful success; some of the prohibitions were perhaps unsound economically. Even after passage of the restrictive laws of 1903 (the Elkins Act), 1906 (the Hepburn Act), and 1910 (the Mann-Elkins Act) the roads did not disgorge the steamship lines and the coal lands that they had swallowed up in their efforts to smother competition, nor did they cease altogether their unethical practices. The situation was a perplexing one. The railroads had long been the only effective means of land transportation, and they had become a part of the accepted order of things. Furthermore, they constituted the largest industry in the nation. Individuals and institutions had invested heavily in rail securities. There was little hope of wringing the water from the bloated capitalization of the roads while savings banks, life-insurance companies, colleges and universities, and even churches and hospitals held huge blocks of stocks and bonds that their builders had issued.

By 1917 the inability of the railway system to keep abreast of the rapidly changing economic life was becoming apparent; obvious also was the futility of attempting in modern times to create a satisfactory nation-wide service without coordination and without plan. The war revealed unmistakably the weaknesses of the transportation structure and brought seizure of the freight-jammed roads on January 1, 1918.

With peace came only more formidable difficulties. During the months of conflict the motor truck both at home and on the battle front in Europe had demonstrated its efficiency and flexibility as a transportation instru-

ment, and the airplane had shown promise of future commercial usefulness. Moreover, the people had come to realize the advantages of unified operation and the conveniences of central depots for passenger service. And, even more important, new industries were arising that soon captured the interest of the investing public. The decade of the twenties demonstrated the widespread implications of the changes that had come. The railroads, tied to a speculative past that made rate reductions all but impossible and bound by regulatory laws that prevented economies in other ways, plodded along while gasoline-powered trucks in ever-increasing numbers sped over the government-subsidized highways.

The Esch-Cummins Transportation Act of 1920 sought to maintain the benefits of consolidation that had been evident during the war and also to protect the public, the railroads, and railway labor. But results were not entirely encouraging. Many leading owners objected to unification, the Railway Labor Board was in 1926 replaced by a private board, and the recapture clause completely failed. While train operation attained reasonable effectiveness, speed and carrying capacity were increased, terminal facilities were improved, union stations were built, and the cutthroat competitive practices of prewar days were lessened, little was done to modernize equipment. Unfortunately it was not commonly recognized that trains, trucks, and planes were all essentials in the new economic nation. Neither government nor private industry exerted any real effort to remove through comprehensive planning the friction that had arisen in the period of adjustment.

Interurban Lines. A significant step in rail transportation was the utilization of electricity as motive power. Long used in the operation of city streetcars, this new miracle of efficient and rapid propulsion was employed on the lines that began to spread beyond urban boundaries. In the first decade of the twentieth century interurban roads, tying city to city and city to country, grew rapidly, and it appeared for a time that they might become the chief local distributing agencies, especially in the North Atlantic States and in the Middle West. The cars, cleaner, cheaper, and more convenient to use than regular trains, became exceedingly popular, even for long-distance travel. Regardless of the service rendered, however, they as well as the more prosaic trolleys were in many places soon smothered by the automobile, the bus, and the truck, which, though costly, were capable of plying between door and door. By 1929 the railroads had begun electrification of some of their lines.

Waterways. Traffic on the rivers was made up mostly of coal, petroleum, and building materials such as stone, gravel, and cement. Efforts to revive

inland canals were only partially successful. New York in 1903 appropriated a hundred million dollars for the development of new facilities, especially a barge canal, and the Inland Waterways Commission, which President Theodore Roosevelt appointed in 1907, began a careful study of the long-proposed intercoastal waterway along the Atlantic and the Gulf. Heavy governmental expenditures were made in the Great Lakes region. The most ambitious undertaking was a canal across the Isthmus of Panama. For ten years, starting in 1906, thirty-five thousand men, using for the first time in such work the modern steam shovel, labored at the task of construction. The total cost of the project, including payments to Latin-American countries, ran somewhere between four and six hundred million dollars. Opened to limited commerce in 1914, the canal benefited national and world shipping tremendously; the coastal fleet, from which the ancient sailers were rapidly disappearing, profited particularly.

Because of its intimate connection with the growth of industry probably the most important waterway was that through the Great Lakes to the ore ports at the farther reaches of Lake Superior. The old whalebacks were supplanted by better vessels of a generally similar design, and loading and unloading equipment was greatly improved. Loading had by the end of the twenties developed into a science directed by laboratory technicians. The cars that came over the railroads stretching back to the pits were weighed by automatic scales as they rolled slowly on to the docks. Since chemical analysis of the contents of each one was already known, the director, much like a chef in a huge kitchen, shuttled them about to fill designated storage pockets according to predetermined formulas. The hurrying ships as they came in were warped under the chutes containing the exact mixtures ordered in advance for their furnaces by the waiting industrialists along the southern shores of the lakes. The endless stream of vessels filing through the Sault Ste. Marie, the Detroit River, and other critical points in the water journey pictured vividly economic progress. In 1929 over a hundred million tons of freight moved through the Detroit River, busiest waterway in the world.

Highways. Most outstanding of the material accomplishments of the twentieth century to the ordinary American was, perhaps, the growth of a highway system. By 1900 many states had set up special agencies to assist local construction and maintenance units, the Department of Agriculture had established an Office of Road Inquiry for gathering statistics and a bureau for testing materials, and the people had begun to realize the tremendous cost involved in moving farm products and other freight

over the miserable lanes and thoroughfares of the nation.[1] Notable changes were occurring. In some communities money taxes were being substituted for personal service, county and township officials were superseding community overseers, convict labor was being turned to road building, uniform regulatory state laws were appearing, the pick and shovel were giving way to efficient machinery, and state roads were being planned under the direction of highway commissioners. Yet serious difficulties remained. Agreement as to where experimental construction should be started was not easily reached, farmers were often bitterly opposed to the necessary tax levies, and the fundamental difference between the type of surface needed for horses and that required for the new gasoline-propelled vehicles was becoming keenly apparent.[2] But progress could not be long delayed. The automobile, first used for pleasure, was soon recognized as a business essential; by 1911 the plant department of the Bell Telephone Company of Pennsylvania, for instance, had in operation "five motor trucks, four Chase trucks, four Mitchell runabouts, one Cadillac runabout, one Ford runabout, one Packard touring car and one Stoddard-Dayton touring car."

At the end of the first World War the public awoke to the fact that highways had suddenly become a necessity. A coordinated national system, begun with the creation in 1916 of the Federal Bureau of Public Roads, made rapid growth. Copying both from the ancient mileposts and from signs put up by such enterprising organizations as the Florida real estate advertisers, state departments devised effective but nonuniform markings that told the driver the direction and distance of each main town ahead. Federal highways running east and west were identified by even numbers; those leading north and south by odd. With the development of satisfactory lighting equipment for automobiles and trucks, traffic flowed incessantly day and night. In spite of signal lights and danger warnings at frequent intervals, the destruction of life and property rose alarmingly as higher speeds became possible.

The construction and maintenance of roads came to be a major industry. Expenditures jumped from an estimated fifty-nine million dollars in 1904 to more than a billion four hundred million in 1927, not including educational costs involved in the study and teaching of highway and automotive

[1] It was estimated that the total bill for country hauling reached nearly a billion dollars a year. Many people believed that this cost could be reduced by two-thirds through road improvement.

[2] The horse, though used on city streets, serves best as a beast of burden when his soft hoofs can tread on turf or dirt. For a time parallel strips of dirt and surfaced road were used, but the plan was not feasible.

engineering, the expense of keeping up private and semiprivate bureaus, or the payment of thousands of wage earners employed in turning out road machinery. Technical and mechanical improvements helped immensely. Local dirt trails were graded and dragged or covered with gravel, clay, or stone. State highways were surfaced with "blacktop" (stone bound together with tar), asphalt, or concrete. The last soon won universal approval; mileage increased from seven thousand in 1918 to fifty thousand nine years later. Construction principles were modified, and machines became efficient aids. The clumsy steam shovel of 1920 was changed into a facile implement capable of performing many tasks. The old concrete mixer to which ingredients had been rolled by wheelbarrow and from which the mortar had been carted away in like manner was transformed into an automatic device that, fed from trucks, moved slowly along the concrete forms, pouring as it went. In 1919 it required about seventy-four men to build three hundred and fifty feet of pavement a day; in 1928 forty-five men could in the same number of hours complete some eight hundred feet.[3] By the end of the decade ribbons of concrete tied America together, and great bridges and viaducts and tunnels sped long-distance traffic. Filling stations, more common than the inns that had once dotted the turnpikes, became the information booths of the nation as business men, pleasure seekers, vacationists, and mere wanderers took to the highways. The hurrying procession was soon joined by commercial trucks of every description.

Streets. On the whole the rebuilding of city and village streets lagged behind that of highways. The sign "End of State Maintenance" at the edge of town usually meant to the driver a rough passage ahead. Forced to rely almost solely on their own funds, cities often found it impossible to surface even their most-used thoroughfares. The wooden blocks and rough cobblestones of Cincinnati and St. Louis, for example, persisted long after incoming roads had been modernized. Residents of small towns and villages, especially in the agrarian sections, could sometimes scarcely maintain passable streets on main lines of traffic; the impatient motorist and the haughty truck driver spent little in their business houses but swore much at their provincialism. Many tiny hamlets that had once dreamed of becoming famous metropolises deincorporated themselves in order to escape the burden of providing good roads for passing strangers. Even New York, Chicago, Detroit, and other important urban centers began by the end of the twenties to spend millions of dollars on by-passes, outer

[3] See *Recent Economic Changes* (New York: McGraw-Hill, 1929; 2 vols.), vol. i, pp. 246-248.

belts, and other devices for diverting automobiles and trucks away from their already congested streets.

Buses and Trucks. Transportation of freight and passengers by gasoline-propelled vehicles as a public service was economical only after the development of adequate streets and highways. The early motor buses for the most part merely plied between such institutions as hotels and railway depots. Prior to the first World War sight-seeing trips for curious visitors were inaugurated in large cities, and soon buses on regular schedule were being used in competition with or as supplements to the streetcar systems. By the middle of the twenties this new means of transportation had become an accepted part of urban life; it had also begun to serve rural children as consolidated schools absorbed the little one-room structures, presumably red, to which farm tots had trudged on foot through the years. Before the end of the decade the bus, vastly improved, which had at first competed only with the horse, became a competitor of the railroads as well. A network of long-distance lines spread over the land, and the loping greyhound and other markings became symbols of passenger transportation on a national scale. The buses offered scenic wealth to those who did not feel that they could afford to drive their own automobiles and savings of almost half to those who otherwise would have ridden the trains.

Motor trucks, like the buses, began as local conveyances. Business and commercial houses quickly discovered that deliveries and transfers were made with much greater speed and with fewer laborers than when horses were used. Self-propelled vehicles had before the beginning of the twenties virtually driven drays and wagons and carts from city streets. The transformation was immeasurably significant; it was, in fact, the first real improvement in the handling of local freight since the horse and wagon came into use. With the appearance of reasonably satisfactory roads, motor trucks became carriers of long-distance burdens also. They did not possess the capacity of railway cars and they entailed higher operating costs per mile, but they did have two distinct advantages: first, they involved smaller capital investment and maintenance charges, and, second, they delivered their cargoes directly to their destination, thus eliminating drayage. It was the latter advantage rather than a relatively free use of tax-built highways that made it possible for the truck lines to flourish in spite of opposition from the railroads. The two systems of transportation were not actually competitors in their major activities. The truck was primarily a facilitating instrument in the economic life of individuals and of small concerns; the railroad was a great industrial adjunct. Household goods, vegetables from the truck gardens, cotton and other crops from the fields, semifragile

manufactured goods that went directly to retail distributing houses, and miscellaneous freight on short journeys constituted the major shipments most logically and economically handled by trucks, while coal, iron and steel, heavy machinery, and other basic materials that could be unloaded from spurs feeding out from main lines into the yards and buildings of manufacturing plants or wholesale distributing institutions made up an overwhelming part of the traffic best handled by the railroads. Nevertheless, the growing fleet of motor trucks, though it carried only a small portion of the shipping business of the nation, ate more and more into the freightage that otherwise would have been transported by rail. Too, it emphasized the very serious question of whether the highways were meant to serve the three million trucks or the twenty-three million automobiles then registered.

Automobiles. The automobile as an instrument of personal transit is less purely economic in nature than is the automobile industry. Until the perfection of the airplane its development was no doubt the most outstanding achievement in the history of man's efforts to secure quick and easy methods of movement over the earth. Mechanical progress soon not only made the automobile extremely comfortable but also gave it a speed exceeding that of the lumbering trains. Moreover, "the car" was, as the horse before it had been, a personal possession; it took one from his home to his destination and brought him back to his home again. Strangely enough, however, the transporting of individuals quickly from one predetermined place to another was not responsible for the original popularity of the automobile. Driving without fixed purpose and speeding without hurry were at first infinitely more important to many. Furthermore, the ability to provide transportation was often a wholly extraneous consideration in the owner's decision as to when to sell an automobile and buy a new one. That fact explains why so many cars were built and how such a large number of the poor came to hold at least tenuous title to their own instruments of transportation. The automobile in the hands of the people was a powerful force in the economic growth of the twentieth century, and its material usefulness increased in significance through the years. By 1927 ownership had become more widespread than that of telephones; Americans were seeing America, workers were in part freed from the fetters of distance, and migration had ceased to mean permanent family separation.

Airplanes. Growth in air transport facilities was small before 1929. Passenger service was limited, and freight shipments were of little consequence. Capital investment by local political units and by the national government in landing fields and in safety markers of various kinds was

larger than that of individuals and corporations in planes. Air travel had become an accepted fact, but it was far from a reality as a part of the transportation system of the nation.

The Growing Communications Facilities. *The Telegraph and the Telephone.* The telegraph was greatly extended in the first three decades of the twentieth century. Though it was driven almost entirely from some fields by competitors, its usefulness in others was increased by the invention of automatic recording machines. Stock exchanges and the press were especially important users. It was the telephone, however, that grew most rapidly. The Bell system owned or was connected with six hundred and seventy-seven thousand telephones in 1900, five million eight hundred thousand in 1910, twelve million six hundred thousand in 1920, and twenty million in 1930. In addition, many independent groups set up their own local service. Investment in plant and equipment in 1927 totaled more than three and a half billion dollars. Technological improvements were rapid. Underground cables made it possible to strip the maze of wires from city streets, and new inventions spread the lengthening lines across the continent. In 1911 conversation by overhead wires was inaugurated between New York and Denver; two years later between New York and Salt Lake City. In 1915 transcontinental communication between Boston and San Francisco was opened. Before 1929 automatic machinery began to displace operators in many exchanges, and the dial came into general use.

The telephone was an essential in the growth of radio and wireless. The first speech transmitted by radio telephone was sent out from Arlington, Virginia, in 1915 "across the continent to San Francisco, to Hawaii, and across the Atlantic to Paris." Six years later a conversation originating in Havana, Cuba, was carried fifty-five hundred miles by submarine cable, overhead and underground lines, and radio telephone. Soon ship-to-shore service, picture transmission, and international communication were regular procedures.[4]

Radio and Wireless. Radio rose from infancy to full stature in the brief span of a single decade. As commonly known, it was never a means of either personal or business communication but something of an animated newspaper, deriving its chief income from advertisers. Soon it became a distributor of information of economic significance. In 1921 KDKA in

[4] Telephone service by wire and radio telephony between the United States and the rest of the world spread quickly: to Mexico in 1927; to the chief countries of western Europe by the end of 1928; to South America and Australia in 1930; to Java, Sumatra, Bermuda, Hawaii, and the Canary Islands in 1931; to South Africa, Egypt, Siam, and the Bahamas in 1932; to the Philippines, the Canal Zone, Central America, Palestine, and India in 1933; to Japan in 1934; and to China and Alaska in 1937.

Pittsburgh broadcast the first farm program and the first market reports. Lessons in homemaking and nutrition quickly followed.

Wireless transmission in one of its phases developed into a dramatic and useful means of direct communication. The crackling message that flashed over the Atlantic from the sinking Titanic in 1912 tragically demonstrated its potential value in the commerce of the world. Before many years had passed, short-wave broadcasting had tied the ends of the earth together and had become an indispensable aid in flying, in administering urban police forces, in maintaining contact with individuals on hazardous explorations and similar undertakings, and even in conducting world political affairs.

The Changing Physical Aspect of the City. The remarkable physical development of the nation between 1900 and 1929 brought to the city far-reaching changes, for it was during those years that the scientific and mechanical marvels that were just coming into being at the turn of the century grew to maturity. The automobile was a singularly potent factor in the transformation of urban centers. Except in the oldest cities, where investments were too heavy to permit sweeping modifications, the narrow streets that in 1900 had been crowded with plodding horses drawing buggies and drays and hacks and cabs turned before the end of the twenties into broad boulevards that hurried the traffic of a new and restless age. Yet congestion became worse rather than better. By 1929 the roads leading into every large city were, especially on Sunday evenings, jammed for miles with impatient drivers crawling at a snail's pace toward their homes. Economic losses in costly delays, in needless consumption of gasoline and oil, and in destructive accidents reached tremendous proportions as the stream of people that had poured out over two days each week end sought to return in a few hours.

In towns large and small main thoroughfares were filled with moving vehicles, and cars lined the curbs from end to end. The installation of the now familiar "Stop" and "Go" lights helped discipline traffic, but the parking problem everywhere remained unsolved. As "No Parking" signs increased, taxis, streetcars, and buses became the only feasible means of travel in downtown sections. Even away from the crowded areas limitations began to be imposed on parking along the curbs. Householders complained that delivery service was impeded, and city officials found it almost impossible to clean the street. On the other hand, the ever-growing number of automobile owners of modest means, particularly clerical workers and other wage earners, who lived in garageless homes and apartment houses became more and more bitter in their condemnation of urban governments

that forced them to store their cars in privately owned facilities at exorbitant rates. With millions of dollars' worth of property unguarded on the streets both day and night, pilferage and theft became notorious.

Residential districts were transformed. Unsightly overhead wires disappeared as cables came into use; the back-yard garden vanished along with the carriage house; and, except in the lesser towns, the individually placed and much-decorated Victorian homes of the early part of the century fell before new economic forces. Efficient city services such as water and sewage disposal necessitated uniform grading in business and residential districts; ancient trees were cut down as giant shovels altered the topography of the land, and the walks were planted with maples, elms, or sycamores as identical as the houses that lined the streets. What once would have been alleys became paved driveways as the automobile joined the furnace in the basement. Throughout urban America, as the newly arrived and the nonpermanent elements of the population as well as young couples with leisure and comparatively adequate income sought homes of their own,[5] construction of single, twin, and row houses and apartment buildings was ever in progress. By 1929 more than three billion dollars was being spent annually on the erection of dwelling units, though millions of the city poor still lived in miserable tenements and more miserable shacks. Houses were either rented or bought. Apartments, with the exception of a few in cooperative experiments, were rented. Vying with one another in elaborateness of equipment and conveniences, they offered, especially to the growing class of professional and service workers and to the aging, comfortable quarters involving neither capital investment nor maintenance obligations.

Striking changes came also in the nonresidential districts. Architectural designs underwent modifications to suit the new age. Improved heating, lighting, and ventilating systems were established, with beauty and comfort primary considerations. Business offices and department stores, for instance, were turned into wonderlands of engineering ingenuity. The skyscraper, whether economically practical or not, struck the fancy of Americans because of its bigness. It came, however, out of real financial necessity, for concentration of business and industry had by 1900 so increased the price of urban land in some places as to make it impossible to derive profits from low buildings. Stories were therefore piled upon

[5] Many factors were involved in the disappearance of the boarding house as an economic institution. The availability of foods in both fresh and factory-prepared forms, the desire for freedom and isolation, the appearance of vacuum cleaners and other mechanical aids that helped to simplify homemaking, and the advent of more enticing occupations for women than that of keeping boarders were in part responsible.

stories to dizzying heights. The twenty-floor Masonic Temple in Chicago, completed near the end of the nineteenth century, was the first of the towering structures. In 1902 the Flatiron Building in New York, two hundred and eighty-six feet in height, took from the midwestern metropolis the honor of having the tallest edifice in the world. Soon it was dwarfed by the Singer Building, six hundred and twelve feet, which in turn was overshadowed by the Woolworth Building, seven hundred and ninety-two feet. The Empire State Building, one hundred and two stories, reaching twelve hundred and forty-eight feet into the air, marked perhaps the climax of American skyscraper construction. For many years after its opening in 1931 a substantial part of its income was derived from the sale of tickets to sight-seers wishing to look over the nation's most magnificent metropolis.

The skyscraper, ever in conflict with the economic forces that spread cities over widening areas as transportation facilities improve, represents because of its tremendous cost a static institution in a changing world. It illustrates more keenly than anything else man has created the utter dependence of the individual on his unknown neighbors for existence in a complicated and interrelated civilization. Even a petty quarrel between capital and labor can with scarcely a warning to the occupants wholly paralyze any one of these teeming human hives. Yet whatever its ultimate fate, the skyscraper will stand as a monument to the vaunting ambition of a business generation that may have reached its height while the Empire State Building was being pushed toward the sky.

In the smaller local business communities within the urban areas corporations selling their wares through chain outlets not only built attractive stores in outlying districts but also stirred the traditional small-scale butchers, bakers, and candlestick makers to modernize their establishments. Although the corner grocery still survived, food marts arose in every busy neighborhood. Since they were owned by central organizations, they enjoyed the advantages both of decentralization as to location and of centralization as to management. In spite of bitter opposition and heavy taxes, they prospered as penny-conscious homemakers, drawn by their prices as well as by their invitingly clean and orderly interiors, flocked through their doors. By 1928 the Great Atlantic and Pacific Tea Company was doing an annual business of three-quarters of a billion dollars in seventeen thousand five hundred stores throughout the nation. Other chains flourished also, some providing only buying service for independent dealers. The distribution of food was transformed in many ways. Delivery service for the most part disappeared, the quality of the goods offered

improved, and such contrivances as visible scales made for economical shopping. Moreover, women, fascinated by the Piggly-Wiggly self-serve idea, devised and patented by Clarence Saunders of Memphis, Tennessee, began to insist on selecting each item personally.

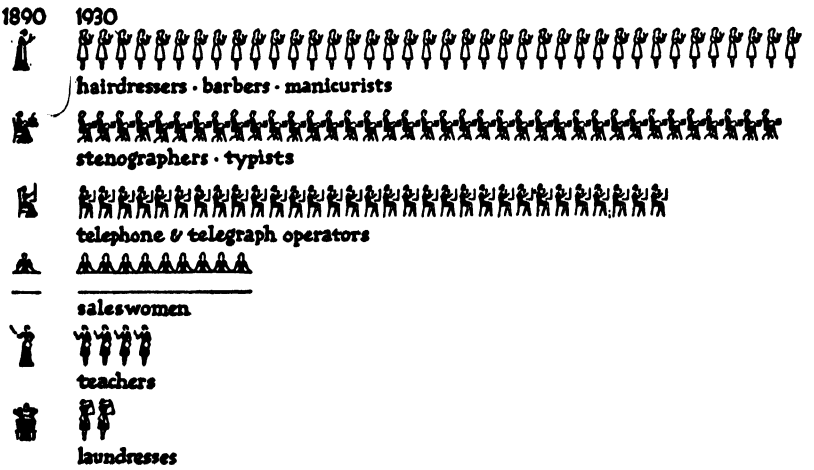
Many new business houses grew up in the neighborhood centers. Five-and-ten-cent stores operated by Woolworth, Kresge, and others made their appearance, and J. C. Penney, United Drug, and United Cigar established branches throughout American cities. Even Montgomery Ward and Company and Sears, Roebuck and Company, long-established mail-order firms, set up stores in thriving communities. Most outstanding, however, of the growing local institutions in the sprawling metropolises of the country were the moving-picture theaters. Beginning in the early years of the century as "nickelodeons" or "nickelets" housed in vacant buildings hired for the purpose of catering to children of any age "who could transport a nickel to the cashier's booth," they became by the end of the twenties imposing structures where more than a hundred million people a week were entertained.

The development of playgrounds, begun on a national scale in 1906, was a recognition of the fact that the nation had changed. Increased concentrations in the population, shortened hours of work, and more money than usual in the hands of the people were factors that could not be ignored by the social philosophers, the governmental agents, or the directors of industrial progress. Some began to realize that children without chores to occupy their time became when left to shift for themselves in city streets heavy financial burdens in one way or another and that adults with leisure hours and only unwholesome diversions made poor producers in the economic scheme. A few were convinced by the beginning of the twenties that recreational facilities were as necessary as gas, water, light, transportation, or any of the other urban public services.

Americans had long approved of amusements if paid for by each participant. Play at the expense of the taxpayers, however, was accepted as a principle only reluctantly. As the idea slowly spread, boards of education and city councils came to supplant such organizations as the Society for Improving the Condition of the Poor in combating the evils of idleness. In 1907 ninety cities maintained recreation centers; by 1929 the number had grown to three hundred and thirty-six, and in some places flood lights had been installed to make night use possible. The parks and playgrounds provided for a wide range of activities, and total costs were tremendous. Though many private gifts were made, city budgets swelled alarmingly as bond issues and annual appropriations running into millions of dollars

became customary in urban government, especially in the years after the first World War. Art museums, libraries, botanical and zoological gardens, municipal auditoriums and amphitheaters, and a host of other cultural and social institutions added further to the burdens of the property owners.

But the new city was not altogether attractive, and physical improvements were not universal. Many urban centers continued throughout the period to rely on outmoded water systems that were wholly unsuited to a mechanical age in which millions of dollars were spent in piping human and industrial waste into every stream and other millions expended in making that same water reasonably safe—if not palatable—for human con-



Courtesy Machinery and Allied Products Institute

FIGURE 17. INCREASE IN GAINFULLY EMPLOYED WOMEN, 1890 AND 1930

sumption. Street-railway systems, cursed by speculation and peculation, were not appreciably better in 1929 than they had been in 1900. Except in congested metropolitan districts, they lost patronage to the automobile and the bus and in many instances, particularly in small towns, were driven out of existence. The "Toonerville trolley," figment of a cartoonist's imagination, came to represent to gibing and sometimes swearing motorists everywhere the typical surface car of the transportation companies, notwithstanding the fact that modernization was about as rapid as on the railroads. Only Boston, New York, and Philadelphia possessed subways, most satisfactory—and most expensively constructed—of all means of urban transit.

The purely commercial districts of most cities lagged as far behind general development as did the facilities for transportation. Freight stations and docks, usually in the old and somewhat forgotten sections, took care

of the traffic of greatly increased populations under conditions little different from those of a half century or more before. Centers where perishable farm produce came in were often woefully crowded. Buildings were old, streets were narrow and unimproved, and there was not adequate room for manipulating the giant trucks that moved ceaselessly through the cramped quarters. The problem of urban food supply became, in fact, ever more complex. Even before 1900 the people of New York City had come to consume annually eighty million dozen eggs and forty-five million pounds of fish; they were spending some fifty-nine million dollars for meat. Daily they were buying around twenty-four thousand bushels of potatoes, three hundred thousand gallons of milk, and two hundred and ninety thousand pounds of butter.

By the middle of the twenties cities were beginning to smother themselves by their own congestion. Distribution costs moved upward; in New York City total local delivery charges on vegetables sometimes amounted to more than the expenses involved in shipment across the continent, and a pound of bacon sold in Chicago, where it was packed, for more than it did, for example, in Vermilion, South Dakota, five hundred miles away. Police and fire protection, education, medical services, hospitalization, and sanitation dipped yearly heavier into the purses of the taxpayers. Bitter conflicts arose among urban centers as they fought for watersheds and for means of disposing of their trash, garbage, and sewage.[6]

The Changing Economic and Social Life. Fully as significant as the physical upheavals that came between 1900 and 1929 were the social modifications of the period, and their economic consequences were no less obvious. The disappearance of the individualistic democracy that had characterized agrarianism was a far-reaching change. With the spread of the city Americans had lost their ability to wrest a living directly from nature, and with the growth of urbanism to maturity even their jobs became dependent upon the welfare of society in general. Old dogmas were cast aside and economic thoughts and habits were turned into unfamiliar channels as new social philosophies arose. By 1920 bewildered youth had begun to measure all conduct with an uncertain yardstick of utilitarianism.

The Influence of the Automobile. One of the greatest single factors in the changing economic life was the automobile. It provoked the expenditure, directly and indirectly, of enormous sums of cash; it took country

[6] Interesting statistics based on the researches of the Commission on Housing and Regional Planning in the state of New York may be found in George Soule's "Will the Cities Ever Stop?" in *New Republic*, vol. 47 (June 16, 1926), pp. 105-107.

people to town and city people to the country; it leveled the evidences of social inequality; it enabled rural boys and girls to go to high school as much as twenty miles away and brought colleges and universities to the doors of those once unable to attend because of the expense of living in the city; it made the family rather than the individual the unit in migrant labor; it enlarged the social horizon and thus the purchases of the farmer, his wife, and his children; it severely limited the trade of the crossroads store and helped reduce the excessive charges frequently made by small-town business men; and it was partially responsible for the decay that fell upon "the church in the valley by the wildwood." In addition it tended to equalize the population by obliterating many personal deterrents to migration. Lack of movement, as Rupert B. Vance has pointed out, would be disastrous. The varying birth rate would soon surfeit many rural communities, while the cities would wither.

Another important development that came with the automobile was the rise of the tourist industry to Gargantuan size. It is estimated that in 1929 total expenditures involved in travel amounted to five billion dollars or more, four-fifths of which was spent by motorists. Probably a billion dollars went to railroads, steamships, bus and air lines, and garages and service stations serving motorists; another billion to hotels, inns, and tourist houses; a billion and a quarter to retail stores and other distributing institutions offering their wares to the traveling public; a billion fifty million to hotel dining rooms, restaurants, and roadside stands; three hundred million to confectioneries; and four hundred million to theaters and other places of amusement.[7] Chambers of commerce, local and sectional associations, private corporations, and national, state, and local governments were by the end of the twenties spending fifty million dollars annually in advertising playgrounds and places of interest. Thirty-five million people visited national parks and national forests in 1929. For thousands of householders along the highways of America who opened their doors to weary travelers the motorists became bearers of new gossip, new styles, and needed money. Handicraft shops reappeared in the lower Appalachians, along the Gullah coast of the Carolinas, in the Indian country of Florida, the West, and the Southwest, and elsewhere. Indeed, the automobile as a social instrument stirred a diversity of economic activities and spread wealth over the land.

Changes in Home and Family. The changing economic order was clearly revealed in the homes of the nation. More and more city people, especially after the first World War, moved into apartments and row and twin

[7] See Glover and Cornell, *The Development of American Industries*, ch. xxxix.

houses. The parlor lost favor; idle rooms were luxuries, and surplus funds had to be used for electric lights, running water, gas, telephones, vacuum cleaners, electric refrigerators, and sometimes gas or oil furnaces. There were no longer facilities for or economy in domestic production of traditional goods. The average homemaker, for instance, could scarcely compete with the great factories in sewing clothing, for finished garments could in many cases be purchased for the price of the material alone in small quantities. The disappearance of common tasks, the chores of other days, may have lessened social cohesion in the family, but it brought by the middle twenties a unified economic front. Every member who could, male and female, sought gainful employment in some form, chiefly because one pay check was not sufficient to provide all with what they had learned to want. Many girls when old enough to enter industry turned to the laundry, the bakery, the canning plant, and the clothing shop to do what they had refused to do at home. Country boys fled to the city. Their sisters, despite the rumored hazards of urban life, soon followed after them; in fact, the census figures by the beginning of the twenties began to show that women were seeking urban employment in larger numbers and at earlier ages than were men. The war, the automobile, and countless other influences had both destroyed old fears and created new desires. Until the depression of 1929 the ceaseless stream of migration carried off the best and the worst from the agrarian human reservoir.

New Clothing Expenditures. Rising expenditures for wearing apparel strikingly reflected the changing economic scene before 1929. The mechanical products pouring from the noisy factories were matched and even exceeded in variety by the shifting styles in dress, particularly for women. The scanty wardrobe of one or two outfits of 1900 was supplanted by full closets even in the small towns. The shirtwaist, sniffed at by Paris dressmakers, enjoyed universal approval; the output in 1910 in New York shops alone was valued at more than sixty million dollars. While moralists cried out against the "harem trousers" and the slit skirts of the day and judges sometimes sent offenders to jail for what they chose to term "indecent exposure," American girls continued each year to spend increasing amounts of money on dress as they clung to the new and discarded the old. Before 1914 they had given up parasols as needless and chatelaine watches as "old-fashioned." High-topped shoes were still popular, but long underwear, voluminous petticoats, and bunglesome bathing suits were losing out to lighter and briefer rivals. The total value of women's clothing produced in regular factories (excluding corsets, hats, handkerchiefs, and other important accessories) was nearing half a billion dollars annually.

Men, though they caused less economic disturbance through demands for current styles than did women, deserted temporarily their traditional dull garb for peg-top trousers, diamond-shaped pearl buttons, caps, and string and bow ties. Factories of other days that had turned out millions of paper, celluloid, and rubber collars began to limit their output exclusively to stiff linen collars that were soon to give way to the soft attached models of the modern shirt. Spindles and needles were everywhere busy; more than twenty-one per cent of the wage earners of the nation on the eve of the first World War were employed in the textile mills.

The conflict that in one way or another engulfed the United States in the years between 1914 and 1918 completed the transition of women from "home bodies" to individuals participating actively in the economic, financial, political, social, and cultural life of America. After the war, dress, except on formal occasions, typified a new and bustling world. Youth was accented, and the distinctions that had marked rich from poor disappeared. The leading cotton-producing country on the globe became the largest consumer of silk and rayon as women and girls at every economic level discarded shapeless and heavy stockings, drawers, bust forms, and nightgowns and turned to gossamer creations that they called hose, undies, bras, and nighties. By 1925 mail-order catalogs, appealing primarily to rural people, were featuring women's clothing above all other items.

Expenditures for Other Luxuries and Necessities. Fuel, electric, gas, and water bills mounted too as ordinary Americans installed equipment and conveniences previously found only in public hostelries or private mansions. Between 1900 and 1918 new furnaces, washing machines, stoves, and bathrooms and such luxuries as player pianos, phonographs, electric fans, and decorative lamps dug heavily into pay envelopes. During the twenties installment buying alone, perhaps, made it possible for family budgets to absorb the stream of automatic mechanical marvels flowing out of the factories. Living costs were growing apace. They were growing because the number of things wanted by the mass of the people was ever moving upward as more products became available. They were growing also because the new goods were, generally speaking, more costly than traditional items. The automobile was far more expensive than was the horse, and so it was with the radio and the talking machine, the electric washing machine and the hand-turned washer, the vacuum cleaner and the broom, the electric refrigerator and the ice box, the oil burner and the coal-fired furnace, and the cigarette and the pipe and pouch. Economic life did not follow the predictions of the experts, for the washing machine kept the

laundry at home and, stranger still, the refrigerator took over the job of the ice plant; but everywhere expenditures expanded astoundingly.

Educational and Cultural Growth. Educational facilities increased rapidly in the thirty years before 1929. Though teachers' salaries were small and equipment and buildings on the whole were poor, total annual costs rose by the middle of the twenties to more than two and a half billion dollars, almost as much as those of the rest of the world combined. Whereas in 1900 many of the states were almost without high schools, by the beginning of the thirties education through the twelfth grade was available to an overwhelming majority of American youth. Student enrollment in elementary and secondary schools mounted from fifteen and a half million in 1900 to twenty-four and a half million in 1926, and that in college and postgraduate courses from a hundred and nine thousand to more than five hundred thousand. The number of young people taking shorthand, bookkeeping, business administration, and other "practical" subjects made notable gains. Economically the astounding growth in education meant that each year millions of boys and girls were presumably being prepared to increase their effectiveness as workers while being withheld from the labor market. It meant too that new desires for material goods were being created and that taxes were becoming burdensome.

The financial problem that accompanied the expansion of educational opportunities was indeed perplexing. Even the poor, especially in the agrarian regions, had always advocated good schools, but the costs were difficult to meet.[8] With the help of contributions from Washington for training in fields such as home economics and agriculture, state and local governments maintained the elementary and secondary systems. Colleges and universities relied altogether on national assistance, state appropriations, tuition fees, and gifts. Rockefeller, Carnegie, Hershey, Eastman, Duke, Harkness, and many other individuals gave liberally. Their very generosity, however, sometimes caused embarrassment because of the possible control of the donors over intellectual explorations. Unfortunately in the reconstruction period of the twenties many institutions put disproportionate

[8] The benefits of a well-developed school system were strikingly missing in the poor urban sections. Money that might otherwise have been used for schools had to be spent on new water systems, playgrounds, fire and police protection, and other services as cities grew bigger and costlier to maintain. The social and the economic thinkers came into bitter conflict concerning the purposes of metropolitan taxation. Jane Addams felt that cities were essentially places where children grew up and that they should therefore be planned with that fact in mind; the business man, on the other hand, believed that they were centers of commerce and trade in which human beings were incidental. Sociologists were concerned with the poor as future citizens; economists were worried over their cost as possible future criminals and inefficient workers. Controversy over allocations in urban budgets was inevitable. Unfortunately law enforcement frequently won over social improvement.

amounts of their funds into spacious buildings and grounds and thus gave rise to a Frankenstein's monster of upkeep. Money was wasted in other ways, for sometimes it seemed as though nobody knew what was the main show in what some called the great circus of higher education; both the public and the student bodies by their support lent strength to the claim by some that it was athletics, particularly football. Grade-school and high-school costs also were rising. The agrarian regions spent hundreds of millions of dollars on consolidation in order that teaching personnel might be bettered and attendance increased. Not even the miserable homes in which many of them lived revealed the disadvantages of farm children more clearly than did the straggling child plodding a mile or more through mud and rain to a one-room cabin where presided a teacher whose education was frequently not of high-school level.

The cultural growth of America in the years before 1929 is difficult to explain in its material significance. Individualism began to appear in architecture, in literature, and in attitudes toward local surroundings. Museums and legitimate theaters were losing ground. The charitable gave less to "heathen uplift" and more to home-town improvement programs. Inspirational editorials in the newspapers gave way to bargain notices and stock-market quotations, comics, personal advice, and news that touched (and frequently exaggerated) human rather than national and international affairs. Books were concerned with specific people and their problems; Eugene O'Neill, Theodore Dreiser, and Sinclair Lewis, for instance, pictured no little Nells, nor did Edgar Lee Masters, Vachel Lindsay, or Carl Sandburg write of gentle things in their poems. By the opening of the thirties Thomas Benton, Grant Wood, and their contemporaries were portraying simple Americans whose economic stories fairly jumped from the canvases. Magazines that a few years before had been interested chiefly in reform turned to individual realism, and new publications such as H. L. Mencken's *American Mercury* arose to prod at national complacency, which college students confused with stupidity. Newspapers and magazines were bought in great quantities. Altogether the value of the output of printing and publishing houses climbed from slightly more than four hundred million dollars in 1914 to two and a half billion in 1927. Books remained, as in the past, secondary, though occasionally a "best seller" brought fortune to author and printer alike.

Expenditures for Amusements and Sports. Amusements and sports in their various forms were outstandingly important economically in the years between 1900 and 1929. In no other field, even in government, did expenditures increase so rapidly; they amounted in 1929 to somewhere between five

and six billion dollars. The quest for recreation and relaxation was a potent factor in the demand for still shorter hours and still higher wages and an integral part of the new emphasis on personal consumption and on personal rather than national welfare. Material conditions at the beginning of the century were such as to encourage leisure. The banks of the nation held in their deposit accounts seven billion dollars or more, Americans were taking up British and German loans, lending rates were lower than in any other country, exports exceeded imports by millions of dollars, and labor had to a considerable extent been transferred to machines. The outlay before 1917, however, was nominal; only in the moving-picture industry did capital investment come to rival that in traditional enterprises. After the war the spirit of big business invaded the sports world, and the power of the new advertising lifted amusement to the position of an established occupation.

By the early twenties vast sums of money were being expended in the production of sports equipment and in the construction and maintenance of ball fields, race tracks, skating rinks, gymnasiums, field houses, stadiums, and similar installations. Financially it was the spectator and not the participator who made sports significant. Soon Americans were paying millions of dollars annually to the ticket takers of baseball parks and incidentally to hotel keepers, taxi drivers, peanut and soft-drink venders, and other servers of the diversion-seeking public. But in terms of cost the "national pastime" was quickly outstripped by football. A crowd of fifty thousand was not unusual at the great college games, and expenditures on this particular aspect of higher education rose to seventy-four million dollars annually before the end of the decade of the twenties. Professional boxing contests too were popular; the Dempsey-Tunney return fight at Chicago in 1927 drew gate receipts of two million two hundred and eighty thousand dollars. Golf was no longer limited to a few elderly players; country clubs became the clearing houses of business and social America as expenditures for the game approached half a billion dollars in 1928.

The ball parks, the golf courses, and the boxing rings were challenged in their bid for the amusement dollar by the dining and dancing establishments and the night clubs, which in 1929 drew more money from the public than did football and baseball combined. Everywhere, it seemed, work was scarcely more than an adjunct to pleasure; according to Stuart Chase, the people were devoting a quarter of the national income to play and recreation.

Expenditures on Vanities and Indulgences. Americans spent for tobacco in 1924 a billion eight hundred million dollars, a sum that, with the single

exception of the food and kindred products group, exceeded the value of the entire output of any one of the sixteen general classifications of industry a quarter of a century earlier. They spent also eight hundred and twenty million for soft drinks and ice cream, six hundred and eighty-nine million for candy, eighty-seven million for chewing gum, four hundred and fifty-three million for jewelry, and two hundred and sixty million for perfumes and cosmetics. In addition women began to pay out millions of dollars yearly in search of the beauty and grace that advertisers eloquently assured them could be theirs. Cosmetics, reducing garments, mud packs, and permanent waves are only a few of the items that came to be never-failing sources of income to enterprising manufacturers and "beauticians." Economics everywhere appealed to vanity; each year more striking and beautiful models appeared in such once prosaic things as automobiles, refrigerators, vacuum cleaners, oil burners, plumbing fixtures, and drinking fountains.

The Changing Farm. In the country as in the city one of the most important agents of change in the years between 1900 and 1929 was the automobile. For the first time in the history of agriculture the power that provided economic and social transportation ceased to be the same power that drew the plow, the drill, the tiller, and the harvester in the fields. That fact was significant. It meant that farmers no longer spent weary hours on plodding journeys to town; repair parts and needed goods could be obtained quickly, and such items as eggs and chickens and small amounts of fruits and other produce could be marketed with dispatch. More than that, it meant that farm boys and girls were no longer bound to their homes for lack of means of getting away. As they and their parents became familiar figures on the streets and in the stores and amusement houses of their nearest urban centers, they shook off their provincialism and with it the labels of "hick" and "hayseed" inflicted on them by the proud new city dwellers in the days before the "horseless carriage." It meant also new economic demands by a large though dwindling element in the population.

The telephone and the radio too were powerful factors in transforming rural life. The telephone did much to dispel the isolation that had long burdened agrarians. Radios, because of the original cost and the expense of maintaining batteries, were unfortunately beyond the reach of a great many agriculturists. Farmers were still poor, for, except for the brief years of the first World War, their incomes had increased but little. In 1929 some seventy per cent were receiving less than a thousand dollars annually.

In spite of the vast strides that had been made, the end of what was supposed to be a decade of prosperity found the farm lands as a rule with-

out electricity and running water and all the conveniences that those services made possible. Screens, paint, and other things that had long been commonplace in the towns were missing. On the other hand, new expenditures had become necessary. For example, the automobile was hardly to be done without, and the sick now had to be sent to urban hospitals, where space even in the cheapest wards was fearfully expensive. And always agrarian appetites were being whetted by new industrial products and tempted by new urban pleasures. Farming communities had no tax-maintained recreational facilities for use during the few leisure hours that mechanization had brought. In the Cotton Kingdom in particular there was poverty, stark and real. The authors of *The Plantation South* wrote as late as 1940: "The problems of rural living in the South described in terms of need for balanced diets, improved housing, control of disease, better schools, and availability of such items as radios and magazines all reflect the economic situation. There are also the related questions of lives characterized by drudgery and monotony and of the need for changing attitudes and habits and broadening cultural horizons. The cotton cycle is such that periods of heavy labor demands are interspersed with long periods when little time is required for farm operations. In general the low-income Southern family lacks the training, the facilities, and the incentive to take advantage of these periods of leisure either for improving its surroundings or for self-improvement." [9] Barring a small number of really prosperous farmers, conditions throughout great portions of the agricultural regions differed only in degree. That the agrarian had become a specialist, a scientific producer, and a business man in the sense in which the term is used in the countinghouses was for the most part still mere talk. Though he had turned to specialties that suited his land and his market and large-scale farming was carried on in the truck-growing regions and in the West, on the whole the tillers of the soil remained in 1929 small landowners ever in want.

[9] William C. Holley, Ellen Winston, and T. J. Woofter, Jr., *The Plantation South, 1934-1937* (Washington: Government Printing Office, 1940; Research Monograph xxii, Federal Works Agency, Work Projects Administration), p. 69.

Chapter 32

THE ECONOMIC COLLAPSE

Much has been written about the "great depression," but no thoroughly satisfactory analysis of its causes has yet appeared. Panics and economic disturbances are not easily explained even in the simplest society; in the modern world of change and ever-growing interdependence the contributing elements are so overwhelming in number that they seem to defy clear delineation and evaluation. Experts have set forth their particular theses regarding the origins of the collapse of 1929 only to find that other experts, equally well qualified, have denied the legitimacy of their explanations. The economic disruptions that followed the first World War, a surplus of durable goods, overproduction, underconsumption, installment purchases, stock-market speculations, an oversupply of gold, an undersupply of gold, national extravagance, individual extravagance, and technological progress are only a few of the reasons advanced for the difficulties that came up at the end of the decade of the twenties. All, perhaps, were involved, yet each at one time or another has been belittled by capable authority. While the learned have argued their points, the layman has solaced himself by charging that a lack of morals had led to war and disruption, by saying that a panic was due, or by declaiming from pulpits and speakers' platforms that irreligion had brought a scourge from God. Time and patient research alone will enable the economist, the financier, and the historian to sort out the fine from the dross and present at last a well-balanced story of how the myriad factors combined to bring the calamitous years that fell upon the nation. The importance of the depression in modern economic life may, in fact, lie not so much in its origins as in the lessons learned in the attempts to extract the struggling people from its coils, for, whatever the political implications, the tragedy brought as never before some real thinking concerning society and its material welfare. There came some comprehension of two principles that had long been at least faintly discernible: first, that life meant even for the most humble more than mere existence and, second, that since the nation had become predominantly urban, the poor could no longer turn in time of trouble to the soil. Policies

and practices began in some cases to be based on conditions as they were and not as they had been; dogmas that had served in other days were examined against a background of industrial internationalism and occasionally found lacking. Spending and saving took on new meanings under scrutiny. Much study, however, remains to be done.

The "Prosperous" Twenties. The depression, contrary to popular opinion, was not ushered in through a flowing horn of plenty. The year 1929 found less than forty-nine million people in the United States pouring into the fields, the forests, the mines, the mills, the factories, the countinghouses, the stores, the schools, the offices, and wherever else man could earn his sustenance. These working men and women of the land had opportunities not elsewhere equaled, yet they would justly have denied a charge of luxury, would rightly have disavowed an intoxicating abundance. Neither they nor their dependents were living in a "fool's paradise," as has often been said. They were not reveling in a spending carnival. The washerwoman who reputedly called for her burden in an automobile was far from opulent; generally the car she drove was comparable to the bony "plug" of the poor a generation before. The great mass of Americans—though the richest people in the world—were living beyond their means only if one admits that essentials are the full measure of happiness. Many possessed a minimum of human necessities and much less than their wants. Indeed, according to a report of the Brookings Institution consumption of conveniences and luxuries in the twenties rested heavily on eight per cent of the population. The productive capacity of the nation running at full blast, declared Dr. Moulton and his associates, was wholly inadequate to provide a plethora of goods or even a "reasonable standard" of living for everybody. More than nineteen million of the estimated twenty-seven and a half million families in 1929 received annual incomes of less than twenty-five hundred dollars; of that number sixteen million received less than two thousand dollars each year, twelve million less than fifteen hundred, and six million less than a thousand. These nineteen million families alone could, in the opinion of the members of the Brookings staff, have overtaxed existing production facilities had their incomes by some means been increased to twenty-five hundred dollars each. The fact that individuals in all economic groups became in the twenties buyers of every class of goods the markets offered neither proves prosperity nor disproves the assertion that the factories were incapable of surfeiting the people with unwanted products. The purchase of radios, automobiles, silk stockings, coonskin coats, stylish dresses and suits, and other so-called luxuries meant too often that credit was being overextended or that traditional essentials were

being forgone. Prosperity was the part of a relative few; the many can be accused of no more than poor judgment in the selection of the things they bought.

The Employment Situation. A study of particular occupations in the decade of the twenties reveals additional evidence that wealth was not widespread. Agrarian troubles led all the rest. The four billion six hundred million bushels of grain harvested in 1919 sold for six billion nine hundred million dollars. Ten years later, however, the four billion three hundred and ninety million bushels brought the beleaguered farmer only three billion one hundred and seventy million. At the same time land values dropped precipitately: fifty-four billion dollars in 1920, thirty-seven billion in 1925, and thirty-four billion in 1930. Farm-mortgage indebtedness rose nearly two billion dollars, and tenancy grew from thirty-eight to forty-two per cent. Some two hundred thousand farmers were forced to desert their fields and look elsewhere for work.

In industry there were particularly drastic changes in employment. During the decade eighty-seven thousand miners in the bituminous-coal fields fled their pits to seek new means of livelihood, and a hundred and five thousand persons engaged in the extraction of other minerals did likewise. Forty-three thousand lumbermen, raftsmen, and woodchoppers turned to other tasks. Apprentices in the building and hand trades fell in number by almost fifty per cent, and thousands of boat builders, harness makers, hair-goods workers, glassblowers, phonograph builders, streetcar conductors, leather workers, lime burners, and so on found that their jobs had slipped from under them before 1929.

The textiles trade was seriously disrupted, unemployment was spreading, and labor organizations were retreating before the spirit of big business. Of the three hundred and twenty-six separate industries listed in the *Statistical Abstract of the United States* for 1930, a hundred and forty showed decided decreases in the average number of people employed ten years before. Total wages too slumped in many instances. The payrolls of a hundred and five of the three hundred and twenty-six industries mentioned above fell by more than seven billion dollars. In the building of ships and boats the decline was a billion four hundred million, in flour and other grain-mill products nearly a million, and in cotton textiles and meat packing over eight hundred million each.

Fortunately the unfavorable statistics are only a part of the story. The total number of people employed increased, aggregate wages grew appreciably, and the value of goods produced moved upward rapidly. A million eight hundred thousand new workers went into the trades, a million and

a half into domestic and personal service, a million into the professions, slightly less than a million into clerical pursuits, more than half a million into transportation, a hundred thousand into public service, and a million two hundred thousand into the mechanical and manufacturing industries. Automobile manufacturers were flourishing, prices in general were falling, and the variety of new products pouring out of the busy factories seemed endless. Want, said Herbert Hoover during his 1928 campaign, was being driven from the land. "We have not reached the goal," he declared, "but, given a chance to go forward with the policies of the last eight years, we shall soon with the help of God be in sight of the day when poverty will be banished from this nation." Thousands of pocket pieces "Good for 4 Years of Prosperity" were distributed by the Republican party. Economic hopes, however, were built on a foundation of shifting sands. The population was growing faster than the army of workers gainfully occupied, the share of the farmers in national wealth was lessening, and the wage advances of labor were in no way proportionate to the advances in the demand of urban dwellers for new goods. Unemployment was a persistent fact. Only speculative profits were large, and they were turned into new speculative ventures rather than into solid enterprises that would provide more income for eager workers.

World Economic Disturbances. The foreign situation too denied the assertions of prosperity that were made by many persons in both public and private life. The war that had raged over the world between 1914 and 1918 had left many poverty-stricken countries indebted to the United States with no means of paying their obligations except by shipping merchandise. But tariffs, rising ever higher through the twenties, dried up the stream of inflowing cargoes and also brought reprisals from the continent, England, and the British dominions, including Canada. Trade with Russia was hampered when officials, fearful that any other course would be interpreted as an implied approval of communism, refused to recognize the new Soviet government. The bankers and the industrialists insisted doggedly on money payment of war debts, even though they knew that one hand must lend to pay the other back. At last the logical consequences of such a policy was reached, and Europe ceased to send goods, to buy goods, or to pay money. One by one foreign nations deserted the gold standard as their reserves of the yellow metal flowed into the coffers of the United States. American manufacturers, seeking to nullify retaliatory restrictions, built giant branch factories abroad and with pauper labor turned out trade-marked products that they had long said were made possible by high tariffs and high wages.

The Speculative Mania. Most immediate in the precipitating causes of the collapse of 1929 was the financial situation at home. It may be true that installment buying had forged so far ahead of ordinary earnings that there was a slack in the purchase of articles for current consumption, but the most significant factor was the inordinate amount of speculation that was rife in the land. Deliberately encouraged by interested people through radio, books, circulars, pamphlets, magazines, and whatever else twentieth-century civilization could offer by way of propaganda agencies, the investing public deserted bonds in an insatiable cry for stocks. Prices on the exchange moved upward crazily; increases from fifty dollars or less to four or five hundred within a few months were not unknown. Business men became thoroughly infatuated with the new promise of easy wealth, and even college presidents, college professors, and public servants, paid by the hard-earned tax money of the people, neglected their duties to society to play the brazen lamb in the game of bulls and bears. Specialists provided for all who could pay the price secret information that would unlock the golden doors to the storehouse of fortune. High officials in the government assured everyone that business could do no wrong, and, perhaps unwittingly, even the Treasury Department and the Federal Reserve banks by their own actions furthered the general rush to buy.

Speculation was stimulated by existing conditions. Concentrated management supplied opportunities that could never have been exploited by individual ownership. The financial genius, conspicuous in the days before the depression, conceived and executed astounding maneuvers on the speculative battlefield. As one writer has said, "the nature and variety of his security issues, major and minor, prior and junior, underlying, pledged, cumulative preferred and prior preferred, dizzied the imagination." But that was not all. The "split-up" with its marvels came to the aid of the promoters. This breaking of original stocks into smaller units resulted in more stocks to be bought, thereby reducing prices, temporarily at least, to within reach of the ordinary buyer. No other single technique was more important in keeping the financial game within the scope of the layman. Day after day as the end of the twenties approached, the number of stocks changing hands in the great market in New York City increased. Bedlam reigned around the selling posts as men fought to buy for deluded clients from every town in the land. "Seats" (though nobody had time to sit down) sold in the Stock Exchange for more than a half-million dollars each. Leaders in American life, the stalwart of civilization, and the cream of the social fabric worked to exhaustion as if they were contributing to the welfare of the nation. Yet no matter how many stocks poured into

the markets, there were still others to come. Underwriters, holding companies, trust companies, and financial masters—all with the blessings of the bankers and the brokers—launched new projects daily into the welter of financial confusion. Securities of doubtful value were being fed to the gullible public with as much vigor as had ever been witnessed in the eighties. The fleecings that came were more tragic than those of earlier days in that the fleeced knew not what had happened.

The securities that were changing hands in such staggering amounts were bought on margin, a sort of installment plan in which the additional payments were made only on demand. The hope of the buyers was that they could hold this paper evidence of nonpersonal property until upward-moving prices enabled them to sell at a profit. Payment only in part permitted the speculators to extend their holdings and thus insure larger profits when prices went up. But the sword of Damocles that hung over their heads was the fear that prices might go down. And so it was that the ingenious ticker, long known, made its universal appearance over the land to signal the progress of the business world. Newspapers printed pages of stock quotations and put out editions day and night to announce that all was well. Once again, as it had done a few times in the past, the philosophy arose that he was richest who was deepest in debt. Criticisms of the poor who bought real material goods at a dollar down and a dollar a week came with ill grace from those who were with so much recklessness pyramiding with mere paper the private debt structure to dangerous heights.

Interest rates for both time and call money went up as stocks increased in price. Brokers' loans jumped alarmingly. Money that normally would have gone into stable investments poured into New York and went in one way or another into the purchase of stocks. Even some of the institutions of learning with endowment surpluses threw their funds into the call market, adding further to the unreal prosperity. Wealth that existed only in the stock ticker and the market quotations piled up other wealth equally fictitious. Stocks that were unpaid for purchased other stocks that the buyers never intended to pay for. Fattened by what they fed upon, securities rose to such heights that it was impossible to check speculation without bringing disaster. Shrewd financiers began months before the depression to safeguard themselves by disposing of their holdings; the bulk of investors, however, were destined without hope to sell in a market when few wanted to buy.

Collapse and Depression. Late summer of 1929 brought many signs of uneasiness in both domestic and foreign affairs, but those in high positions continued to tell the people that the market was sound. October came

and had almost gone when on the twenty-fourth the now famous "Black Thursday" struck New York. Twelve million eight hundred thousand shares were sold that day. Margin and short selling began. On Tuesday the twenty-ninth sales on the exchange reached sixteen million with an additional seven million on the curb. The market collapsed completely, and in its wake came bankruptcy, despair, and suicide. Great fortunes and the widow's mite together disappeared—and as in Biblical days the widow had given the most.

The Financial Losses. The calamity that fell upon the stock market was not soon over. The paper wealth of the security holders of the land melted away sometimes at the rate of a billion dollars a day. It had been difficult enough for the bewildered farmers of 1921 to find themselves unable to pay their debts with their granaries full and with no decline in the amount of food consumed in a day, but it was incomprehensible to the investors of 1929 for riches to change so quickly into a crushing debt without the destruction of a single physical item. The nation fought desperately to stem the sudden disaster. In fact, Americans had convinced themselves that such a thing was impossible in modern civilization. They needed, they were assured by their financial leaders, only to show a bit of courage; the wise and the stable, their advisers confidently asserted, would buy when the timid were "selling the country short." Persuaded by a handful of New York bankers, a host of individuals stepped into the breach and bought stocks the value of which immediately blew away into the whirlwind, though, said many, not until the tycoons of money had saved themselves. Recurrent convulsions finally shook the faith of the most persistent investors. Time after time small rallies occurred, only to be followed by relapses that plumbed new depths.

The index value of stocks on the market in September, 1929, as compared with that in June, 1932, was two hundred and sixteen to thirty-four. Twenty public-utilities stocks fell from an average of a hundred and forty-one dollars to twenty-eight, and a like number of railroad stocks dropped from a hundred and eighty-two to twenty-eight. The index of twenty New York bank stocks declined from three hundred and fifty-seven to sixty-seven. According to the Brookings Institution approximately a hundred and sixty billion dollars of national wealth vanished within thirty-six months. That was about all the people had gained in seventeen years of remarkable material progress. The spirit of defeatism arose everywhere. Those who had sought to prop up the crumbling financial temple gave up the task, and those who had tenaciously held on to their stocks at last sold out for what they could get. Persons fortunate enough to keep their jobs

lived without oppressive hardships; some even piously declared that the trials would prove a blessing. But debtors, whose outstanding obligations remained unchanged, were hopelessly burdened, and the unemployed were doomed to evil days from which few were to escape without appalling wounds.

The Human Losses. The editor of the *Commercial and Financial Chronicle* wrote in November, 1929, that many had sacrificed their jewels and their treasures already and that before the end was reached even essentials would likely go by the same road. His prophecy was more than fulfilled. Much that was fundamental was fed into the hungry maw of depression, and most deplorable was the fact that the innocent suffered with the guilty. No language is graphic enough to picture the want that stalked through the land as economic conditions became worse in the first years of the thirties, no mind sufficiently keen to measure the human losses that resulted. The fight for public health was beaten back on many fronts. Tuberculosis and other diseases directly connected with nutritional deficiencies and lack of sunshine and fresh air increased alarmingly as shrinking purses brought less and less food to the table and drove family groups to "double up" in crowded quarters. The number of patients in the free wards of the hospitals grew astoundingly, and thousands of doctors unselfishly donated their services. In many places it was estimated that more than half the pupils went to their classrooms hungry; feeding the undernourished became a part of education.

The school system was one of the first targets of the advocates of economic retrenchment. Business men's clubs and other organizations that should have known how plainly the twenties had revealed the handicaps of the uneducated fought in season and out for cheaper schools. Legislators cut educational appropriations with abandon. Throughout the nation thousands of primary schools were closed in order that the sacred business principle of a balanced budget might be maintained. Teachers in many rural districts taught for twenty dollars a month or less. The demoralization in colleges and universities was little less than tragic. Faculties were reduced and salaries cut by ten to fifty per cent and in some cases even more. The movement of scholars slackened, and, what was more serious, those who had devoted their lives to systematic study were forced to spend too much time and effort fighting for their positions with whatever weapons came to hand. The economic losses involved in the educational policies followed are yet to be fully realized.

Other service or white-collar occupations suffered severely. Salesmen came in from the road because there was nobody who could buy. Stenographers

put aside their notebooks and wondered where they would find homes. Clerks were let out of the stores and the countinghouses. Artists, musicians, and writers fruitlessly peddled their wares. Magazines bought famous names for hack-writer prices. Men who had previously received as much as ten thousand dollars a year in executive positions vainly walked the streets in search of work. Western Union shut its local branches, and city telephone directories grew noticeably thin as subscribers had their instruments disconnected. Old landmarks in cultural America disappeared, and a few famous institutions swung to their doors. The Philadelphia *Public Ledger,* published since 1837, printed its farewell editorial.

Depression in Industry. Workers on the production front fared no better than did the servers. Lessening pay checks to the wage earners and decreasing returns to the employers were common to all industry. Unfortunately there are few reliable figures with which to tell the story. Day after day goods piled up in the stores, the warehouses, the factories, the mills, the mines, and the fields. Day after day workmen turned from their machines, their tools, and their implements as businesses failed because there was no demand. Desires had not suddenly ceased to exist. Men, women, and children over the nation were in need. They wanted all that the machines, the fields, and the mines could produce. Owners were anxious for their workmen to resume their tasks, and laborers begged for opportunity to exchange their brain and their brawn for the means with which to buy food and clothing and shelter and whatever else had come to be a part of life in the twentieth century. But all sat in helpless idleness in a land of plenty. Man, who had imposed money upon himself as an absolute essential in his economic existence, had once more demonstrated the fact that he had not mastered his own creation. Unemployment figures rose shockingly: three million in April, 1930; six million in October, 1931; ten million in the summer of 1932; and twelve million or more in January, 1933.

In manufacturing alone the average number of wage earners in 1933 was two million seven hundred thousand less than in 1929. Total wages paid fell from eleven billion six hundred million dollars to five billion two hundred million. The value of the industrial output dropped from about seventy billion dollars to slightly more than thirty-one billion. In the twenties there had been other places to turn for gainful work, but now collapse was universal. Figures from the Bureau of the Census are revealing. In 1929 twenty thousand workmen making advertising signs (chiefly electrical and mechanical) and other advertising novelties produced goods valued at one hundred and eighteen million dollars, and they received in

wages twenty-seven million nine hundred thousand dollars; four years later twelve thousand workmen produced goods valued at forty-seven million one hundred thousand, and they were paid eleven and a half million dollars. Fourteen thousand workmen in the aircraft factories turned out six thousand heavier-than-air machines in 1929, valued at fifty-one and a half million dollars, and they were paid total wages of twenty-one million nine hundred thousand dollars; in 1933 seven thousand workmen produced one thousand machines valued at fifteen million six hundred thousand, and they received ten million three hundred thousand in wages. The five hundred and sixty-six makers of sand-lime brick in 1929 fell to eighty-four in 1933, and their wages dropped from seven hundred and seventy-six thousand dollars to sixty-one thousand; the finished product was valued at nearly three million dollars in 1929 and only two hundred and five thousand in 1933. Forty-five hundred workmen made three million brooms in 1929, and thirty-seven hundred produced two million in 1933 at about half the wages. One million twenty-one thousand dozen bathing suits were made in 1929 but only eight hundred and thirty-three thousand dozen in 1933. Less than half as many jeweled watches were manufactured in 1933 as in 1929, and production of nonjeweled watches and alarm clocks fell by over a third. More than forty per cent of those engaged in making watches and clocks in 1929 had lost their jobs by 1933.

Thirteen thousand fewer workmen were engaged in making confectionery in 1933 than in 1929, and their wages had fallen from fifty-six million four hundred thousand dollars to less than thirty-three million. Fifteen thousand fewer men and women cleaned and dyed clothes in 1933 than four years earlier, and they received thirty-nine million dollars less in wages. In 1929 eighty-four thousand people were employed in making cigars and in 1933 only fifty-four thousand five hundred; their wages fell from sixty-seven million two hundred thousand dollars to thirty million. Nearly a thousand fewer people were required to make the boxes in which the cigars in 1933 were packed, and their wages had dropped more than a million and a half dollars. One hundred and twenty-nine thousand workers were employed in making clay products in 1929 but only fifty-five thousand five hundred in 1933; their wages were reduced from a hundred and fifty-one million dollars to thirty-six million eight hundred thousand. Workers in the cement industry fell by more than fifty per cent, and their wages shrank from forty-eight million eight hundred thousand dollars to thirteen million eight hundred thousand. Furniture as well as store and office fixtures of every description declined drastically. Chairs and other equipment in schools, theaters, assembly halls, churches, and libraries produced in 1933

were valued at nine million dollars as compared with forty-one million in 1929. In 1929 four hundred and forty-seven thousand men and women employed in the building of motor vehicles, bodies, and parts received a total of seven hundred and thirty-three million dollars in wages; four years later two hundred and forty-three thousand received two hundred and fifty-two million.

Throughout manufacturing the same tragic story repeats itself; it was as though half the city and farm buying population were dead. The dry figures when viewed in terms of human welfare present an appalling picture. The people of the nation wore fewer clothes, drove fewer automobiles, bought less furniture, built fewer houses, used less paper and fewer pencils and even rubber bands, bought fewer radios, ate less food, and, in fact, consumed less of nearly everything that human ingenuity had contrived for the happiness and well-being of man. Only a handful of individual industries escaped the heavy burden of depression. Moving-picture houses suffered little loss, and there was some increase in the use of electric refrigerators, electric washing machines, and electric clocks. Large gains beginning about 1931 in the amounts of rayon and cotton goods produced were only temporary.

Idleness in the Coal Fields. In the coal fields of the nation there was utter collapse. Over the anthracite region of Pennsylvania unemployed miners turned in desperation to the abandoned shafts of old mines and there, in constant danger of losing their lives, dug out what coal they could and, though labeled "bootleggers," sold it to middle-class Americans eager to save a few dollars. Operators warned householders against this "cheap" fuel and officials in Philadelphia and New York relentlessly persecuted and prosecuted the truckers for short weight, but the public continued to buy. The bituminous miners were even more desperate than those in the hard-coal pits. As factories, shops, and mills closed down, the demand for coke and coal dropped precipitately. Mine owners, in spite of severe reductions in price, could not sell their product. The miners in some cases worked only four or five days a month. They lived only as the very poor know how to live.

Poverty on the Farms. Agriculture during the depression, declared Secretary Henry Wallace in 1934, was "thoroughly insolvent." The agrarians, plagued since the first World War with surpluses that resulted from closing markets in the debtor states of Europe, were completely smothered by accumulating stocks of corn and wheat and cotton and other products that could not be sold at home because the economic collapse had stripped urban people of their ability to buy. Prices, already low, moved dishearten-

ingly downward, but mortgage rates, taxes, and other fixed charges fell only slightly. The financial returns from the fields of America in 1932 were less than half those in 1929; according to Secretary Wallace the average farmer after paying the expenses of production, interest, rent, and taxes had only about two hundred and eighty dollars left. The city suffered with the farm, for as the landowners fought desperately and sometimes vainly to hold to their lands, rural purchases of industrial goods virtually ceased. Tenancy everywhere increased. Between 1928 and 1932 a billion dollars in mortgages was liquidated through foreclosures, bankruptcies, and forced sales. The last accounted for thirty-seven per cent of all the changes that occurred in land ownership in 1932. The burden of mortgage debt was two and a half times that of 1910; one-fourth of all the farms and farm buildings in the nation would scarcely have canceled the obligations could they have been sold on the market.

It seemed to the farmer that the trials of the depression were enough, but to the troubles of twenty-five-cent wheat, ten-cent corn, and five-cent cotton was added a devastating drought in 1930. Stretching westward from the Appalachians through the blue-grass regions of Kentucky and Tennessee and on toward the Mississippi River and the great West, an agrarian empire parched under a pitiless sun. For miles on end only the burnt brown stems of what had once been grass were to be seen in the fields. Railroads reduced charges on foodstuffs entering the area, and the hard-pressed citizens of other sections did what they could to aid the discouraged and desolate families. Grasshoppers and dust storms were still to come.

The Rise of Discontent. With industry and agriculture paralyzed, it was only natural that discontent should arise. Radio, press, and automobile, to mention nothing else, had made people too familiar with national assets and their ruthless exploitation for private gain to starve in the midst of plenty without protest. Moreover, Wall Street had wailed too much over its losses. A few corporations had offended by continuing to pay dividends in the face of poverty, and bankers and financiers, ready to foreclose on farm and on home, talked of canceling the war debts of Europe. Many depositors were convinced that banks had been shut in their faces in order that their savings might be enjoyed by those who had toiled not. Men in high places, regardless of whether they were to blame or not, came to represent to the needy all that was wrong. Unfortunately there was much fuel for the fire. Industrialists in some instances drove their employees in sweatshop work, paying them as little as a dollar a week. The Bell Telephone Company released a relatively large number of workers and drastically cut the wages of those who remained but made no reduction in its

monthly charges to customers. In fact, the prices of many industrial services and products remained virtually unchanged throughout the early years of the depression. Farm implements, for example, fell only six per cent; farm commodities fell sixty-three.

Corporation officials daily turned workmen into the swelling army of the unemployed and yet sometimes admitted to congressional investigators that they had voted themselves handsome salaries and liberal bonuses. Those most able to pay too often sought to avoid their contributions to a rising tax levy. Wealthy financiers retained skilled lawyers to juggle their income-tax reports and safely steer them away from a duty that was plainly theirs. One individual explained to his baiters in Washington that giving stocks to his family at Christmas time and taking them back after the tax reports were in was "an old family custom." The leading banking firm of New York City paid no taxes in 1931 or 1932. As an added fagot to the burning fire of indignation which the chicaneries of some of the moneyed had stirred came the great midwestern public-utilities scandal of 1932. Samuel Insull, stripping his investors and filling his pockets with gain, sailed for a foreign haven. When returned from Greece two years later, he asserted in his own defense that he had done "only what others were doing." And last, with honest citizens of the land struggling to earn a living and being treated with scant decency on the slightest unintentional infraction of the law, bootleggers, racketeers, and gangsters lolled in open luxury with, apparently, the blessings of the officeholders and the police forces.

The widespread discontent expressed itself in remarkably few demonstrations. Never before had so many persons anxious to work been unemployed. There are no accurate figures, but the unwillingly idle numbered somewhere between twelve and fifteen million. Such a host of needy and discouraged people held dangerous powers; rarely in all history, however, has more tolerance been demonstrated by those in distress. Tramping the streets in miserable days and nights, the hungry asked humbly and respectfully at every door for a crumb on which to live. The deserving and the undeserving alike got a share of the scanty store which those fortunate enough to have jobs possessed. It was fitting that in 1931 Philadelphia awarded its medal given annually to the outstanding man of the city and the accompanying ten-thousand-dollar prize to the unknown unemployed. Those acts of violence that did occur were too often condemned with more vehemence than judgment.

The Farmers' Protests. Just west of the Mississippi River, particularly in Iowa and the Dakotas, the farmers made desperate efforts to save the results of their years of hard labor. Disturbed by rumors that a fourth of

the land in some of the agricultural states had come under the auctioneer's hammer in a single day, angered by the sight of those who had money buying their neighbors' farms at far less than they were worth, and aggrieved when moratoriums were declared on foreign debts while little was being done to save their homes,[1] they clubbed together and by devious means made it both inconvenient and uncomfortable for outside buyers to bid at all. In a few cases real force was used against sheriffs and judges when those officials endeavored to carry out their legal duties. The "ignorant" westerners were denounced for their lawlessness by the defenders

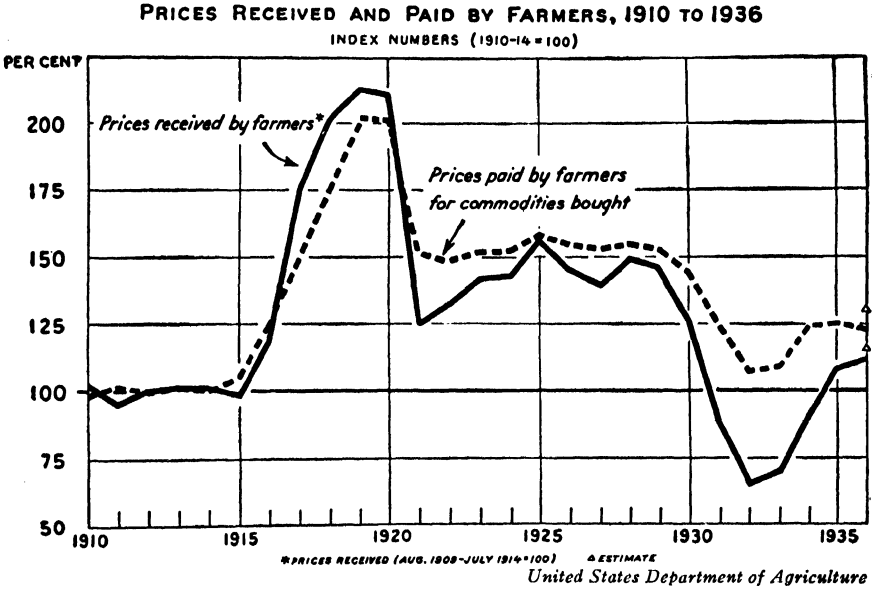


FIGURE 18. PRICES RECEIVED AND PRICES PAID BY FARMERS, 1910–1936

of "sound" government, but they were acting on what they believed to be human rights older than the Constitution.

The Farmers' Holiday Association, led by Milo Reno, attempted what the agrarian had dreamed of for many years—a strike that would bring the butchers, the bakers, and the candlestick makers of the cities to recognize that the food growers were fundamental in the nation. Outside Iowa towns in the summer of 1932 young farmers, businesslike in overalls and crisp of tongue as bankers, stopped all traffic and searched for food. Truckers who could not be talked into turning back were persuaded by other means. Milk—and the farmer received less than a penny a quart for

[1] Moratoriums on farm debts had been proposed in other crises, particularly during the panic of 1893.

that classified as "surplus"—was proscribed;[2] many a gallon was poured into the thirsty soil at the roadside. The strike activities continued into 1933.

The March on Washington. Other groups besides the farmers gave evidence of restlessness. Various and sundry "armies" under the direction of ministers, reformers, and mere adventurers appeared over the land. For the most part they quickly evaporated because everybody wanted to be leader; the number willing to enlist in the ranks of the privates was small. The chief hope of the protesters was to present their demands for assistance to Congress in person; unlike those of 1894, however, the discontented had no desire to become "petitions in boots." Motor trucks were preferred as a means of transportation, though few caravans actually materialized. Some that got under way were halted by traffic officials, empty gas tanks, and balky engines. Only the unemployed ex-soldiers reached their goal. In midsummer of 1932 more than ten thousand marched into Washington, where they were labeled the Bonus Expeditionary Forces.

The Bonus Army. The Bonus Expeditionary Forces, dubbed the B.E.F. by the reporters, demanded little more than immediate payment of adjusted-compensation certificates, due in 1945. Some of the marchers pitched their makeshift shacks on the outskirts of the city in Virginia and Maryland. Others took possession of vacant buildings on Pennsylvania Avenue within a stone's throw of the treasury. These buildings, which belonged to the national government, were soon to be replaced by administrative offices. The authorities, under the pretext that construction was about to begin, demanded their evacuation by the small group that stayed on after the main army had dispersed. Before the episode ended, army tanks, gas bombs, and bayonets were turned upon the unresisting recent defenders of democracy. Floyd Gibbons, fighting correspondent of the first World War, and Elsie Janis, "sweetheart of the A. E. F." of 1917-1918, gave deserved publicity to the sordid incident.

The Teachers' Protest. Scarcely had the echoes of the B.E.F. died away when the Chicago schoolteachers, long face to face with the bread line, began to demand something besides payless pay days. Tax discriminations had been apparent for many years in the corrupt city government. When the depression began, many property owners either could not or would not pay their bills. All municipal employees suffered, but it was the

[2] Some confusion has arisen concerning the prices received for milk by the farmers during the depression. The dairy companies contracted with individual farmers for specific amounts of milk. The price of the contracted amount was low; the excess was bought for practically nothing. The farmers had no alternative; there was no other practical means of disposal, and the yield of the herd could not easily be reduced.

teachers who most often found themselves without checks. After months of waiting they started a demonstration in April, 1933, that soon brought them into collision with the police of the community whose children they had taught without compensation. Again the caustic comment of some national figures was not in keeping with the occasion. There was no possible justification for permitting any circumstances, regardless of their nature, to prevent for four years regular payment of a decent group of people for honest work performed.

The few disturbances that the teachers and other aggrieved groups created were mild indeed in view of the hopelessness of the slough of despond into which all had slipped. There were those, of course, who shouted blatantly, but the patient forbearance of the mass of the people of the United States in those trying years will always stand as a memorial to the stamina and courage that stemmed from a remarkable past.

"The Way Out." The problem of extracting the nation from the deadening grip of depression was a serious one. Recovery measures of one sort or another began almost simultaneously with the collapse. Suggestions were plentiful; from scholars and lunatics alike came panaceas and nostrums, generally titled "the way out." *Buying* the way out led to advertising in streetcars and wherever else man had been accustomed to obtaining his economic advice. *Selling* the way out led to the setting up on every street corner in many cities of apple venders, who thus diverted vagrant nickels from regular dealers. One psychologist launched a campaign to *smile your way out.*

President Hoover, painfully anxious as he was to find some relief for the suffering nation, was seriously hampered by his philosophy of "rugged individualism." The government was burdened with the agrarian-born and long-established premise that prosperity comes only as a result of "harder work, greater saving, and less spending." Few were willing to admit that twentieth-century life was different in any way from that which had been known in happier years.

The Bankers' Pool. First among the national efforts to check the depression was the formation under the leadership of J. P. Morgan and Company of a bankers' pool in New York immediately after the collapse. The primary purposes of the pool, said its founders, were to cushion the drop in the stock-market prices and to assist in carrying the enormous burden of brokers' loans. Shortly afterwards the Federal Reserve Bank of New York City reduced its discount rates from six to five per cent in an attempt to stimulate business. The Federal Reserve Board began to buy in the open market with the intention of checking the mad scramble to sell and

in January, 1930, started retiring gold certificates, thus releasing the metal for reserves. It looked for a time as if there might actually be some hope of restoring prosperity. The foreign-trade balance turned in favor of the United States, and the stock market took an upward swing that was encouraging. But relief was only temporary. Soon the market was touching new lows, and, in spite of the fact that the Federal Reserve discount rate was by May, 1931, reduced to one and one-half per cent, business was following the downward drop.

The President and Relief. Hoover was trying desperately to end disaster. His implicit faith in the ability of the nation to cure itself through individual effort, however, prevented the institution of an aggressive program and brought grave disappointments. The industrial leaders, upon whom he thoroughly depended, promised at a conference in November, 1929, to maintain wages at existing levels; nevertheless, by March, 1930, drastic reductions had begun. Income taxes were lowered in order that business might enter the fight for returning prosperity unhampered, but the only apparent result was a much-regretted curtailment in federal revenues. The silent wheels of industry refused to turn; the self-recuperative powers of business failed to function.

Relief for the man who was out of work and whose family was hungry was studiously avoided. Direct help was condemned, and in March, 1931, a bill to create a national employment system for working with state employment agencies was vetoed. Personal assistance was still confused with charity, and charity was an open admission of failure. President Hoover, like most of his predecessors, both Democratic and Republican, believed that nationally little more could be done than to warn the poor and the unfortunate not to meddle with the immutable laws of finance and business because they must suffer first and foremost in any economic disturbance that came. With annoying regularity he and his associates reiterated the promise that prosperity was "just around the corner." The weary search brought political upheaval, and in November, 1930, the Democratic party won a majority in the House and came very near capturing the Senate.

Congress and Relief. The Congress that assembled in Washington in December, 1931, met in a black cloud of discouragement. There seemed little that could be done for an economic system that had folded up. The collapse in December, 1930, of the Bank of the United States in New York City and of the Bankers Trust Company in Philadelphia was only the beginning of a long series of calamitous events. The domestic crop situation, the foreign debt and gold complications, the distress of the railroads,

and the many bank suspensions convinced even the most determined that laissez faire, for a time at least, must be deserted. Some industrialists were at last compelled to admit, as financiers had had to do several years before, that self-adjustment in a complicated society is too slow and too costly in human misery to be relied upon as the sole means of recovery.

President Hoover faced the new and hostile Congress in 1931 conscious of the facts that twenty-eight thousand business and banking houses had failed during the year with liabilities of nearly seven hundred million dollars, that foreign trade had reached its lowest point in seventeen years, that want was increasing, and that federal revenues were falling far behind federal expenditures. Driven from his hopeful stand of other days, he recommended legislative measures for national betterment. Yet there were those who were never certain that he was not holding his tongue in his cheek. Moreover, the Democratic House was embarrassingly stubborn at times. Some earnest efforts, however, were made to lessen agricultural distress. The machinery for agrarian relief was already in operation, notably in the Grain Stabilization Corporation and the Cotton Stabilization Corporation. These two organizations in 1930 and 1931 actually bought and stored between three and four hundred million bushels of wheat and more than a million and a half bales of cotton. But the attempt to check falling prices seemed only to complicate further the farmers' problems. Pressure from the hungry finally forced the distribution of some of the wheat to those too poor to become competitive purchasers in the market. Eventually both the cotton and the wheat were disposed of by sale, by trade, and by donation; the corporations closed up their business, with terrific financial losses. A liberal free distribution to the needy might have been wise.

The Reconstruction Finance Corporation. The President was not so much interested in the rehabilitation of the farmer as he was in the reestablishment of industry. At various White House conferences he sought suggestions from business, and he eventually presented to Congress plans for the Reconstruction Finance Corporation. Created by law in January, 1932, this new agency was capitalized at half a billion dollars with power to sell five-year notes or bonds to the extent of an additional billion and a half. The board of seven directors, including the Secretary of the Treasury, the governor of the Federal Reserve Board, and the farm-loan commissioner, was authorized to make loans of not more than a hundred million dollars each to banks, savings institutions, insurance companies, farm-mortgage associations, livestock associations, railroads, and similar organizations for a maximum of five years.

The RFC did a land-office business. In the first year loans to banks amounted to nearly a billion dollars and those to railroads to about a third as much. The only tangible result was that the government had become a preferred partner in a host of staggering enterprises. Though many banking and business houses had perhaps been saved from collapse, no improvement in the economic situation occurred. Nor did credit grow easier for small concerns or for hard-pressed individuals. The general benefits that were supposed to follow from treating the economic structure at the top did not materialize. The money that had been spent, said the veteran Senator Carter Glass of Virginia, had merely been "poured down a rat hole."

Congressional-Executive Quarrels. The failure of the lending experiment to check the depression was keenly disappointing to the President, but most annoying was the fact that Congress, with an eye to the approaching election, began aggressively to push for effective social measures. Many members, the poor at their backs, prodded away at the doctrine of "rugged individualism." Huey Long in particular rose up to question the Hoover faith in an economic utopia through self-government of industry. He laid politically skilled but unholy hands upon the ark of the covenant of wealth. Proposing redistribution through a capital levy, he warned his enemies, "Ye rich men, weep and howl for your miseries that shall come upon you." "Soak the rich" became the watchword of the legions of the poor, while many conservative statesmen admitted that in the troublous days that had fallen upon the nation, the broadest backs must bear the heaviest burden.

Herbert Hoover could never understand the give-and-take of practical politics or a philosophy that compromised with the "fundamentals of business." He regarded an unbalanced budget as little less than unmoral and direct help to the unfortunate as lacking in ethics. As late as December, 1931, he firmly stated, "I am opposed to any direct or indirect Government dole." Pommeled, however, by Congress, by "Share-Our-Wealth" clubs, by technocrats, and by those who reminded him that Charles G. Dawes, chairman of the board of the RFC, had borrowed from the corporation ninety million dollars immediately upon resignation from his office, he accepted amendments providing for additional appropriations of two billion one hundred million dollars for the RFC, one billion eight hundred million of which was to be loaned to states and municipalities for the relief of distress.

Although it seems strange that national tradition should permit governmental expenditures to prevent cattle from starving to death in the drought-stricken fields of the West and yet reject proposals to save human

lives, the stubborn fight of the President against direct relief involved real principles. When the measure was eventually passed, the nation took up a task that it will perhaps never be able to lay aside. And the presidential-congressional controversy was not over. Proposed increases in income taxes brought further arguments, as did also the efforts to effect economies in government. Charges, countercharges, vetoes, and indifference marked the year 1932 until at last the questions were taken to the final tribunal, the people.

The Election of 1932. The election of 1932 was a significant one in modern economic life. Hoover, again made the nominee of his party and again supported by the wealth of the land, attempted to expound convincingly the doctrine of individual effort and thrift that had guided the nation in its isolated and agrarian days. He cited no less than sixteen different remedies that he had applied to lift the pall of stagnation from farm and factory. He so forgot realities that he was led to say that "the grass will grow in the streets of a hundred cities, a thousand towns" if the Democratic tariff plans prevailed. The President was not to blame for the desperate straits to which the country had been reduced; he was not responsible for the "Hoover Heights" and the "Hoovervilles" that had sprung up in the city dumps of industrial America; nor was he personally at fault when the wheels of industry refused to turn again. The depression was bigger than any individual. Yet the President chose to regard it as *his* tragedy, and still more distressing was the fact that in the campaign he chose to speak to the unfortunate and the needy not of their overwhelming problems but of the past traditions of his party and of future dangers should his political opponents capture the government.

The Democrats nominated Franklin D. Roosevelt, and the choice was none too popular even in the candidate's own party. But Roosevelt was astute enough to understand that some sort of crisis was at hand and shrewd enough to comprehend that neither past glories nor future hopes were sufficient for the present in which he was involved. Promising the "forgotten man" a "new deal," he drew the attention of those whose welfare in the years of the depression had been overlooked. When election day came, his party swept the country as thoroughly as had the Republicans in 1928. Hoover won only six states and fifty-nine electoral votes. One thing at least was made perfectly clear: the majority of the people in the United States did not want what they had had, whoever was responsible.

The period between the November election and March 4 was one of uncertainty and inaction. President Hoover with the burden of defeat

upon him could do little, and President-elect Roosevelt took no part in government while waiting to assume the reins of office. Restlessness, however, was in the air. Everybody believed something would happen, and the conservative men of wealth feared the worst. In the confusion rich and poor alike turned to hoarding. The situation became so acute in some states that the governors closed the banks in what came to be known as "banking holidays." Newspaper intimations that all was not well in Detroit, Cleveland, and other great midwestern cities spread the movement. Saturday morning, when the throngs began to converge on the capitol, the banking structures in forty-seven of the forty-eight states were either heavily restricted or completely paralyzed.

The Roosevelt Inauguration. Washington awoke on March 4, 1933, an excited and overcrowded city, eager to hear what Franklin D. Roosevelt would say about the disturbed economic and financial life. Surrounded on the inaugural stand by members of his family, political and personal friends, and high government officials, the new President declared in simple, biting statements that the bankers had failed the nation. The sympathetic crowd that packed every available bit of ground, gathered on every convenient roof, perched in the branches of trees, and even looked down from the dome of the capitol itself listened in silent approval, hope in the hearts of all that the grim days were over.

On Sunday the shouting and the tumult died as the visitors prepared to leave the city. Before midnight the newsboys were shouting on the streets the presidential proclamation closing the banks everywhere. Monday morning the people began to examine their pockets for cash and found but little. Grumblings at the hardships that came, however, were rare. He was the hero who could scrape the fewest pennies from his purse. Amos and Andy spread the doctrine of sportsmanship over the radio. The nation won a moral victory over some dire premises of the past. In Washington at least the days were not unpleasant. Unable to do otherwise, the capital enjoyed the experience. It unquestionably enjoyed too the rumor that on Monday morning four men in tall silk hats were seen walking painfully northward along the Bladensburg Road toward Wall Street. An era that had collapsed in 1929 had perhaps come to an end.

Chapter 33

THE NEW DEAL: SOCIAL ECONOMY

The events that mark the first confused years of the New Deal that Franklin D. Roosevelt launched on March 4, 1933, are especially challenging to the student of economic history. To present them judiciously and accurately is even yet difficult if not impossible. A full realization of this fact is essential in any measurement of the experiments that were undertaken. Personal emotions and political inheritances will long color opinions as to the wisdom of the efforts that were exerted to extract the nation from the agonizing grip of the "great depression." But in all the currents and cross currents and arguments, pro and con, at least two things stand out with reasonable clearness: first, the New Deal was both a social philosophy and an industrial experiment; and, second, its inaugurators hoped not only to cure a very real existing evil but also to reshape economic patterns in keeping with economic assets.

For many years it had been apparent that so far as natural resources were concerned, America was no longer the fabulously wealthy land of former days. In 1924 Dean Guy Stanton Ford of the University of Minnesota aptly wrote that while mankind might not be at the crossroads, the nation was dimly conscious that the way ahead was not the "broad and happy highway of the past." Moreover, he who chose to see noted that the ordinary American (labeled "the common man" in his fight for political equality just a century before) was vigorously pressing his right to an equitable share in the waning wealth.

At the time of the inauguration in 1933 many people, particularly the industrialists and the financiers, were still insisting that the depression was nothing more than a periodic recurrence of an inevitable economic scourge—a scourge that must without hindrance be permitted to gather its toll, even though that toll fell heaviest upon the poor in field, factory, and office. Loud were the warnings of financiers that reconstruction must not begin until the old and evil structure had completely crumbled. Much like the ancients who made their hecatombs, moderns were to offer up in humble obeisance to angry economic gods millions of honest, hard-working

human beings. But radio, press, screen, automobile, and school had been rapidly spreading the philosophy of social rather than individual economy. Indeed, cultural advancements may have been primarily responsible for the deepening belief that persons in favored places were wresting from the workers the fruits of their labors. This was not a new doctrine. Greenbackers, Grangers, Populists, and other farm groups had protested vigorously in the last quarter of the nineteenth century against corruption and inequality. Never before, however, had the evidence been presented so mercilessly as in the years immediately following the collapse of 1929. Information wrung from unwilling witnesses revealed the grim facts that in a land of want industrial and financial leaders were annually voting themselves handsome bonuses and salaries, that defalcation of bank presidents was so common as to be regarded in some quarters as "routine matter," and that the wealthy who were shouting most for a balanced budget were, through their ability to hire legal assistance sufficiently skilled to defeat the tax laws of a "stupid" Congress, paying no income taxes—and all the unsavory pottage immediately became, by way of the press and the radio, the property of the great mass of the people. And so it was that the collapse of 1929 was more than a mere recurrence of an economic phenomenon. It began what has perhaps been justly termed a *revolution.*

To call the changes wrought by the New Deal revolutionary is not at all to identify them with strange new radical political theories that have spread over the world in the twentieth century. They were entirely unlike them in philosophy and intent. They had their roots, in purpose at least, firmly grounded in the past history and ambitions of the nation. They sought merely to attain without violence those birthrights of democracy which had already been admitted. It is true that some of the men and women who executed the reform legislation had seen Peter Pan and had dreamed of fairies in far-off places and that some had political ideals not born in the Republic, but on the whole the sponsors of the program sought only to adjust in as orderly a manner as possible an economic system that had lagged far in the rear of social development. Few, if any, of the experiments were wholly new; William Jennings Bryan in his "cross of gold" speech in 1896 had spoken of economic betterment by helping the lower group as good Democratic doctrine.

The Launching of the New Deal. Franklin D. Roosevelt when he took his oath of office on March 4, 1933, was fully conscious of the new national obligations that the changing temper of the people imposed upon him. He knew too the hazards involved in any departure from accustomed

paths. Yet, whatever the odds, he launched at once a program for the restoration of human values with an audacity unmatched in the annals of the presidency. He appointed to his cabinet a group of liberals without particular regard to politics and called to his aid a handful of college professors who had thought deeply, if not practically, upon social and economic problems. Forebodings as gloomy as those that had shrouded official Washington in 1829 arose, but the President, sensing that millions of Americans had their faces turned toward what they hoped was a new economic dawn, moved with decision and rapidity. The proclamation of March 5 closing the banks was quickly followed by another calling Congress together four days later. The lawmakers who gathered in Washington on March 9, bewildered as they were, carried with them something of the spirit of the day. They sanctioned without protest and with what to some appeared to be unseemly promptness the measures that came from the White House.

The Emergency Banking Legislation. Roosevelt's first words to Congress properly concerned money and the perplexing banking situation. Action was immediate. The message with its accompanying bill was read in the House at three in the afternoon. At eight thirty-seven in the evening the Chief Executive affixed his signature to the new law in the Oval Room in the White House. This initial administrative measure in the New Deal fight against the depression was only the first written under his direction. Throughout the night of March 8 the President, the leaders of House and Senate, and the Secretary of the Treasury had labored feverishly in its preparation. As completed, it provided for the opening of the Federal Reserve banks as soon as the Treasury Department had been convinced of their soundness and had issued licenses. Banks that were stable but needed additional time to put their assets into shape were placed under conservators and permitted to operate on a partial basis, and those that were hopelessly insolvent were liquidated. Badly needed currency for carrying on the business of the nation was made possible through the issuance of notes to member banks by the Federal Reserve System to a maximum of one hundred per cent on their government bonds and ninety per cent on other rediscounted assets. These last were non-gold paper money and were known as Federal Reserve bank notes. The Reconstruction Finance Corporation was authorized to assist needy banks, holding preferred stock as security. The emergency action taken by the President under the questionable authority of the Trading-with-the-Enemy Act of the first World War was legalized.

The Nationalization of Gold. Most astounding in the new banking leg-

islation was the nationalization of gold. All holders of the metal and certificates thereto were ordered to turn them in to their nearest banks in exchange for any other legal tender available. For the first time in the history of the United States money was recognized as a social instrument whose fundamental control should not be subject to the whims of individuals. Always Americans had felt that the right to make and to keep money was one of the sacred privileges of human liberty. Furthermore, society as a whole had paid lip service to the *natural* laws of finance and had strenuously objected to governmental interference or regulation. The much-used story of "money-clipping sovereigns" had been of aid in the establishment of the tradition of private control of banking and currency in the democracy. For years after the Civil War venal politicians had carted money about the streets of New York City in manipulations for personal gain without the slightest regard for the fact that the welfare of society was intimately tied up with the currency of the country. The story of the gold corner in 1869 is familiar to all students of economic history. As late as the second Cleveland administration the nation had been plunged into its greatest peacetime debt to that date for the basic purpose of maintaining the right of everyone—even the meanest money changer—to demand and receive gold.[1]

The Glass-Steagall Bill and the FDIC. The initial emergency measures were followed in June by the Glass-Steagall bill, commonly referred to as the Banking Act of 1933. The new legislation prohibited investment banking on the part of commercial banks, restricted the use of bank credit for speculative purposes, provided for regulated state-wide branch banking, and established a limited deposit insurance. The public in general approved, but those whose privileges the measure restricted protested vigorously. Deposit insurance in particular was forced to run a severe gantlet; its enemies declared it not only unwise but actually impossible and pointed with dismal warnings to lessons of the past. Senator Glass himself was not enthusiastic, and the bill was passed chiefly because many believed it to be only a temporary expedient.

Machinery for guaranteeing deposits consisted of a Federal Deposit Insurance Corporation with headquarters in Washington and district offices

[1] The confiscation of gold, although thoroughly in keeping with the New Deal efforts to better American economic society, brought in its wake serious national and international complications. At home it presented the monumental problem of wise regulation; abroad it provoked justified protest. Obviously a part of the gold was obtained from other lands under the old philosophy of individual bargaining, but the entire store was appropriated to the country's private social welfare. Other nations will continue to assert their right to a share of the happiness which this metal mined from the four corners of the earth can bring under proper direction.

in Boston, New York, Columbus (Ohio), Richmond, Atlanta, St. Louis, Chicago, Madison (Wisconsin), St. Paul, Kansas City, Dallas, and San Francisco. Management of the corporation was vested in a board of three directors: the Comptroller of the Currency, ex officio, and two members appointed by the President with the advice and consent of the Senate for a term of six years each.[2] Insurance funds at first were made up of one hundred and fifty million dollars subscribed by the Treasury of the United States, slightly more than one hundred and thirty-nine million contributed by the Federal Reserve banks based on fifty per cent of their surplus on January 1, 1933, and approximately thirty-seven million derived from assessments on participating banks not members of the Federal Reserve System. Moreover, the directors were authorized to sell bonds, debentures, and other obligations totaling not more than half the capital stock of the corporation. The Treasury Department and the Reconstruction Finance Corporation were required to purchase such obligations to the extent of half a billion dollars when needed for deposit insurance. Membership included all Federal Reserve banks and other qualified deposit-receiving institutions that cared to join. As eventually worked out, the insured amount for each individual depositor was fixed at five thousand dollars; only two per cent of the accounts in all participating banks exceeded that figure.[3] While no real test of the insurance structure has yet occurred, the record of payments to customers of failed banks is a remarkable one. Of the hundred and nine million dollars in deposits in such banks between 1934 and 1946, one hundred and six million had been paid by December of the latter year.

The Banking Act of 1935. The emergency financial legislation of 1933 was supplanted by a new law two years later. The Banking Act of 1935 was especially concerned with revising the organization and government of the Federal Reserve System. The old Federal Reserve Board was replaced by a Board of Governors made up of seven members appointed by the President with "due regard to fair representation of the financial, agricultural, industrial, and commercial interests, and geographical divisions of the country." In the hope of restricting political influences the

[2] The Comptroller could not serve as chairman of the board, nor could he receive additional pay for his services. Compensation for the two appointed members was fixed at ten thousand dollars annually. Political unanimity was not permitted; one member was required to be of the opposition party.

[3] The original banking legislation provided for both a temporary and a permanent plan of deposit insurance. The temporary plan was in force from January 1 to July 1, 1934. Deposits of twenty-five hundred dollars and less were fully guaranteed during that period. For a while, beginning July 1, accounts up to ten thousand dollars were fully insured, those between ten and fifty thousand were covered for seventy-five per cent of their value, and all above fifty thousand were guaranteed for fifty per cent.

Secretary of the Treasury and the Comptroller of the Currency were forbidden ex-officio membership. A Federal Advisory Council of twelve persons (one from each Federal Reserve district) was established also. The Open Market Committee, created in 1933, was continued with changes and modifications. Consisting of the Board of Governors of the Federal Reserve System and five representatives elected by certain specified reserve banks, it met in Washington not less than four times each year to consider, adopt, and transmit to the several Federal Reserve banks "regulations relating to the open market transactions of such banks."

Altogether, the legislation of 1935 gave to the national government a strict and intimate supervision of the banking, credit, and currency structure of the nation.

Monetary Legislation. Reforms in banking machinery and financial practices brought into prominence the question of money itself. Having launched a program of social economy, President Roosevelt could scarcely avoid taking some action looking toward increasing the effectiveness of money as a social instrument. He struck deeply at evils which the farmer had been crying out against for decades when he asserted that he wanted a dollar whose value did not change from year to year. He was not speaking of the intrinsic value of the dollar but of its value as measured in bushels of wheat or oats or corn or any other commodity with which a debtor cancels his debts. The silverites of the last quarter of the nineteenth century had referred to such a dollar as "the dollar of the contract," for it had permitted them to pay off their mortgages with the same number of bushels of wheat, for instance, as they had contemplated when contracting the obligation.[4]

The "honest dollar" that the President was seeking is difficult to identify. It is one thing to the creditor, another to the debtor, and still another to the financial philosopher. Mutual agreement seems impossible. There is little hope that the banker will ever lose his devotion to gold, and certainly the producer and the debtor, especially among the agrarians, who, except in time of war, are generally pinched by low prices and staggering debts, will never abandon their fight against their "oppressors." Throughout the ages the poor have regarded gold as one of the burdens of mankind. Few times have their leaders allowed them to forget the simple lesson often demonstrated that when famine, pestilence, war, or death is abroad

[4] The changing value of the dollar has borne particularly heavy upon the agrarians. During the first World War, for instance, many bought land when wheat was two dollars or more a bushel. When the collapse came, they were forced to pay the debt in wheat that was in some cases selling for only twenty-five cents a bushel. Thus the farmer's debt was multiplied practically eight times.

in the land, the metal flees in cowardly retreat, only to return and devour those who have managed to survive. Neither banker nor debtor has been able to maintain more than a passing ascendancy in the argument. During the latter half of the nineteenth century the nations of the world definitely turned to gold as a single and unquestioned measure of value, but since the first World War they have deserted it with equal determination.

The United States was no exception in the flight from gold. Whether by intention or not, the proclamation of March 5, 1933, closing the banks and embargoing the metal started the country off the single standard. Succeeding proclamations of March 10, April 5, and April 19 completed the act. The President bore no hostility to gold; his one hope was to increase prices and thereby bring both prosperity and equalization of debts. Congress aided the experiment. In the Agricultural Adjustment Act of May 12 the Chief Executive was granted discretionary—not obligatory—powers of inflation. He could, if he so desired, throw into the money stream three billion dollars of paper currency having no more than government credit as security. He could, in addition, reduce the gold content of the dollar by half, reestablish free coinage of silver at whatever ratio he wished, and accept as much as two hundred million dollars of the war debt of Europe in silver at a valuation of not more than fifty cents an ounce. In June Congress by joint resolution declared invalid all clauses in contracts, public and private, requiring payment in gold, and the Supreme Court later upheld in effect the legislation. John Marshall too had tumbled before the wrath of the "great depression"!

In spite of the dire predictions that were made concerning the course of national finances, the masses, either through ignorance or through hope, refused to become alarmed. Lionel D. Edie's statement that the people did not want "a gold dollar whose content changed from day to day" found no substantiating evidence except among the financiers. There was no doubt as to the changing content. In September the President began a gradual devaluation of gold by raising its price above the traditional $20.67 an ounce. In January, 1934, having abandoned the commodity theory, he fixed the value of the dollar by executive decree—with congressional authority—at slightly more than fifty-nine per cent. The government thus found itself with a stock of gold whose total value as bullion was roughly forty per cent more than its original coinage representation. Two of the three and one-half billion dollars in profits that accrued were set aside for the double purpose of protecting national finances and stabilizing the value of the dollar in foreign exchange. The country was on a gold-bullion standard.

Financiers were bitterly disappointed. Gold, they maintained, was worth only what it would bring in the markets of the world, regardless of the action of any nation. John G. Carlisle nearly a half century before had pointedly stated their argument when he said that "to call a dollar a dollar does not make it a dollar any more than to call a horse a horse makes it a horse." Early in his administration President Roosevelt had admitted this contention of the financial men by agreeing to an international monetary conference in London, the failure of which left him and his associates free to develop their own domestic program.[5]

Time alone will reveal the wisdom or folly of the financial course of the New Deal in its first years. That the immediate results were not wholly satisfactory is attested by the fact that in August, 1934, a policy of silver purchase was launched by the government and a bimetallic standard reestablished on the basis of twenty-seven to one. Certain results, however, seem apparent: prices were increased; employment was stimulated; debts were equalized to some extent; and money, temporarily at least, came under complete governmental control.

The Truth-in-Securities Act. The creation and sale of securities were intimately connected with national finances. Monetary reforms could not be wholly effective until the evils that had fixed themselves upon the stock market were abolished. It is estimated that in the decade of the twenties no less than a million investors had been fleeced of twenty-five billion dollars by the socially approved stock exchanges and their agents, public and private. Officers and administrators of the speculative machinery, who should have guarded the people with diligence, had used their positions to prey upon the gullible public, eager always for wealth without work. Reputable men were not above making fraudulent statements and unethical sales, and honest bankers often threw their depositors' money recklessly into the gaping maws of the brokers. But frauds, misrepresentations, and speculations with "other people's money" were not the sole basis for criticism. Without questioning the honesty of purpose involved, many had begun to doubt the value of the stock-exchange system. John Maynard Keynes, English economist, went so far as to declare that American stock-market speculations had diverted capital all over the world from legitimate business, and John T. Flynn probably mirrored the sentiment of the more radical when he remarked that on the whole exchanges as they were conducted served no useful end. Certainly the market manipulations in the years just preceding the collapse of 1929 had borne little relation to

[5] The conference was held in London in June, 1933. Its failure is often blamed on the President, yet its numerous predecessors had been no more successful.

national welfare. Speculation, though it was its own reward, unfortunately took a heavy toll from society.

The first legislation concerning the stock exchange was approved by President Roosevelt on May 27, 1933. Its fundamental purpose was not general reform; it was merely to place the sale of securities on an honest footing. Indeed, the law quickly came to be called the Truth-in-Securities Act. It stipulated that every person tendering securities for interstate sale must register his offerings with the Federal Trade Commission. Registration, made on forms designed by the commission, required a "full and fair disclosure to investors of material facts regarding securities publicly offered for sale"; offerings might be prohibited if the compulsory "financial statements and exhibits" did not meet with official sanction. The law made it obligatory that every purchaser be supplied with a prospectus and provided for civil and criminal liability on the part of the seller for misrepresentation.

The Securities Exchange Act of 1934. Enormous pressure exerted by bankers and brokers in the financial centers failed to expunge the legislation of 1933 from the statute books. Additional regulations were soon enacted. Early in January, 1934, there was introduced into Congress a measure, based on the recommendations of an investigating committee headed by Secretary Roper, that proposed stricter controls than those already set up. Exceedingly heavy penalties were suggested for dishonesty and for marginal evasions. Before passage in June as the Securities Exchange Act of 1934 the bill underwent many modifications. In final form it established a Securities and Exchange Commission, which took over the supervision, formerly exercised by the Federal Trade Commission, of security sales. Absolute honesty of statement was still insisted upon, and pools, options, and other devices used in unsocial—if not unethical—manipulations were forbidden. The most significant feature of the law probably was the effort to establish real control over the stock-market situation through the governmental supervision of marginal requirements. The Board of Governors of the Federal Reserve System was granted authority to direct not only the amount of margin but also the "character of loans to brokers and dealers." It was hoped thus "to prevent the diversion into security transactions of a disproportionate amount of the nation's credit resources." [6]

[6] The Securities and Exchange Commission as originally established was made up of five members, one of whom annually was elected chairman. They held daily meetings at the commission's offices in Washington, D. C. Regional offices were set up in New York, Boston, Atlanta, Chicago, Fort Worth, Denver, San Francisco, Seattle, and Washington, D. C. The three chief functions of the commission as established by itself were "to correct unfair prac-

Further regulations were set up in the Public Utility Act of August 26, 1935.[7] This legislation was concerned primarily with "the financial practices of holding company systems controlling gas and electric utilities." It made obligatory complete disclosure of the corporate structure of these systems and gave the Securities and Exchange Commission power to regulate their practices and to abolish some of the abuses long associated with this peculiar financial organization. The commission, although it was under certain conditions empowered to control the issuance of securities by holding companies and their subsidiaries, was denied authority to fix rates.

The securities legislation was not intended to guarantee any purchaser against loss; it was intended only to make available accurate information from which one might "adequately form his own opinion." Historically the laws were sound. In the early years of the nation, when economic life was comparatively simple, the people, generally speaking, had made their purchases only after thorough examination of the articles to be bought. Any error in judgment had been wholly the responsibility of the buyer. But as civilization became more complicated, speculative money was turned more and more into stocks and bonds whose value was attested chiefly by printed or spoken description. If the description was false, either by omission or by commission, the buyer was a helpless victim of the seller. The New Deal sought to substitute for the individualistic "Let the buyer beware!" the more social "Let the seller beware!"

Economic Retrenchment. Reforms in fiscal expenditures too were attempted by the New Deal. The President, in fact, had hardly attached his signature to the emergency banking legislation in March, 1933, before senators and congressmen were filing into the White House for a conference on proposed economies. Savings of nearly a billion dollars were recommended. Consolidation of governmental agencies, reductions in salaries, and drastic cuts in pensions were proposed. Many legislators, aware of the political dangers involved, joined the veterans' lobby in opposition; yet the impossible happened, and the economy bill became law. Political pressure, however, soon restored the pension payments, and extravagant expenditures for relief lessened the effect of the legislation. Reducing the

tices in the securities markets; . . . to make available currently to the public sufficient information concerning the management and financial condition of corporations . . . to enable the investor to act intelligently in making or retaining his investments and in exercising his rights as a security holder . . . ; [and] to regulate the use of the national credit to finance trading in securities."

[7] Title I of this act is known as the Public Utility Holding Company Act of 1935.

pay of the already miserably compensated government clerks and stenographers was without merit from the beginning.

The Debt Problem. In addition to reforms and economies in existing institutions, positive and aggressive action in new fields was necessary. One major problem was the staggering mortgage debt, urban and rural. It has been estimated that one-fifth of the national income was being expended in the payment of interest alone. Everywhere the financial obligations of both individuals and corporations had increased enormously with falling prices. In fact, the depression had pitched upon the debtor a hopeless burden. The farmer had to take to market many more bushels of grain to discharge his obligations than formerly, the city householder with a reduced salary had to devote more of his working days to the single item of mortgage payments, and the factory owner on a paralyzed market had to find some way to sell a far greater number of articles in order to meet the interest and principal of his financial contracts. To sign over the farm, the home, or the factory to the creditor would in many cases not help the situation because the returns from a forced sale on a demoralized market would not cover the debts. Society in its worship of prosperity had never worked out an orderly procedure by which depression tragedies might be mitigated. The nation had always in its private debts gone on the basis of "boom and bust." Debtor, creditor, and the social order had suffered accordingly.

President Hoover had attacked the debt problem on the supposition that loans to industry would leaven the whole economic structure. President Roosevelt developed a threefold plan: first, the continuation, with amendments, of the Reconstruction Finance Corporation; second, the inflation of currency and credit with the hope of raising prices; and, third, direct help to the hard-pressed debtors, particularly home owners, through the establishment of the Home Owners' Loan Corporation. The National Recovery Act and the Agricultural Adjustment Act must be mentioned here in connection with debtor relief. The Loans-to-Industry legislation of June, 1934, provided for assistance to industries to the extent of five hundred thousand dollars to any corporation adhering to the existing NRA codes. The Agricultural Adjustment Act created the Federal Land banks, giving them power to suspend foreclosures and to refinance farm mortgages through the sale of four-per-cent farm bonds to the amount of two billion dollars. Other legislation, including the Municipal Bankruptcy Act, the Corporate Bankruptcy Act, and the Frazier-Lemke Farm Bankruptcy Act, were designed to bring an easier, less painful, and more equitable adjustment of debts than had hitherto been possible. The program launched

by the Federal Land banks did not work well, and the Municipal Bankruptcy Act and the Frazier-Lemke Farm Bankruptcy Act were in their original forms declared unconstitutional by the Supreme Court. The idea of governmental assistance during national financial calamities, however, was not new; demands for compulsory adjustments and moratoriums in debts had been well developed as early as the panic of 1893.

The Home Owners' Loan Corporation. Significant among the organizations for helping debtors was the Home Owners' Loan Corporation, authorized by the Home Owners' Refinancing Act, which the President signed on June 13, 1933. The homes of the nation were indeed within the "shadow of disaster." The largest single item in the estimated eighty-four billion dollars of private long-term debts in 1932 was mortgages on urban residences. By midsummer of 1933 foreclosures on non-farm property had reached the alarming number of more than a thousand a day. Families closed their doors and left their homes to the mortgage holders. Bankers and other lending agents finding their vaults full of frozen real estate paper were forced to surrender their institutions to their creditors or to the state departments of banking. The auctioneer's flag of financial failure flew before two hundred and forty-eight thousand urban dwellings in 1932 as compared with only sixty-eight thousand six years before.

The Home Owners' Loan Corporation was established to provide through long-time mortgages emergency relief "to the owners of homes occupied or maintained by them as homes, and who were unable to amortize their indebtedness elsewhere." Congress voted a capital fund of two hundred million dollars and granted an initial permission for the issuance of bonds to the amount of two billion, later increased to four and three-quarters billion. During its active lending life—exactly three years—the corporation made loans to more than a million home owners, totaling some three billion dollars. Repayment on the fifteen-year five-per-cent mortgages was made on an amortization basis at the rate of seven dollars and ninety-two cents monthly per thousand.

The HOLC was authorized to assist bona-fide owners of homesteads worth less than twenty thousand dollars that were threatened with immediate foreclosure. The benefits to society were immense. The three billion dollars in guaranteed and tax-exempt bonds that were issued and exchanged for distressed mortgages represented liquid assets to mortgage lenders of all types scattered throughout the nation. Four hundred million of this sum went to closed banks and thus to their needy depositors. Approximately two hundred and twenty-five million was paid to municipalities and other local governments in delinquent taxes, providing them

with means of maintaining their schools and other essential public services. Fifty-five million dollars was expended by November, 1935, for repairing and reconditioning, furnishing some nine million man-days of employment, mostly to local labor. An additional fifty million went to professional workers in real estate, law, abstract, and similar offices. Moreover, the "menacing deflation of home values" was checked, and reasonable rental levels were reinstated.

The Permanent Plan of Assistance to Home Owners. The emergency that provoked the government's temporary divergence into home ownership demonstrated conclusively the need for a unified and sensible system of permanent mortgage financing. Homes are an essential part of national existence, but they had always been financed by small individual concerns without available external reserves upon which to draw in times of need. Because local savings respond quickly to financial stress, home loans have been peculiarly subject to call in spite of the fact that houses are turned into cash less readily than any other collateral. Losses have as a consequence been staggering in every economic crisis. The plan that Congress and the President devised to prevent these recurring tragedies provided for three permanent organizations: the Federal Home Loan Bank System, the Federal Savings and Loan Associations, and the Federal Savings and Loan Insurance Corporation.

The Federal Home Loan Bank System. The Federal Home Loan Bank System was actually organized in 1932. Governed by a central board appointed by the President, it consisted of twelve regional banks distributed throughout the country,[8] each administered by a board of locally resident directors. Membership was limited to savings and loan associations (by whatever name they were called), savings banks, and insurance companies. Capital stock was provided by subscriptions of member institutions and the government; regional banks were empowered to issue bonds or debentures when more funds were required. By June 30, 1936, the combined assets exceeded three billion dollars. Every member borrowed from this vast reservoir in the same general way that commercial banks drew upon the Federal Reserve.

Federal Savings and Loan Associations. The Federal Savings and Loan Associations were created by the Federal Home Loan Bank Board through

[8] The banks were located in Boston, New York, Pittsburgh, Winston-Salem (North Carolina), Cincinnati, Indianapolis, Chicago, Des Moines, Little Rock, Topeka, Portland (Oregon), and Los Angeles. The central board, known as the Federal Home Loan Bank Board, was made up of five members appointed by the President with the consent of the Senate. Compensation was fixed at ten thousand dollars annually, obtained by levies upon regional banks. No more than three members of the board were permitted to be of the same political party.

authority granted by the Home Owners' Loan Act of June, 1933. These "local mutual thrift institutions," though they were subject to federal supervision and examination, were privately officered and managed. In order to make funds immediately available for home financing and to encourage private investment in shares, Congress empowered the treasury to subscribe up to a hundred million dollars in 1933, and two years later the HOLC invested an additional three hundred million in associated securities. By June, 1936, eleven hundred and sixty-five local associations were serving all but two hundred and sixty-five of the nation's more than three thousand counties, and at the end of the year loans to home owners were being made at the rate of twenty million dollars a month.

Federal Savings and Loan Insurance. The Federal Savings and Loan Insurance Corporation, chartered in 1934 with a capital of one hundred million dollars subscribed by the government, was formed for the purpose of insuring savings and loan accounts. The hard-saved cash of every American yearning for a home was, to the amount of five thousand dollars at least, no longer subject to the vagaries of financial chance. The program began on October 25, 1934, when certificate number one was delivered to I. Friedman, president of the Gibraltar Savings and Building Association, of Houston, Texas. By August 1, 1936, fourteen hundred associations, representing the savings of more than a million people, were insured. Reserves at the time amounted to four and one-half billion dollars.

The Federal Housing Administration. Home building was encouraged in other ways also. The Federal Housing Administration under the direction of James A. Moffett stimulated construction through guaranteeing in part the repayment of loans and, it must be admitted, through engendering a fear that the government itself might enter in earnest upon a home-building program. By the end of 1934 it was possible for an individual to borrow from his local bank up to eighty per cent of the value of his house, even before it was built. Modernization and repairs too were urged. Banks were induced to advance credit in small amounts without security. Running water, electric lights, mechanical refrigeration, oil burners, screens, and pleasant porches appeared in homes that had long been without even the most rudimentary comforts. Both construction and modernization quickened production and employment, restored to some extent the old practice of character banking, and prompted many families to improve their living conditions. But, said the bankers, the people had created a debt that would within a few years exceed the total value of all the homes involved.

The Effects of the Program. Despite pessimistic predictions as to its ulti-

mate results because long-time loans were being made on short-lived buildings, the government's program to liberalize home-building credit contributed substantially to the financial security of men and women of moderate means. Interest rates were lowered, and obnoxious and sometimes usurious second mortgages were eliminated. Moreover, excessive fees of sundry description were lessened, and private institutions were led to recognize the fact that loans of ten thousand dollars and less on homes of ordinary Americans were safe investments. For the first time in modern industrial civilization the average urban dweller could look forward to owning a home early in life.

Reforms in the Transportation System. The President had promised in his campaign that something would be done to bring order into the chaotic railroad situation that had existed for years. Among the first of the laws was the Emergency Railroad Transportation Act, passed by Congress on June 16, 1933. The recapture clause of the legislation of 1920 by which the stronger roads aided the weaker was repealed, railroad holding companies were placed under the supervision of the Interstate Commerce Commission, and the Office of Federal Coordinator of Transportation was established. Joseph B. Eastman, appointed to this new post, did what he could to unify the thoroughly individualistic rail empire and achieve a socially satisfactory transportation system. He found inherent tradition too well grounded to overcome, however, and his office was abolished within three years.

That the national transportation system needed reform was obvious. Having been built to a large extent when industry was in its beginnings, it was unable to meet the economic demands of a nation the sections of which had become in the twentieth century thoroughly interdependent. What little unification had been accomplished was the result of three things: vigorous protests by shippers and travelers, hopes of more profit on the part of financiers, and national emergency needs such as those that had presented themselves during the first World War. The people, having contributed to the existence of the roads in the form of public lands and in what they believed to be overcharges in freight rates, had long urged stricter control. The builders, on the other hand, continued their strenuous objections to governmental interference in their private business. They had reasons for complaint as they saw their traffic slipping away and their returns growing less year after year, especially since their chief competitor, the motor truck, used tax-maintained highways. But it is possible that their financial troubles blinded their eyes to their own faults; blaming society for their bankruptcy, they answered public criticism

by demanding increased rates even though they clung to the slow-moving engines and cinder-filled cars of the nineteenth century.

The railroads, however, soon instituted desirable changes. Fares were reduced, house-to-house "pick-up" and delivery service was established, and much-needed modifications were made in physical equipment. Traveling America took with enthusiasm to the smooth-riding air-conditioned streamlined trains that were put into service. Powered by electric motors, by Diesel engines, or by improved steam locomotives, some averaged a mile a minute even in the industrial East.

The Tennessee Valley Authority. The Tennessee Valley Authority, set up primarily to further projects begun in the Tennessee valley during the first World War, was established on May 18, 1933. Operation of the huge Muscle Shoals power plant on the Tennessee River was only a part of a larger plan that envisaged war munitions without profit, flood control in the lowlands, navigation from the Mississippi to Knoxville in Tennessee, green fields where long had been gullied hills and silt-filled valleys, and—most significant of all—rural homes and villages with all the conveniences and comforts of man's most facile servant, electricity. The valley included parts of Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia; its population exceeded two and a half million people.

The TVA was empowered by the law that created it to conduct experiments "in order to improve and cheapen the production of fertilizers." Agriculturally the provision was noteworthy because the farmers of the region, like those elsewhere, had never been able to replace the elements which their crops year after year extracted from their soil. Commercial fertilizers were exorbitantly priced and contained as much as ninety-five per cent filler. Under the circumstances the agrarians could only plant the old hillsides and hope for a miracle or else clear new lands and watch them in turn grow thin and gullied. Chemists at Muscle Shoals soon produced a fertilizer with a phosphatic content of sixty-five per cent that promised to do something toward providing an escape from the vicious agricultural cycle of increasing cost of cultivation, decreasing returns, and eroding land.

Rural electrification was an important part of the Tennessee valley program. Officials of the TVA were authorized to sell surplus power to "States, counties, municipalities, partnerships, or individuals," particularly those "not organized or doing business for profit." The inhabitants of villages and farms were woefully lacking in the physical, social, and cultural advantages that accompany the use of electricity. Urban dwellers, understanding but vaguely the unmitigated toil of drawing innumerable buckets

of water, of laboriously washing by hand the sweat-soaked garments of agrarian labor, or of any of the other menial tasks long since vanished from the city, objected to the government's divergence into the power field. Interested corporations protested that the proposed experiment was unsound and unnecessary. Public-utility facilities, they insisted, were ample. Electricity, however, had been financially far beyond the reach of most rural people; even in the poorer sections of the city its use was limited severely. Many persons agreed with a TVA official when he declared at the time that what was needed was "an actual demonstration (1) that the electrical power industry had become involved in a vicious circle of high prices and low consumption, and (2) that there was a means of escape from this predicament." But, since cheap electricity was of no value unless consumers could build transmission lines and buy equipment, Congress created along with the TVA the Rural Electrification Administration (REA) and the Electric Home and Farm Authority (EHFA).

The Rural Electrification Administration. The REA, a financing organization, was provided by Congress with funds especially for "line construction and for the installation on consumers' premises of wiring and electrical and plumbing appliances." Loans could not be made by the government to individual consumers; they were granted only to "corporations, States, Territories, and subdivisions and agencies thereof, municipalities, peoples utility districts, and cooperative, non-profit, or limited-dividend associations" or "to any person, firm, or corporation supplying or installing such wiring, appliances, or equipment." Rural agencies such as towns and community cooperatives proposing satisfactory projects could borrow on twenty-year terms the entire amounts of their construction costs at rates of interest comparable to those being paid on long-time government bonds. The only security asked was the line itself and its revenues. No individual farmer was required to mortgage his property, nor was he in any way liable for the debts of another member of the cooperative project.

The Electric Home and Farm Authority.[9] The EHFA was concerned chiefly with supplying appliances of standard quality to rural users. It issued an approved list of equipment and an approved list of dealers; the purchaser bought on the installment plan and, because the EHFA took over the accounts from private dealers, paid his monthly allotment with

[9] First incorporated under the laws of Delaware on January 17, 1934, pursuant to Executive Order No. 6514, issued under authority of the act of June 16, 1933 (Public Act 67, 73d Congress). The corporation was replaced by another, chartered August 1, 1935, under the laws of the District of Columbia and designated on August 12, 1935, an agency of the United States by Executive Order No. 7139. Its life through the decade of the thirties was extended by succeeding acts of Congress.

his electric bill. A service charge of five per cent was added to the cost. Sales were approved only in regions where both electricity and equipment were cheap enough to make their use "feasible and economical."

The electrical trinity—TVA, REA, and EHFA—furnished unlimited possibilities for new development in farm homes and communities. Schools in some districts began to train their boys and girls in modern mechanics and in the use of modern machines; community refrigerators made fresh meat available at times other than the hog-killing season; electrical refrigerators kept milk, butter, and vegetables fresh and palatable. Moreover, in many homes electric stoves retired the iron ranges, virtual furnaces on hot summer days.

But one must not imagine that rural lands in general were suddenly transformed into regions of pleasure and comfort. Agricultural incomes were far too low, particularly in the South, to permit rapid electrification. Those who know the poverty of the section cannot picture tenant cabins in the cotton fields of Dixie equipped with electric lights, electric refrigerators, electric irons, electric stoves, and electric water pumps. Permanent or semipermanent residence, land ownership, and some surplus capital are essentials in modernization. Yet, notwithstanding organized opposition backed by well-filled treasuries, commendable progress in electrification was made. At last there was a possibility that farm lands might provide comfortable homes for rural children, much-needed markets for the industrial products of city workers, and something for agrarians seeking comforts to do with their money other than move to town.

Criticism of the experiments in the production of low-cost electricity soon arose. Charges were made that governmental competition with private industry was not legitimate. Nevertheless, a host of people came to enjoy the blessings of modern science. Nor did universal bankruptcy fall upon the utility corporations as many predicted it would. Private companies in the valley, though they greatly reduced their rates, profited through a growing demand for their product. The inability of some concerns to show favorable balances in spite of high rates was, said a government official, not unconnected with "the attempt to pay dividends on the $1,400,000,000 of write-ups exposed by the Federal Trade Commission; expensive campaigns to influence legislation; excessive fees to affiliated engineering and management companies, as well as the tremendous salaries paid to officers of both the holding companies and the operating companies." Losses, however, were real. Good lands were inundated, valuable timber was wasted, people were driven from their fertile lowland

farms to the slopes from which they had fled long before, and local sovereignty was in some instances all but destroyed.

Rural Resettlement. The rural rehabilitation program did not overlook the miserably poor on the farms. Nevertheless, the efforts of the government at resettlement, made through a Resettlement Administration, did not prove thoroughly successful. An Alaskan colonization experiment, carried out under the direction of Rexford G. Tugwell, met with little favor. Plans for removing poor families from submarginal lands did not materialize; the drift of population during the depression was actually toward the land rather than away, and the government in its subsistence-homesteads work encouraged the movement.

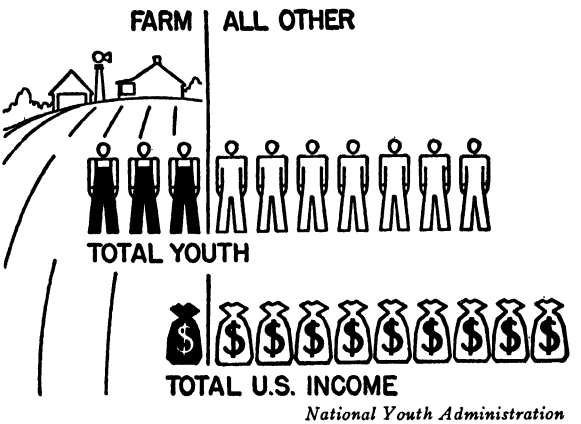


FIGURE 19. FARM YOUTH AND THE NATIONAL INCOME
(One-third of American youth belongs to families that receive one-tenth of the national income.)

The Resettlement Administration was especially interested in rural housing. It began a total of one hundred and fifty-one projects chiefly in the hope of providing rural opportunities for "farmers who have received loans from the Resettlement Administration and have proved themselves capable of operating a farm," "families living on submarginal land purchased by the Administration," and "young couples with farm background who are seeking a place to start farming."

The Urban Housing Program. As early as the administration of Theodore Roosevelt the muckrakers had called the attention of the nation to the wretched houses of its city poor, but social action had been limited mostly to mere moral indignation. Convinced, however, that slums were sources of expensive crime and that annually increasing "community chests" were only costly palliatives without curative value, New Deal officials undertook an urban-relief program that had as its principal objective

comfortable and healthful homes for underprivileged children in order that they might grow to be sturdy men and women physically and mentally able to care for themselves. The task of constructing low-cost living quarters was given to the Housing Division of the Public Works Administration. Soon fifty-one projects in thirty-six American cities, Puerto Rico, and the Virgin Islands were under way or under consideration. Yet many difficulties were encountered. Particularly burdensome was the necessity in more than half the projects of purchasing the slum areas and demolishing their woeful structures before building could begin. Court decisions too were annoying; the judges felt constrained to administer the laws of property without regard to their personal opinions concerning social welfare. Plans did not go well, and the few projects that were finished were expensive indeed. Costs were so heavy, in fact, that rents could not be kept low enough to serve the purpose for which the buildings had been constructed and still repay the government within the contemplated sixty years.

Three of the projects of the Resettlement Administration were concerned with providing suburban communities in which urban workers having incomes ranging from twelve hundred to two thousand dollars a year might live. The three towns, equipped (in the blueprint at least) with schools, stores, and recreational facilities and surrounded by a green belt of forests, parks, and small farms, were located near Washington, Milwaukee, and Cincinnati.

The housing experiments were not wholly satisfactory. Inefficiency and extravagance were involved, as were also the protests of many individuals against the alleged attack of the government upon private property. In some cases the poor themselves defended vigorously their right to live in their miserable shacks. But basically the deterring factor was monetary. By 1936 more than two hundred million dollars had been spent, and the apparent returns were meager.

Social Security. Unlike many of its contemporaries, the national program of social security that began in limited form in 1935 was not intended as a recovery measure. It was merely the beginning of what Commissioner Hodson of the Department of Public Welfare of New York City called "the modern trend of legislation toward social justice rather than 'charity.'" For years both the states and private industry had sought to create workable systems of unemployment insurance and old-age pensions. Some notable achievements had been made, but the spread of the benefits had been too limited to prevent the general demoralization that always occurs during periods of financial stress or to relieve greatly the dark clouds of uncertainty that hovered over the workman's last years. The rapid urbanization

of the twentieth century had clearly demonstrated by 1933 that, however helpful, neither state legislation nor private industry nor filial love nor private charity had effectively provided for the laborer out of a job, the widow and orphan in need, or the man or woman whose body had been made economically useless by the weight of years.

On June 27, 1934, President Roosevelt signed the Railway Pension Act, first of the New Deal efforts in the direction of social security.[10] Thirty days later he sent to Congress a message outlining his plans for economic security for the nation. A commission of distinguished scholars under the chairmanship of Professor Edwin E. Witte of the University of Wisconsin was established to study in detail the subject of "safeguards against the major misfortunes of life." The report, submitted to the President in January of the following year, became the basis of a bill soon presented by Senator Robert F. Wagner of New York and Representative David J. Lewis of Maryland.

The Social Security Act that emerged from Congress in August was, with one exception, only an offer of financial assistance under certain stipulated conditions to states desiring to inaugurate a program of social betterment. General supervision, however, was maintained in Washington. The Social Security Board directed the three major divisions of the security plan: the Bureau of Federal Old-Age Benefits, the Bureau of Unemployment Compensation, and the Bureau of Public Assistance. The first was wholly national and had no relation to the states; the second and third were state programs federally supervised and federally aided.

Benefits for the Workers. The Bureau of Federal Old-Age Benefits was concerned with cash payments to all qualifying wage earners on attainment of the age of sixty-five. Workers in six different classes of occupations were not eligible for assistance; they were agricultural laborers, domestic servants in private homes, employees directly related to their employers in family businesses, officers or crew members of any ship foreign or domestic, workers in state or national government or any subdivisions or agencies thereof, and employees of all nonprofit institutions "organized and operated exclusively for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals."

In creating a federal plan of social security for the aged worker the lawmakers deliberately used the word *benefits;* they did not have in mind a pension system. Monthly payments, based solely on past earnings and

[10] The act was invalidated by the Supreme Court on May 6, 1935, by a five-to-four decision. A new law was soon enacted.

limited to a minimum of ten and a maximum of eighty-five dollars, were, according to the law, to be determined at the rate of one-half of one per cent on the first three thousand dollars of total wages, one-twelfth of one per cent on the next forty-two thousand, and one twenty-fourth of one per cent on all amounts over forty-five thousand.[11] The three different rates were used so that the low-income workers (and, temporarily, those having only a few working years left before they reached the age of sixty-five) might receive appreciable payments.

The money for putting retirement benefits into effect was to be obtained through a wage or income tax on employees and an excise tax on employers, augmented, if necessary, through governmental appropriations. Each eligible worker was required under the annuity plan to pay on all wages under three thousand dollars annually a tax of one per cent during the calendar years 1937-1939, one and one-half per cent during 1940-1942, two per cent during 1943-1945, two and one-half per cent during 1946-1948, and three per cent during 1949 and each calendar year thereafter. The employer was to contribute a like sum. Payments in any form were included; "the name," stated the law, "by which such remuneration is designated is immaterial." The funds, to be held in the Old-Age Reserve Account in the treasury, were placed under the direction of the Secretary of the Treasury, who was authorized to invest any available surplus in government bonds or other federally guaranteed obligations, provided they bore not less than three-per-cent interest.

Unemployment Insurance. The Bureau of Unemployment Compensation supervised unemployment-insurance programs in states that met the minimum requirements established by the Social Security Act. These requirements (which in fact constituted the federal law in the federal-state programs) were: first, that every employer of eight or more workers engaged within the continental United States and Hawaii in what might be roughly described as industry and commerce contribute one per cent on all wages paid by him in 1936, two per cent in 1937, and three per cent in 1938 (later postponed to 1941) and succeeding years; second, that all compensation be paid through public employment offices or other agencies approved by the Social Security Board; third, that all money received be paid over to the Unemployment Trust Fund in the treasury; fourth, that all money withdrawn from that fund be used solely for compensation payments; fifth, that compensation not be denied an otherwise eligible

[11] In computing total wages earned, however, one was not permitted to count more than three thousand dollars in any one calendar year from any one employer, though he might count up to three thousand dollars received from each of any number of different employers during that period.

individual who refused to accept new work when the position offered was "due directly to a strike, lockout, or other labor dispute" or when "the wages, hours, or other conditions of the work offered are substantially less favorable to the individual than those prevailing for similar work in the locality" or when the worker would as a condition of being employed "be required to join a company union or to resign from or refrain from joining any bona fide labor organization"; and, sixth, that all states set up machinery for amending or repealing their unemployment legislation at any time.

Federal participation made it possible for any individual state to care for its wage earners without penalizing its employers in their competition with comparable industrialists in other states. Taxation on the employer was uniform throughout the nation; states could levy taxes upon the employees, however, if they so desired. Congress, influenced no doubt by fear of the courts, stipulated that ninety per cent of the taxes paid by any employer toward state unemployment insurance might be credited against his account with the national government on the part of old-age benefits. That is, the employer was to pay either the one or the other, and his competitor, wherever he lived, was to do the same. The greatest hindrance to a workable solution of one of industry's most perplexing problems had at last been removed.

Help for the Aged, the Blind, and Dependent Children. The Bureau of Public Assistance, the third of the major divisions established by the Social Security Act, was concerned with the welfare of needy old people, needy blind, and dependent children. The federal treasury offered financial assistance in all cases in which state plans met the minimum requirements of the Social Security Board. All three programs had the same general features in that each state was to participate in the financial burden, that the plan was to be uniform throughout each state, that there was to be a central administrative agency for each, and that interested parties were to have the right of appeal wherever or whenever their petitions were denied. The law permitted the government to pay its quarterly contribution in advance.

Old-age assistance was confined solely to the needy. Every state fixed its own definition of need and also the amount of assistance. Where monthly payments to individuals did not exceed thirty dollars, the national government contributed half. The only specific national reservations were that the age limit should not be more than sixty-five after January 1, 1940 (it might be seventy until then); that no one should be excluded who had been a resident of the state for five of the preceding nine years, the fifth

year to be immediately preceding application for assistance; and that no citizen of the United States should be denied help because of state citizenship requirements. Identical payments and restrictions were stipulated in regard to the blind.

The program of assistance for dependent children was inspired by the belief that the home, whatever its limitations, is most conducive to the development of good citizens. Year after year the financial burden involved had kept relatives of dependent children from offering them homes; accordingly such children had been sent into orphanages and other institutions, where they had indeed often become "prisoners of charity." National aid applied only to boys and girls under sixteen years of age who had "been deprived of parental support or care because of the death, continued absence from home, or incapacity, either physical or mental, of a parent," and financial participation of the government was not to exceed one-third the total cost. The maximum payments were eighteen dollars a month for the first dependent child in a family and twelve dollars a month for each additional dependent.

Besides the contributions to definite federal-state programs the Social Security Act provided for direct grants to the states for certain specified social uses. Annual appropriations of three million eight hundred thousand dollars, beginning with the fiscal year ending June 30, 1936, were authorized "for promoting the health of mothers and children, especially in rural areas and in areas suffering from severe economic distress." Similarly, annual appropriations of two million eight hundred thousand dollars were stipulated for the care of crippled children and a million and a half for the "protection and care of homeless, dependent, and neglected children, and children in danger of becoming delinquent," particularly in regions "predominantly rural." A yearly grant of nearly two million dollars was established for the purpose of encouraging vocational rehabilitation, and eight million was set aside for public-health work, with an additional two million for investigation of disease and problems of sanitation. Fifty-nine million annually was to be distributed among the states for carrying out their unemployment laws.

The Social-Security Program in Action. The social-security program was bitterly criticised by many people. Some, referring mostly to old-age benefits, labeled the law the "social-insecurity act"; others pointed out that not more than half the wage earners in the country were included in the benefits. Furthermore, fears were expressed both as to the ability of the federal-state funds to weather a severe depression and as to the dangers

resulting from such an enormous concentration of money in the national treasury.

Progress, nevertheless, was rapid. Approximately twenty-six million workers were quickly registered for old-age benefits, and tax collections began. By February 1, 1937, thirty-five states (and the District of Columbia as well) had established approved systems of unemployment compensation, all but ten requiring no contributions from the employees. In most cases the unemployed workman after a specified waiting period received half his regular wages up to fifteen dollars a week from twelve to twenty weeks a year. Old-age assistance was everywhere approved, but it was not wholly satisfactory in many cases because the strict definition of need robbed it of its social significance by stigmatizing the aged individual and his immediate family as economic failures.

The Social Security Act as a whole marked the beginning of reasonable security for wage earners, unemployed and disabled workers, the old and poor, the blind, and dependent mothers and children. For the first time in history the national government assumed, in part at least, permanent responsibility for the welfare of individuals. The unjustifiably narrow scope of the plan, however, made the name "social security" a misnomer.

Chapter 34

THE NEW DEAL: AGRARIAN AND INDUSTRIAL EXPERIMENT

While attempts were being made to adjust social economics, industrial experiments (in agriculture and manufacturing) also were under way. The two were intimately connected, and both were parts of the general reform and recovery plans of the administration. The experiments, however, were primarily concerned with the immediate task of lifting the nation out of the depression. The President vividly pictured the situation that prevailed when he declared in his inaugural: "Values have shrunken to fantastic levels; government of all kinds is faced by serious curtailment of income; the means of exchange are frozen in the currents of trade; the withered leaves of industrial enterprise lie on every side; farmers find no markets for their produce; the savings of many years in thousands of families are gone. More important, a host of unemployed citizens face the grim problem of existence, and an equally great number toil with little return." Individual efforts had failed to dispel the economic burden that was bearing unmercifully upon the people. All had at last come to agree that the farms must some way be made to yield a living for their tillers and that industry must somehow put its idle men and women to work. The problem was clear but the solution far from simple. No one knew just what should be done; yet to do nothing was socially expensive as well as dangerous. There appeared no alternative to temporary governmental domination. Before the end of the first year of the Roosevelt administration national control had extended itself over virtually every department of the economic structure.

The Agrarian Experiment. In its recovery experiments the government first turned its attention to agriculture. The war had stripped the agrarian of his markets, and the collapse of 1929 had swept away his chances for profitable sales at home. In addition, farm income had declined from an estimated ten billion dollars in 1929 to a little more than four billion in 1932, though fixed charges had remained practically unchanged. Moreover,

the prices of the goods that the farmer bought had fallen far less than the prices of the cotton, hogs, wheat, corn, and other products that he sold.

The doleful economic consequences of the disparity between agricultural and industrial prices were obvious by 1932. When land values dropped below the face values of the mortgages and incomes in all too many cases fell short of meeting interest charges and taxes, the agriculturist knew not where to turn. No matter how efficient his machinery, how rich his soil, or how diligent his labor, he could not wrest a living from five-cent cotton, twenty-five-cent wheat, and three-cent hogs. He was indeed caught between the upper and nether millstones. He could neither wipe out his debts by selling his farm nor earn enough from the soil to maintain himself and his family. Furthermore, the five million young men and women a year who had left the farm for the city now stayed at home, and thousands of urban dwellers joined the "back to the land" movement. With no alternative before him the farmer in his desperate struggle to preserve his property and his standard of living turned to growing more cotton and foodstuffs. The harder he worked, however, the deeper he dug himself into the well of hopelessness, for the increased production merely depressed still more the prices of the things that he sold. He literally smothered himself to economic death by the very weight of his own crops. The Secretary of Agriculture, Henry Wallace, labeled as the most challenging paradox of modern times this starvation of the husbandman in the midst of plenty.

The troubles of the farmer were not his alone. The twenty million inhabitants of villages and towns of the rural areas slipped into poverty with the agrarians. Teachers in the farming sections found their schools closed for lack of funds. Foreclosures, auctions, and bankruptcies grew serious enough to threaten the credit structure of the nation as local banks (with their city correspondents) and insurance companies were forced to take over farms and small businesses they did not want. Declining rural purchasing power was followed closely by decreasing payrolls in the urban factories. In the industrial centers an estimated four to six million men and women were walking the streets looking for work chiefly because the farmers no longer bought their products. The shadow of poverty that had fallen over the farm lands had so blighted the city, in fact, that by the time of the Roosevelt inauguration railroad operators and executives of mail-order houses, agricultural-implement companies, and other firms depending heavily on agrarian sales for their existence were demanding that something be done for rural people.

The Agricultural Adjustment Act. Ten days after the opening of the special session of Congress on March 6, 1933, an agricultural bill was introduced that emerged on May 12 as the Agricultural Adjustment Act, consisting of three parts or titles. The purpose of Title I, the only section under consideration here, was "to establish such a balance between the production and the consumption of agricultural commodities as will restore the purchasing power of farm products to the level of the base period (1909-1914)." In other words, the intent of the legislation was to institute fair prices for farm products, fair prices being regarded as those in conformity or parity with the prices of other goods.

Parity prices for agricultural products were not, as some seem to suggest, purely mythical conceptions.[1] In the history of agriculture there have been periods in which the farmer could exchange his commodities for sufficient amounts of other goods to bring him relative abundance even while industrial owners were making satisfactory profits and workers reasonable wages. That is, there have been times when all producing groups have borne something of an equitable relation to one another, no single group being required to work an abnormally large number of hours for an abnormally small return in the products of the others. One of these periods was immediately before the outbreak of the first World War, and Congress therefore in setting up its legislative goal for agricultural prosperity chose the years between August, 1909, and July, 1914, as the base-price period for all the commodities named in the act except tobacco.[2] The law did not set a fixed price for any product, but it did provide a yardstick by which the nearness of the farmer's receipts to a parity price could be measured. Thus prices of agricultural and nonagricultural items might change from month to month, and yet their monetary relation would remain on an equitable basis if a bushel of wheat continued to buy the same amount of other goods as it had bought between 1909 and 1914.

The Agricultural Adjustment Administration. The task of restoring the farmer's income as contemplated in Title I of the agricultural legislation

[1] The vigorous assertion of many critics that attempts at "parity" or "just" or "fair" prices were "indefensible" is yet to be proved. Whether such prices are attainable or not, the fact remains that the terms have long been known in business and industry. For years the nation has talked of and worked toward a "fair" day's wage, a "fair" day's work, a "fair" number of working hours, a "fair" return on investments, and a "fair" rate on money lent. The concept is no more difficult in one phase of economics than in another.

[2] Secretary Wallace said (*Yearbook of Agriculture*, 1934, p. 103) that the sponsors of the agricultural legislation in choosing the period 1909 to 1914 "undoubtedly had in mind the fact that the situation then, besides being reasonably favorable to agriculture, had signs of stability." The average prices of the products the farmer bought were in 1933 about identical with those between 1909 and 1914, although the average prices of the products that he sold were fifty per cent below those of the period selected.

was placed upon the Agricultural Adjustment Administration (commonly referred to as the AAA), within the Department of Agriculture. Officials were authorized to proceed along four major lines of action: first, reduction of the surplus that was smothering the farmer; second, payment of the farmers for immediate losses sustained through participation in

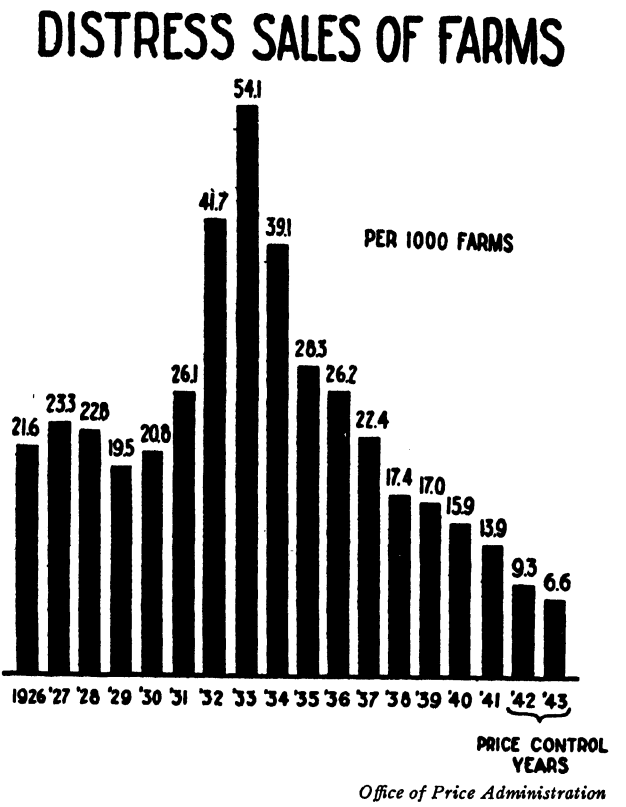


FIGURE 20. DISTRESS SALES OF FARMS, 1926–1943
(Mortgage foreclosures, tax sales, and other distress sales are included.)

production-control programs; third, collection of sufficient revenues from the initial processors of farm products through taxation to meet the cost of the farm program; and, fourth, protection of producers and consumers alike from unfair practices and unwarranted acts through voluntary marketing agreements and compulsory licensing. Congress also provided for loans to farmers on certain products and for the diversion of surpluses to the unemployed. The entire program was designed primarily to increase the prices of the products the farmer sold without unduly increasing their cost to the consumer.

Acreage Reduction and Benefit Payments. The new control experiments were at first limited to the "basic" commodities: cotton, wheat, field corn, hogs, rice, tobacco, and milk and its products. During 1934 sugar, beef and dairy cattle, peanuts, rye, flax, barley, and grain sorghums were added. The general purpose was to prevent the appearance of embarrassing surpluses through noncompulsory regulation of production. Farmers who agreed to reduce their acreages in any of the basic crops were given in consideration therefor cash subsidies from the federal treasury. These *quid pro quo* agreements both made the agrarians shareholders in the undertaking and guaranteed them against what had often happened in their local efforts at control—the reaping of the reward by those who had in no way contributed to the program.

Acreage reduction was fixed by state and county committees, each individual's quota being based on his average production for the five years between 1928 and 1932. Having accepted his allotment and promised that he would not use the land for the growing of other competitive crops, the contractor received from Washington "benefit" compensations in one of several forms. Payments varied for different commodities, depending partially at least on the ability to collect the necessary revenue; the maximum rates were determined by the differences between the current prices of the commodities and the parity prices for the base years between 1909 and 1914. Actual relief needs were a factor in some communities. In all instances the cooperating farmer had an advantage in that he received not only market prices for his products but governmental assistance in addition.

The Processing Taxes. Funds for meeting the payments to farmers were obtained through processing taxes levied upon the manufacturers who took the first steps in changing the raw agricultural commodities into consumable products. In the case of wheat, for example, the miller paid a tax of thirty cents on each bushel turned into flour, but the baker who sold the bread to the consumer paid none. In general the sum total of the levies was about equal to the aggregate paid to the farmers in the effort to secure for them parity prices on their products. Not all the money, however, went directly to the agrarians; administrative costs even in the local communities were taken out of collections. Nor was all the cash collected under the guise of processing taxes turned in to the government; manufacturers passed on the taxes wherever they could and sometimes added other costs as well.

The Emergency Program of Destruction. Unfortunately crop control in the first year of the AAA frequently meant crop destruction rather than crop regulation. The agricultural and industrial legislation (certain parts

of the National Industrial Recovery Act concerned agriculture) was passed too late to affect materially the acreage planted in 1933. Obviously the quickest solution of the immediate surplus problem was physical removal. The suggestion nevertheless met with strenuous objections from many quarters. Particularly aggressive were those critics who pointed to the starving as proof that there was no surplus but simply a state of underconsumption. They urged export disposal in foreign markets even at the expense of dumping and, if necessary, price fixing at home. Henry Wallace himself was never convinced that mere destruction was wise. He did believe, however, that no workable scheme could be devised so long as unbridled and undirected production was permitted; and so the late summer of 1933 found farmers plowing under their growing cotton and butchering their pigs and brood sows. The Secretary felt keenly the public criticism that arose. Commenting later on the cotton program, he wrote, "Certainly none of us ever want to go through a plow-up campaign again, no matter how successful a price-raising method it proved to be." Drought and other unfavorable weather conditions sufficiently reduced the prospects in other commodities to obviate further programs of destruction. Benefits went to the farmers whether they lessened their acreage in cultivation or plowed under that which had already been planted.

The Production Programs. *The Cotton Program.* Each crop presented its own peculiar problems, and specific individual programs were devised to meet them. In cotton, overproduction at home, increasing production throughout the world, and substitution of other fabrics for the cloth had by the summer of 1933 resulted in an unsold surplus of nearly thirteen million bales of the raw product. Yet even while the government at Washington was endeavoring to launch an agricultural plan for helping the industry, the planters in desperation put forty-one million acres into cultivation. The large acreage, combined with good weather, promised a harvest of over seventeen million bales in the fall of 1933 if the plants were permitted to reach maturity. In the emergency destruction program which Secretary Wallace regretfully advised, more than a million farmers plowed under ten and one-half million acres of growing plants having a potential yield of at least four and one-half million bales. As compensation for their loss they received in benefit payments a total of approximately one hundred twelve and a half million dollars, plus fifty million in options. The money was obtained through a processing tax of four and two-tenths cents a pound imposed on cotton manufactured for domestic use.

Before the crop program of 1933 had been fully completed, plans were inaugurated for limiting plantings the following year to about twenty-five

million acres. Forty thousand replies to a questionnaire sent out to the growers indicated general approval of compulsory reduction. On April 21 Congress, mindful of the political pressure that was being exerted, passed the Bankhead Cotton-Control Act, which fixed ten million bales (five hundred pounds net weight) as the crop goal of 1934. Cooperation was insured by the levy of a tax of one-half the prevailing market price on all cotton offered for ginning in excess of assigned individual quotas; in no case was the tax to be less than five cents a pound.

The 1934 crop fell short of the expected ten million bales. The reduction, however, represented no loss to the farmers, for the price practically doubled. In addition, those who had contracted to keep their lands out of cotton received benefits amounting to one hundred seventeen million dollars—ninety million as "rental" payments at the rate of three and one-half cents a pound on the average per-acre yield of the land taken out of production and about twenty-seven million as parity payments guaranteed to be not less than one cent a pound. A four-year program announced in December, 1935, never went into effect.

The cotton growers were assisted also by loans. Using their cotton as security, they could borrow through the Commodity Credit Association ten cents on each pound in 1933, twelve cents in 1934, and nine cents (raised to ten after much protest) in 1935. If cotton advanced, the borrower was permitted to pay off his loan and keep the profit; if it fell, he could turn over his collateral to the association and cancel his loan.

The Wheat Program. The wheat program, like the cotton program, presented both domestic and foreign problems. American markets in Europe had virtually disappeared as a result of world-wide overproduction, while at home a declining use of bread, coupled with the decreasing ability to buy that accompanied the depression, had brought drastic reduction in consumption. At the end of the 1932-1933 crop year there was a record surplus of three hundred and sixty-three million bushels. The average price per bushel in January, 1933, was slightly more than thirty-one and one-half cents, and growers living farthest from the markets were paid much less.

In an attempt to untangle the world difficulty the United States arranged an international wheat conference in the summer of 1933. Amicable agreements were reached and quotas assigned to the great wheat-growing countries. Unexpectedly large crops upset the export plans of the various nations, however, and the work of the conference collapsed within a year. Domestic efforts at adjustment proved reasonably successful. An estimated eighty per cent of the wheat growers received thirty cents a bushel on fifty-four per cent of their average production (the portion of the crop habitually

consumed in the United States) in the years 1928-1932. In return they agreed to reduce their acreage by fifteen per cent in 1934 and by ten per cent in 1935. The contracts for 1936 (covering the three years to 1939) were scarcely completed before the entire agricultural program was drastically changed by the courts. But a total of more than three hundred and fifteen million dollars was paid out in benefits in the three years 1933, 1934, and 1935.

Agrarian income from wheat aside from government payments grew rapidly. Acreage reduction was not wholly responsible. Weather was an important element; severe droughts cut heavily into production and were unquestionably a major factor in price increases. Although Edwin G. Nourse of the Brookings Institution is inclined toward the opinion that the general results might have been approximately the same had the government not instituted its program, one must not overlook the fact that many farmers whose fields were blasted by drought received aid which enabled them to maintain their farms and keep their families from the relief rolls.

The Corn and Hog Program. Corn, basic crop of the upper Mississippi drainage basin, was so closely related to the production and sale of hogs that the two were logically combined into one program. The grain reached the market principally in the form of livestock, particularly hogs. Corn and pork must be kept somewhat in balance. When crops are short, heavy sales of hogs pull meat prices below a profitable basis; yet the animals, if they are not disposed of, consume grain that might well be preserved for more prosperous days. The purchase and destruction of pigs and brood sows in 1933 was an emergency measure. The subsequent program provided for a unified reduction in both hogs and corn.

More than a million farmers signed contracts to reduce their 1934 corn planting by at least twenty per cent and their hog production by twenty-five. Benefit payments were made at the rate of thirty cents a bushel on the acreage withheld from corn and five dollars a head "for each three out of four head of hogs raised on the average from litters farrowed during the two-year base period, December 1, 1931, to December 1, 1933." But again the weather proved a more decisive influence than government plans. Corn production dropped over a billion bushels, not more than a third of which decrease can be attributed to reduction contracts. The 1935 program called for a ten-per-cent curtailment in both hogs and corn and increased the benefit payments to thirty-five cents a bushel on the latter. Funds were obtained through a processing tax of five cents a bushel on corn prepared for uses other than feed and a tax on hogs at a progressive rate that began

at fifty cents a hundred pounds and rose gradually to a maximum of two dollars and twenty-five cents.

Additional assistance was given the corn farmers through loans on grain sealed in the cribs. Advances, usually at forty-five cents a bushel, were made by the Commodity Credit Corporation. As in the case of cotton, the farmer could when he so desired pay off his loan and use his corn; if conditions did not warrant his doing so, however, he could clear himself of all obligation by turning the grain over to the corporation. After the first year rising prices kept the loans at a small sum.

The Rice Program. The rice growers, though few in number, were faced with the too prevalent agrarian problem of huge exportable surpluses for which there was no foreign market. Between 1930 and 1932 the surplus grew from eighty million to two hundred and twenty million pounds. Rice prices, which had averaged about a dollar and ten cents per bushel in the twenties, fell to forty cents in 1932. Marketing agreements and crop reductions without processing taxes were first tried, but a regular program was eventually initiated with benefit payments derived from a tax of one cent a pound.

The Tobacco Program. The tobacco planters also were beset by troubles. Their situation was especially complicated by the large variety of types of tobacco, each with its own specific troubles. A production-adjustment program for each type was worked out for the United States and Puerto Rico. Some plants were plowed under in 1933, and the acreage of succeeding crops was substantially decreased. Benefit payments, though varied, were for the most part of two kinds—those made for acreage taken out of cultivation whatever the production and those made on the net sale value of the tobacco produced on the farm. The Kerr-Smith Tobacco Act, approved on June 28, 1934, introduced a compulsory element by taxing all tobacco marketed in excess of individual quotas. The law was repealed before the Supreme Court declared the AAA unconstitutional.

The Dairy Program. Because of the great diversity of existing conditions throughout the nation the dairy industry presented perplexing problems. Dairying is, in fact, a group of several related industries. Any effort to help one without consideration of all the others might do more harm than good; for example, to regulate the overproduction of butter might result merely in the creation of a burdensome surplus of fluid milk. From 1900 to 1934 the number of milk cows increased by nearly eighty per cent. Up to 1929 the growing demands of a swelling population kept pace with the supply, but depression brought a widening gap between production and consumption. Excessive distribution charges, collusion of producers

and distributors, control on the part of superorganizations, and even "rackets" in various forms were partially to blame for the tragic fact that many children were without milk. The Surplus Commodity Corporation greatly aided the dairy industry through the purchase of surplus milk, butter, and cheese for distribution to the needy unemployed.

Programs for Nonbasic Commodities. Programs regulating the production and sale of sugar, beef and dairy cattle, peanuts, rye, flax, barley, and grain sorghums were planned along the same general lines as those pursued in regard to the original seven "basic" commodities. Sugar, both in the continental United States and in the insular possessions, was placed on a quota basis in the hope that cane and beet growing might be stabilized at such points as to insure fair returns to the growers. Tariffs were reduced in amounts equal to the processing taxes, and child-labor restrictions, particularly in the beet fields, were included in the legislation. Peanut growers contracted to cut down their acreage by ten per cent and received in return eight dollars a ton for peanuts harvested in 1934 with a minimum of two dollars for each acre of the amount allotted for 1935. Payments were made also for diversion of the product to livestock feed and oil. The Warren Potato Act, passed in August, 1935, provided for regulation and compensation on a plan similar to that stipulated in the Bankhead and Kerr-Smith Acts. The plan for controlling the production of rye, flax, barley, and grain sorghum never matured, and the Jones-Connally Cattle Act, approved on April 7, 1934, was virtually changed by the drought into a herd-culling process with benefits paid for condemned cattle.[3]

Marketing Agreements. Besides adjustment programs and benefit payments the AAA used marketing agreements and licensing in its effort to raise the income of the farmers. Marketing agreements proved effective only in application to specific commodities and in instances in which both producers and processors were parties to the contracts. Administrators were severely criticized for pushing them too rapidly and for interpreting the term *interstate* too loosely.

Accomplishments and Criticisms of the First Phase of the AAA. The agrarian experiment came at last before the Supreme Court and suffered the fate of many of its contemporaries. On January 6, 1936, six justices declared in the case of *United States* v. *Butler* that "Congress has no power to enforce its commands on the farmer to the ends sought by the

[3] Senator Robert M. La Follette, Jr., secured an amendment to the act that resulted in the allotment of $17,000,000 for the elimination of cattle with Bang's disease and $12,000,000 for the destruction of those affected with bovine tuberculosis. Farmers received payments for cattle destroyed ranging up to twenty dollars a head for grade animals and fifty for purebred stock.

Agricultural Adjustment Act. It must follow that it may not indirectly accomplish those ends by taxing and spending to purchase compliance." The first phase of the agricultural adjustment program was over. What had been accomplished? There can be no doubt that agricultural conditions had greatly improved. In late 1933 the average farmer had for the first time in four years had a small balance as a return for capital investment and management; his gains had continued with satisfying persistence. According to estimates of the Department of Agriculture the purchasing power of farm income had risen sixty per cent between 1932 and 1936, and actual cash income from sales had grown from four billion three hundred million dollars to seven billion eight hundred million dollars. Furthermore, said a government official, "cash income from meat animals in 1935 exceeded the corresponding figure for 1932 by 73 per cent, and in the first 7 months of 1936 it advanced 27 per cent over the total for the corresponding period of 1935. From dairy products in 1935 the cash income was 30 per cent more than in 1932; the income from poultry and eggs was 45 per cent more. . . . From grains the cash income in 1935 was 61 per cent more than in 1932 and from cotton 46 per cent more. Fruits and vegetables recorded a 40 per cent gain." If benefit payments are included, the advances were much larger. The Brookings Institution, while more conservative in its calculations than the Department of Agriculture, admits considerable improvement in the economic situation on the farm.

Many have argued that the agricultural program was simply a case of "robbing Peter to pay Paul," but the gains were more substantial than mere exchange. There was truth in the optimistic statement in the first annual report of the AAA that "delinquent taxes are being paid; banks are collecting on notes they had written off long ago; schools are reopening or staying open for longer terms; stores are doing an increased business; and money is flowing to the industrial centers of the nation in the form of orders for clothing, household furnishings and supplies, farm implements, automobiles and automobile parts, radio storage batteries, paint, lumber, and many other things that farmers buy. Even transportation agencies which at first thought might be considered as having a smaller volume of farm products to transport as a result of the production reduction campaigns are deriving increased revenue from the larger volume of city goods now moving into the farm areas." Though fully aware of the fact that distress still prevailed in some places, Secretary Wallace in November, 1936, announced that agriculture was "out of the red and making progress toward financial rehabilitation."

Among the chief criticisms of the government's agricultural program

were: first, that it was unconstitutional in that it levied tribute upon one or more groups for the benefit of another; second, that the plan was one of regimentation and therefore was at variance with the democracy which the founding fathers had envisioned; third, that the destruction of foodstuffs was unwise if not criminally wasteful; fourth, that the practice of scarcity upheld by the AAA was contrary to the current economic philosophy of abundance; fifth, that the solutions proposed were limited to national interests alone, whereas the problem was international; sixth, that the AAA was a political organization acting for purely political purposes; and, seventh, that the reform and recovery measures in design and in practice were filled with economic hopes that were technically unsound and sometimes impossible of attainment.

Among the constructive critics no one was more outspoken than Henry Wallace himself, who was concerned especially with the matters of constitutionality and individual liberty. "If," he said, "our farm programs conflict with the essentials of democracy . . . they should be dropped." But the Secretary was convinced that the dangers of regimentation and dictatorship lay not in aggressive action but in inertia. He may have touched on one of the fundamental perils in the depression when he asserted that "man's right to live transcends all other considerations. In the present state of the Nation, we must enlarge our idea of democracy, or risk losing what democracy we have. A purely political democracy would not survive a complete economic breakdown in the United States any more successfully than it has done elsewhere. . . . Recent history shows that at a certain point of misery and destitution nations cease to think about liberty, and think only about bread."

Secretary Wallace insisted from the beginning that the goal of the agrarian program was an era of abundance. But, realizing that abundance in a money-governed society is determined by ability to buy rather than by the mere quantity of goods available, he advocated an initial reduction program. The only alternative, he believed, was the competitive elimination of men and acres, which would necessarily drive many of the rural poor into the cities, already staggering under an overwhelming relief burden. The control program was of course expensive and sometimes ineffectual. It took out of cultivation both efficient and inefficient fields, it provided "no insurance against the expansion of production through bringing new lands into cultivation," and it created a trail of new problems to solve. Moreover, crop restrictions on a national basis only stimulated production elsewhere. For example, the cotton output in Brazil alone jumped during the first few years of the New Deal agricultural experiment

from three hundred thousand to a million bales. Secretary Wallace openly conceded that continued curtailment of American wheat acreage would be justified "if competing countries likewise recognize the need for acreage adjustments, but not otherwise."

Processing taxes took in one way or another heavy tolls from the purses of many who were ill able to afford them, for, in spite of publicity on the part of the Department of Agriculture and the Consumers' Advisory Board, prices of goods rose more rapidly than levies warranted. Furthermore, benefits were unequal, particularly in the South of "forty acres and a mule," where the agricultural program encountered a peculiar economic condition and an historical tradition. Living in economic uncertainty where budgets were unknown if not impossible because of the extreme fluctuations in returns from cotton, the southern tenant farmer, unprotected by any law providing either fixed tenure or compensation for improvements, profited little from the AAA. In general the hard-pressed landowners received subsidies, and the harder-pressed tenants and laborers received relief.

Charges that the AAA was a political institution were instigated chiefly by opposing politicians. The physical difficulties involved deny the accusations that benefit payments "were timed so that a blessed rain of checks would descend upon politically doubtful territories just prior to election." Edwin G. Nourse says that the monumental task of getting checks into the hands of participators in the control program was "achieved in a manner which would reflect great credit on any agency—governmental or corporate." Altogether, the emergency measures were undeniably helpful. Since the agricultural problem was one of long standing, however, a lasting program was needed.

The Second Phase of the Agrarian Program. The Soil Conservation and Domestic Allotment Act, signed by President Roosevelt on February 29, 1936, launched the second phase of the agricultural experiment. The transition had already begun before the invalidation of a part of the AAA by the Supreme Court. The decision not only made revision necessary but also cleared the way for the program that was to follow.

The new legislation was not primarily concerned with recovery; its basic purpose was to promote "the welfare of American agriculture," especially in "its relationship to the welfare of the nation as a whole." Many regarded the change in emphasis as of fundamental permanent significance. Secretary Wallace described the three major objectives of the new program as follows: "The first is the conservation of the soil through the development of a national long-time agricultural policy based on rec-

ognized good farming practices. The second purpose is the reestablishment and maintenance of farm income so as to further the gains made during the last three years. The third objective is the protection of consumers by assuring adequate supplies of food and fiber now and in the future."

Action was desperately needed. By 1936 the seriousness of the question of soil conservation was tragically apparent in gullied hillsides, in dust storms, in raging floods, in ruined bottom fields, and in filled-up channels, reservoirs, dams, ditches, and harbors. Three hundred million acres of land had been or were being leeched of their fertility by erosion and improper cultivation. Damage was not restricted to the hill country; even fertile Iowa cornfields were being depleted. No individual and no group was to blame. Economically the nation had throughout its history encouraged private ownership of land regardless of its use or misuse. Unlike most materials wasted in industrial mistakes, soil lost by farming errors can never be recovered. In fact, Frederick Jackson Turner's thesis that the moving frontier was the most significant thing in all American history may yet be expanded into the thesis that it was also the most important factor in the scarcity that may eventually fall upon the people and in the changes that may come in the nature of the government. Unfortunately, losses were not limited to material assets alone. Human beings had been eroded too, and their hopes and their ambitions had washed away with their land.

The task of caring for his farm did not belong solely to the owner, even though neglect meant for him inevitable poverty. Assistance was essential. The agrarian, selling the fruits of his labor at whatever prices were offered and buying goods at whatever prices were asked, could never till his soil with the good of society in mind any more than the factory worker could toil at his machine with the welfare of his children as future citizens uppermost in his thoughts. He could not afford to save his resources. In order to exist at all, he had too frequently to strip from his fields everything he could in the least possible time. Charles A. Beard's workman, hat in hand, bargaining individually with the factory magnate a generation before was no more a hopeless figure than was the farmer of the thirties, hoe in hand, battling with the heritage that had come to him in the soil. Both help and guidance were necessary, and neither could be more harmful than had been the gifts, bounties, exemptions, privileges, subsidies, and protection lavishly bestowed upon industry since the days of Alexander Hamilton.

The program of the AAA as begun in 1936 contemplated a lasting readjustment of agricultural practices with the aim of alleviating agrarian poverty and preventing the damages of uncontrolled erosion. Interest cen-

tered chiefly in soil conservation, a task beyond the financial ability of unaided individuals. Congress appropriated funds for benefits of two types or classes: those for soil-conserving plantings and those for soil-building plantings. That is, farmers were encouraged to turn lands peculiarly subject to erosion into pastures and to plant legumes wherever possible in fields commonly devoted to such soil-depleting crops as corn, wheat, and tobacco. More than that, various government agencies stood ready to provide fertilizer, lime, and other needed supplies at reasonable prices and to furnish labor for controlling gullies and for fencing. Compensation was made in some districts for liming, weeding (weed-control measures), and terracing. Advice on farm plans and problems was made available and was frequently a prerequisite to assistance. Furthermore, Secretary Wallace in 1937, seeking to lessen the tragedies of wind, rain, and drought, proposed an "ever normal granary" on the plan that Joseph had used in Biblical days in an attempt to meet the famine of the seven lean years. He desired through a combined storage and insurance program to flatten the agricultural cycle of overproduction and underproduction.

For the most part the farmers soon began to perceive the value of a national agrarian program. After 1936 they were more responsive than they had been during the emergency years. What the future holds for agricultural planning is still uncertain, but the AAA at least taught the agrarians to work for a time in democratic cooperation. The return of prosperity in the wake of war was soon to relegate the experiments to the pages of history and bring to the farmer unprecedented prosperity. The backwash of world conflict may yet revive them.

The National Industrial Recovery Act. Closely connected in general purpose with the Agricultural Adjustment Act was the National Industrial Recovery Act (the NIRA), which became law in the summer of 1933. Announcing that "a national emergency productive of widespread unemployment and disorganization of industry, which burdens interstate and foreign commerce, affects the public welfare, and undermines the standards of living of the American people, is hereby declared to exist," Congress enacted Title I of the NIRA[4] in an avowed determination "to remove obstructions to the free flow of interstate and foreign commerce which tend to diminish the amount thereof; and to provide for the general welfare by promoting the organization of industry for the purpose of cooperative action among trade groups, to induce and maintain united action of labor and management under adequate governmental sanctions and super-

[4] Title II concerned public works and construction projects, and Title III provided additional appropriations for relief.

vision, to eliminate unfair competitive practices, to promote the fullest possible utilization of the present productive capacity of industries, to avoid undue restriction of production (except as may be temporarily required), to increase the consumption of industrial and agricultural products by increasing purchasing power, to reduce and relieve unemployment, to improve standards of labor, and otherwise to rehabilitate industry and to conserve natural resources."

The intent of the bill, observed the President on affixing his signature on June 16, was "to put people back to work; to let them buy more of the products of farms and factories and start our business at a living rate again." The ultimate goal, he continued, was "the assurance of a reasonable profit to industry and living wages for labor, with the elimination of the piratical methods and practices which have not only harassed honest business but also contributed to the ills of labor." Nevertheless, the legislation was virtually dead within the year.

The industrial experiment, like the agricultural, was, at least in its first stages, chiefly concerned with recovery. The desperate condition of business and the hopeless outlook of labor warranted immediate attention. The public had almost wholly lost its faith in the ability of industry to lift itself out of the depression. The tramping millions of unemployed had come to feel that they were but pawns in a competitive system of economics that had no greater inspiration than selfish gain. Even extreme conservatives were ready to admit that drastic action was necessary. Many individuals were willing with the President to undertake untried measures that had for their aim the stimulation of purchasing power and the eventual rehabilitation of industry. In spite of the argument that technological developments had brought about overproduction, a large part of society was convinced that the factory, unlike the farm, had a practically limitless potential market. Few indeed in the land had ever been in the happy position of being able to purchase all they desired before exhausting their money. The problem was to provide for an economically unsatisfied multitude the ability to buy what they wanted. Primarily, then, there had to be an increase in real wages, though secondary assistance could be rendered by a certain amount of economic planning, by diffusion of wage payments, by prohibition of child labor, and by elimination of predatory competition and unsocial practices on the part of industrial leaders.

Any program, however, that contemplated wage regulation, price stabilization, and moral coercion, direct or indirect, was bound to fly in the face of a long-established policy of laissez faire. The complications were far more forbidding than those encountered in agriculture. In the first place,

while the farmer was both capitalist and laborer and was therefore helped directly by whatever assistance was given, the manufacturer was only the capitalist, who was to be compelled to raise the wages of his laborers in the mere hope that their augmented buying power would stimulate his trade and thereby add to his profits. In the second place, industrialists had long set their own prices and wages and had come to regard the practice as their inherent privilege. In the third place, business as the purse holder of the nation as well as the heroic occupation of the people was in a position to protest effectively that liberties were being invaded. And, in the fourth place, labor, whatever it gained, would not be content.

Yet that was not all. The NIRA proposed a national program of benevolence, and benevolence was little understood by either of the two chief parties concerned. On the whole, neither capital nor labor was immediately interested in national well-being. Each was fighting for self-preservation and what it felt to be individual justice. Long years of economic and physical violence had brought mutual suspicion and hatred. However earnest the participants on either side, common agreement was difficult if not impossible.

Even those who were neither capitalists nor wage earners were not certain what the general welfare demanded. They were not, when the questions were presented, sure that the small independent business was wholly desirable; they were undecided as to whether the sale of cigarettes and other "leaders" by chain stores at less than cost was an economic detriment; they usually opposed company unions, but they saw little reason why any wage earner should be forced by his fellow workmen to join a labor union against his will. They knew only that the consumer was never consulted as to what a haircut or a ton of steel should cost. That many of the arguments which the NIRA provoked were political efforts for personal gain must not be ignored. Critics overlooked the fact demonstrated by the numerous controversies that arose—that definite principles cannot be established when the interests of groups to be aided are not pointed in some mutual direction.

The National Recovery Administration. *Code Making.* The industrial experiment was pushed vigorously forward. The President early created the National Recovery Administration (the NRA) and placed it under the leadership of General Hugh S. Johnson, who attempted to set up immediately the "codes of fair competition" that Congress had authorized. The fiery general "tore into action as if a war were to be won or lost in thirty days"; and there was need for haste, as even the legislators had recognized by inserting the stipulation that any industry not preparing a

code quickly enough might be forced to accept one presented by the administration. Codes, golden rules of conduct for both the industrialist and the wage earner, were to end at last the poverty of the factory owners and the idleness of the workers.

But code making brought the capitalist and the laborer face to face, and the golden rule was often forgotten in the ensuing conflict. The law, seeking to help the weaker party in the argument, provided that every industrial code must grant to labor the right to bargain collectively through representatives of its own choosing, positively outlawed the "yellow dog" contract, and specifically prescribed maximum hours of work and minimum rates of pay. Agreements were reached with difficulty. In spite of the statement of Donald R. Richberg, successor to General Johnson, that "we are not trying to establish public management of private business, we are not trying to fix prices or wages by governmental orders, we are not trying to unionize labor by federal command," manufacturers were convinced that the government was interfering unduly with their private affairs. Before the experiment had come to an end, there was much talk about "regimentation of business."

The Blanket Code. Code making did not keep pace with the hopes of the administration; in fact, only the cotton-textiles industry seemed to be hurrying. The delays, coupled with the belief that mass purchasing power could be developed quickly by the simple expedient of spreading a temporary blanket code simultaneously over wide industrial areas, led the Chief Executive to launch his President's Reemployment Agreement (known as the PRA) on July 27, 1933. In a direct appeal "To Every Employer" business men were asked to come to the assistance of the stricken nation by agreeing to six major premises of recovery: the abolition of child labor, the limitation of the working day to thirty-five to forty hours, the establishment of minimum wages at some point between twelve and fifteen dollars a week (or thirty to forty cents an hour), the "equitable" adjustment upward of wages above the minimum whenever possible, the restriction of price increases to actual cost increases, and the cooperation of all parties to the agreement.

The Blue Eagle. Realizing the monumental nature of the task of obtaining consistent adherence to the proposed blanket code, the government, as it had often done in the past, began a program of moral coercion. Nothing since the first World War had so nearly resembled the wartime drives for food and money as the effort to place the Blue Eagle over the doorway of every business house in the land. The movement developed something of the fervor of a crusade, with all the dangers attached thereto. Intoler-

ance, bigotry, and self-aggrandizement brought insurmountable difficulties. The overwhelming pressure for enforcement, according to Richberg, eventually transferred much of the NRA energy "from cooperative to disciplinary channels." The administration itself was caught in the whirlwind and spent much time in chasing pants pressers, battery makers, and other insignificant violators, though it at last bearded Henry Ford in his Detroit fortress.

The Industrial Codes. It was not until after the industrial experiment had been weakened by the era of the Blue Eagle, sometimes called the first phase of the NRA, that the regular codes went into effect. The cotton-textiles industry was the first to present a code. It was particularly demoralized by child labor, starvation wages, and machine exploitation and was therefore a harvest field for communists and a seed bed for violence. The manufacturers were eager for assistance; under the leadership of George A. Stone they were ready with a code even before General Johnson had completed his plans.

But most of the codes, including the textiles, were the work of the industrial leaders. Furthermore, unlike the blanket code, which applied only to those who had signed it, the individual codes forced all members of a given industry into an agreement when eighty-five per cent had signed. However earnestly some factory owners endeavored to carry out the provisions of the established codes, it was not long before many industrialists were taking advantage of their position to force company unions, price fixing, and monopoly. Labor grew alarmed at the threat to the continuance of its traditional organizations and, despite the efforts of various labor boards appointed by the President to avert industrial strife, resorted occasionally to strikes. Business men used their keenest statisticians to show that the costs of their products were always in conformity with their sales prices. "Chiselers" made their appearance; they willfully raised their prices for fictitious reasons and deliberately evaded the provisions of the codes, which were actually law.

Public confidence, shaken by the adverse reports of Clarence Darrow and the Brookings Institution, declined rapidly. Actually the ground had already slipped from under the NRA before the Supreme Court on June 3, 1935, in a unanimous decision in the case of the *Schecter Poultry Corporation* v. *United States* (commonly referred to as the "sick chicken case") declared the whole network of seven hundred and fifty codes illegal because it had been built upon an unconstitutional delegation of powers to the President. With the exception of the Guffey coal bill (frequently referred to as the "little NRA"), which in its original form failed to win the support

of the courts and passed into oblivion, no aggressive attempts were made to revive the industrial experiment.

The Accomplishments of the NRA. The arguments concerning the NRA will not soon be settled. Statisticians have marshaled figures to prove "conclusively" that the experiment was good and that it was bad. Those who tried to carry out the wishes of the government will long remember the flood of contradictory instructions that filled the post boxes day after day. The small-business man, center of interest for many years, suffered greatly in many instances. Labor, however, made some gains: wages were increased, hours were shortened, sweatshops were abolished, and employment was stimulated. But even labor felt aggrieved. Only the miserably paid worker in the tiny shop regarded the experiment with evident satisfaction.

Chapter 35

THE NEW DEAL: SOCIAL RELIEF

The New Deal undertook in social relief a task more complicated and in many ways more discouraging than any other it faced. The efforts devoted to reforming the economic system and the energies expended in "priming the pump" of agriculture and industry could not solve the immediate problem of caring for the destitute that filled the land. It was impossible for those without food to await the results of economic and industrial experiments. Nevertheless, relief proposals met with bitter opposition. Many persons only grudgingly conceded that workmen in field, factory, and office were wholly at the mercy of social and economic forces over which they had no control, and they forgot completely that twentieth-century laborers can neither quickly shift their occupations nor turn to the soil for partial subsistence when times are bad. Everyone admitted that the wheels of industry must be made to turn, yet the number who were more interested in recovering profits than in salvaging demoralized people was far too large.

Some observers were overwhelmed less by the astounding loss in physical possessions than by the attendant loss in human values; to them the most tragic phase of the depression was the destruction of morale. Society, though perhaps only vaguely, had begun to question the wisdom of permitting the gifted to be forced by the events of the day to throw away their talents in pointless toil for bare existence. Earlier generations had felt that grinding want and economic difficulties were splendid foundations upon which to build ambition and character, but by 1933 doubts had begun to arise as to whether the trained or the untrained who were compelled to give up their regular occupations and turn to a desperate hand-to-mouth struggle for life would ever recapture the hope and joy that had once been theirs. Certainly if modern industrial production depends chiefly upon personal consumption, then individuals must be preserved if the economic system is to continue to function.

Whatever the changes in philosophy, real or imaginary, work had to be found for millions of unemployed. The task might have been relatively

simple had men without jobs been a new phenomenon. Such, however, was not the case. There had been serious intermittent unemployment for more than half a century. It is estimated that in 1897 roughly a million two hundred thousand men were out of work in four of the basic industries —manufacturing, transportation, construction, and mining. The number declined considerably in the opening years of the new century but jumped upward to a million and a half by 1908 and to a million eight hundred thousand in 1914 and 1915. Even during America's participation in the war there were probably nearly a million idle men, and the relapse of 1921 swelled their ranks to more than four million. Throughout the twenties unemployment remained critical.



FIGURE 21. STUDENT AID UNDER NYA
(Each symbol represents 10,000 students.)

Forgetting that men without money cannot buy goods, industrialists, economists, and statesmen bewailed the drastic decline in foreign trade and blindly insisted that local communities care for or neglect—as they chose—their jobless men. The *London Economist* aptly commented that until the "Great Depression" America prided herself on giving no thought to unemployment and observed that "the only recourse of the indigent working man was to charity." The able-bodied unemployed who were willing to work had indeed been made subjects of charity in the midst of their friends. Through the habit of years public assistance was limited almost exclusively to poorhouse care, burial, medical attention, and small amounts of outdoor relief. Furthermore, local relief agencies, because of the precarious standing of their treasuries[1] and their inability to plan more

[1] Relief expenditures in sixteen major cities had grown from a million and a half in 1911 to twenty million in 1928.

than to meet the demands of the hour, found it impossible to separate those who merely wanted help from those who wanted only a chance to work. As a result, people earnestly looking for jobs were pulled down to the level of people who were not especially anxious to earn their living. The New Deal made unemployment for the first time a national problem.[2] President Roosevelt was convinced that idleness was the concern of all.

Relief for the Youth. *The Civilian Conservation Corps.* In order to rescue some of the thousands of discouraged boys who aimlessly wandered the country learning lessons of indolence and evil, Congress created the Civilian Conservation Corps on March 31, 1933. Physically fit unmarried unemployed males between seventeen and twenty-eight years of age who were citizens of the United States and members of families on public relief were eligible for enrollment. Monthly wages were fixed at thirty dollars, twenty-two to twenty-five of which was by compulsion allotted to dependents.[3] Within three years the million five hundred thousand young men who passed through the camps constructed in the forests of the nation seventy-five thousand miles of truck trails, forty-five thousand miles of telephone lines, three thousand fire lookouts and observation towers, and fifty thousand miles of firebreaks; they improved the stand of trees on two and a quarter million acres and planted six hundred million seedlings. In the agrarian regions they built two million soil-erosion dams and thirty-five thousand miles of farm terraces and cleaned and repaired twenty million linear feet of drainage ditches. In addition, they established thirty-five hundred fish-rearing ponds and cleared many streams and lakes in the general interest of preserving wild life and preventing waste of natural resources.

The National Youth Administration. To care for girls in destitute families and boys whose parents, though not on relief, were financially hard pressed, President Roosevelt set up by executive order on June 26, 1935, the National Youth Administration. In late spring of 1936 aid in one form or another was being given to more than three hundred thousand young men and two hundred and fifty thousand young women. The most important phase of the NYA program had to do with education. Payments for the clerical, educational, and manual work involved varied in different sections of the country; they were limited, however, to a maximum of six

[2] The national government was interested also in the care of the incapable needy, but only until local agencies could rehabilitate themselves and take up the task. Inexperience (though there are many evidences of premeditation) in distinguishing between the two groups caused communities to shove all their needy upon the national government despite specific instructions to the contrary.

[3] Some exceptions were made in that war veterans were permitted to enroll at any age and certain skilled workers received sometimes more than thirty dollars a month.

dollars a month in high schools and to an average of fifteen a month in colleges and thirty a month in graduate schools. By December, 1936, over four hundred thousand students were receiving checks from the government. Other thousands were being employed to some extent in state-directed work projects or being vocationally trained. A few apprentices were learning crafts, and a few jobless women were studying household management. But surplus youth increased; more than eight million reached the age of employment during the first half-dozen years of the depression.

Relief for Adults. The need for rehabilitating boys and girls was only a part of the larger problem of saving society as a whole from the moral deterioration that comes with enforced idleness and poverty. The depression made it necessary for communities not only to maintain the traditional unemployables (that is, persons who for various reasons were physically or mentally unable to work) but also to support the unemployed employables and assist those with jobs whose wages were not sufficient to feed their families. Local treasuries were staggering under their burdens when the New Deal began.

The Federal Emergency Relief Act. On May 12, 1933, Congress passed the Federal Emergency Relief Act, providing for "cooperation by the Federal Government with the several States and Territories and the District of Columbia in relieving the hardship and suffering caused by unemployment, and for other purposes." The law created a Federal Emergency Relief Administration and directed the Reconstruction Finance Corporation to make available for grants to the states a sum not exceeding five hundred million dollars. The first funds were allotted on May 23 to Colorado, Illinois, Iowa, Michigan, Mississippi, Ohio, and Texas. By the end of 1933 the federal relief rolls included, besides unemployables and unemployed, farmers and others who had been caught in the toils of disaster. Before another year had passed, many who had exhausted their savings had joined the army of national dependents. A host of ne'er-do-wells too had rushed to the rolls, and large numbers of rural folk who had always lived on corn pone and salt pork were making regular trips to the local relief stations.

Government aid had become established. That meant that the federal budget would not be balanced, that congressmen would for political reasons begin vigorous fights for local benefits, and that charges and countercharges would spring up in abundance. Yet there seemed to be no alternative. Men, women, and children could not be left to starve in a land overflowing with food and industrial products. Millions of people desper-

ately needed help. Those responsible for local administration, however, made no honest effort to differentiate between substantial and nonsubstantial applicants.[4]

The relief program under the FERA was a cooperative venture in which the states and local units of government were expected to assume a major share of the financial burden. But the original plan was not long adhered to. Within a month Washington was making unmatched grants to some states, and eventually it assumed entire control of relief work in six.[5] Regulations were essentially national; the power to withhold grants gave the federal government opportunity to prescribe both policies and procedures. Particularly were wages and hours supervised carefully. The first general regulations provided that relief work should be based on the needs of the individual and his dependents, that a "fair rate" of wages should be allowed, that payments should be made by check or cash or in kind,[6] that wages should be computed on the hours employed, and that skilled workers should be paid according to their crafts. Shortly afterwards it was announced that federal funds were available for projects only where the minimum wage was definitely fixed at thirty cents an hour. Working hours were limited to eight a day and thirty-five a week except in office employment, where a maximum of forty was permitted. The regulations were intended to abolish abuses rather than to establish uniformity of wage payments; the government, in fact, urged compensation at rates locally prevailing. In many communities workers had received as little as five cents an hour regardless of skill.

Material contributions and work projects were not the only means devised for aiding the needy. Efforts were made through the rural rehabilitation programs to remove agricultural families from the relief rolls by helping them to become self-sustaining. Federal funds were advanced for the purchase of farm equipment, fertilizer, seed, livestock, and other needed goods in the hope that stricken farmers would economically reestablish

[4] There is, of course, no difference in hunger; the shiftless are as much pained by lack of food as the industrious. But since there was never enough money to meet all the demands for relief (the number of unemployed not receiving relief being always greater than the number of unemployed receiving relief), there was some obligation to dispense assistance on the grounds of stability and social worth. This point was made perfectly clear to President Roosevelt during his trip through the drought region in the summer of 1936.

[5] In the original FERA plans the federal government was to match the funds of the states on the basis of one to three. In practice grants were made according to need without relation to state contributions. Between January, 1933, and June, 1934, Massachusetts, for instance, provided seventy-four per cent of its relief funds, while South Carolina contributed only six-tenths of one per cent of the relief money spent in that state.

[6] That is, in the form of food, shelter, clothing, heat, light, medical attention, and other absolute necessities.

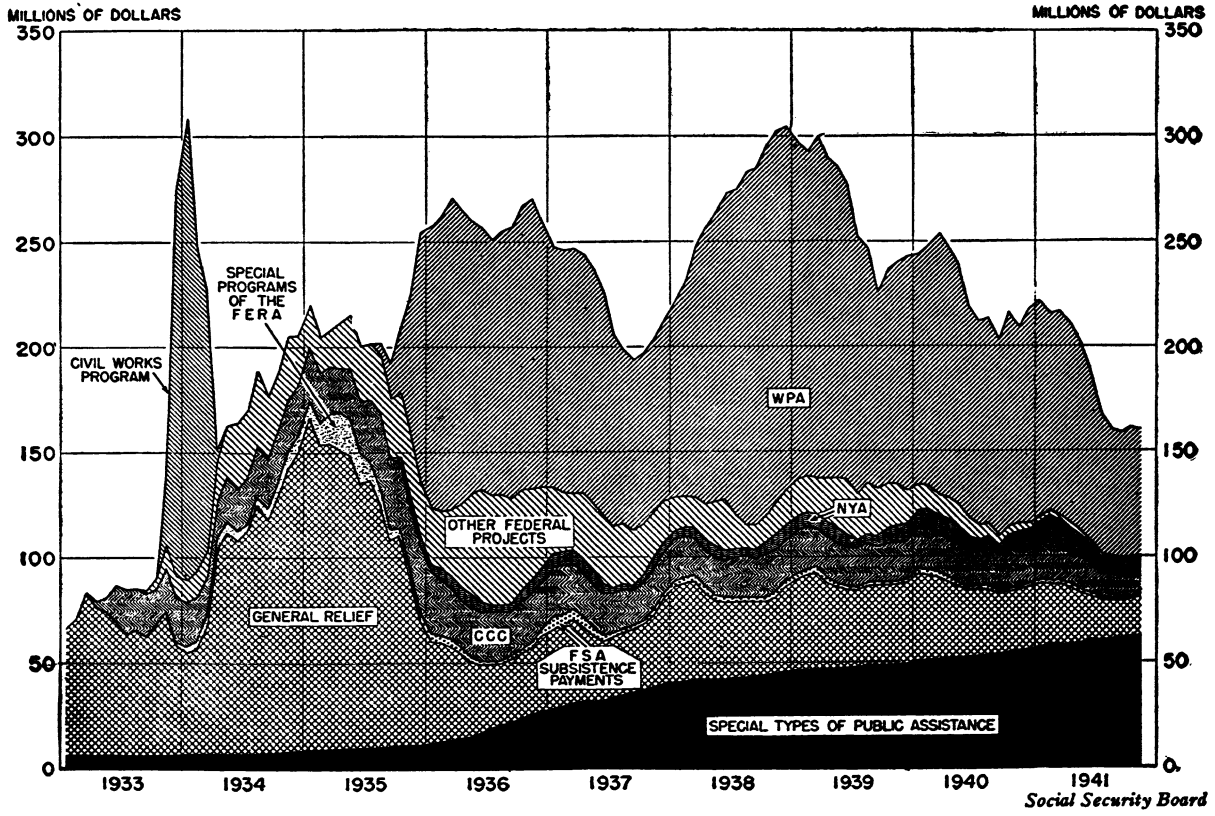


FIGURE 22. EXPENDITURES ON PUBLIC ASSISTANCE AND FEDERAL WORK PROGRAMS IN CONTINENTAL UNITED STATES, JANUARY, 1933–NOVEMBER, 1941

themselves. Technical advice on farm management was supplied, and support was given to education. Under various projects promoted by special divisions such as Women's Work, Emergency Education, and Nursery Schools, both adult instruction and child training were furthered, and suitable employment was found for white-collar workers. Earnest attempts were made to cushion the drastic results of curtailment in state appropriations for teachers; by March, 1936, rural schools in thirty-two states that otherwise would have been closed had been enabled to remain open, and fifty thousand (one of every five) school buildings had been repaired or improved. High-school and college students were assisted, and self-help associations were financially encouraged.

The FERA program was supplemented by other government agencies. Outstandingly helpful was the Federal Surplus Relief Corporation, which, formed under the laws of Delaware on October 4, 1933, was primarily concerned with buying and processing surplus agricultural products and distributing them to those in distress. Wheat, for instance, was bought, ground into flour, packed in bags on which was plainly printed the penalty for private sale, and given to families on direct relief. Other farm products were disposed of likewise. The plan was a good one; the needy were fed, agricultural surpluses were utilized, local work was provided, and some employers who were nearing the "unemployed" ranks were rescued. Between October 31, 1933, and January 31, 1934, the corporation spent twenty-four million dollars in the purchase of agricultural products. It was superseded on November 18, 1935, by the Federal Surplus Commodities Corporation.

The FERA was supported also by the Public Works Administration, authorized by the National Recovery Act of July 16, 1933, but even so it was unable to stem the increasing demands for relief as the winter of 1933-1934 approached. Many difficulties indeed had delayed the program: old traditions of "local relief" had to be followed; legal restrictions on the amount of debt that might be contracted by state and local governments often prevented effective assistance; wealthy states were jealous of the larger proportionate receipts of the poorer ones; and local politicians were not above using relief for purely political purposes.

The Civil Works Administration. The Civil Works Administration was hurriedly established to meet the existing emergency by putting the needy to work immediately. It was in part a recovery measure and in part merely a palliative, and many have questioned its worth. Announced on November 9, 1933, the entire plan was completed before the fifteenth, and by

January 18, 1934, more than four million men were at work, half of whom had been taken from the relief rolls and half from public employment offices.

State and local agencies administered the Civil Works program, but they were obliged to conform to national regulations. Workers under sixteen were not permitted, working hours were limited to thirty a week with a few exceptions of forty, and individual wages sufficient to maintain "a standard of living in decency and comfort" were required. Projects in great variety were undertaken; the two essentials were that they be socially and economically desirable and that they be started quickly. Planned on a temporary basis, the work, however, was not always economically sound, and it helped create the opprobrious word "boondoggling." Some critics went so far as to accuse the government of putting able-bodied men to raking leaves. There were errors enough, but such absurdities were not among them. The entire project came to an end on March 31, 1934. Though it had cost the national government in excess of eight hundred million dollars and the states with their local community contributions eighty-seven million more, it had neither solved the problem of unemployment nor appreciably lessened the need for relief. It had, nevertheless, prevented much suffering in the one bleak winter of its existence.

The Emergency Work Relief Program. The Emergency Work Relief Program, news of which was released from the White House on February 28, 1934, was created to carry on the work of the CWA. It was designed specifically for the benefit of three primary groups of the unemployed: first, distressed families in rural areas; second, "stranded populations"—that is, people living in single-industry communities where there was no hope for future reemployment; and, third, the unemployed in large cities. Funds were furnished through the monthly grants of the FERA to the states.

The rural program contemplated rehabilitation rather than relief. Stranded populations, on the other hand, were to be assisted by physical transplantation through the Subsistence Homesteads Division of the Department of the Interior and other government agencies and by the development of supplemental industrial opportunities. The able-bodied urban unemployed were given opportunities to sell their labor for pay. Work was provided in the construction of highways, streets, sewer systems, parks, recreational centers, and public buildings and in similar socially helpful projects. Needy men and women received equal consideration; both were permitted to work at prevailing wages (with a minimum of thirty cents an hour) enough time to earn money for a subsistence budget as set up by

social-service investigators.[7] Projects to care for the professional and other white-collar jobless were initiated, and schools for social workers were continued.

As one organization after another grew up out of the original Federal Emergency Relief Administration, many observers began to ask openly what was the ultimate destiny of the approximately five million people who were leaning upon the government for existence. The word "emergency" had indeed been worn threadbare, and there was reason to doubt that many of those being helped would, when better times came, contribute greatly to the national welfare. Month after month the relief rolls showed an increasing number of the unemployable, the ignorant, the unskilled, and the indolent; unemployment relief was rapidly becoming merely relief. The New Dealers grew restive. President Roosevelt declared in a message to Congress on January 4, 1935, that "the Federal Government must and shall quit this business of relief." The people, he went on, who before the depression had been cared for by local efforts "must be cared for as they were before." [8]

The Works Program and the Works Progress Administration. The President's message made it clear that the government meant to assume in the future obligation only for providing jobs for the employable destitute. Since those who were unable to work were banned from further national consideration, the new plan was significantly called the Works Program. Congress appropriated four billion dollars for carrying on work projects over the country and granted permission to transfer from other accounts approximately one billion additional.

The Works Progress Administration was created by executive order on May 6, 1935, to administer the Works Program. Harry Hopkins, director of the FERA, was chosen to head the new organization, which consisted of three definite executive divisions—national, state, and local. He and five regional representatives guided the federal activities, state administrators supervised the state machines, and local officials watched over the actual

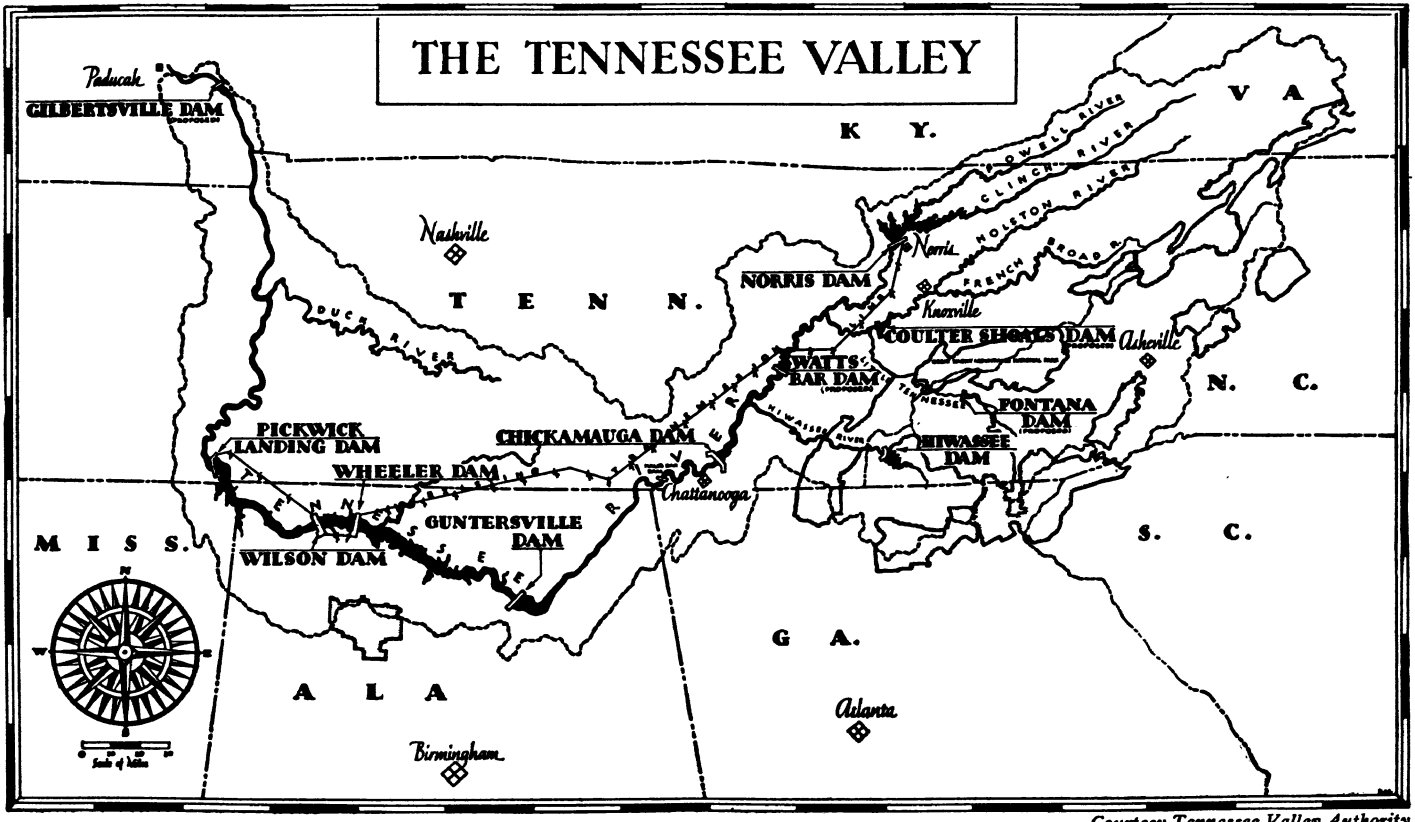
[7] The prevailing wage was determined by a committee consisting of one representative each from organized labor, business, and the local relief administration. An adjustment committee was provided to hear grievances.

[8] The new program of emergency public employment should be governed by a number of practical principles, the President declared. They were:

(1) All work undertaken should be useful—not just for a day or a year, but useful in the sense that it affords permanent improvement in living conditions or that it creates future new wealth for the nation.

(2) The planning of projects should seek to assure work during the coming fiscal year to the individuals now on relief, or until such time as private employment is available.

(3) Effort should be made to locate projects where they will serve the greatest unemployment needs as shown by present relief rolls.



Courtesy Tennessee Valley Authority

FIGURE 23. WATERSHED OF THE TENNESSEE RIVER AND ITS TRIBUTARIES

work in the field. The projects, with the exception of a few of national scope and a small number on federal territory, were selected by the district units. The local sponsors of projects sent their proposals, each "accompanied by plans, specifications, a working procedure, and other data," to the district offices, from which they eventually reached the central office at Washington. Applications that were approved were passed to the Bureau of the Budget and then to the President. Communities contributed funds in accordance with their financial ability and the nature and location of the work.

Wage policies under the WPA changed frequently. The adoption of the "security wage" on May 20, 1935, marked a complete departure from previous federal practice. As formerly, restrictions were placed on the length of the working day, week, and month, but compensation was determined on a monthly salary basis, varying as to region, degree of urbanization, and class of work. Laborers were paid for time lost because of weather conditions or temporary interruptions "beyond the control of the workers." Labor under this plan was classified as unskilled, intermediate, skilled, and professional and clerical. The nation was divided into four major geographic sections, within each of which every county and township was further divided into five wage-determining classes according to the largest city therein. Wages differed as to each of the major and minor geographic regions and as to each of the four occupational groups. Thus there were eighty basic rates of payment, ranging for the unskilled from nineteen dollars a month in the rural South to fifty-five in the large urban centers, for the semiskilled from twenty-seven to sixty-five, for the skilled from thirty-five to eighty-five, and for professional and clerical workers from thirty-nine to ninety-four. It was hoped that the average payment would amount to approximately six hundred dollars a year. Soon this complicated system of determining wages was abandoned in favor of prevailing community rates. In order that the benefits might be spread as widely as possible, only one member in each relief family was eligible for employment.

The Work Projects of the WPA. During the early years of the New Deal work projects were directed by several organizations. Those undertaken by the Works Progress Administration were particularly varied, and, though some were socially and economically insignificant aside from providing relief, their total physical accomplishments were substantial. Roads and highways were repaired and resurfaced; abandoned trolley tracks were removed from streets, and ancient cobblestones were replaced by concrete and asphalt; alleys were cleaned and made sanitary; and farm-to-market roads were surfaced so that year-round transportation by automobile and truck might be possible for rural dwellers hitherto isolated in winter and

in rainy seasons.[9] City halls, fire houses, sanitariums, schoolhouses, museums, and dormitories and gymnasiums at colleges, universities, and institutions for the deaf and dumb and the blind were restored and in some cases rebuilt. New classrooms equipped for effective study were supplied for thousands of children who had been attending school in temporary structures and condemned buildings. Playgrounds were improved and beautified. Water and sewer systems were constructed and modernized in many communities, both urban and rural. Dams were built both for flood control and for irrigation, trees and grass were planted to check erosion and to halt the rapid run-off, dead trees were cleared away in the forests for the purpose of lessening fire losses, lands subject to periodic inundation were reclaimed through the clearing of channels and the building of levees, and miles of walls and dikes were thrown up in the hope of preventing damage at flood tide to farms, cities, and towns along the rivers.

Much attention was given to recreational, instructional, and health projects also. New parks and play areas, lakes, swimming pools, bathhouses, stadiums, auditoriums, band shells, zoological gardens, and natural-history museums changed scores of dull towns and cities into interesting places for children and adults alike.[10] Public health was bettered. Mosquito-infested swamps and marshes were drained, and sources of water pollution were eliminated. Some forty-three thousand openings to nineteen hundred abandoned coal mines that had long poured sulphuric acid (formed by the combination of seepage water with the sulphide compound in the mines) into the streams of the mining regions, making them unfit for any use, were sealed. The erection of model sanitary outdoor toilets, notwithstanding the scoffing that was provoked, retarded the spread of deadly diseases in rural and village communities and thereby saved thousands of dollars in doctors' bills annually.

Air transportation was encouraged through airport and airway projects. Forty-five new major landing fields were built, eighty-five new runways constructed, and sixty-seven airports and seventy-six runways repaired and

[9] In late 1936 the states giving most emphasis to the farm-to-market roads were Arkansas, Maine, North Dakota, South Dakota, Tennessee, and West Virginia. At the same time seventy per cent of the relief workers in North Dakota and more than fifty per cent in Kentucky, Pennsylvania, Maine, and Arkansas were employed on regular roads and highways. Connecticut, Maryland, and Michigan were emphasizing street and alley improvements. By September 15 the total mileage of roads and streets constructed or repaired had reached one hundred and twenty-two thousand five hundred.

[10] By September 15, 1936, the WPA had completed the construction of fourteen hundred new athletic fields and playgrounds, four hundred and twenty-five new parks and fair grounds, thirty-nine golf courses, and two hundred and forty-eight swimming pools. Repairs and improvements had been made on fifteen hundred athletic fields and playgrounds, one thousand parks and fair grounds, fifty-five golf courses, and sixty-one swimming pools.

improved. Twenty-six thousand signs and direction indicators were established. Towns previously without air service were placed on regular schedules. Emergency-landing fields increased safety, and markers and frequent stopping places helped pilots of private planes not equipped with radio.

The Service and White-Collar Projects of the WPA. Since the main purpose of the Works Progress Administration was relief, not all the projects undertaken were concerned with permanent or semipermanent physical improvements. The "goods" projects, for instance, had as their object merely putting the unemployed to work supplying other unemployed with essential things they could not buy. Sewing, canning, gardening, and the renovating of shoes, clothing, and furniture were most important in this program. Sewing alone, in which more than two-thirds of all the women on the WPA rolls were engaged, constituted more than eighty per cent of the projects. By September, 1936, the Federal Surplus Commodities Corporation had distributed to the needy over thirty-one million garments and over two hundred and seventy tons of foodstuffs that the service workers had made available.

The white-collar projects possessed in their cultural and health aspects considerable lasting value. It has been pointed out already that one of the outstanding characteristics of the twentieth century before 1929 was the rapid growth in the number of people employed in the service occupations. The depression left thousands of these men and women jobless and hungry—without, however, the outward appearance of destitution. Doctors, nurses, teachers, musicians, painters, writers, photographers, architects, accountants, auditors, draftsmen, engineers, stenographers, typists, payroll clerks, and others who had spent millions of dollars in educating themselves for life employment were faced by the necessity of competing for existence with the unskilled and the uneducated. The white-collar idle were not fitted for the jobs the government had felt impelled to provide for those in want. Eventually projects were launched in which they could participate. Several thousand were put to work surveying national, state, and community records; a much larger number undertook traffic surveys, studies of wages and incomes, property inventories, and other research tasks; some with clerical training were assigned to mending and copying public records; and library workers assembled loan exhibits, supervised children's reading rooms, and repaired millions of books. The Braille transcription projects furnished the blind for the first time with more than a meager selection of reading material. Guidebooks were prepared. Adult education was given new life. Children's playgrounds were effectively supervised. Nurses and doctors checked the health of hundreds of thousands

of boys and girls, immunized thousands against typhoid, smallpox, whooping cough, and diphtheria, and recommended corrective treatment whenever needed. Nine million visits to homes of the destitute had been made by September 15, 1936.

Most dramatic of the white-collar activities were the art, music, theater, and writers' projects that were undertaken in hopes of preserving the art of talented individuals and educating the public in cultural appreciation. During parts of 1936 as many as five thousand artists were employed on murals, sculpture, easel paintings, and graphics. Attendance that year at the art exhibits, concerts, plays, and circuses presented by unemployed artists, musicians, and players was gratifyingly large.

National Disaster Relief. Flood and drought projects were concerned chiefly with repairing damages and alleviating suffering. On July 31, 1935, President Roosevelt allocated five million dollars to the WPA for rehabilitation of the flood districts of that year. Scarcely had the waters ebbed before workers were busy clearing debris from homes, public buildings, streets, and roads and restoring water and sewer systems. By the time the floods of 1936 began to pour over New England, Pennsylvania, and the Ohio valley, a relief force was already organized. People in the paths of the raging waters were warned before danger was upon them, furniture and valuables were removed, buildings were roped down, and emergency construction work was begun on dikes and other control devices. The surplus-commodity or goods projects supplied food, bedding, and clothing for the refugees. In Johnstown, Pennsylvania, five thousand men were cleaning the streets and scattering tons of hydrated lime over the water-soaked premises before the water had left the city limits. When the great flood of January and February, 1937, was at its peak, seventy-two thousand WPA workers were aiding the suffering from Wheeling, West Virginia, to New Orleans.

Drought relief was initiated in 1936, when the WPA began a program of assistance to families on burnt-up farms who were faced with ruin and starvation. The Resettlement Administration and allied agencies in the Inter-Departmental Drought Committee were charged with making available loans, grants, and other means of self-help to the farmers, and the WPA offered actual work to those who were destitute. Within a month after the drought committee of the Department of Agriculture had officially named the first emergency counties, nearly thirty-eight thousand individuals in the designated regions (all certified as needy by local relief authorities) were employed on various work projects connected in one way or another with water conservation. Less than sixty days later the number

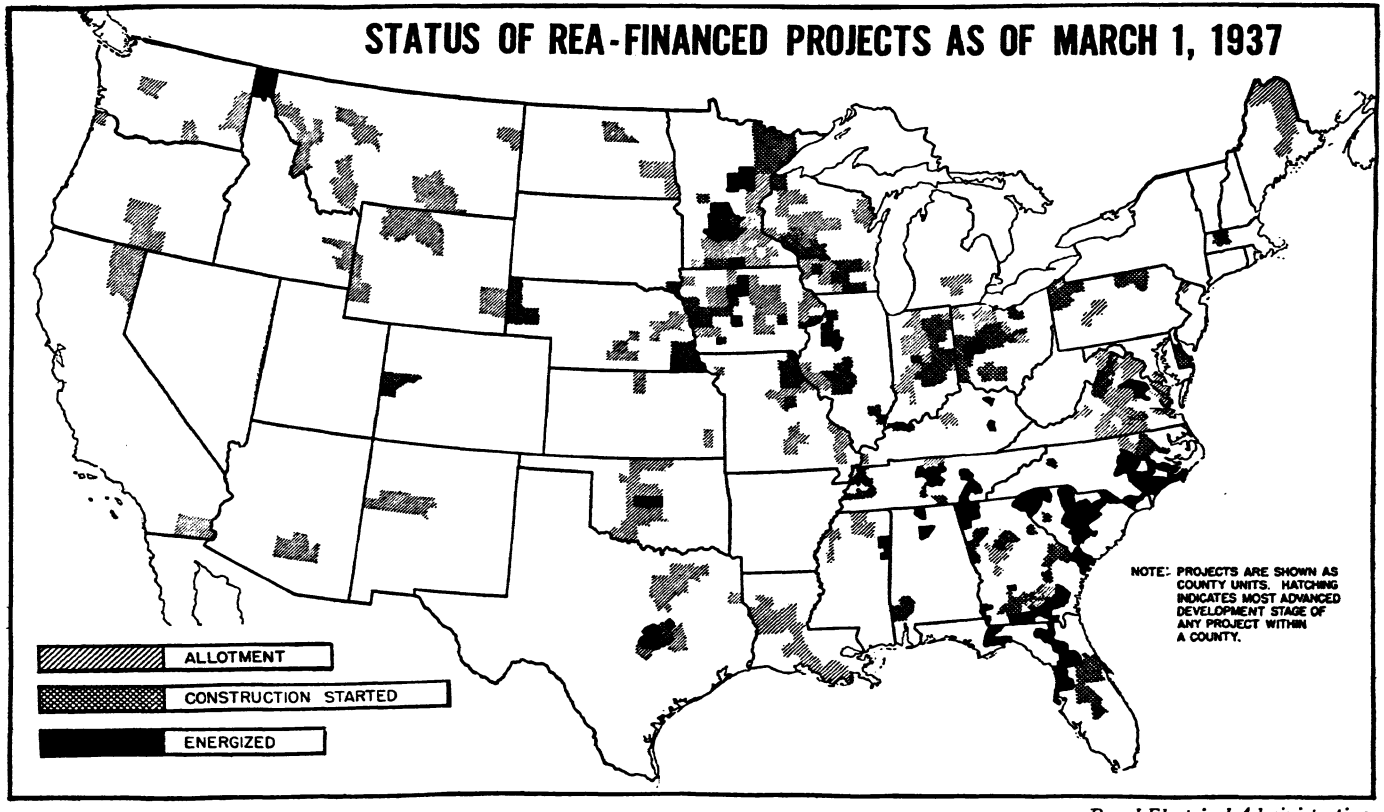
had grown to one hundred and seventy thousand. Though twenty states were stricken in whole or in part, most relief went to North Dakota, South Dakota, Missouri, Wisconsin, and Oklahoma in the order named.

Other Work Projects. However varied, the activities and projects of the Works Progress Administration constituted only the major portion of the Works Program. Other governmental agencies prosecuted similar projects falling within their own fields. The Department of Agriculture was particularly active. Using emergency-relief funds, the Bureau of Entomology and Plant Quarantine expended by December, 1936, more than forty million man-hours of work in fighting plant and tree diseases and destructive moths and weevils; the Forest Service, employing throughout 1936 an average of twenty-five thousand workers, removed fire hazards, constructed horse trails and lookout towers and telephone lines and firebreaks, replanted forests, developed recreation camps, and established refuges for wild birds and animals;[11] and the Bureau of Roads built by January 31, 1937, twelve thousand miles of highways and roads and two thousand road crossings. The Soil Conservation Service in its instructional work on the control and storage of surface water erected seventy-three thousand permanent dams and more than eight hundred thousand temporary structures, which may point the way toward freeing the agrarians in the semi-arid regions from the tragedies of recurrent water famines. It also demonstrated contour-strip cropping, contour tilling, contour furrowing, terrace protection, gully control, and crop rotation and offered advice on the use of native grasses to check the disastrous dust storms. Ninety-three per cent of the actual labor was done by the needy unemployed.

Other special projects of the Department of Agriculture included work in the eradication of the parasite-carrying cattle tick in Florida and Louisiana and Texas, efforts to preserve wild birds and animals from complete destruction, a survey by the Home Economics Bureau of goods consumed by farm families, and restoration and repair of flood gauges on American rivers by the Weather Bureau.

The Department of Commerce projects were limited almost exclusively to a business census and a survey of retail trade in 1935, an alphabetical index of the census of 1900 for use in connection with the Social Security Act, and a census of religious bodies. The projects of the Department of the Interior had to do with national-park development and reclamation

[11] The Civilian Conservation Corps was engaged in identical work. Often different agencies were involved in similar occupations, but they were always widely separated. The kind of work was often determined by what was possible or necessary in the community where relief was needed. The CCC was the only mobile unit.



Rural Electrical Administration

FIGURE 24. REA-FINANCED PROJECTS AS OF MARCH 1, 1937
(Completed projects are shown solid black.)

work. Historic spots were marked, and millions of acres of unused lands and forests were turned into pleasant recreational and amusement centers. The Grand Coulee Dam project on the Columbia River was the largest undertaking in the reclamation development, though it was only the first step in a vast plan that may require half a century to complete.

The two major projects of the Department of Labor were a nation-wide survey of consumer purchases in urban areas and the preparation by the United States Employment Service of a perpetual inventory of registrants for employment. The Navy, War, and Treasury Departments each carried out projects of local and national importance. The Corps of Engineers of the War Department spent more than a hundred and forty million dollars in the development of rivers and harbors. The Alley Dwelling Authority tried to eliminate the atrocious alley slums in Washington, D. C., and the Library of Congress attempted to make and distribute an adequate supply of "talking books" for the blind.

The Public Works Administration. Unlike the Works Progress Administration, which sought to revive a lagging economic system through relief expenditures whose benefits accrued directly to individuals and indirectly to industry, the Public Works Administration, created by the National Industrial Recovery Act of 1933, was not primarily concerned with creating work for the idle; its chief purpose was to stimulate business in general by reestablishing the construction industry.[12] President Roosevelt believed that a public-works program carried out by private individuals under the supervision and with the financial assistance of the government would not only provide reemployment for masons, bricklayers, steel workers, carpenters, plasterers, and plumbers but also call forth orders for building materials, which in turn would send jobless wage earners back to the mills and factories, stone miners to the quarries, and lumbermen to the forests and set in motion again freight cars and trucks laden with construction materials. Because communities were compelled to furnish a major part of the cash involved and because Director Harold L. Ickes insisted that plans be carefully drawn and honestly executed, however, projects materialized slowly. Nevertheless, the PWA proved more than did any other agency the basic value of sound economic planning. It also clearly revealed the perplexities involved in meeting a national emergency quickly.

[12] Harold L. Ickes said in 1936: "PWA is essentially a creative agency; it makes jobs, and it builds. The jobs it creates serve their purpose in reducing unemployment and stimulating industry. They speeded the country's rescue in the hour of its greatest economic crisis. The buildings it builds and the great engineering works it establishes serve their immediate purpose and remain to benefit the people of our own and succeeding generations."

Costs, Accomplishments, and Criticisms of the Relief Experiments. Altogether the costs entailed in governmental attempts to end unemployment were staggering. The national debt bounded upward with alarming rapidity. By 1936 federal appropriations for New Deal relief and public works exceeded eight and a half billion dollars. It was evident that the nation, no matter how justified the expenditures, could not continue indefinitely such a policy. While a substantial portion of the outlay went into the mere business of day-by-day existence, much was paid out for permanent social and industrial improvement. Between 1933 and 1936 the WPA alone spent of government and community money six hundred and forty million dollars on utility and institutional buildings, a hundred and eighty-seven million on water-supply projects, three hundred and eighteen million on sewage-disposal systems, eight million on garbage-disposal plants, a hundred and thirty million on hospitals and sanitariums, thirteen million on recreational projects, a hundred and fifty-five million on housing, a billion in modernizing transportation facilities on land and sea and in the air, and half a billion on educational institutions, not to mention other millions allocated through the Corps of Engineers and the Bureau of Reclamation for flood control, the completion of Boulder Dam, and initial construction on the Grand Coulee Dam. In addition it loaned two hundred million dollars to railroads for such work as the electrification of the Pennsylvania line between New York and Washington. Even more prodigal than the PWA, though often less effective, were the WPA and other spending agencies.

The material returns from the expenditures made in creating employment for the idle are difficult to measure. Obviously outright payments to the hungry in money or in kind must be charged to the nonprofitable fact that society had so ordered itself as to be unable to care for its unfortunates, industrious or indolent. But, having deserted the peaceful midnineteenth-century philosophy that only the few deserved or even were capable of enjoying the better things of life, the government seemed to have no other choice than to feed the needy. If, as some scholars assert, economics is something apart from human beings and human welfare, then perhaps there were few gains that could not have been made under the dominance of "rugged individualism." Certainly the value of some of the hurriedly inaugurated projects was more aesthetic than utilitarian; still in an eventual accounting total returns may balance well with the physical profits of many endeavors of the disordered twenties, when private industry was in full sway.

Educational institutions, libraries, hospitals, playgrounds, water and sewer systems, hydroelectric plants, irrigation works, farm-to-town roads, and a host of other long overdue social necessities of profound economic importance must be placed to the credit of the relief administration. Indirect gains such as cheaper utilities and lower financing costs in home buying were undeniably substantial. And, though unnoticed, there were many benefits that were to accrue to the nation during the second World War. Moreover, it is reasonable to suppose that aid in the period of acute need lessened the number of children destined for the rolls of the unemployables, the free medical clinics, and even the jails and penitentiaries. Yet the criticisms were valid. The relief efforts were confused, they were costly, they encouraged wandering by providing quick aid for transients, they did not solve the unemployment problem, they were shot through with politics, and they were frequently visionary. Furthermore, officials in administrative offices refused to recognize failures in work that was patently experimental; professing scientific detachment, they neglected those who had contributed to the progress of society and nurtured those who had not, as if a miracle of transformation were about to be performed.

The Question of Relief. As 1936 closed, the end of relief was not in sight. The first deficiency-appropriation bill of 1937 set aside nearly eight hundred million dollars, and in April the President requested an additional billion and a half. When December came again, however, the doleful army of the unemployed still numbered several million. It had not been dissipated when America went to war in December, 1941. In fact, assistance to individuals in need had by 1937 probably been permanently fixed upon society as a whole. The horrors of national relief in the beginning were horrors partially because relief was new. Actually there was no alternative during the depression. Every American, whatever politics or tradition or personal interest prompted him to say, knew that the basic question was not whether there would be relief but only what would be its form and extent. Everyone was aware that each must earn enough to maintain for himself and his dependents a decent mode of living as measured by an ever-changing philosophic concept and that wages must not only be compatible with prices but also bear a close relation to the number of new products appearing on the economic horizon. It was clear that all must have enough, and "enough" changes from year to year with the growth of production facilities and with advances in scientific knowledge. To expect sectional and occupational groups to forgo wants, however they may be created, in an age when consumer standards are national is to

invite perpetual demand for aid and even modifications in the government. Certainly the first half-dozen years of the New Deal made it obvious that the people must begin as never before to study their economic structure and their economic life.

Chapter 36

CONFLICT AND REACTION, *1937-1941*

The benevolence that marked the early days of the New Deal evaporated before the beginning of 1937. Political opposition stiffened even within the Democratic ranks, and industrialists began boldly to say that the logical consequences of an illogical economic program were becoming undeniably apparent. That well-defined organizations fighting viciously for advantage had sprung up, however, was ample indication that progress had been made. But, fearful that the "symptoms of prosperity" that had appeared might become "portents of disaster" because of the lessening of public interest and the growth of private opposition, the President, though he grudgingly admitted that some of the groups whose powers he had extended were at times stumbling blocks on the road to recovery, plodded ahead with courage and persistence. In his 1937 inaugural, as in the one four years earlier, he emphasized the economic problems that faced the nation. Millions of Americans, he asserted, were still without adequate means of attaining a decent standard of living. One-third of the people, he declared with some drama and much truth, were "ill-housed, ill-clad, ill-nourished." The National Resources Committee produced abundant substantiating evidence; it revealed too the startling fact that the average income of the lowest third of the population for the twelve months between June, 1935, and June, 1936, had been only four hundred and seventy-one dollars.

The Economic Relapse. A severe economic relapse that started about the middle of 1937 and lasted a full year gave critics opportunity to cry, "I told you so!" Arguments will long continue as to whether the drastic stringency demonstrated conclusively the futility of the course that was being followed or whether it only proved the inability of "business as usual" to care for all who needed work. In either case the President was partly to blame. As early as April he and his advisers had begun to issue warnings that production of durable goods was endangering recovery. The general public seriously doubted the necessity for applying brakes to any industry; projects requiring large amounts of steel and similar goods were

nevertheless sharply curtailed. Federal financial institutions joined in the campaign to check the supposed boom. By September unemployment was bounding upward, and the relief offices were flooded with men and women looking for jobs. Industry, charged the Chief Executive, had failed to absorb the working population.

Actually a part of the trouble was due to a widespread reaction against never-ending economic and social experiments. For the first time since 1933 the great mass of the people, who on the whole had silently supported the administration, began to wonder what the future held. Some were skeptical of the sincerity of officials who had said that failures when they appeared would be admitted. Others, as they observed no appreciable improvement in the lot of simple, hard-working toilers, began to feel that perhaps the merely poor deserved a part of the attention that was being given the very poor as described by the new philosophers. Basic questions arose in the minds of those who had no dollars to gain and no offices to win or keep. Labor leaders, radical college students, and men and women on relief inspired no confidence.

Congressmen, reflecting the uneasiness of many who could certainly not be called deliberate opponents of social progress, cut appropriations for relief, and the results seemed to indicate that unfortunately the flow from the pump of prosperity was yet mostly priming. The WPA, the PWA, the RFC, and other agencies were soon pouring billions of dollars into the staggering economic structure to save not only the ten million unemployed but also those with jobs from heavy losses. The desert of industrial idleness began to bloom again. Five years of remarkable progress had not been indicted, nor had the "old order" vindicated itself; but that the royal road to economic stability had not been found was obvious.[1]

The Last Phases of the New Deal. In spite of reaction and a rising demand that expenditures be reduced, President Roosevelt insisted that additional reforms were needed. Attempted purges in his party, coupled with an attack on the Supreme Court, lessened his power over Congress, but his consummate skill as a political chieftain enabled him to overcome all opposition. The programs in operation were continued, and new ones were instituted.

The Agricultural Program. Notwithstanding Secretary Wallace's declara-

[1] The Supreme Court fight, the beginning of social-security payments, the expenditures on the soldiers' bonus, and many other factors, economic and political, were involved in the new depression. The President's arguments as to the detrimental effects of the bonus were fallacious. The payments went chiefly to the poor, and the money, generally speaking, went for needed goods. True, the basis of selection was economically unsound, but on the average the errors were perhaps no greater than those of many of the spending agencies. More than that, the public debt was not increased, for payments were due in 1945 in any case.

tion before the end of his first administration that agriculture was "out of the red," agrarian problems were far from solved. Under the Domestic Allotment plan of 1936 individual farmers cooperated to whatever extent they chose, and so as the depression of 1937 deepened and prices fell, they increased their acreages and thus threatened themselves again with poverty. The third period in the agrarian reform program began with the passage on February 16 of the Agricultural Adjustment Act of 1938. The basic purposes of the legislation, though more comprehensive than in 1936, still remained production control and land improvement. The President pointed out to Congress in his message in January that the distressing cycle of surplus and scarcity must be overcome. He recommended that some democratic scheme be adopted that would so regulate plantings as always to provide an adequate food supply at prices that would maintain the agrarian and his family on a decent economic level. The only alternative, he asserted, was either to cut production costs below those of other countries, which would make slaves of rural people, or to underwrite surpluses without limit, which would bankrupt the richest treasury in the world "within a decade."

Participation in the farm program under the 1938 law, entirely voluntary, entailed adherence to strict quotas. The Secretary of Agriculture was empowered to establish annually national acreage allotments for corn, wheat, cotton, and other essential but soil-exhausting crops. Local committees in the various counties of the agricultural states in turn determined the plantings of each farmer and set up minimum amounts of soil-improvement work to be done. Everyone cooperating was entitled to "conservation" payments for his soil-building labors and, in addition, parity payments that would give him and his fellow agrarians a fair share in the national income.

In order to prevent temporary gluts in good seasons, Secretary Wallace inaugurated an ever-normal-granary plan. Surpluses, stored on the farms or in regularly designated warehouses, were to be held for release during lean years. Consumers, both urban and rural, were thus to be insured against drastic fluctuations in prices. Emergency needs of the farmers were to some extent taken care of by the provision that each might borrow from the Commodity Credit Corporation on chattel mortgages a substantial part of the parity value of his excess crops. Embarrassingly large reserves could be checked by the discontinuance of loans. Moreover, effective market quotas could be resorted to in cases of abnormal yields. Individual sales could be strictly limited by a two-thirds vote of the producers; by this means the harvests of farmers not cooperating with the AAA could be

frozen at the source. The tragedy of drought in the wheat regions was to be lessened by crop insurance. Growers were in good seasons to pay their premiums to the government in bushels of wheat and in poor years to draw out their losses in kind. Secretary Wallace was hopeful that a somewhat stable economy would replace the farmers' traditional feast and famine.

Land preservation and crop control were, however, only parts of the agrarian program. No plan for the economic rehabilitation of agriculture could succeed without consideration of the human problems involved. In February, 1937, President Roosevelt in a message to Congress called attention to the long-known fact that land in the hands of its cultivators was becoming each year more and more a myth. The storied ladder by which the farm laborer moved upward through tenancy to ownership was, as he aptly put it, becoming a treadmill. Farms (including buildings) valued at eleven billion dollars were at the time being operated by renters of one type or another. Tenancy was not limited to the barren hillsides and gullied slopes of the South. In some of the best agricultural regions of America seven of every ten farmers were nonowners; even the equity of many of those who held nominal title to their land did not exceed twenty per cent.

Through the Bankhead-Jones Farm Tenant Act of July, 1937, Congress set aside ten million dollars to be loaned at three per cent on forty-year mortgages to tenants, share croppers, and farm laborers for the purchase of their farms. Within three years annual appropriations reached forty million, and applications for loans were flooding the offices of the Farm Security Administration. But the general situation was not greatly improved so far as tenancy was concerned. Furthermore, ownership was merely a step toward agrarian economic independence. Thousands of farmers who held title to their soil could borrow money for equipment and supplies only at local banks, where interest rates were rarely less than eight per cent in advance and notes were renewable every thirty, sixty, or ninety days.

Though there was now lending machinery for relieving conditions, little was actually accomplished. Gains under the agricultural legislation of 1937 and 1938 were nevertheless in many instances encouraging. During 1939 more than forty-one million acres of land were newly seeded to alfalfa, clover, and similar soil-conserving crops, and other millions were protected to some extent against erosion. Tons of fertilizer and lime were applied to thinning fields. Ranchmen built new water tanks and reservoirs and used three million pounds of seed in reestablishing grass stands. Total farm incomes increased, and urban consumers were provided with a reasonably stable supply of food products. Agrarian problems had by no means been

solved, and the condition of farm labor had perhaps become worse; it is significant, however, that the nation when it went to war in December, 1941, possessed large stores of food and millions of acres of land whose fertility had been much improved.

The Relief Program. Few important changes were made in relief practices between 1936 and the outbreak of war. Demands by the President for increased appropriations during the depression of 1937 and the secondary recession of 1940 went unheeded, for Congress insisted that the unemployed return to private industry for their maintenance. White-collar projects of various kinds were abolished entirely, and attempts were made to restrict assistance on building projects to fifty thousand dollars each. Even so, governmental expenditures remained large and unemployment declined slowly. The Works Progress Administration (renamed the Works Projects Administration on July 1, 1939), the PWA, and other spending agencies continued active—though the President, as economic conditions grew better, came to feel that direct work relief was more desirable than pump priming because the latter failed to take care of the idle in neglected communities. Emergency-relief appropriations for the fiscal year ending June 30, 1941, amounted to a billion three hundred million dollars.

The Housing Program. During the first Roosevelt administration, despite effective reforms in the home-mortgage system, efforts to make available cheap housing for the urban poor had failed completely. Congress, seeking to "assist the several States and their political subdivisions to alleviate present and recurring unemployment and to remedy the unsafe and insanitary housing conditions and the acute shortage of decent, safe, and sanitary dwellings for families of low income, in rural or urban communities, that are injurious to health, safety, and morals of the citizens of the Nation," created by the Wagner-Steagall Housing Act of September 1, 1937, the United States Housing Authority, which both decentralized procedures and limited the role of the government to the part of advisory banker. The responsibility of initiating construction projects was placed entirely on local agencies. Funds up to ninety per cent of initial expenditures could be obtained through the USHA at the going rate of federal interest plus one-half of one per cent, repayment to be made in not more than sixty years. Before the end of 1940, thirty-eight states, the District of Columbia, Puerto Rico, and Hawaii had passed laws providing for participation in the national housing program. Costs and rental limitations, however, were always in disagreement. Some rural homes designed to rent at seventy dollars a year were erected in the South in the hope of reducing the num-

ber of miserable shacks in which four million farm families existed, yet the situation in general was little changed.

The Wage Program. Idleness, low wages, and long hours were three significant factors in the labor problem. Relief disbursements and employment on work projects lessened the number of men and women in actual need, but adverse court rulings frequently blocked efforts to better the lot of those with jobs. Not until June, 1938, was the President finally able to fix "a floor below which industrial wages [should] not fall, and a ceiling beyond which the hours of industrial labor [should] not rise." The Fair Labor Standards Act of 1938, secured only after months of pommeling Congress, established a minimum hourly wage of twenty-five cents for the first year after becoming effective, thirty cents "during the next six years from such date," and forty cents "after the expiration of seven years from such date." The work week was limited to forty-four hours during the first year from the "effective date" of the law, forty-two hours during the second year, and forty hours thereafter. Employment of children under sixteen years was, with certain exceptions, entirely prohibited. The legislation, applicable only to firms that were engaged in or were producing goods for interstate commerce, was administered by the Wage and Hour Division of the Department of Labor, and ample opportunity for appeal was guaranteed to all. Time and a half for overtime may have encouraged work for increased pay more than it discouraged the long working week.

Though not so vital as at first believed, the new regulations were basically important, especially to wage earners who did not belong to strong unions. Seven hundred thousand employees were benefited when in 1939 the minimum wage payments rose from twenty-five to thirty cents, and more than twelve and a half million profited when the forty-hour week became effective the next year. No provisions were made for aiding the handicapped. Furthermore, thousands of workers without adequate means of expressing their demands, notably in small towns, were overlooked.

Minor Programs. Reforms in the income-tax law, the establishment of a Civil Aeronautics Authority, and the passage of reasonably satisfactory legislation concerning purity in food and drugs sold in interstate commerce, while not of great economic moment, were of real value. The President's attempt to reorganize administrative agencies in line with the government's new role as guardian of the people as individuals only partially succeeded, and his efforts to take from the Supreme Court its absolute power to destroy every legislative enactment of the New Deal failed, though in the end victory was his. The TVA, practically an agrarian and urban-village laboratory, continued its remarkable progress. Dams were

built; something was done toward developing low-cost farm machinery; community quick-freezing refrigerating stations were constructed; further improvements were made in fertilizers; new natural resources were discovered; and, most outstanding of all, electric lines were spread each year to more and more farms.

State Programs. Many states had enacted progressive laws long before the New Deal. Additional measures were put into force throughout the thirties. The social-security legislation that President Roosevelt pushed through Congress was for the most part quickly approved by state legislatures, and some local programs were launched that ranged from Upton Sinclair's "End Poverty in California" to the legal admonition "Eat More Cheese" in Wisconsin. Price control and monopoly regulations were especially emphasized. Although distribution costs were obviously lowered under combination, heavy attacks were made on chain stores in many places. Levies intended as destructive rather than regulatory were imposed in some states, and a national bill was proposed by Congressman Wright Patman of Texas.

The Rise of Labor to Power. Having recovered to some extent from the long, grim years of want that had marked the early thirties, labor by 1936 had begun to express itself militantly. Returning prosperity was not the dominating factor in its rise to power. Leaders were less firmly tied to the traditions of what had been called "law and order" than at any other period in the history of the nation; followers were more easily swayed than ever before because they could without difficulty be brought together and subjected to mass argument as well as mass contagion. The relief program in general helped too, for it provided to a limited extent freedom from hunger, which in hard times had always curbed the activities of the wage earners. In addition, cultural and educational institutions had had their influence, and, despite the fact that the American Federation of Labor refused to be convinced, science and invention had leveled distinctions in the laboring world. The ditchdigger, oft-used example of the ignorant and unskilled, had become an engineer, handling as complicated a piece of machinery as his fellows in the giant factories. Furthermore, when day was done, he saw, read, heard, and understood in part at least the news of the world about him; he knew something of the hopes and aspirations—social, cultural, and economic—of his fellow men. There were, of course, still those among the workers who toiled in as abject blindness as Edwin Markham's "Man with the Hoe," but even they were struggling upward.

Differences of opinion as to whether the way was a way of progress were not unusual, yet it was clear that America had passed another stage

in its economic development. Laborers, long resentful of what they considered oppressions, were saying, as the agrarians had said in 1896, "We defy them." The forces of labor, however, unlike those of agriculture in another generation, were possessed of a boundless reservoir of power in the great and growing city population. The era of protest was over, and the era of conflict on a common field was just beginning.

The National Labor Relations Board. Labor was assisted in its fight by a sympathetic government. The National Labor Relations Act, passed two months after the Supreme Court declared the NIRA unconstitutional in 1935, provided for a National Labor Relations Board established on a permanent and independent basis. It guaranteed labor not only the right to unionize without interference but the right to bargain as a unit as well. In cases of rival unions in the same shop the NLRB was empowered to conduct, when requested, elections to determine by majority vote the bargaining group. It was authorized too to investigate violations of the law by employers, and its findings were "conclusive." It could issue "cease and desist" orders against any corporation that in its opinion was imposing on labor, and it could petition "the respective circuit courts of appeal" for enforcement. The board in all cases was prosecutor, judge, and jury combined.

Employers in many instances felt that the new legislation was unjust. Refusing to admit that the day of personal agreement—if it had ever really existed at all—was far in the past, they complained that their rights were being denied them. And indeed they were severely restricted. They could not "interfere with, restrain, or coerce employees" in their unionization activities; they could not "dominate or interfere with the formation or administration of any labor organization or contribute financial or other support to it"; they could not "discriminate in regard to hire or tenure of employment or any term or condition of employment to encourage or discourage membership in any labor organization"; they could not "discharge or otherwise discriminate against an employee" because he had filed charges or given testimony against them; and they could not refuse "to bargain collectively" with the majority unit representing the workers.

The scales of justice, said some, had been tipped far on the side of labor. It is possible, however, that the fundamental question was not one of giving advantage or disadvantage to any party but one of ordering human relationships in keeping with the stage of economic and social development that had been reached. Troublesome problems of adjustment and perhaps even modifications in the law were to be expected before

the people and the courts freely recognized the fact that in a predominantly industrial society the rights of many individuals are protected only with the help of government.

The CIO. The gains made in the years of the New Deal stimulated demands for changes within the labor structure itself. Revolt welled up in the ranks of the American Federation of Labor, and when William Green refused to desert the craft basis on which the federation had been founded in the eighties, John L. Lewis and others in open defiance began in 1935 to press for action through what they designated the Committee for Industrial Organization. Operating on the theory that only by concerted efforts of all workmen, skilled and unskilled alike, could labor win its conflicts in a world of mass production, the committee moved vigorously forward. Already boasting a following of nearly a million members in the United Mine Workers, the International Ladies Garment Workers, and the Amalgamated Clothing Workers, it turned with determination to the steel mills and formed the Steel Workers Organizing Committee, shortened quickly to the SWOC. It took over the United Automobile Workers, founded unions in the rubber, aluminum, oil, shoe, electrical-goods, and other industries, and gained a foothold in the transport and shipping organizations, especially among the longshoremen. It made a beginning among the white-collar workers with the accession of the American Newspaper Guild, and through the Cannery, Agricultural, Packing and Allied Workers it launched a mild campaign for the unionization of agricultural laborers. Late in 1938 the CIO, its leaders by this time expelled from the A. F. of L., began its independent career as the Congress of Industrial Organizations with a membership of somewhere between three and four million people.

Labor versus Industry. The peace that poverty had brought to industry in the early thirties had begun to disappear by the middle of the decade. Turmoil scarcely less violent than that which had marked the effort of railway workers in the seventies to protest their conditions on a nation-wide scale arose as labor began in the middle thirties to assert its right to organize and fight on an equal basis with the employers in great industrial plants. In November, 1936, the United Automobile Workers, member of the CIO, announced a strike against the General Motors Corporation. That the men violated the ancient idea of private property by taking possession by the French "sit-down" method of the machines they operated was less significant for the future than the fact that a contest between capital and labor in a single city could in its economic aspects reach out over America and still the activities of thousands of people not directly

involved. The first problem was settled temporarily by the federal courts;[2] the second continues more perplexing as time goes on. Important too was Governor Frank Murphy's refusal in Michigan to call out the militia, most powerful instrument (with the possible exception of court injunctions) previously available to employers in their struggles with their employees.[3] By the end of 1937 the automobile workers had won recognition of their union from General Motors and from most major car manufacturers other than Henry Ford.

In the meantime, on March 1, 1937, the United States Steel Corporation peacefully agreed to raise wages, to shorten hours, and to recognize the right of collective bargaining. A handful of smaller producers known as "Little Steel" refused to follow suit. Although it did not possess a majority of the workers in any of the plants, the militant (and some said Communist-influenced) SWOC in May led a strike against the defiant companies. In May and June more than seventy thousand men walked out at Inland Steel, Youngstown Sheet and Tube, Republic Steel, and Bethlehem Steel. Intimidation and brutality, culminating in the murder of ten workmen in South Chicago on Memorial Day, characterized the sordid affair. The strike on the whole was not only a failure but also a demonstration of the lack of appreciation on the part of some industrial leaders that human beings and not material progress as it had once been understood were the chief concern of the nation. Denunciation by the NLRB and persistent efforts by labor leaders eventually led all the corporations to recognize the union.

Conflict on the labor front, though it lessened in 1938, grew more intense as the decade came to an end. Henry Ford, who had fought bitterly and not always bloodlessly against collective bargaining, capitulated completely in 1941. Over the nation there were strikes and rumors of strikes, and the questions at issue were at times far from clear. More than that, economic interdependence in a land that had become overwhelmingly urban made everyone a participant in the controversies that arose whether he comprehended them or not. The question of politics too was involved. It is true that the cry of communism was sometimes raised for private and personal reasons. But Communists did appear in the labor ranks, and their power was real. Instead of denying their existence, union leaders might have done

[2] In 1939 the Supreme Court in the case of the *NLRB* v. *Fansteel Metallurgical Corporation* and in other instances upheld the decisions of the lower courts that the workers had unlawfully seized property. Actually it mattered little how the courts ruled, because a modern plant cannot successfully operate under strike conditions.

[3] Governor George H. Earle of Pennsylvania likewise refused to send militia to protect a battery concern in Philadelphia during a labor conflict at the plant.

well to point out that it was the injustices in the economic system that furnished sustenance for what some chose to call radical philosophies. Both capital and labor frequently forgot that the main task before them was to find a way to industrial peace and not merely a means of pommeling each other. Labor, as capital had done in its day of dominance, neglected to guard against the evils that frequently accompany growth. Moreover, it began on a large scale practices that it had bitterly condemned in other days. It exercised monopoly and interfered with local and individual democracy while decrying such conduct elsewhere, and its political contributions and actions struck a familiar chord in the memory of politics.

Labor versus Agriculture. Except for commercial farming, the problem of the tenant farmer was not so much one of exploitation as one of general poverty. Throughout the South landlord and tenant too often lived in abject misery. Renters on worn-out corn patches and exhausted cotton fields were especial objects of pity. Their ambitions had been blunted, but they were not the animals that some playgoers and novel readers have been made to believe. They needed only a chance to work where they could see some fruits from their toil. They needed only to own something more than the offals of industrialism. But restoration was more than a material matter; land ownership and loans for improvements as provided by the Bankhead-Jones Farm Tenant Act could not release them altogether from the burdensome heritage of the past.

Another group that needed help consisted of workers who toiled for others on large plantations for scarcely more than a pittance. Their efforts to better themselves by unionization were bitterly opposed. Aided little by the agricultural program of the New Deal, some of them united with the share croppers in forming in July, 1934, the Southern Tenant Farmers' Union; others joined the experiments in community farming that were growing up.

A third group of agrarians whose lot was scarcely tolerable was made up of those individuals, who, driven from the cotton fields by machinery and from the "dust bowl" by the raging winds, turned to the commercial vegetable farms and orchards that were appearing, especially in California, Washington, Oregon, Ohio, and Michigan. Homeless and poor beyond description, thousands of "Okies" and "Arkies" poured across the Rockies into the Imperial valley. Throughout depression-ridden California they were hounded from place to place, and often even the miserable shacks that they built were ruthlessly destroyed. Eventually organized by the CIO, they continued the fight already begun by Mexican and other farm laborers.

Labor versus Labor. Industrial conflicts in the thirties were not limited to those between capital and labor. It has been estimated that only sixteen per cent of the total man-days of idleness due to the disturbances of 1937 resulted from protests against inadequate wages and excessive hours. Many of the strikes were for the right to organize and bargain collectively. A substantial number, however, stemmed from bitter rivalry between labor leaders. There were basic justifications of the philosophies underlying both the CIO and the A. F. of L., yet in the campaign for membership neither organization stuck closely to its field. Occasionally John L. Lewis and William Green and their respective partisans treated the nation to as regrettable a squabble as had ever occurred among the expanding states of the world as to which should civilize the benighted. Over the land workmen refused not only to labor on the same job with rival unionists but also to handle any product made by them. Redwood from the Pacific coast, where there was a jurisdictional dispute, could not be used in house construction in the East, for instance, and production of kitchen ranges at the plant of Roberts and Mander near Philadelphia stopped for many months because certain parts were made by opposing unions. Everywhere the controversy became more intense month after month, and others besides the "Tories" of whom the President was prone to speak grew weary of the quarrel. All efforts at conciliation, even though strongly urged by the White House, failed. The situation was not an unnatural one, but it gave opportunity to critics to charge labor with selfishness. It led also to petty bickerings that kept some unions from joining either side and eventually drove Lewis from the presidency of the CIO. With the attack on Pearl Harbor in December, 1941, personal and organizational conflicts to a large extent disappeared.

The Gains of Labor. The progress of the workingman between 1933 and the opening of the decade of the forties was more real than that in any comparable period in American history. Child labor was restricted, hours were shortened, wages were increased, the right to organize and bargain collectively was generally accepted, "yellow dog" contracts and easily obtained court injunctions were outlawed, machinery was set up to guarantee strict observance of the reform laws, mediation boards were provided, and the practice of using military force in industrial disputes was for the most part abandoned. Unions moved from a defensive to an offensive position, with a powerful governmental agency (the NLRB) to watch over their welfare and guard their members. Union treasuries became full enough to compete with those of Wall Street in donations to political campaign chests. But many questions remained unanswered, the

army of the unemployed continued far too large, and both capital and labor were still interested primarily only in profits and wages. The reforms of the thirties may, in fact, prove of permanent significance chiefly because they equalized the power of labor and capital, long industrial antagonists. They brought no peace to a perplexed society; indeed, the confusion, as is usually true in periods of rapid change, worsened.

Labor staggered under its new responsibilities and in too many cases fell into the hands of domineering, dishonest, and "racketeering" leadership. Excessive fees were charged for admission to the unions, and dues, frequently heavy, were collected each month without regard to the income of the individual workman. Absurdities not exceeded by those of capital at its worst arose in the fight of labor for its rights. Most of these could have been avoided. A majority of union members would themselves perhaps have welcomed some restraints upon the excesses that appeared.

The President and others, balancing the sins of the nineteenth century against those of the twentieth, declared that the difficulties were merely incident to the growing pains of a newly empowered social group. That was a logical analysis but no solution to a current problem. Past evils bear no relation to successful adjustments of the controversies between employer and employee; demands on the part of either are, however, intimately connected with the welfare of society as a whole. To agree that in spite of individual exceptions neither capital nor labor wants more than simple justice might do much toward making understandings possible in the age-old conflict in the workshop. No riddle in all the vast field of economics deserves more judicious study, yet none has been more colored with emotion.

Poverty and Panaceas. Unfortunately a large number of Americans received little assistance other than relief from the New Deal and derived few benefits from unionization. Particularly was this true in small towns and in rural districts. Village workers gained practically nothing from the floor under wages and the ceiling over hours; tenants and share croppers profited only slightly from terracing, ditching, and conserving soil; old couples because they had a minimum of their economic wants were in many places denied state old-age pensions. These rural and small-town dwellers, most heart-rending of the poor, inspired the grandiose plans of such men as Huey Long and Dr. Francis E. Townsend. Long, to himself a Robin Hood in the Sherwood Forest of modern privilege, proposed a capital levy that would restrict inheritances, annual incomes, and total fortunes. He fathered too the Share-Our-Wealth movement, by which every family was to receive not less than five thousand dollars so that it "would

start life again with homestead possessions of at least a home and the comforts needed for a home, including such things as a radio and an automobile." He played his strange part against a backdrop of poverty that he never let his followers forget. He said to a political gathering in Louisiana in the late twenties: "And it is here under this oak where Evangeline waited for her lover, Gabriel. This oak is immortal, but Evangeline is not the only one who waited here in disappointment. Where are the schools, the roads and highways, the institutions for the disabled you sent your money to build? Evangeline's tears lasted through one lifetime—yours through generations." He pictured in his autobiography what the situation in the nation would be when all had enough:

> Then no tear dimmed eyes of a small child will be lifted into the saddened face of a father or mother unable to give it the necessities required by its soul and body for life; then the powerful will be rebuked in the sight of man for holding that which they cannot consume, but which is craved to sustain humanity; the food of the land will feed, the raiment clothe, and the houses shelter all the people; the powerful will be elated by the well being of all, rather than through their greed.
>
> Then, those of us who have pursued that phantom of Jefferson, Jackson, Webster, Theodore Roosevelt and Bryan may hear wafted from their lips in Valhalla: EVERY MAN A KING.[4]

Townsend, sixty-seven-year-old California physician who had for thirty years "lived the hard life of a country doctor in a frontier town" and had lost his job and his savings during the depression, drew an army of the aged after him by his promise of monthly payments of two hundred dollars each to all persons sixty years of age or older. The plan, financed by a two-per-cent tax on all transactions, would have cost between twenty and thirty billion dollars annually, but in spite of its impossibilities it appealed more strongly to many people than did some of the official schemes for helping the needy, who, said the philosophers, had been "caught in a web of circumstances over which they had no control." Upton Sinclair in California with his EPIC and the Reverend Charles C. Coughlin of Detroit with his National Union for Social Justice were other dreamers in the world of make-believe wealth. The real jest in the national circus was that no one was able to present a workable solution of the problem of hunger in a land of riches.

The Balance Sheet on the Eve of War. By 1941 the New Deal had slowed down to the pace of a mere progressive administration. The "brain trust" had departed long since from Washington, laws relating to social

[4] *Every Man a King: The Autobiography of Huey P. Long* (New Orleans: National Book Company, 1933), p. 340.

and economic welfare had been put into force, the fervor of the reformers had waned, and reaction had brought controversy and recrimination. Whatever the reasons, conditions were obviously better than they had been in 1933. The wheels of the factories had begun to turn, salaries and wages had risen appreciably, payrolls had grown, the national income had almost doubled, workmen had been helped, investors had been safeguarded, home owners had been relieved of an ever present fear of foreclosure, hard-pressed industries had been aided, the needy had been fed and clothed, and cultural, recreational, and educational facilities had been improved. In addition, several huge dams had been completed, and in some places rural electrification projects were functioning effectively. In Mississippi, Alabama, Tennessee, and Georgia one farm home in every seven was electrified as compared with one in every thirty in 1934. Ninety-seven and nine-tenths per cent of all depositors in failed banks were protected by insurance. Borrowers were paying reasonable interest on their notes, and holders of mortgages and lenders of capital were receiving a far larger total sum than in 1933. The accomplishments were impressive, especially when enumerated by the President.

There were, nevertheless, disturbing thoughts in the minds of many individuals. The public debt had been vastly increased, full employment had not been realized, a staggering fixed cost for maintenance of a far-flung bureaucracy had been contracted, and privileges abolished in some quarters had been created in others. Most significant of all, there was no absolute proof that recovery had been directly induced by the expensive experiments that had been undertaken—Republicans argued that the return to prosperity had actually been delayed. Besides, substantial groups in society had been completely neglected. Much comment arose concerning the plight of the "little" business man. But there were other "little" people who faced more imminent dangers than he. Growing tax levies as they reached down the economic scale threatened with destruction teachers in public schools and colleges and universities, scientists in laboratories, creative machinists in their shops, and scholars and experimenters in various other fields. Upon them rested to a greater degree than was recognized the progress of society. These men and women, having no choice if they wanted really to serve well but to buy out of their own meager purses expensive books and training equipment and other needed services and supplies, no social security unless they spent a third or more of their incomes on life insurance, and no limit on their hours or floors under their wages or power to bargain with the society that employed them, were of the really forgotten.

Whatever the course of events at home, it was, sadly enough, the coming of war over the earth that started the wheels of industry actually turning and dried up the army of the unemployed. Although many people were convinced that President Roosevelt had scuttled the London Economic Congress by concentrating his attention on domestic affairs, there was on the part of the administration some realization of the fact that the economic structure had become global in character. Secretary of State Cordell Hull, versed in the politics and the language of Andrew Jackson, was as certain as had been Democratic Speaker John G. Carlisle in the eighties that international commerce meant not only wealth but also peace. He established through the use of reciprocal trade treaties favorable commercial connections with many nations, encouraging friendly relations with England, Canada, and Latin America in particular. But the peace in Europe and in the Pacific was an uneasy peace, and appeasement of the rising dictators in the thirties only hurried war. To understand why the United States became the bulwark of opposition to the aggressors in the tragic years of the forties, it is necessary to examine the ever-strengthening threads that for three decades at least had been weaving the nation into an increasingly dominant pattern in the web of the world.

Chapter 37

AMERICA'S GROWTH TO DOMINANCE IN WORLD ECONOMY

The opening of the twentieth century brought to the people of the United States not only faint beginnings of new economic and social concepts at home but also new attitudes and a new relation to the world. Individuals and groups of individuals were powerful factors in shaping the policies of the nation in foreign affairs, but urbanization and material progress were the basic determinants in spreading America to the ends of the earth. While missionaries, humanitarians, educators, nationalists, great bankers and industrialists, and avid military philosophers led the vanguard of expansionists, it was the development of far-flung transportation and communications systems and the demand on the part of ordinary citizens for what had once been regarded as luxuries that, as the years went on, came to fix the fact though perhaps not the form of imperialism. Rubber and silk and oil were only three of many significant items that knit the world together in need and drove it apart in rivalry. The wealth that made America urban and industrial and that in turn created new wealth was bound, whoever the political players and whatever the political plays on the international stage, to be an ever more important element in global economy. American capital, in fact, soon began an exodus to the oil fields, to the sugar, rubber, and pineapple plantations, and to the money-hungry regions over the world; investments in foreign enterprises rose from about half a billion dollars in 1900 to three billion or more in 1914.

Expansion to the First World War. What John Hay chose to call "the splendid little war" with Spain in 1898 launched the nation on a vigorous course. The question of expansion became a major issue in the campaign of 1900, and William Jennings Bryan, bitter opponent of the outward spread of the United States, was decisively defeated. The Republican party, riding a wave of business prosperity, became the advocate of a larger economic horizon. The protest of intellectuals was drowned by the clamor of industrialists and financiers with a majority of the people at their backs, and so the nation pressed on beyond its traditional boundaries. But the American-

dominated islands that dotted the oceans after 1900 made up less a colonial empire than a loose colonial system. No single administrative office was established, and control ranged from absolute possession to openly recognized economic and military supervision. Though little attention was paid to the smaller acquisitions, strategic places were carefully watched. Cuba was of particular concern, and, despite the Teller resolution, the Platt amendment of 1902 guaranteed that the island under freedom would continue to be tied in many ways to its liberator. Debts in excess of revenues could not be contracted, the right of intervention was admitted, the reforms of the occupying forces were approved, and two coaling stations for the navy were to be sold or leased to the United States. Thus the owners of sugar plantations were protected, commercial men who were dreaming of an Isthmian canal were safeguarded, and naval strategists were pleased.

As the expansionists of "larger vision" swept over the Caribbean, force was sometimes necessary in the maintenance of peace. Marines were landed in Cuba in 1906, in 1912, and in 1917. In the meantime the United Fruit Company and subsidiaries of such giant industrial concerns as Bethlehem Steel consolidated their positions while the "leathernecks" maintained order. Utilities, mining, sugar, tobacco, and railroad corporations also profited. No one realized more keenly the changes that had come than the Cuban farmer. Under Spain he had in general shaped his own miserable material existence; free, he became before long an insignificant pawn in a vast commercial and financial venture that was directed by business men in New York and elsewhere.

Puerto Ricans too were caught in the spreading web of American economy. The island, annexed outright in 1898 and awarded territorial status in 1917, gained much from the vast expenditures of the United States on internal improvements. The growth of huge sugar and tobacco plantations quickly stripped the natives of their land, however, and made them as agrarian laborers subject to the whims of American markets for those two products. Since neither Cuba nor Puerto Rico could provide a much-needed harbor, national interest shifted to the neighboring Danish West Indies. Rumors during 1917 that Germany was negotiating with Denmark brought quick purchase for twenty-five million dollars. The price was excessive, and the islands, renamed the Virgin Islands, have, except as a financial burden, been of little importance. They lay, however, within the compass of the "canal policy" that was growing up and were therefore significant at the time.

The Philippines also, though far from the Caribbean, were of concern in these days before the first World War. But the dream of the imperial-

ists that their possession would make of the Pacific an American lake never materialized, and the hopes of many for easy wealth in the distant islands were for the most part doomed to disappointment. A native insurrection dragged on until 1902, taking in taxes from the purses of the American people millions of dollars. Roads and schools and other improvements too were costly. Trade showed little growth, and native products, especially sugar, competed with home production. Moreover, the islanders, clever at the game of politics, persistently demanded independence both in governmental and in economic affairs. Withdrawal of the United States "as soon as a stable government can be established therein," as provided by the Jones Act of 1916, was delayed by the war and forgotten for many years after Versailles.

Constitutional questions were entangled with the question of expansion. The domestic market for tobacco and sugar in particular could easily be disrupted by the great plantations on the islands, especially in the Caribbean, that had fallen under the flag of the United States. If the warships and the diplomatic servants carried the Constitution beyond continental boundaries, there could be losses as well as gains, for that would mean additional competitors in several economic fields. In *Downes* v. *Bidwell*[1] the Supreme Court ruled that Puerto Rico was "a territory appurtenant and belonging to the United States, but not a part of the United States within the revenue clauses of the Constitution." Republican business men, mentors of protection, were thus able to move over the world territorially for whatever profit could be obtained while protecting their interests at home through restraining tariff walls.

The Panama Canal. The dream of tying the Atlantic and the Pacific together by means of a canal through the isthmus that connects the North and South American continents dominated the policy of the United States in the Caribbean. The commercial advantages of such a waterway had long been apparent, and the military value had been thrown into bold relief by the journey of the *Oregon* around the Horn in 1898 to join the fleet that bottled up the Spaniards in Santiago Bay. Many factors, however, delayed the execution of the great project. The hampering restrictions concerning control of fortifications as agreed to in the old Clayton-Bulwer treaty between the United States and England in 1850 were abrogated by the second Hay-Pauncefote agreement of 1901. But other difficulties remained. Though the nation had commonly accepted a Nicaraguan route as the most desirable as early at least as the middle of the nineteenth century, there was bitter controversy as to the location of the canal. The speculator-owners of

[1] 182 U. S. 244, 1901.

the bankrupt French Panama Company, which had started digging across Panama several years before and was now anxious to dispose of what many believed was its worthless claims for a hundred and nine million dollars, began a political campaign in Washington to convince authorities that the De Lesseps route was the best one. Approval by the Walker Commission, appointed by Congress, and authorization in the House of Representatives on January 2, 1902, by a vote of three hundred and eight to two for beginning construction through Nicaragua hurried Philippe Bunau-Varilla and William Nelson Cromwell to Washington to sell the rights of the New Panama Canal Company, successor to the old French interests, for forty million dollars before they expired completely. Senator John T. Morgan of Alabama, supported by Henry Watterson, editor of the Louisville *Courier-Journal,* and others, made a valorous attack on the "gray wolves" that were lusting for profit, but he was defeated. President Roosevelt came out for Panama, the Walker Commission reversed its opinion of a few months before, and in June the Senate passed the Spooner bill approving—with various provisos—immediate construction.

Before work could be undertaken on the Panama route, said Congress, perpetual control of a six-mile strip of land from sea to sea had to be secured from Colombia. Negotiations moved slowly. On January 22, 1903, however, the desired privilege was obtained through the Hay-Herran treaty, whereby the United States agreed to pay ten million dollars and, beginning nine years after the exchange of ratifications, an annual sum of two hundred and fifty thousand dollars in addition. The Colombian senate was not impressed. Its members cast a negative vote and went home, and all the name calling that President Roosevelt could muster could not bring them back. But it was not to be expected that the aggressive "Teddy," backed by a nation whose new position in the world made some means of easy passage between the Atlantic and the Pacific necessary for both economic and military reasons, would be long put off. Exactly what happened is not wholly clear. A revolution soon broke out in the province of Panama, and American ships, conveniently near at hand, prevented its suppression by Colombian troops. The new Republic of Panama was quickly recognized. Bunau-Varilla, now diplomat as well as politician and business man, signed with Secretary Hay a treaty giving to the United States absolute control of a ten-mile zone from ocean to ocean for the same price that had been offered to Colombia. President Roosevelt later declared, "I took Panama." Whoever was responsible, the canal, though not a thoroughly successful venture financially, has been an important factor in the rise of the United States to world economic dominance.

Dollar Diplomacy. The proposed waterway bound not only the Republic of Panama but also every other country in the region to the apron strings of the United States. Interference in the affairs of the small nations to the southward had long been an established fact, and it took on in the early years of the twentieth century an aspect of permanence as the canal policy began to take shape. Although protection was obviously necessary, many individuals began to suspect that the defending forces were becoming mere guardians of American interests. There was some truth in the accusation, yet intervention in the Caribbean was closely connected with the expansion of the nation elsewhere. Enjoyment of the economic fruits of the earth by Americans was in part dependent on national safety, and national safety was to many impossible without peace and order and stability in the western world. The Chief Executive, in keeping with what has sometimes been called his corollary of the Monroe Doctrine, acted vigorously in the Caribbean. In 1905 he took over by agreement the financial affairs of the Dominican Republic. While warships patrolled Dominican waters and marines patrolled the streets of Santo Domingo, an American collector straightened out its tangled finances and paid its foreign debts. The southern neighbors of the United States were alarmed, and the actions of William Howard Taft, successor to Roosevelt, gave them cause for further anxiety.

President Taft, albeit he suffered the brunt of the criticisms of the opponents of "dollar diplomacy," merely followed the course of events. Under his administration American capital pushed southward. Such names as Kuhn, Loeb and Company, the National City Bank, Brown Brothers, and J. and W. Seligman became familiar in the fiscal affairs of many of the countries. Interest alternated between the Caribbean islands and the Central-American states and in 1911 swung westward to Magdalena Bay in Lower California.[2] Interventions, treaties, and monetary agreements made up the accepted order. Even the "good neighbor" policy of Woodrow Wilson when he came to the presidency—though he denied the spirit of "dollar diplomacy"—perpetuated in many instances financial penetration. The Bryan-Chamorro treaty with Nicaragua in 1916, which granted the right to construct a canal across the state, included a ninety-nine-year lease on

[2] Rumors spread that a Japanese fishing company was seeking to lease from Mexico a tract of land on the bay that, if transformed into a naval base, would break the direct relation of the Pacific coast with the Panama Canal. The episode brought forth the Lodge corollary to the Monroe Doctrine, which was that "when any harbor or other place in the American continents is so situated that the occupation thereof for naval or military purposes might threaten the communications or the safety of the United States, the Government of the United States could not see without grave concern the possession of such harbor or other place by any corporation or association which has such a relation to another Government, not American, as to give that Government practical power of control for national purposes."

the Great Corn and Little Corn Islands and permission to erect a naval base on the Gulf of Fonseca. Moreover, the marines stayed on. Military forces were used in other places also. In Haiti and in the Dominican Republic, for instance, soldiers of the United States kept peace while civilians supervised the building of roads, the establishment of schools, and the financing of foreign and domestic debts. If necessary, constitutions ready-made in Washington were forced on the people.

The primary motive behind what has been called the Panama or canal policy in the Caribbean and Central America was not a desire on the part of the government either to protect greedy investors or to encourage exploitation. That both occurred does not obscure the fact that since the nation was rapidly moving into a position of economic dominance in the world, new attitudes and practices were necessary. Officials sometimes gropingly sought a way out of their difficulties, and, as in labor-capital controversies at home, they too often, in the absence of anything else, used the police power as a solvent.

Mexico. Sprawling Mexico was caught up too in the swirl of world developments and canal policy. The restless forces of discontent that had long been welling up as the land was alienated by the ruling clique to European and American investors overthrew in 1911 Porfirio Diaz, uncompromising dictator for three decades. Taft, deeply disturbed by the inability of the Mexicans to maintain political stability, passed the problem to his successor on March 4, 1913, with evident relief. President Wilson was especially anxious to establish friendly relations with Mexico, which, he told Congress, "lies at last where all the world looks on." He earnestly wished for good government in the disordered country, for in good government alone were there possibilities of peace and happy relationships. He wanted to emancipate the people of all Latin America from outside interests that through "concessions" had taken their wealth and were "apt to dominate their domestic affairs . . . and . . . to become intolerable." He was convinced that the growth of the United States in the over-all economic structure of the Americas must rest on the principle of self-development, uninfluenced by purely personal monetary considerations. "It is a very perilous thing," he declared, "to determine the foreign policy of a nation in terms of material interests."

American capitalists, while they hoped that the President was merely being the professor, had reason to be alarmed. Since 1900 their investments in Mexico had jumped from some two hundred million dollars to a billion or more; they owned, estimated a congressional committee, two-thirds of the railroads, seventy-eight per cent of the mines, seventy-two per cent of

the smelters, fifty per cent of the oil, and sixty-eight per cent of the rubber plantations in the country. Any radical departures from the practices of the past were bound to bring heavy losses.

For the most part Wilson's idealistic dream concerning Mexico was realized chiefly only as a guide for the future. Conflict over the recognition of Victoriano Huerta, who supplanted President Francisco I. Madero in 1913; the occupation of Vera Cruz in April, 1914; the "A.B.C." (Argentine, Brazil, and Chile) conference to work out a settlement of the perplexing situation; and Pancho Villa's challenge to Venustiano Carranza (Wilson-sponsored presidential candidate) made for perpetual turmoil. Villa's raids across the border brought public clamor at home for intervention both by those who felt that an irresponsible bandit was making a travesty of national honor and by those who feared that their property was being endangered. The President under pressure from many sides mobilized the militia along the Rio Grande and sent General John J. Pershing in search of Villa. After nine months the troops, without the bandit, were recalled because the war clouds of Europe were rolling ever closer across the Atlantic. In 1917 a Mexican constitution was promulgated that struck deeply at the privileges of the church and of foreign property holders. But in spite of many provocations President Wilson continued his tolerant course, and his actions formed the foundation stones upon which eventually a real effort for peace in the Americas under the leadership of the United States could be made.

The Far East. The acquisition of the Philippines in 1898 was in the opinion of many people a symbol of rising American dominance in the Pacific. England, France, Germany, Russia, and Japan, however, were already dividing unhappy China into spheres of influence for their own economic purposes. The United States could not for many reasons join in the greedy absorption of peaceful territory, yet she was obliged to take some steps toward protecting her long-established trade in eastern waters, now guarded by the Philippines. Under circumstances faintly resembling those of 1823 when the Monroe Doctrine was announced, Secretary of State John Hay inaugurated the policy of the "open door" in China by asking in a circular letter of September 6, 1899, that all powers forswear monopolistic economic ambitions.

Hay's initial hope of protecting the trade of China soon by force of circumstances came to embrace the defense of the sovereignty of the distressed empire. In the summer of 1900 fanatical bands of Chinese soldiers, determined to drive foreigners from their land, ravaged the northern provinces and besieged the legations of the western powers in Peking in

what is known as the Boxer Rebellion. An interallied military expedition, including American and Japanese troops, lifted the siege of the city. Unfortunately there was the possibility that the incident might offer opportunity for the division of China. Again Secretary Hay appealed to the nations that were struggling not only for the trade of the Far East but for financial concessions as well. In a circular letter of July 3 he declared that the United States was seeking "a solution which may bring about permanent safety and peace to China, preserve Chinese territorial and administrative entity, protect all rights guaranteed to friendly powers by treaty and international law, and safeguard for the world the principle of equal and impartial trade with all parts of the Chinese Empire."

The open-door policy was more idealistic than real. It involved the United States in the embroilments of Europe both in the Far East and on the continent, and, since there was never a willingness to back it with arms, it pledged the people to a task they could not accomplish. Until the door swung completely to several years later, however, America was an active though weakening influence in the defense of China as one power after another challenged the uneasy peace that her moral cloak sought to maintain. With the succession of treaties and diplomatic agreements in the early years of the twentieth century, the economic grasp of the various competing nations became more and more powerful. Russia and Japan were brought into a rivalry that flared into war in 1904. The Treaty of Portsmouth (New Hampshire), which President Theodore Roosevelt succeeded in bringing about in 1905, did not allay the jealousies of the two belligerents; it did mark the beginning of unfriendly relations between Japan and the United States.

An attempt by Philander C. Knox, Taft's Secretary of State, to help China free herself from the trammels of foreign railway concessions through monetary assistance in the purchase of foreign holdings and the construction of new roads came to naught. But American bankers—until checked by President Wilson—participated with official approval in the loans for economic development. Their investments on the eve of the first World War did not amount to more than fifty or sixty million dollars, but the material interests of the nation in the Far East in general were rapidly becoming essential in American industrial progress at home. It is interesting to note too that with war flaming in Europe and trouble brewing along the northern border of Mexico, Japan was rapidly destroying the fiction of the open door; in 1915 she forced China to accept the notorious "Twenty-one Demands," and two years later she jockeyed the United States into recognizing in part her "special interests" on the mainland.

International Economic Aspects of the First World War. The great conflict that raged between 1914 and 1918 brought little less than a revolution in world economic relations. When the guns began to fire, America was without a doubt in the lead as an industrial producer. When they ceased, she was much more than that, for the conquering powers, so far as Europe was concerned, were indebted to her in vast sums, and both victor and vanquished were dependent on her to rebuild their shattered states and feed their hungry. She had come to dominate the earth economically, and the responsibilities and dangers involved boded no good for a people who had long been isolationist in sentiment and provincial in outlook.

European War Purchases. Usually the outbreak of war is preceded by heavy though cautious selling on the stock exchanges, by increasing interest rates, by mounting grain prices (particularly of wheat), and by declining industrial output other than fighting equipment. But in the months before August, 1914, discount rates had been reduced everywhere, the United States had bought large quantities of foreign merchandise, and demand loans in New York as late as five days before the declaration of hostilities had been made at two per cent. The powerful thrust of the German army westward toward Paris threw the unsuspecting monetary centers into confusion. The New York Stock Exchange closed its doors as a flood of securities, thrown on the market by European holders eager for gold, threatened to swamp American banks. It is estimated that pending sales amounted to two billion dollars or more. Since sales could not be made, actual open panic was avoided. The situation, however, was critical, and conditions grew worse when shipments of cotton, wheat, and other products ground to a standstill. Moreover, the millions of dollars in interest and maturing obligations held abroad had somehow to be met. The situation was merely temporary, for no one could escape the fact that the United States must ultimately become the basic source of materials of war and of food for the warring countries that possessed ships to reach her shores.

Before midsummer of 1915 conditions began to improve. America, in fact, was moving slowly into international financial leadership. New York, though the change was scarcely noticed, had taken the place of London as the principal money city of the world. Funds that formerly would have gone to the British capital flowed into the new center on the Hudson, payments due foreign states were left on deposit, and dollar advances to the belligerents were merely credits to be applied to American purchases. In England David Lloyd George was made Minister of Munitions in May with authority to use all accessible producers. Orders immediately began to pour into America. In July the house of J. P. Morgan and Company

was designated purchasing agent of the Allies. Soon the steel mills were running far behind in production; the amount of unfilled orders at Bethlehem alone jumped from twenty-four million eight hundred thousand dollars in December, 1913, to one hundred and seventy-five million four hundred thousand in December, 1915. The value of munitions exported rose from some forty million in 1914 to more than a billion in 1916. The outflow of goods not directly related to the battlefield quickly increased also. Neutral countries that had long bought their manufactured goods and other products from England, France, and Germany were compelled to turn to America for supplies. Furthermore, various producers in the western hemisphere that had formerly sent their wares to Europe in English bottoms had now, because British vessels were busy in war transport work, to send them to the United States for reshipment abroad. The value of such trade reached in 1915 a total of sixty-one million four hundred thousand dollars, largest since 1806.

American Loans. The huge purchases of England and France in particular in the United States during the early war years not only gave the American people a deep concern with the outcome of the conflict but also seriously disturbed the financial conditions in those countries. The return of securities even when bolstered with shipments of gold was insufficient to meet the mounting indebtedness. In October, 1915, J. P. Morgan and Company floated an Anglo-French loan of five hundred million dollars. During 1916 and the early months of 1917 England, France, Russia, and Italy sold obligations of sundry kinds to the amount of a billion. Thus total private borrowings of European powers had reached a billion and a half dollars by the end of 1916, and the Secretary of the Treasury had become alarmed by the rapid absorption of the liquid assets of the banks in the acquisition of foreign securities.

The American declaration of hostilities against Germany changed both the domestic and the foreign situation. From the beginning the military planners contemplated direct financial assistance to the nation's allies. The first Liberty Bond Act, approved April 24, 1917, provided for loans up to three billion dollars to "foreign governments then engaged in war with the enemies of the United States." The money was to be made available through the purchase of bonds of those governments by the Treasury Department. Some congressmen saw in this pledging of the credit of European nations to America a source of future trouble. Representative William P. Borland of Missouri predicted that such a course would mean taking over "definitely and finally the control of the finances of the world," and Senator Albert B. Cummins of Iowa feared "that in the years to come

the fact that the United States has in its possession bonds of these great countries which, when they emerge from the war will all be bankrupt, will create an embarrassment from which the men of these times will find it difficult to escape." Before the armistice came, holdings had reached more than seven billion dollars.

Postwar Economic Problems. When the guns had cooled in Europe, the problems of peace remained to be solved. Wilson at Versailles tried to shape a world that could live without war, but political and economic forces were far more powerful than his philosophic ideals. The cry of ancient justice—an eye for an eye and a tooth for a tooth—permeated the war settlements, and whatever wealth had survived four years of destruction was played over the chessboard of nationalism until the game could no longer go on. The United States in the meantime fed the hungry with one hand and reached for the interest and principal payments on its debts with the other.

The Interallied Debts. The seven billion dollars that the major countries of Europe owed for supplies purchased during the conflict did not represent the end of America's lendings. Before November, 1920, the total had jumped roughly an additional three billion as aid was extended for reconstruction purposes and for the support of struggling new democratic governments. The list of indebted states was a roll call of Europe. England owed more than four billion, France about three billion, and Italy a billion six hundred million. Armenia, Austria, Belgium, Czechoslovakia, Esthonia, Finland, Greece, Hungary, Latvia, Lithuania, Poland, Rumania, Russia, and Yugoslavia too were bound to the new financial colossus across the Atlantic. Only the foolishly optimistic hoped to escape from the entanglements without controversy and bitterness. The United States soon became to the poor of Europe "Uncle Shylock."

Although discussion had been in progress for some time, the first official body created to consider the debt problem was the World War Foreign Debt Commission, established by Congress in February, 1922, for a period of three years. Between May 1, 1923, and May 3, 1926, funding agreements were made with thirteen countries. In general these settlements were based on ability to pay over a long period of time, in several instances sixty-two years. The total indebtedness was scaled down, and Secretary Mellon felt that the commission over which he presided had been generous indeed. But the generosity was limited largely to forgiveness in long-time interest payments and not in principal, and strenuous objections arose at home and abroad. Some Americans demanded cancellation on the basis that the money had been a contribution of the nation to ultimate victory in the

months when it was unprepared to throw an actual army into the field. Others asserted that since goods could not because of tariff levies be used in payment, it was economically unwise and perhaps impossible to extract from disordered Europe its badly needed gold. The debtors reminded Americans that they had borne the brunt of war and were now to give their pound of flesh, that they had borrowed in goods and were asked to pay in money, that they had bought at high prices and were required to return the same amount when prices were low, and that their borrowings, spent largely in the United States, had contributed substantially to America's favorable financial and economic position.

Throughout the discussion Secretary Mellon stood firmly by his decision that the debtors must pay according to their ability. He wasted much paper in drawing up tables of the precise annual amounts far into the future. As Secretary of the Treasury he knew that the obligations of his government must be met either by collection from the borrowers in Europe or by taxation of the lenders at home. As a financier he was convinced that whatever the penalties or impossibilities involved, the welfare of the world was tied to the sacredness of contract. England, he wrote in 1926, stood "a rock in the turbulent seas of monetary instability now washing over the other allied nations" because she had acted promptly and courageously in pledging repayment. "Are you sure," he replied to Frederick W. Peabody of Ashburnham, Massachusetts, who had asserted that the honor of the country was being bartered for twenty-one billion dollars, "that your policy of cancellation will mean a happier future for a world which will only continue to trust those who keep their promises once made?" Calvin Coolidge merely said, "They hired the money, didn't they?"

The Reparations Payments. Full settlement of the war debts, whatever American opinion, was involved not only with high tariffs in the United States and deteriorating conditions in Europe but also with the payment by Germany of indemnities for war destruction. The reparations sum was fixed by a commission in 1921 at thirty-three billion dollars. The burden was far heavier than Germany could carry, and default seriously affected payments on war debts notwithstanding the insistence of the Secretary of the Treasury that there was no relation between the two. After France's bitter failure to collect by force through occupation of the Ruhr, a committee of experts headed by Charles G. Dawes recommended in April, 1924, the Dawes Plan, whereby requirements of vanquished Germany were to be brought within her capacity to pay, loans were to be advanced for stabilizing her currency, and the Ruhr was to be promptly evacuated. The plan was put into effect on September 1, and as Germany, chiefly through

borrowings from the United States, resumed reparations payments, Americans began to press her wartime allies for debt settlements.

Before 1929 the great rush to buy stocks had practically dried up the flow of American money to Germany in the form of loans, and reparations payments again came to an end. Another commission was established, and the Young Plan, named after its chairman, Owen D. Young, was evolved. The total reparations sum was scaled down to twenty-seven and a half billion dollars,[3] but even that—distributed over a term of fifty-nine years—was beyond Germany's ability to pay. In 1931 a banking crisis in Austria spread through Europe. Germany ceased payments altogether, and England was driven from the gold standard. The United States declared in June a one-year moratorium on war debts. The year, however, never ended, for, though debts and reparations had been distinctly joined by the action of the Lausanne Conference, default became for all practical purposes permanent before the twelve months were over. Thereafter little Finland alone annually appeared at the Treasury Department with full payment. In 1934 the Johnson Act, forbidding further loans to nations in arrears, was passed. Altogether the government had absorbed nearly all Europe's war debt to the American people and supplied funds for nearly half the reparations payments of Germany.[4] The only obvious gain was the painful lesson that the mighty must bear the cost of world conflict.

Postwar Economic Expansion. The war that taught the world to look to America for money and goods made of the nation both master and servant—master in myriad ways of the destinies of people in far-flung places, and servant of the forces that controlled the scattered stores of natural resources over the earth upon which her greatness was coming more and more to be built. The United States, in the past a debtor lacking in general only capital with which to develop her well-filled storehouse of wealth, became after Versailles dependent on certain raw materials for the success of many of her giant factories. Without rubber, for instance, the automobile industry could not have flourished, and without silk the textile mills would have lost much of their interest to the young generation just growing up. But neither rubber nor silk was produced at home. In addition, there was no nickel, no tin, no coffee, and supplies of wool, sugar, wood pulp, and other essentials were wholly inadequate. Large

[3] On a basis of five-per-cent interest the principal actually amounted to only nine billion two hundred and seventy-two million dollars. That figure is frequently given.

[4] Total payments in all forms on more than ten billion dollars borrowed by America's allies and the newly created states of Europe amounted to only two billion six hundred million dollars. Germany paid in the years before 1931 four billion four hundred million dollars in reparations; she borrowed from the United States during those years, however, two billion four hundred and seventy-five million.

importations, for example, of antimony, chromite, manganese, tungsten, platinum, vanadium, cork, jute, graphite, copper, zinc, and mercury also were necessary. Thus it was that the material welfare of tin miners in Bolivia; coffee pickers in Brazil; rubber gatherers in the East Indies, Brazil, Liberia, and Mexico; oil workers in Central and South America, Central Europe, and the Far East; tobacco and sugar-cane harvesters in Cuba and other islands of the West Indies; copper miners in Peru, Chile, Mexico, and Canada; and, in fact, laborers everywhere became to a large extent subject to the production and consumption whims of a people who had suddenly become the creditors of the world and the only holders of substantial amounts of liquid capital. Economic imperialism for the first time was a reality as American bankers spread their influence over Orient and Occident in their eager search for crude materials and as agents of the new industrialism sought out sales opportunities over the earth for the output of the busy factories.

New Goods for the World. The imperialism of the United States was not, as in some cases in Europe, the imperialism of necessity; it was the imperialism of opportunity. American storehouses were not glutted with surplus stocks, and foreign markets were not basic in American economic existence. The goods that flowed out over the seas brought not so much prosperity and riches at home as Americanization abroad. American motion-picture films, beauty preparations, soda fountains, electrical equipment, automobiles, safety razors, trucks and tractors, and other things that began to move outward in the nineteen twenties affected profoundly the social and economic life of millions who had never seen the United States. Moreover, they aroused jealousies and hostilities that were soon translated into national defensive programs.

Capital Exportations. Money as well as new goods began to pour out to Europe in large quantities. In December, 1913, only fifteen of the twenty-two hundred securities quoted on the New York Stock Exchange were foreign issues. America was still hungry for capital, and investors were concerned almost wholly with developments at home. The nation, as it had long done, was continuing to export low-priced agricultural products and to import expensive manufactured and semimanufactured goods. Shippers were paying huge sums in carriage and insurance charges to foreign maritime interests, and tourists were spending large amounts in European travel. Remittances of recently arrived immigrants were far from inconsequential. International balances were, generally speaking, always in favor of the Old World. Markets were therefore assured, for Europe both needed goods and possessed the means of buying. Changes, however, were already

apparent before the first World War broke out, and the ensuing years of conflict completed the transformation of the United States from a debtor to a creditor nation. Credit advances during the war reversed the traditional flow of interest payments, government loans for reconstruction work after Versailles further swelled foreign obligations, and private loans in the two forms of direct investments in factories, mines, and other enterprises and portfolio investments in public and private securities engulfed both political and industrial institutions. American money was supreme. It was used in supporting the war-disrupted currency systems, in sustaining the struggling young democratic countries, in maintaining for a time the Weimar Republic, in rebuilding strategic transportation systems, including ports, and in reestablishing production facilities. Though war ravages were repaired and governments were reinstituted, the situation was not a pleasant one. The creditor had ample purchasing power but little desire for the goods that the debtor had to sell.

Foreign investments were not limited to Europe alone. American money spread over the world. A host of products such as rubber, tin, bananas, oil, wood pulp, and sugar moved into world commerce from the Far East, Mexico, Central and South America, Canada, and other places through its power. The crude materials of the earth were ever in greater demand in the factories of the United States.

The outflow of American money reached its height in 1929 as bond purchases and direct investments surged upward. The American and Foreign Power Company and the International Telephone and Telegraph Corporation expanded their facilities, and Ford, General Motors, the International Business Machines Corporation, and many other enterprises built or bought plants abroad to avoid the retaliatory tariffs that had been thrown up. Conditions were favorable everywhere; even Europe was enjoying reasonable prosperity, though it was based on American loans. Soon, however, reaction set in in Germany, depression came to the United States, and governmental difficulties appeared in several Latin-American countries. Foreign investments fell from sixteen billion dollars in 1930 to eleven and a half billion in 1936. But the decline was incidental in the sweep of events, for the United States had become the dominant nation of the earth, and her money bound the rest of the world to her in adversity as well as in prosperity.

Changes in Imports and Exports. The shifting nature of exports and imports revealed the changed position of America in the international structure. More than three-fourths of the goods moving outward in 1900 had been bound for England or the continent, and fully half the incoming

cargoes had come from Europe. Nevertheless, the ties that had long existed were within three decades seriously disrupted. In 1929 Europe took less than forty-seven per cent of the products the people of the United States sold abroad and provided less than thirty per cent of those they bought. Asia had become a center of economic concern; at the end of the twenties the proportions of Far Eastern and European imports were almost exactly the same. The United States had not exhausted her resources, and she was not being lured into strange lands merely in quest of exotic goods. She was only following the inexorable law that in an age of science industry must draw upon all the world for its raw materials. Undeveloped places are thus caught in the swirl of economic activity and soon become buyers as well as sellers. The value of finished manufactures flowing out of American ports rose from three hundred and thirty-one million dollars in 1900 to two billion two hundred and sixty million in 1928. In the search for rubber and silk and all the other things that were needed in the fabrication of the new products that the pounding factories were turning out for the satisfaction of home consumers, America had become the workshop of the earth.

Postwar America in World Politics. Hemisphere relations after the war improved in general. Troubles, however, did not entirely disappear. The Mexican problem, for instance, was still a perplexing one. The possibility of enforcement of article twenty-seven of the Constitution of 1917, which had vested ownership of the subsoil in the government as guardian of the wealth of the people, endangered American investments. Blustering threats were hurled back and forth across the Rio Grande. Pending differences were temporarily settled in the Bucareli conferences of 1931, but the election of Plutarco Calles to the presidency the next year brought new land laws and bitter anticlerical legislation. Charges and countercharges again flew thick and fast. The situation fortunately soon took a turn for the better. In January, 1927, the Senate voted unanimously for arbitration, and in October Dwight W. Morrow was appointed ambassador. The Mexican courts and the Mexican congress quickly nullified some of the obnoxious land legislation. In 1929 the religious controversy was adjusted on the basis of compromise, and the next year the Catholic churches—which had been placed under a ban by the reformers—were opened for worship. The Republic below the Rio Grande began a remarkable cultural and economic growth that tied it ever closer to the United States.

Everywhere in the Caribbean reliance on the military for maintaining peace weakened perceptibly. "Dollar diplomacy" bred its own condemnation. Furthermore, it was discovered that friendly officials could be kept

in office without difficulty and that, since the welfare and prosperity of governments and individuals had become inseparably bound up with the economics of the United States, investments no longer needed constant guarding. Even fear for the safety of the canal lessened as the western hemisphere grew stronger. The marines stayed on in the Dominican Republic, Haiti, and Nicaragua through all or parts of the twenties, but after his inauguration in 1933 Franklin D. Roosevelt took aggressive action in the cause of peace. Before long the corollary of the Monroe Doctrine that Theodore Roosevelt had sponsored was deserted, and an agreement was signed to the effect that no state had the right "to intervene in the internal or external affairs of another."

Southward beyond the Isthmus of Panama, American economic interests were beginning to overshadow the historic role of the British. Hostilities born of the past made it difficult, however, to adjust the economic conflicts that still existed. While the Standard Oil Company and the great meat-packing concerns in particular spread through South America, wheat and cattle moving northward met with many obstacles. Tariff controversies arose, and other quarrels followed in their wake. Hard work helped in building up amicable relations, but it was in part the fear that had earlier driven the United States to watch the canal zone with unconcealed anxiety that eventually drove the Americas together, and even then a few of the countries had deep-seated suspicions.

In Europe the political power of the United States rose after 1918 to a commanding position. Nevertheless, the nation refused to accept its new leadership, though its shadow across world events was not without influence. Regardless of what some called a "solemn referendum" in 1920 against participation in the League of Nations, officials unofficially took part in many activities of the organization and an American jurist sat on the World Court. Aggressive action, except in the case of interallied debts, was limited chiefly to legal attempts to restrict war. A naval-armaments limitation conference was held in Washington in 1921-1922 at which a holiday was approved by the powers and the ratio of capital-ship tonnage was fixed at five and five for the United States and England and three for Japan. The peace efforts that Edward Ginn, Andrew Carnegie, and others had initiated at the beginning of the century were revived, as were also the dreams of William Jennings Bryan under Wilson of preventing conflict by treaties. The American Committee for the Outlawry of War renewed its campaign, and in 1923 Senator William E. Borah introduced in the Senate a scheme for establishing an independent court of nations. Before the end of the twenties the peace movement had made considerable

headway. In July, 1929, the Pact of Paris, fruit of the labors of Aristide Briand of France and Frank B. Kellogg of the United States, was proclaimed. Some thirty-one countries agreed to outlaw war, but their reservations reduced the value of the compacts to little more than the beautiful bindings in which they were inclosed. In spite of adjustments and reassurances at the London Conference in 1930, a vicious armaments race was soon on.

In the Far East the years after the first World War were politically for the United States years of retreat in many ways. Notwithstanding the existence of a four-power treaty and a nine-power treaty that in part at least guaranteed the rights of China, the open door slowly swung to. Japan, furthered in her desires by the war settlements, pushed ahead toward ascendancy in the Pacific. Jealous of her honor, she challenged the naval agreements that had set up a ratio that her ambassador to the United States pointedly declared sounded much like "Rolls-Royce—Rolls-Royce—Ford." Japanese diplomacy and Japanese soldiers were by the beginning of the thirties dissevering China piece by piece and binding the segments to the Empire of the Rising Sun by actual occupation or by complete domination otherwise. That political protests of America went unheeded and that American lives and property were blasted by bombs and shells with apparent impunity did not mean that the United States was powerless in the Pacific. The entire region was held to the western world by a thousand economic ties, and the rise there of an aggressive state soon began to build up an encircling wall of opposition that swung through the Philippines, Australia, and New Zealand, upward to the northwesternmost tip of North America, and even into the Soviet Union, which had heretofore been unwelcome in the society of western democracies.

The Drift to Isolationism. Strangely enough, the American people were withdrawing unto themselves even while the industrialists, the diplomats, the financiers, and the peacemakers among them were spreading the power of the nation over the world. A few of the self-designated cultural and intellectual elite fled abroad from what they termed narrow provincialism at home, but on the whole most individuals saw little that was enticing in foreign lands. The military forces returned from the first World War with little affection for either ally or enemy, and the endless squabbles that marked the years of reconstruction convinced even the most sanguine that peace and order were impossible in Europe. Congressional investigations revealed corruption in the fight for democracy, novelists and playwrights questioned in stark words the price of glory, and the youth of the day doubted the value of tomorrow. The difficulty was that the weight of

responsibilities that world power had brought was unfamiliar and galling. Americans had not yet learned that the rich at the table of the world, where eat the welcome and the unwelcome alike, must pay the bill.

The events of the thirties brought further perplexities. The United States, burdened by a depression unequaled in the history of the nation and influenced by a desire for peace that sometimes reached feverish heights, saw ahead an uncertain way. President Roosevelt and Secretary of State Cordell Hull were keenly aware of the looming danger in Europe, but at the London Economic Conference in 1933 they chose a domestic course. While the diplomatic mail bags continued to bring reports of mounting tension abroad, the peace advocates at home made steady gains. In March, 1934, in an article ("Arms and the Men") that Doubleday, Doran and Company reprinted and distributed at cost, *Fortune* magazine told of purportedly friendly merchandising of the instruments of death by international munitions makers. A congressional investigating committee, headed by Senator Gerald P. Nye of North Dakota, dug up a mass of unwholesome material that led a host of readers to conclude with the chairman that monetary greed alone had prompted American participation in the first World War. Many people, disillusioned and thoroughly disgusted, sought to withdraw from the world in which they lived. They had no faith in international agreements, and the second London Naval Conference of 1935 confirmed their doubts. Always they were bolstered by an active group of intellectuals.

A vigorous campaign was launched to obtain legislation that would prohibit altogether the sale of war goods, denounce the right of neutral vessels to freedom of the seas, and deny neutral passage on belligerent vessels except at the risk of the individual. A resolution to require a national referendum before war could be declared attracted powerful support. As finally passed, the neutrality acts of 1935 (amended in 1936) and 1937 gave the President some latitude in determining when the embargo should be applied though no right to discriminate between aggressor and victim. Loans and credits to warring countries were prohibited, travel on ships of belligerents was restricted, and certain raw materials destined for foreign military use could be interdicted from American bottoms. "Cash and carry" sales permitted to those who took title at the ports brought protests because the seller appeared to escape moral responsibility while still reaping profits.

The Rise of Dictatorships. The guns that blazed over Europe in the years between 1914 and 1918 had destroyed more than human lives and material possessions. They had destroyed confidence, stability, and security

and had in many places wiped out the middle class, upon whom to a large extent forever rests the structure of government. Hunger during the period of reconstruction was partially responsible for the rise of a motley group of vengeful, determined, and sometimes neurotic men who, working through division rather than unity, gave power and direction to the unguided forces in their unfortunate countries. Benito Mussolini in Italy led audacious youth, and Adolph Hitler in Germany glorified "pure Aryanism." In Russia the "dictatorship of the proletariat" climbed to might behind a few directing figures. General Francisco Franco ruled Spain with as firm a hand as his enemies would permit, and far across Asia the military clique around Emperor Hirohito spread by force of arms the influence of the "heaven-blessed" Japanese over the Far East. Everywhere economics, politics, ambition, hatred, greed, lust, ignorance, prejudice, and indifference were fearfully mixed, and no one is certain even yet that jobs and food could have kept the world at peace.

There seems little justification for denying the assertion that international leaders did not recognize the changes in the economic structure of the earth, but that the great masses of the people in their struggles for democracy and tolerance were throughout the world betrayed by a handful of brazen self-seekers is open to argument. Perhaps the complexities of civilization in a shrunken universe where wants were growing had so bewildered the simple citizen that he swayed to every wind that promised to bring him the things he longed for even at the expense of others. Whatever the explanation, it is obvious that the good did not prevail, and prospects of gain either for nations or for individuals always found enough followers to overthrow the labors of those who fought for an orderly society.

Aggression under the circumstances was easy. Hitler, chief of the National Socialist (Nazi) party, became Chancellor of Germany on January 30, 1933. Two years later he began remilitarization of the state by launching a submarine-building program, reestablishing conscription, and shifting the air fleet to military control. Denouncing the Locarno Treaty, which had guaranteed the eastern frontiers of France and Belgium, he ordered German troops on March 7, 1936, into the demilitarized zone east of the Rhine. During that same year he tried out his weapons in the Spanish war and late in the fall signed agreements with Italy and Japan. Early in 1938 he moved into Austria to protect, he said, the Germans therein, and with the consent of France and England at Munich he took over a few months later the Sudetenland (German part) of Czechoslovakia. The next year he completed the conquest of Czechoslovakia, made

the Polish port of Memel a part of his Third Reich, and in the fall marched into Poland.

In the meantime blustering Mussolini had been busy. Dictator of Italy for a decade before Hitler came to power, he had managed while materially improving his nation both to wipe out the liberties of his people and to tighten and even to expand his empire over Fiume, the Aegean Islands (Dodecanese and Rhodes), Libya, Eritrea, and Somaliland. In October, 1935, the Italians invaded Ethiopia, and the next spring they occupied Addis Ababa, the capital. On April 7, 1939, Good Friday, they invaded Albania and took possession of the farther shores of the Adriatic.

Japan also had been active in spreading outward through the fateful decade of the thirties. On September 18, 1931, an "incident" near Mukden in Chinese Manchuria marked the beginning of her march in the Pacific. Manchuria was quickly overrun and turned into a puppet state called Manchukuo. By 1937 Nipponese control had been extended to Jehol in North China, and Peiping, Shanghai, and Nanking had fallen to the aggressor.

The invasion of Poland by Germany on September 1, 1939, let loose the forces of war. Appeasement, isolationism, and humanitarianism had failed. For the moment Germany, Italy, Russia, and Japan were bound together in what seemed a threat to the liberties of millions of human beings. Destruction quick and merciless swept over Europe, and slow cruelty both sapped the strength of and united the hapless Chinese.

The Drift to War. It was soon apparent to many Americans that some concerted action must be taken to restrain the acts of lawlessness if trouble was to be avoided. President Roosevelt at Chicago on October 5, 1937, called for a "quarantine" of aggressors. The suggestion brought bitter opposition and biting condemnation. The sinking by Japanese bombs of the United States gunboat *Panay* in the Yangtze River in China two months later provoked only a modicum of indignation because, said many, Rockefeller's oil was the real issue at stake. Slowly, as aggressive groups took up the cause of particular peoples or nations, the peace forces turned to the theory of participation. It may be—at least the material arguments had recently been used concerning the first World War—that mounting incomes everywhere in the nation began to push the acute longing for peace from the foreground. At any rate, with the increase in persecutions, suppressions, and murders it became daily more evident to all who wished to see that aggressors, while they might rise up without the direct aid of the United States, could be put down only with the help of that dominating power in world economy.

The invasion of Poland by Germany on September 1, 1939, climaxed a series of evil deeds and brought open warfare in Europe. Three weeks later President Roosevelt asked Congress in special session to repeal the restrictive legislation against belligerents and return to neutral rights under international law. Though at the cost of repeating the story of 1914-1917, the way was clear for a vigorous economic attack against the enemies of democracy. The time was crucial. In November Russia invaded Finland, and in the spring of 1940 German forces moved into Denmark, Norway, Belgium, the Netherlands, and Luxemburg. France fell in June before the blitzkrieg of Hitler and the strike in the back by Italy. England miraculously withdrew her army from Dunkerque but left her weapons useless on the beaches. Japan in the Far East was pushing heavily against China and crawling along the Pacific islands toward the Philippines.

America took up the task of supplying money and goods for the beleaguered of the world. Foreign loans were made, naval construction was begun, and in September a selective-service act was passed that within a year sent to military training camps nearly a million and a half men. Soon the President announced that fifty overage destroyers had been traded to England in return for naval and air bases stretching from Newfoundland to British Guiana. Machinery for the administration of economic warfare was set up. Already the industrial plants of the nation were turning out arms and equipment, and before long the heavy hand of taxation was reaching into every purse as appropriations for defense began to run into millions of dollars.

Lend-Lease. While economic production was getting under way, long-neglected economic weapons were at last turned against the enemy. After the attack on Norway and Denmark in April, 1940, funds of the invaded countries in the United States were "frozen" so that they might not fall into the hands of the conquerors. Eventually this freezing process was converted into a positive instrument of coercion in that the assets of the invaders too were taken over, and the procurement of needed supplies was thus curtailed. Blacklisting, strategic purchasing, and export licensing, as well as shipping controls, also were employed. More notable than any of these was lend-lease. Through this device the nation became, as the President had already expressed it, "the great arsenal of democracy."

The lend-lease bill, introduced in the House as H. R. 1776 and approved by Congress on March 11, 1941, provided that "notwithstanding the provisions of any other law" the President might authorize the Secretary of War, the Secretary of the Navy, or "the head of any other department or agency of the Government" to manufacture in arsenal, factory, or ship-

yard—or to procure otherwise—"any defense article for the government of any country whose defense the President deems vital to the defense of the United States." The Chief Executive was further empowered, "after consultation with the Chief of Staff of the Army or the Chief of Naval Operations of the Navy, or both," to "sell, transfer title to, exchange, lease, lend, or otherwise dispose of" any other defense items procured. In addi-

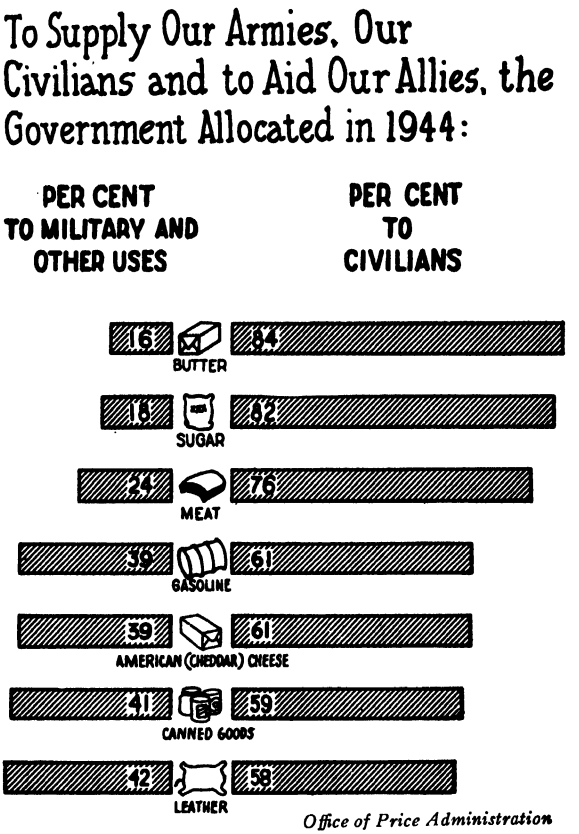
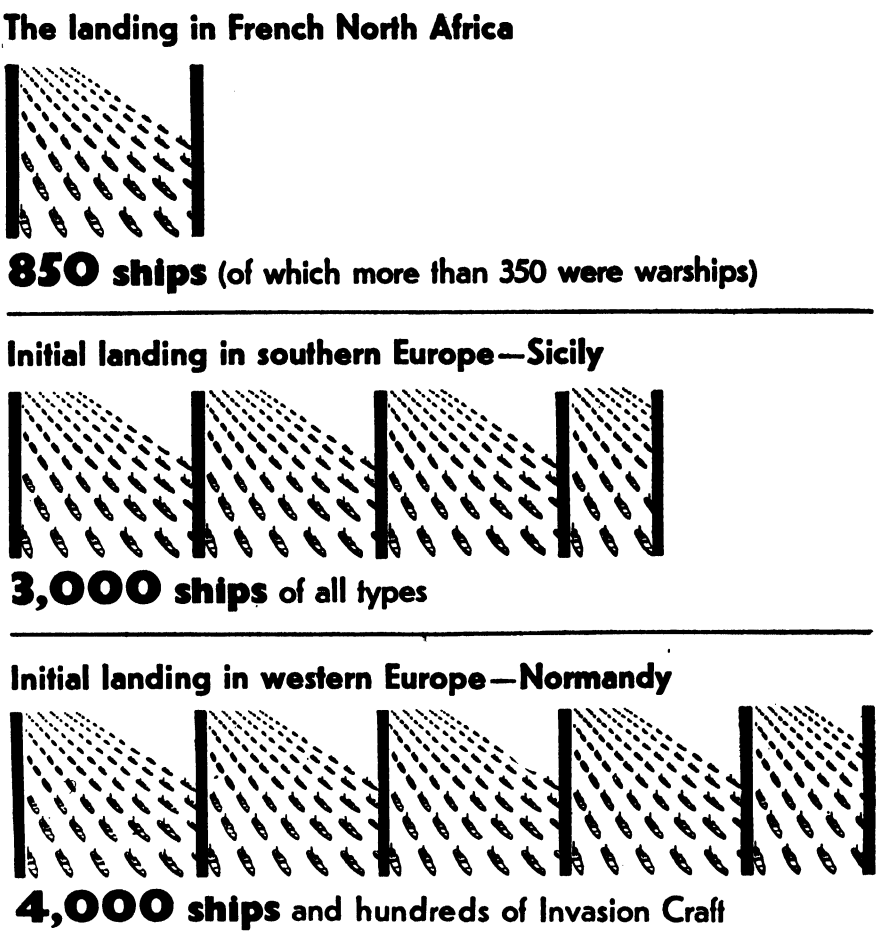


FIGURE 25. MILITARY AND CIVILIAN ALLOCATIONS

tion, provisions were made for testing, inspecting, proving, repairing, outfitting, reconditioning, or otherwise putting "in good working order" the instruments of war for any country whose welfare was involved in the "welfare of the United States." Secrecy restrictions on defense information and export limitations on defense goods were removed with respect to every such government.

The lend-lease legislation made the United States beyond any doubt an active and determined participant in the fight against the aggressors. Upon her thereafter rested fundamentally the very existence of her allies, and

toward her was directed the greatest hatred of the enemy. The problem of supply was critical. England, for instance, had virtually exhausted her dollar credits in America when the plan took effect. She could buy but a small portion of her needs, for, since her factories were, generally speaking, turning out only war materials, her pounds could not be used by foreigners



Courtesy British Information Services

FIGURE 26. FLEETS OF SHIPS NEEDED IN INVASIONS

in her markets in exchange for British goods. Lend-lease made available materials with which to carry on regardless of financial assets. It illustrated to Americans, moreover, the fact that the battle ground though afar off was real. Defense elsewhere meant to an ever-increasing number defense at home, and therein lies the reason for the proviso in the lend-lease law that payment or repayment might be "in kind or property, or any other

direct or indirect benefit" that the President might deem "satisfactory."

The first lend-lease transaction occurred three hours after the signing of the bill, when the Chief Executive ordered the Secretary of the Navy to turn over to England twenty-eight PT and PTC motor torpedo boats and a supply of arms and ammunition for various purposes. On the same day the Secretary of War was directed to transfer to the Greeks a small supply of field guns and ammunition. Soon the parade of nations was on; from the far corners of the earth diplomats and special representatives filed through the White House to ask for aid from Uncle Sam. Britishers, Greeks, Norwegians, Netherlanders, Yugoslavs, and Chinese—and even Russians, their war with Finland ended and their alliance with Germany broken—were promised help. Backed by an initial appropriation of seven billion dollars, factories sprang up over the land, and workmen turned to the hurrying machines as guns, ships, tanks, planes, food, and an infinite variety of other goods began to pour out of American ports in a stream that was within a short time to rise to a flood.

Pearl Harbor. Most Americans—some with fear and some with eagerness—realized that the United States could not long remain a major force in a war in which she took no armed part. With the economic might of the country reaching out to bolster the bulwarks that were being manned by others, the possibilities of involvement became constantly greater. The road was familiar, and as in other days—long before the term "shrunken world" had become an excuse for the shattered bonds of peace—it could lead only to war. The first blow came in the recently developed Far Eastern economic theater. On December 7, 1941, the Japanese struck viciously at Pearl Harbor in Hawaii and awoke a military that had been shouting in its sleep. Hostilities were declared the next day, and the people, whatever their opinions in the past, turned grimly but determinedly to what the President called a "war for survival."

Chapter 38

WAR AND THE ECONOMIC STRUCTURE

The attack of the Japanese at Pearl Harbor made the United States the active leader of the powers opposing aggression over the world and turned the entire energies of the nation to the task of unseating the dictators who had come to power. The burden of supply, assumed already to some extent through lend-lease, grew heavier, for the number of uniformed men and women America could throw into the fight was no more important than the amount of materials of war she could forge in her pounding factories. Actually the economic front had become with mechanization of the means of destruction the primary determinant in victory. Effective use of warring forces was impossible unless the lines of maintenance were not only adequate but also readily responsive to changing demands on the far-flung fields of battle. Balancing an economic system that had to maintain simultaneously as going concerns a war front and a home front was far from easy. Production planning was plagued with complexities; quick fabrication of the goods of war could not be accomplished without endangering accumulated gains of long years of peace.

Defeating the enemy without destroying the basic structure of the democracy was a challenging problem. There was no uniformity of opinion as to the course to be followed. Industrialists saw in price, profit, and production controls an extension of New Deal philosophies; labor suspected that regimentation might turn out to be merely a veiled threat against unionism; farmers feared that business men were, as in 1917-1918, seeking to limit the returns from agriculture; and the military conceded only grudgingly that there were difficulties that could not be solved by a simple directive. It was obvious to all, however, that unity and direction must in some way be achieved.

Economic Organization for War. *The National Defense Advisory Commission.* Administrative organization for the effective control of the economic structure of the nation was, like the war itself, begun before the official declaration of hostilities. In May, 1940, President Roosevelt, following closely the procedure in the first World War, established a Council

of National Defense, together with an Advisory Commission of experts to work with the Council. This National Defense Advisory Commission (NDAC), as it was called, became the first of several administrative organizations set up to guide production. In spite of its lack of leadership, except for what attention the President himself gave it through the Office for Emergency Management,[1] and the almost wholly persuasive nature of its powers, its work was not without significance. William S. Knudsen was placed in charge of industrial production; Edward R. Stettinius, Jr., industrial materials; Sidney Hillman, labor and employment; Chester Davis, agriculture; Ralph Budd, transportation; Harriet Elliott, consumer protection; and Leon Henderson, price stabilization. At a noon meeting at the White House on Memorial Day the President, flanked by General George C. Marshall (Chief of Staff of the Army), Admiral Harold R. Stark (Chief of Naval Operations), and several members of the cabinet, discussed with the commission the difficulties ahead.

The problems involved in effectively strengthening defenses at home and at the same time rendering substantial aid to what were called the democracies abroad were serious ones. An industrial machine that had been only partially functioning for a decade had to be rehabilitated. That meant training an army of skilled workers, supplying new tools, and putting into operation plants that had long been idle. It meant too expanding tremendously the domestic output of steel, copper, aluminum, lead, and other needed supplies and increasing at once stockpiles of critical materials available only from foreign sources. Most troublesome of all, it meant turning the nation to the task of manufacturing in huge quantities armor plate, guns, fighting ships, explosives, high-octane gasoline, and a host of other things unfamiliar to the people in days of peace when nondurable goods were of primary concern. Grave economic disturbances were in prospect; the President had already called for a production speed of fifty thousand planes a year, and in July congressional appropriations began a startling upward climb as construction of a two-ocean navy and other defense activities got under way.

The Office of Production Management. As the output of military goods moved upward, economic clashes became customary. Each new defense plant that was launched added to the growing fight for materials, and a rapid increase in the supply of money in the hands of consumers stirred civilian production. Although voluntary agreements as to priorities less-

[1] The OEM was established on May 25, 1940, four days before the creation of the Council of National Defense. Like the heads of the other countries involved, the President kept supreme direction of all wartime activities in his own hands throughout the war.

ened friction, it was clear that some authority was needed if resources were to be mobilized and put to effective use. Before Christmas the President announced that a change was being made. On January 7, 1941, the Office of Production Management (OPM) was created, with William S. Knudsen and Sidney Hillman as director and associate director respec-

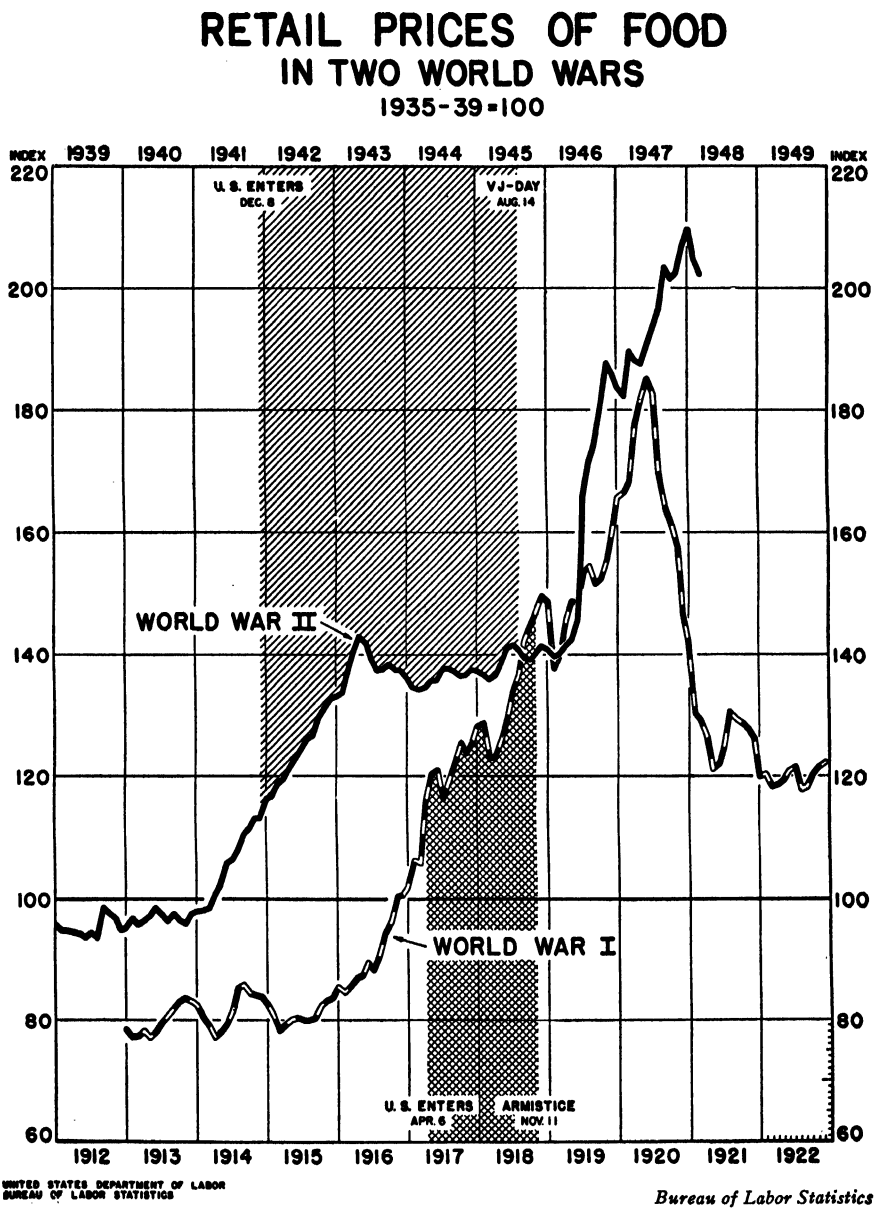


FIGURE 27. RETAIL PRICES OF FOOD IN TWO WORLD WARS

tively. The new organization absorbed only the production, materials, and labor and employment divisions of the defunct NDAC. The other divisions were made into independent units. Price stabilization and consumer protection, along with certain responsibilities of the agricultural division, were consolidated into the Office of Price Administration and Civilian Supply (OPACS, soon to become the OPA), with Leon Henderson as administrator, and transportation became the Office of Defense Transportation (ODT).

The Office of Production Management possessed little more power than had its predecessor. It had, however, far more difficult problems to solve. Bottlenecks in industry began to appear as shortages grew acute. Moreover, business men, already bewildered, found it impossible to comprehend the varying and sometimes contradictory instructions that were being showered upon them from many directions. Manufacturers with A-1 priorities saw their hopes of fulfilling their contracts disappear when their raw materials were carried off by those with AA-1 ratings. Hurry was universal, but there was no one to say which of the equally hurried should take precedence. The situation was aggravated by disagreements within the OPM. Some of the members, convinced that the nation would inevitably be drawn into active war, wanted immediate and vigorous action; others saw no reason for completely disrupting national economy until it became clear that open hostilities were unavoidable. Troubles arose without end, and all were made especially irritating by the desire of many planners in general and the military[2] in particular to pinch civilians, presumably asleep, into a realization of the dangers that existed.

In spite of perplexities, the harassed and hard-working personnel of OPM did something toward bringing order into the chaotic industrial situation. Formal priorities were issued, and the production of machine tools, alarmingly short in supply, was encouraged in many ways. The use of aluminum and steel was restricted to defense requirements and essential civilian needs. By July fabricators of civilian goods were notifying their distributors of substitutes and deletions in their merchandise. Everywhere the dominance of the defense program began to be felt as articles long familiar became noticeably scarce in the market places. In mid-July Leon Henderson made the alarming proposal that the output of automobiles, refrigerators, and washing machines be cut in half. The storm that blew up was soon over, but it was evident that the nation was restless and uncertain. As new industrial plants sprang up in some sections, old ones in other regions were being closed down. Workmen were doubtful as to

[2] The word "military" is herein used to include not only the army but all the services.

the permanency of their jobs, and increases in incomes were offset by the upward swing of prices that resulted from the conversion of an ever greater number of assembly lines to the cause of war.

The Supply Priorities and Allocations Board. The progress that OPM had made was only relative. Many administrative officials were ready by midsummer 1941 to admit the inability of the agency to cope with the troublesome conditions. Accomplishments seemed indeed trifling when measured in terms of need by those who were sure that the nation would soon become actively involved in the bloody world conflict. The discouraging outlook in Europe emphasized the failure of OPM to meet the two stubborn problems of priorities and allocations as aluminum, steel, rubber, copper, zinc, and a host of other materials grew scarcer. Late in August the President, back from writing with Winston Churchill the Atlantic Charter, set up the Supply Priorities and Allocations Board (SPAB) in an effort to strengthen the flagging administrative structure.

During the short and hectic life of SPAB earnest attempts were made to improve the confused industrial situation. Basic policies were laid down for dividing actual and potential resources so as to meet most effectively the military, the defense (including lend-lease), and the civilian demands. Controversies arose immediately as to allocations. Arguments over the size of stockpiles, the capacity of given industries to produce, the nature of production (essential or nonessential), and a number of other questions engendered much heat though sometimes little light. One difficulty was that there was no real knowledge either as to materials needed or as to the extent of those possessed. Furthermore, no one was sure whether the nation was preparing for war or was merely assisting the active disputers of German might.

The uncertainty was dissolved with the attack on Pearl Harbor. It was obvious then to all that fighting equipment was desperately needed. President Roosevelt in a message to Congress on January 6, 1942, set the production goals for the first twelve months at sixty thousand planes, forty thousand tanks, twenty thousand antiaircraft guns, and eight million tons of shipping. The budget estimates submitted the next day forecast expenditures of more than fifty billion dollars during the approaching fiscal year. That meant, said the Chief Executive, that at least half the national production would be devoted to the war effort.

The War Production Board. On January 6, 1942, the War Production Board (WPB) supplanted SPAB and the functioning part of OPM. Donald Nelson, an executive of Sears, Roebuck and Company, who was placed in charge, was responsible solely to the President for his direction

of industry. The new organization was broken into nine major divisions: production, industry operation, materials, civilian supply, labor, statistics, purchases, legal, and planning. Advisory committees for specific industries were established, and eventually several thousand labor-management committees were formed in the war plants. Many outstanding business men gave their services as "dollar-a-year men" or on the basis of payment "only when employed" (O.W.E.).

Although Congress kept a careful watch over WPB and the President sometimes set up contradictory bureaus, production moved upward rapidly. The progress involved drastic civilian curtailments, serious disturbances in prices and wages and rents, and even destruction of thousands of small businesses. While there was no longer doubt as to the necessity for preparation for war, new problems arose as military demands threatened to choke completely the flow of consumers' goods. Every decision as to allocations of raw materials brought repercussions in the industrial structure. Some things that had appeared adequate in supply rapidly dwindled away when they were turned to new uses because of restrictive orders issued to preserve the meager stockpiles of others. New production facilities were established only at the expense of scarcities elsewhere; construction of aluminum plants, for instance, made heavy drains on the already overtaxed steel mills. Furthermore, traditional habits were broken with difficulty; when plastic buttons were suggested for officers' uniforms, for instance, the Quartermaster Corps asked what brass was being saved for. Never before had the interrelationships and the complexities of modern material civilization been so evident, and it sometimes seemed that every attempt to move forward served but to confound the sincere endeavors that were being put forth.

The President, in answer to criticisms that had arisen, set up on May 28, 1943, the Office of War Mobilization (OWM) and placed at its head James F. Byrnes, who had recently resigned from the Supreme Court to take charge of the Office of Economic Stabilization in the fight against inflation. The new agency was not intended to replace WPB. The Chief Executive hoped, however, that it would in the sprawling administrative structure streamline activities, lessen duplication and overlapping, eliminate interdepartmental friction, make quick decisions possible, and keep both the military machine and the essential civilian economy running "in team and at high speed."

Notwithstanding the large number of changes in top administrative organizations and the creation of many lesser boards and committees, unity was never attained. Charges and countercharges, resignations, condemna-

tions by Congress, quarrels between labor and management, and never-ending bickerings between civilian and military personnel marked the years of conflict. The production accomplishments of the people were nevertheless remarkable; many of the tasks performed were unmatched in the history of nations.

The Mobilization and Allocation of Resources. Effective direction of the war effort was important, but eventual victory on the battlefields of the world depended basically on the sum total of resources, human and material, that could be turned against the enemy. Seemingly filled to overflowing when needs had been simple, the national storehouse of wealth staggered under the heavy demands made upon it when America became the "arsenal of democracy." The food larder in particular had appeared inexhaustible. Mechanization had vastly increased productive capacity, the introduction of powered machinery had released for other uses thousands of acres of land previously used in raising feedstuff for animals, the development of improved crops such as hybrid corn had swelled acreage yields appreciably, and the work of the Civilian Conservation Corps and the Department of Agriculture during the New Deal had in many places given fresh life to worn-out soil. Moreover, nearly two hundred million acres of idle crop land and plowable pasture could be put under cultivation if necessary, and giant dams made further expansion through irrigation possible. Meats as well as grains seemed in good supply. In 1939 the farms had produced for slaughter more than a hundred and twenty million hogs, cattle and calves, and sheep and lambs. Milk, butter, and cheese were likewise plentiful, for the dairy industry had been growing rapidly.

But in spite of the predictions of experts that available food facilities could support a population of four hundred and sixty million people, troubles soon developed. Agriculture for twenty years had been desperately sick economically; total monetary returns from the spreading fields had been persistently declining. Heavy productive tasks could be undertaken only if new equipment and new implements such as tractors, plows, seeders, and harvesters could be obtained and if an adequate labor supply could be had. More serious still was the problem of distribution. Producer and consumer were far apart in the urban nation, and transportation facilities were soon overtaxed. Crates, boxes, bags, steel and tin for cans, and sugar for preserving were lacking. Food was never in overabundance. Feeding the military and provisioning the rest of the democracies through lend-lease took large amounts, and eventually most of the products of fields and orchards came directly or indirectly under rationing. A nine-man War Production Food Requirements Committee, headed by Claude

Wickard, and later a food administrator gave direction to the agrarian efforts.

The industrial situation was far less encouraging than the agricultural. Shortages had plagued the administrators in NDAC before the entrance of the United States into the war. A survey of resources had resulted in the designation of fourteen items as strategic and fifteen as critical. These materials, though the list shifted rapidly, were for the most part produced at home in small quantities or not at all. Among them were rubber, silk, tin, manganese, quinine, magnesium, cork, manila fiber, nickel, zinc, and kapok. Congress had appropriated long before Pearl Harbor substantial sums for building up stockpiles of those obtained from far quarters of the earth, and yet little had been done. The outbreak of hostilities made further acquisitions difficult if not impossible.

However essential imports from other lands in the production of civilian and military goods, it was obvious that the nation must depend primarily upon its own resources. Many elements entered into the measurement of those resources. Existing capacity to produce, potential capacity to produce, creatable capacity to produce, salvageable products of the past, and consumption control through careful regulation, while basic, were all uncertain. Since there was no real knowledge as to exactly what was needed, unjustified optimism prevailed at first. Presumably the forests and the mines were capable of supplying all the timber and fuel necessary to meet the military and civilian demand. But new camps for the recruits, new plants for industry, and new houses for the great horde of migrant workers who swelled old cities and towns and built new ones soon stripped the lumberyards. Mining, like agriculture, had for two decades been in dire straits. Many of the smaller mines had closed down, and those that had continued to operate were poorly equipped. Even the large corporations that had electrified and modernized their equipment had made little fundamental progress in freeing the huge shafts and tunnels from disastrous accidents. Output could not be quickly expanded, and, though many old diggings were reopened, civilian deliveries in particular were before long drastically curtailed.

The iron and steel supply was problematical. Authorities in Washington and manufacturers over the nation were inclined to feel that the mills that had built the "steel age" could meet the challenge of a world conflict. The ore in the fabulous ranges of the Great Lakes region was far greater in amount than the enemy could boast, and capacity to transport, process, and fabricate into usable forms the raw material was enviable. In February, 1941, Gano Dunn, chairman of the board of the J. G. White Corporation

and adviser to Edward R. Stettinius, Jr., head of the Industrial Materials Division of NDAC, reported that existing facilities were adequate. He was soon to reverse his opinion. But in spite of ever-growing demands as other metals grew scarcer, WPB, by constructing new ore carriers, setting up new plants, and (with the aid of Civilian Defense agencies and the press) pushing scrap drives, managed somehow to keep production just ahead of consumption.

The aluminum situation was alarming from the beginning. The problem was chiefly one of mobilization of resources to meet the increasing needs of plane builders and other suppliers of war goods. The establishment of new production units, however, required time, and shortages were already acute by the beginning of 1941; existing stocks alone could be used for immediate exigencies. In the summer of that year the homemakers of America were asked to strike a blow at Hitler, with whom the nation was not yet at war, by throwing all their worn and battered utensils into the accumulating piles that appeared on the street corners and public squares of every city and town.

On September 9, 1941, officials of SPAB undertook the difficult task of recommending ways and means of securing maximum production of aluminum, magnesium, copper, zinc, brass, and steel through the expansion of facilities. Soon new government-owned but privately operated plants were working toward the unprecedented goals that had been set up for aluminum. Copper, as did also zinc and magnesium, presented peculiar complexities. There were few substitutes, war demands were persistent, and the output of the refineries was not easily changed. During 1942 six hundred thousand tons were gathered in through scrap drives, prices were raised to such an extent as to bring in marginal deposits, some four thousand soldiers were furloughed to the mines, and new sources were developed in South America and in Africa. Nevertheless, the supply was throughout the war inadequate, and production of war goods was occasionally delayed.

Oil, gasoline, and rubber, inseparable commodities, were absolutely essential in both the military and the civilian economy. Not only transportation but also heat and power were involved. Crude petroleum had in the dolorous thirties been a glut on the market, and national and state legislation had been enacted to restrict output. While nobody knew exactly how much the underground pools had been depleted, many suspected that a global war would make vast inroads on what experts had already predicted would under ordinary circumstances last only a few years. Rationing was quickly applied at home. The demands of the military as

the fighting forces fanned out over the world exceeded production, however, and some foreign purchases were made.

There was little that could be done to augment the puny stock of natural rubber the nation possessed. The Japanese cut off the supply from British Malaya and the Netherlands East Indies, and in the early part of the war the German submarine campaign in the Atlantic hampered importations from the limited and inefficient plantations of South America. But neither the President nor the public was convinced that drastic action was necessary, and so administrators in Washington took time to argue over gas rationing, mileage allotments, and scrap. Eventually a committee headed by Bernard M. Baruch, who in some way or other became final arbiter in most of the disputes that arose, recommended the institution of a thirty-five-mile speed limit, a periodic inspection of tires, and the building of synthetic-rubber plants. William Jeffers, president of the Union Pacific Railroad, was appointed rubber "czar." Already the sale of new tires had been put on a strict rationing basis, and a vigorous scrap drive had been launched. When "spares" were prohibited on new cars and old, automobile owners carted their extra casings and tubes to the express companies for shipment to the collection agency without too much grumbling. But the situation was far from good. The amount of "reclaim" needed for military requirements and for use in retreading and recapping civilian passenger-car tires was ever increasing. The basic outlines of the synthetic-rubber program were drawn up early in 1942, yet it was more than a year before any aggressive action was taken. Regardless of opposition and of the overwhelming need for construction materials elsewhere (including Oak Ridge, Tennessee, with its "Manhattan Project" that was to bring a dramatic end to the war), the chairman of WPB finally decided to rush forty per cent of the plants to completion with top priority ratings.

Although synthetic rubber had been manufactured in small amounts by Standard Oil, Du Pont, and a few rubber companies before Pearl Harbor, excessive costs had made successful large-scale production impossible. Thus the government in launching a billion-dollar program with a goal of eight hundred thousand tons a year undertook an industrial project that was under normal measurements unsound. Moreover, quarrels seemed perpetual, plant experience was lacking, and delays were always occurring. The most serious controversy arose between the members of the Agricultural Committee of the Senate and the leaders of the oil industry. Butadiene, principal intermediate product from which synthetic rubber is made, could be secured either from alcohol or from petroleum. The difficulty was resolved by resort to both, but the government rubber (GR) experiment

was, notwithstanding its accomplishments, never free from criticism. The requirements of the military, however, were met, and most of the automobiles of the nation managed to stay on the road.

Priorities and Allocations. Whatever resources were available, war production could be wisely directed only if there was a reasonably clear idea of what would be needed by the army and the navy and for lend-lease. Because military officials were reluctant to reveal their plans to civilian agencies, schedules were not easily established. Fortunately England and the United States (after much argument) had summed up their assets before the latter joined in the fighting. The Stacy May report of late 1941 was an invaluable guide to those who were shaping the industrial program, yet for the most part the output of the factories was determined by events rather than by design and was therefore not always satisfactory. A second essential to production success was judicious allocation of the raw materials available. Priorities had been set up during the defense period, but ratings at first were mere designations within broad categories, with no distinctions that would move one thing and leave another when the two were equally pressing. The natural result was the creation of higher priorities, and that quickly came to be a vicious circle. When allocations were added to priorities, order began slowly to evolve.

The Controlled Materials Plan that was eventually instituted envisioned not only preference ratings but also direction of all components necessary for each given task. Though much hardship ensued, especially for the small contractors, and many arbitrary decisions were made, what was required was produced. The reason was that the manufacturer found what he needed at his plant when he needed it, for his contract comprehended, in addition to a stipulation of what was to be made, positive designation of the stuff for the making. The process was a simple one in comparison with that earlier in the war, when producers had had to fight with suppliers for the raw materials with which to fabricate their goods.

Procurement Problems and Procedures. The administrative organizations that determined the economic conduct of the war were as a rule not purchasing agencies; the idea of buying through a single center was intolerable to the military and was opposed by Baruch and many other civilians in responsible positions. The various branches of the military, as they had done throughout their history, bid against one another and bought what they wanted if it could be had. One of the untold stories of the war is that of the bitter and sometimes personally tragic conflict between commanding officers of old procurement stations and higher authority in Washington over the question of military cooperation with civilian planners. In

some instances men of long service and advanced rank were retired or transferred because they could be neither disabused of the conviction that there was no road to knowledge other than that beginning with a second lieutenancy nor stripped of the idea that their installations were the residing places of all experience. Particularly irritating to officials in the field was the fact that the uniforms of the "long-haired boys" were still fresh from the tailors. But the protesters had a point, for theirs were going concerns of many years' standing; some of the changes in procedure that were presented as original in Washington had been advocated before. The lessons learned in clothing the Civilian Conservation Corps were of especial value in textile buying, but old practices everywhere were deserted slowly. No matter to what extent the general policies were formed by headquarters groups, the local establishments determined in large measure the particulars of actual purchase. There was, unfortunately, little opportunity for buyers on the home front to consult and advise with commanders on combat duty. Some items were planned and procured by the service forces that could not be effectively used; others were designed by the fighting forces that could not be readily and economically bought.

Procurement procedures in the various services differed greatly as to detail and underwent modifications as the war progressed. In general, however, whatever could be bought from samples was purchased at prices set in advance. Even then excessive gains could be reclaimed through renegotiation processes. Where samples could not be made, as in the case of mammoth guns, gun carriages, new equipment, planes, or tanks, payments were based on cost plus a fixed fee to the manufacturer. The cost-plus contract was at best an expensive method of buying and at worst an open invitation to profiteering, but there was no workable alternative. In time of peace purchases by the military had been accomplished largely through sealed bids, the law requiring that awards be made to the lowest bidders. The defense emergency brought in September, 1940, the introduction of negotiated contracts—that is, qualified manufacturers were asked to bid, and quantity and price were arrived at on an informal basis. The theory was that plants large and small throughout the country would have opportunity to share in government work, that the unemployed would find employment, and that balance would be maintained in the economic structure. Economy in dollars, though still important, became secondary to geographic distribution of orders, to relief, and to a desire to strengthen "the human fiber" of the nation.

The army in part at least did not approve of the new principles. Officials at the textiles depot at Philadelphia vigorously asserted that spreading

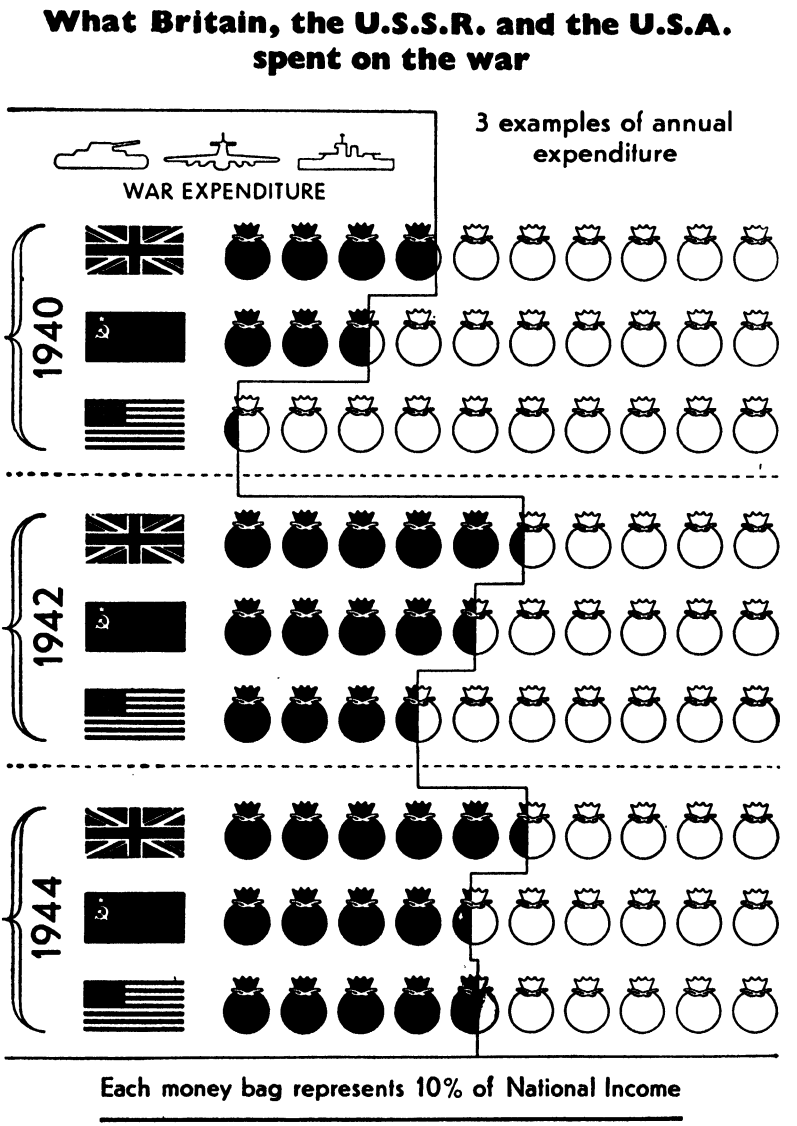
orders made it impossible in an industry composed in the main of small-scale units to choose qualified concerns, that eliminating bid bonds tended to bring irresponsible firms into the bidding list, that "ringing doorbells" (inviting bids) was of little actual benefit, and that awards except to the lowest bidder would inevitably provoke accusations of favoritism and fraud. Moreover, the commanding officer was firm in the belief that welfare, relief, and politics should be handled elsewhere than in connection with clothing the soldiers; he was convinced too that making speed, quality, and economy subordinate to other factors would delay the procurement program, nullify specifications, and load the depots up with "worse junk" than had been acquired during the first World War. The new principles prevailed, however, and throughout the war New York City, for instance, was deliberately awarded fixed percentages of certain clothing purchases at premium prices without consideration of facilities in other places.

Comprising more than two-thirds of all the fighting force, the army was the greatest single military purchaser. The old Services of Supply (SOS) of the first World War became the Army Service Forces (ASF), made up of several services. So far as the factories of the nation were concerned, the two most important buying agencies were the Quartermaster Corps, which procured the food, shelter, and clothing and all other equipment of the soldier common to two or more branches except his weapons, and the Ordnance Department, which procured guns and ammunition as well as motorized equipment. But all the forces bought in tremendous quantities, and all maintained their old and sometimes outmoded inspection facilities to determine the quality of their purchases. Waste, inefficiency, and duplication were usual, and occasionally officials with unbecoming bluster blamed the civilian economy for their own failures; yet the fighting men were magnificently equipped.

The Extent of the Military Force. The sheer number of men and women in the military service was in itself of tremendous economic significance. When the preparedness program began in the late thirties, the army consisted of about one hundred and seventy-four thousand men scattered over the nation in various posts, camps, and stations. On July 1, 1939, the first of many authorizations for rapid increases was issued. In May, 1940, further expansion was approved, and Congress began voting appropriations in terms of billions of dollars. On October 16 some sixteen million men between the ages of twenty-one and thirty-six were registered for military duty in compliance with the provisions of the Selective Training and Service Act that had been passed just thirty days before. When the Japanese struck at Pearl Harbor some fourteen months later, the army was

made up of well over a million and a half men. By July, 1943, its strength had moved upward to nearly seven million, and by 1945 (by which time all males between eighteen and sixty-five had been registered) to eight million three hundred thousand.

Meanwhile the navy too was growing. President Roosevelt and Representative Carl Vinson of Georgia had for several years been persistent



Courtesy British Information Services

FIGURE 28. WAR COSTS OF THE ALLIES

advocates of a strong fleet. War in Europe eventually brought plans for a two-ocean navy, but construction was just getting under way in December, 1941. Personnel, obtained through volunteer recruitment and through assignments from the draft boards, jumped from three hundred and twenty-five thousand at the time of Pearl Harbor to more than three million before the end of hostilities. The marines rose in number during the same period from about thirty thousand to nearly half a million, and the coast guard from fourteen thousand to approximately one hundred and seventy thousand. Altogether more than twelve million men were enrolled in the various services.

The drain on the manpower of the nation was quickly discernible, and as a means of partial relief several women's service organizations were set up. Uniformed women in war were not new. There had been "marinettes," "yeomanettes," army nurses, navy nurses, signal-corps telephone operators, motor-corps drivers, and others in the first World War. None, however, had actually been in the military, and high officials relinquished male monopoly in the second World War only with reluctance and under pressure. The Women's Army Auxiliary Corps (WAAC) was the first of the three groups formed after Pearl Harbor to become part of the military. The corps, directed by Mrs. Oveta Culp Hobby, was established in May, 1942. Its goal of a hundred and fifty thousand members was never reached; some two-thirds of that number enlisted in the Women's Army Corps (WAC), commanded by Colonel Hobby, which supplanted the WAAC in 1943. The WAVES (Women Appointed for Volunteer Emergency Service) under Lieutenant-Commander Mildred McAfee had its beginning in July, 1942. Later the "leathernecks" set up their women's branch, and with the forthrightness that had characterized them since the inception of their corps, they called their sisters in arms merely marines. Other groups such as the WAFS (Women's Auxiliary Ferrying Squadron) and the SPARS of the coast guard were civilian. The Army Nurse Corps after years of humiliating status was during the war finally given full military standing.

The flow of men and women into the services added greatly to the demand for war goods and drastically affected production both on the farms and in the factories. In agricultural regions where the urban siphon had been particularly effective, the situation became acute. Only in the thickly populated sections of the cities was the drain not readily apparent, though even there obvious changes were involved as owners of stores and shops of various kinds, notably mercantile outlets, moved into the government's producing and buying installations.

Housing the new recruits was a major problem. The situation in the army became critical before Pearl Harbor. Early plans contemplated twenty-nine reception centers for inducting and outfitting the soldiers and twenty-one replacement training centers for "fundamental" instruction. Land had to be acquired, construction materials purchased, and barracks, hospitals, social centers, and other facilities erected. While the Chief of Staff, speaking before a Senate committee on August 5, testified for the army, "We know exactly what we want to do and exactly where we want to do it," no definite decisions had been made even as to size of the camps. Eventually new depots were built and old ones enlarged, laboratories and experiment plants were set up, and machinery for keeping records of each individual and his dependents was put in motion.

The economic structure was considerably taxed. Though skilled workers and key persons in many occupations were exempted from conscription, those who were left at home to house, equip, feed, and clothe the fighting forces of the nation and provide Europe with appreciable quantities of goods as well faced a grueling task. Never before in its history had American industry, built on free enterprise, encountered such a tremendous challenge.

The Miracle of Production. *Economic Organization.* A few hours after Congress declared war against Japan, the Supply Priorities and Allocations Board declared from the office of Vice-President Henry Wallace that every activity of national life and civilian economy must be "immediately adjusted" to the change that had come and that the aim of the people must be "the greatest production which is physically possible." No call has ever been answered with grimmer determination.[3] Before Pearl Harbor, even had there been desire, it would have been difficult for the big corporations to shift piecemeal to war work. Assembly lines cannot be partly converted; they must for the most part be changed entirely or not at all. It was clear that the automobile industry, already persuaded or pommeled into action by William S. Knudsen and others, would be the backbone of the war production structure. This was true not only because of its gigantic extent but because of its organization as well. There was no mistaking

[3] Elaborate M-Day plans that had been carefully worked out at the cost of much time and money over more than a decade were completely ignored, however, and throughout the war they remained securely locked up in the vaults of the procurement agencies. Little concern, in fact, had been shown by civil or military officials in actually preparing as to supplies against attack. On the eve of the war, when information relative to the points of attack and the islands that Japan would likely occupy had already been distributed, pleas from the command in Alaska for adequate and suitable sleeping bags, clothing, and other equipment were answered with the suggestion that age, not quality, was the difficulty and with the advice to "improvise."

the fact that all manufacturing resources, large and small, must contribute to the war effort. American industry had since the introduction of standardized parts been characterized by diversified production units. The automobile makers more than other industrialists had established contact with the independent (and generally small) producers and tied them to their vast concentrating and assembling plants. Since it was impossible to deal with individual suppliers, the government took over the existing machinery. Thus the chain of authority ran from the planning agencies through the government buying organizations to the corporations as prime contractors and from them to the lesser manufacturers as subcontractors and subsubcontractors. There were perplexities and evils in the system, but guns, planes, vehicles, clothes, food, and other needed goods were produced.

Production by the Great Corporations. However important the contribution of the simple industrial plants, it was upon the great corporations that the real burden of production fell. The time was critical. "Industry—in fact, the entire economy—shivered under the impact of conversion throughout the first six months of 1942," says Donald Nelson. "It was like nothing else the nation had ever felt or witnessed. It was not so much industrial conversion as industrial revolution, with months and years condensed into days . . . the last automobile left the assembly lines in February. On February 23 the order curtailing the manufacture of domestic mechanical refrigerators was issued, effective April 30. On May 5 a sweeping order, M-126, stopped the manufacture of more than 400 civilian products using iron and steel. Manufacturers who had been making such items were allowed to substitute no other metals except gold and silver. The grimness of the war news, especially in the Pacific theater, was reflected in the speed-up of our activities in Washington, where it had become clear that there was less time than even the most pessimistic of us had thought."[4]

Soon the floors of the automobile factories were empty, and new assembly lines were being installed. The steel hands of the machines were retooled to turn out the things that were wanted. The raw materials that came through the doors differed entirely from those of other days. Processes on similar goods were more numerous and more exacting than before. Whereas the cylinder block of the Cadillac engine was made up of a single part and required only twenty-five operations and two-tenths of a man-hour of labor to complete the connecting rod and only sixty operations to finish the crankshaft, for instance, the cylinder block of the Allison aircraft engine was made up of seventeen parts and required ninety-three

[4] Donald M. Nelson, *Arsenal of Democracy: The Story of American War Production* (New York: Harcourt, Brace, 1946), p. 283.

operations and seventeen man-hours of labor to turn out the connecting rod and eighty operations to produce the crankshaft. For the most part, however, there was little relation between the old work and the new. The General Motors Corporation, for example, by September, 1942, was manufacturing not only army trucks, ambulances, and armored cars but also the Allison and the Pratt and Whitney aircraft engines; airplanes; airplane propellers, wings and parts, instruments, fuel pumps, landing gears, and automatic pilots; Diesel engines for tanks, trucks, and ships; tank and antiaircraft gun mounts; carbines, machine guns, and antiaircraft guns and aircraft cannon; tanks; radio receivers; parachute flares; and a host of other things. Between January and September its three hundred and forty thousand workers (assisted by an additional three hundred thousand in the shops of suppliers and subcontractors) in one hundred and four plants and operating units in forty-six cities in thirteen states produced equipment valued at over a billion dollars. Chrysler, Ford, Willys-Knight (home of the "jeep"), and others presented equally busy scenes.

The plane factories soon began to lose their handicraft characteristics and to take on an aspect of hurry as mass-production experts swarmed through their doors and set up assembly lines. Former rivals who had guarded their secrets jealously began to exchange both actual materials and the details of processes. A pool of supplies from which all might freely draw kept work moving, and unadulterated "ballyhoo" drew workers into the shops when labor shortages threatened. Each month the planes grew swifter and more powerful than their predecessors, and still others were being designed when the war ended. In 1944 over ninety-six thousand, valued at upward of sixteen billion dollars, poured out of the plants. Total production between January 1, 1940, and August 14, 1945, on the Pacific coast, in the Middle West, and in the East was in excess of three hundred and three thousand planes; that was more than even the President could have dreamed.

Tanks and guns too emerged with unbelievable speed from the huge shops that had once fabricated goods of peace. Tank makers, led off by the Chrysler Corporation, pooled their resources, traded their tools, and revealed their manufacturing secrets—and turned out an endless stream of mobile fortresses to lumber over the fields of war with Americans, Britishers, Russians, Australians, and whoever else was fighting Hitler's Germany and Hirohito's Japan. Some sixty types of military vehicles came from the production lines, their batteries, spark plugs, door handles, belts, generators, and other equipment largely standardized so that repair and

replacement would be easy. Guns ranging from the simple rifle to the giants of the big battle wagons were turned out in stupendous quantities; the traditional craftsmanship on which Remington and other arms makers in the United States had relied heavily was beginning by late 1940 to give way to the assembly line. Production of the thirty-caliber Browning machine gun began in the Saginaw Steering Gear Division of General Motors in March, 1941. By March, 1942, when the first two hundred and eighty specimen weapons were according to the original agreement to have been delivered, the company had completed more than twenty-eight thousand, and the price had dropped from six hundred and sixty-seven dollars to one hundred and forty-one.[5] The new Garand rifles, the automatics, the antiaircraft guns, the mortars, the multiple pom-poms, the rockets, and similar instruments of destruction, secret and open, that were manufactured cost (along with the ammunition they consumed) almost exactly as much as the first World War altogether.

The corporations that had previously made automobiles and planes were not the only ones that spread their energies into many fields. Explosives, which had made up eighty-five per cent of the output of the Du Pont plants in 1917-1918, amounted to less than twenty-five per cent between 1940 and 1945. Such widely assorted products as ammonia, cellophane, coated fabrics, dyes, electrochemicals, finishes, freon, insecticides, pigments, nylon, plastics, and rayon became outstandingly important. Hundreds of concerns that had formerly manufactured typewriters, refrigerators, machinery, chemicals, cameras, and a host of other items converted to war work. The large industrial institutions contributed to victory in other ways besides production. They carried on a ceaseless program of research; whatever the publicity, the part of the military in the actual development of new products was exceedingly small.

Few production feats were more spectacular than that of the great naval yards and private ways that built both the vessels that fought and those that merely transported men and guns and food and a million other things the long miles over the world. At the end of 1941 much of the Pacific fleet lay useless in Pearl Harbor, and the "battle of the Atlantic" was far from won. Battleships, carriers, cruisers, destroyers, submarines, motor torpedo boats, and submarine chasers were desperately needed. Landing craft of many varieties also had to be built. Ever, in fact, did fighting ships, merchant ships, and landing craft come into competition. Many troubles beset the landing-craft program in particular. Hurried

[5] Nelson, *Arsenal of Democracy*, p. 226.

orders, cut-backs, and changes in design were habitual. During the last six months of 1942, however, construction amounted to two hundred and eighteen thousand tons. But complexities increased rather than lessened during 1943 and 1944 as the navy and the Maritime Commission, harassed by labor shortages and scarcities in supplies of raw materials, fought for vessels. Enviable construction records were nevertheless established. Even the powerful battleships were built and repaired in record time. Battered hulks limped into American navy yards on what seemed for each its last journey, yet they lived to fight again.

The construction program for cargo vessels was especially complicated. Progress in the Pacific in particular brought constant demand for new types. The War Production Board found it a perplexing task to keep the infinite variety of steel plates and other components flowing in adequate amounts and at the proper times. The "Liberty ship" of ten thousand eight hundred tons was the most important in the merchant fleet. Far from a thing of beauty, this plodding craft was at least relatively simple to construct. Here more than anywhere else WPB's hankering for economy could be indulged. Along with many another type, the Liberty ship found brass and copper and aluminum and stainless steel for the most part banished from its interior. Painted iron pipes were bad enough, but the nadir of disgrace was a steel bell. Nevertheless, the two hundred vessels originally planned grew to two thousand seven hundred before the war was over.

Altogether some five thousand large ocean-going ships and a great number of small ones were built. Total dead-weight tonnage amounted to fifty-three million—five times that which had existed at the beginning of the conflict. The voluble Andrew Jackson Higgins of New Orleans contributed substantially to the landing-craft program. But it was Henry J. Kaiser who confounded the enemy critics who had scoffed loudly at the President's building goals. Through the use of radical techniques he beat his own records over and over and at last was constructing Liberty ships in forty days and less from keel laying to delivery; a comparable undertaking had required upward of ten months in the first World War.

Production in Small Shops. The big corporations gave no more generously of their efforts and their abilities than did the thousands of lesser concerns of the nation. The owner of the small shop as a subcontractor became a vital factor in production; expansion in some instances rested almost solely upon his facilities. He helped make shipbuilding history. Moreover, it was his assistance that enabled modest factories to turn out

goods far beyond their actual capacity and at much less cost than had they built new units. A California company supplying lights for planes and air fields pushed its sales volume to a million and a half dollars a month with only two hundred workers and machinery valued at some fifteen thousand dollars. An eastern tank manufacturer received parts from over two hundred subcontractors, who themselves relied on more than a thousand subsubcontractors. In certain instances more than half the output of large plants was farmed out. Many towns became through community plans or business organizations virtual production corporations. Usually selected concerns served as prime contractors; occasionally, however, all combined to set up an administrative agency with power to act.

Throughout the nation owners of small shops and mills and of large businesses not included in the category of great corporations changed their production to needed goods regardless of experience. Some of the transformations were startling. The Food Machinery Corporation shifted from sprayers to protect the farmers' crops against insects to the "Water Buffalo," amphibious tank that carried landing forces ashore, fighting as they went. Walter Kidde and Company, which had served the "soda jerk," turned its bubbling gas into a guardian of fliers and manufacturers alike against fire. The "king" of the frankfurter-casings producers fabricated protective covers against gas, the International Silver Company became (after making some two hundred and fifty million pieces of flat silverware for the military) a leader in the manufacture of Browning automatic rifles, and makers of women's gossamer "panties" and "bras" sewed such prosaic things as army ponchos.

The subcontractor, however important, did not always have a happy lot. Since he dealt only with the prime contractor, he had no recourse to the government. He was frequently overlooked altogether, and as a protester in Washington he was often kicked "from pillar to post" until he went home discouraged. Moreover, he lacked accounting staffs to keep satisfactory records of costs and generally had no reserve funds to carry him through the slow initial period of production or the weeks of idleness that sometimes followed cut-backs. Large producers pirated his labor force, and when delays resulted, military officials called him by long-distance telephone to tell him of his ineptitude—and reversed the charges. Legislative and financial aid came in June, 1942, when Congress authorized the creation of the Smaller War Plants Division in WPB and subscribed one hundred and fifty million dollars for loans. In March, 1943, the Smaller War Plants Corporation, with even larger resources, took over. A year later

Maury Maverick, fighting Texan, became chairman, and the big corporations never found a more vigorous adversary in their midst.[6]

The Contribution of the Government to Production. The government itself was an active participant in the production program. The Defense Plants Corporation, subsidiary of the Reconstruction Finance Corporation, spent some sixteen billion dollars in the construction of facilities for the manufacture of aluminum, synthetic rubber, airplanes, machine tools, high-octane gasoline, steel, and other needed goods. Many of the plants were leased to private management; others were operated by the government. Some investments were made in Latin America.

In addition to ownership of facilities, the government held direct control over raw materials, hours of work, and wages and dictatorial authority over production schedules. But the accomplishments were the result not so much of central administration and what was to a large extent central ownership as they were of the cooperative efforts of all. Such a tremendous stream of goods was turned out that the whole has not yet been catalogued in a single listing.

The Puzzle of Distribution. *The Nature of the Problem.* Transportation was one of the most perplexing problems of the war. Moving supplies and materials in necessary variety and quantity at the times and to the places needed on the production front and on the war front (logistics in the science of warfare) not only for the nation itself but in no small measure for its allies as well was a staggering task. At home fear of attack by air led to shift of the traditional centers of production away from raw materials and away from the regions of railroad concentration. The growth of huge hydroelectric plants in the valleys of the Tennessee and Columbia Rivers also was in part responsible for changes, and the theory of equitable distribution of war work was not without influence. Internal traffic in many instances had to be reshaped. Furthermore, since the enemy lay both across the Atlantic and across the Pacific, shipping facilities and adequate ports had to be maintained on both the coasts and on the Gulf of Mexico. No simple key would solve the difficulties. Civilian and military personnel competed for passenger service, and raw materials moving to the plants fought with finished goods on the way to the battlefields of the world. Never before had fighting forces been spread so widely over the earth. A plodding freighter out of New York took some seventy days to cover the twelve to fourteen thousand miles around Africa and upward to the Suez

[6] The terms "large" and "small" as applied to the plants that produced war goods were deceptive designations. Small businesses, according to government definition, meant concerns with fewer than five hundred employees. In such industries as textiles even the largest units rarely employed that many workers.

or to the supply points to Russia and China. It still required more than half that time after the Mediterranean was opened. Even then delivery was not completed. From the Persian Gulf to northern Iran on the route to Russia was six hundred and fifty miles; the Burma Road, when it could be traveled, was scarcely less formidable than the flight "over the hump" into China. The journey upward by the Arctic to Murmansk and Archangel consumed about a month, as did also that from San Francisco to Guadalcanal and neighboring islands or to the mainland of Australia.

Each step toward victory brought further burdens on the supply lanes. Invasion consumed tremendous quantities of goods. The channel crossing, for example, necessitated delivery of equipment for a million two hundred thousand men, millions of tons of materials of every imaginable description, enough planes to blacken the skies, several hundred miles of railroad trackage, twenty thousand cars and a thousand locomotives, nearly four thousand landing ships and crafts, and pipe for an oil line from Britain (operation Pluto). Demands elsewhere were little less extensive. On the production front at home the Office of Defense Transportation (ODT), headed by Joseph B. Eastman, rendered valuable service throughout the war.

Railway Transportation. The brunt of the carrying load at home was borne by the railroads. Close to three-fourths of all the freight that was moved over the nation went by rail. Between December 7, 1941, and March 15, 1942, a million nine hundred thousand of the military personnel were transported within the continental United States. By October forty per cent of the sleeping cars and fifteen per cent of the coaches were being devoted to troop movements, and the average speed of special trains had increased more than fifty per cent over that attained in the first World War. Freight and regular passenger traffic also grew rapidly. Cars were filled far beyond usual capacity, and the average distance hauled grew substantially. As the war went on, total volume expanded. The roads, described as "a 236,000-mile assembly line which runs day and night," carried in the first five months of 1943 not only a record amount of ton-miles of freight but also eighty-one per cent more passenger-miles than during any previous year in the history of transportation. With six hundred thousand fewer freight cars and twenty-one thousand fewer locomotives, American railroads in March, 1945, alone handled a greater volume of material for the European front than during the whole of the first World War.

National Highway, Waterway, and Pipe-Line Transportation. Motor trucks, boats, and pipe lines moved relatively little freight during the war. The rubber shortage and the scarcity of gasoline, especially along the

TABLE VI

DISTRIBUTION OF COMMERCIAL FREIGHT TRAFFIC IN THE UNITED STATES*

Millions of ton-miles

Agency	1940	1941	1942	1943	1944	1945
Steam railroads, incl. mail and express	378,343	480,783	644,096	733,420	745,843	689,691
Great Lakes	87,593	104,100	112,393	104,006	105,620	125,000
Rivers and canals	22,412	26,815	26,398	26,306	31,385	
Motor trucks	51,003	57,123	50,207	48,199	49,308	55,619
Oil pipe lines	67,270	77,818	74,730	96,257	132,336	123,293
Electric railroads	818	965	1,166	1,295	1,325	1,300
Air carriers	14	16	33	52	71	91
Total	607,453	747,620	909,023	1,009,535	1,065,888	994,994

Percentage distribution

Steam railroads, incl. mail and express	62.3	64.3	70.9	72.7	70.0	69.3
Great Lakes	14.4	13.9	12.4	10.3	9.9	12.6
Rivers and canals	3.7	3.6	2.9	2.6	3.0	
Motor trucks	8.4	7.7	5.5	4.8	4.6	5.6
Oil pipe lines	11.1	10.4	8.2	9.5	12.4	12.4
Electric railroads	0.1	0.1	0.1	0.1	0.1	0.1
Air carriers	—	—	—	—	—	—
Total	100.0	100.0	100.0	100.0	100.0	100.0

* From *A Yearbook of Railroad Information*, 1947 edition, p. 5.

Atlantic seaboard and in Washington and Oregon on the Pacific coast, hampered, though it did not halt, the highway fleets. River traffic too was limited, but the boats on the Great Lakes plied incessantly between the ore fields and the industrial cities on the southern shores of Erie and Michigan. Averaging about thirteen per cent of all transportation, they were second in importance as carriers only to the railroads. As the German submarine attack cut heavily into the tanker lines between the oil fields of the Southwest and the industrial centers of the East, it became clear that new transport facilities must be developed. After much controversy and delay (during which many homes were cold and some war plants were idle) the government sponsored at a cost of a hundred and eighty million dollars the construction of thirty-eight hundred miles of pipe line—the "big inch" and the "little inch"—to pour oil into the East.

Air Transportation. Planes, both civilian and military, were extensively used in transport. Their speed and the fact that they were little if any affected by the geographic boundaries of the enemy made them valuable for delivering urgent needs (such as luminous flags to mark the invasion beaches in Africa) and for hurrying diplomatic, production, and service personnel to their destinations. Air-borne infantry, paratroopers, and other fighting forces were significant in many battles. Before the war was over, huge carriers were swallowing up even jeeps and tanks and disgorging them within a few hours at critical fronts. At no time in history had people moved great distances with such indifference; soldiers of the ranks on far-off battlefields were sometimes flown half around the globe on emergency furloughs.

Ocean Transportation. Ships, connecting links between the producing units in the United States and the consuming units in Europe, Africa, and Asia, were a source of much anxiety during the war, especially in the first years, when submarines were sending them to the bottom of the ocean faster than they could be built. Tankers for oil and gasoline and all manner of vessels for the "fleet trains" of the navy and the supply service of the army were needed. As the forces moved forward, more and more ships in the navy's "train" had to be loaded and more and more bases for the army had to be filled. Happily the Maritime Commission had been set up before the beginning of hostilities. Headed by Vice-Admiral Emory S. Land, it put afloat through construction, purchase, or lease a host of vessels not only for the merchant fleet but for the navy as well.

Production and the Working Army. *Manpower.* In the final analysis success of the production program rested heavily upon the ordinary workman in field and factory. To mobilize the manpower of the nation on an efficient basis was not simple. The tragic years of the thirties had offered scant opportunity for building up a reservoir of skills, for unemployment had been deadening both to ambition and to learning. Moreover, the armed services ate rapidly into the age group that would normally have shouldered the tasks of production. Consequently one of the first undertakings in the battle of the factories was a training program. During 1940 and 1941 thousands of people flocked to the government-sponsored day and evenings classes. "Refresher" courses were offered for adults and vocational training for youth. Classes for white-collar workers were taught, for it was inevitable that the war a filing-case civilization would fight would be a filing-case war. And so along with potential plasterers and metal

workers and bricklayers and welders trudged to school would-be typists, stenographers, filing clerks, and PBX operators.

Fortunately there was a great army of men beyond military age who yet held in their hands a tremendous store of production wealth—men who had been pitched out of industry as too old to work. Fortunately too there remained (in spite of twentieth-century pessimism and much teaching to the contrary) still a trace of the tradition that Americans could do anything. The well, the sick, the lame, the halt, the blind, and the lazy poured into the factories and proved the point. Women left their homes to join in the battle of production. "Rosie the Riveter" helped make aircraft history, and her sisters toiled long hours in shop and mill and office. In midsummer of 1943 more than thirty-six per cent of the workers on the assembly lines of the prime contractors were females; many were young wives of soldiers, sailors, and marines, but grandmother was not unrepresented. Boys and girls too were employed, special permission of the state labor bureaus being as a rule required. The number of gainfully occupied rose from forty-five million in 1940 to sixty million in 1944.

Directing the flow of human resources was scarcely less difficult than allocating the supplies of physical resources. Labor was in continual movement. As plants grew up in thinly populated sections, workers had to be imported, and in the process serious difficulties such as housing shortages and transportation problems developed. Hurried demands for particular goods on the part of the government led to pirating and general competitive buying in the labor market. Prime contractors with large financial assets and government subsidies behind them stripped their subcontractors of their best producers, though that meant in the end delays in essential parts for their own plants.

In April, 1942, President Roosevelt created a War Manpower Commission (WMC) with the assignment "to establish basic national policies to assure the most effective mobilization and maximum utilization of the nation's manpower in the prosecution of the war." The commission, under the chairmanship of Paul V. McNutt, expanded the training program and discouraged employment in occupations that were not essential to the progress of the war. By December its authority over the production army had been extended to include virtual control of the draft and to compel the hiring of labor through its subsidiary, the United States Employment Service. Despite the fact that abilities were in instances frozen at existing levels, the confusion in the manpower situation was lessened.

Organized Labor in the Production Battle. Labor as a producing instrument was less definitely affected by the War Manpower Commission than

it was by various labor boards and divisions and by its own unions. Participation in government planning began with the appointment of Sidney Hillman as adviser on employment to the National Defense Advisory Council. Hillman, with the help of assistants from the A. F. of L. and from the CIO, rendered a commendable service in "trouble-shooting" and in the setting up of a Training-in-Industry program. As associate director of the short-lived OPM he was accused occasionally by military procurement officials of favoring firms in good standing in his own union in the distribution of contracts, but his section helped materially in mobilizing needed craftsmen for work in areas away from normal centers of skills concentration.

The labor front was not without its conflicts. Such questions as that of the right to organize and bargain collectively were not wholly forgotten, but the matter of wages took precedence over all the rest. Union spokesmen promised the President a few days after Pearl Harbor that there would be no strikes. On January 12, 1942, the National War Labor Board (NWLB), composed of four representatives each from the public, the workers, and the employers, was established to maintain industrial peace, receiving from the Secretary of Labor disputes that could not be settled by other existing machinery. Production moved forward with little disturbance. Wage conditions, however, became acute as prices climbed upward. In July, 1942, a fifteen-per-cent increase to meet advances in the cost of living since January 1, 1941, was granted by the NWLB to employees of certain steel companies, and this "Little Steel formula" became the measuring stick for determining wage scales in all disputes until the end of the war. Though wages were increased by various evasions as time went on, labor became more and more convinced that it was bearing an unjust share of the war burden.

The amount of time lost by strikes was small in view of the total number of working days involved in the production of war goods. Only in 1943 did serious controversies develop. John L. Lewis led his five hundred thousand soft-coal miners in a general revolt against the government's attempt to control inflation through holding down prices and wages. A fifteen-per-cent advance was followed by new demands. Even after Secretary of the Interior Ickes as coordinator of hard fuels took possession of the mines, troubles did not disappear; three times during the year the miners walked out. Lewis in the end won his points, but his defiance stirred resentment in Congress. In June the War Labor Disputes Act became effective over the President's veto. Government seizure of strike-bound plants producing essential war goods was authorized, a cooling-off

period of thirty days after intention to strike was filed was made mandatory, and approval by secret ballot was required before work stoppage. Penalties were provided for instigation of strikes in government-possessed war plants, and strikers in privately directed plants were made liable for damage. Furthermore, the use of union funds in support of candidates for federal office was prohibited.

Agrarian Labor. Agrarians as well as urban laborers made up a part of the working army. Food was no less essential than were the instruments of destruction that rolled in a mighty tide from the factories. Everywhere seasons were good and harvests bountiful. Between 1942 and 1944 the corn crop exceeded three billion bushels annually, and wheat reached a billion bushels in 1944. Meat averaged over twenty billion pounds a year. Though some production shortages and distribution scarcities occurred, Americans, both in the service and in civilian life, had more to eat than did any other warring people of the world, and there were substantial amounts to contribute to the allied nations. Farm incomes rose from five billion dollars in 1932 to twenty billion in 1944. But costs too moved upward. Feed was high, machinery was expensive if it could be obtained at all, and labor was scarce and dear. The whole agricultural industry was heavily burdened with debt. Moreover, the agrarian, since he had ceased to process his own crops, was hardly less dependent on the storekeeper than was the city dweller. Notwithstanding legislative guarantees of the prices of his products through subsidies, he frequently grumbled about his lot. Yet he and the laborer were more prosperous than they had been in a generation.

Wartime Finances. *The Cost of the War.* The pay-as-you-go dream of other wars was revived when the United States entered the fight against the dictators. It was wholly impossible, however, for the nation to raise in half a dozen years twice as much as the government had spent since its founding. The over-all costs between July, 1940, and December, 1946, were tremendous: forty-seven billion for airplanes, forty-one billion for ships, eleven and a half billion for guns and fire control, twenty-one and a half billion for ammunition, twenty-one billion for combat and motor vehicles, eleven billion for communications and electronic equipment, forty billion for naval stock and other equipment, twenty-seven billion for war construction, sixty-nine billion for pay and subsistence and travel, and nearly forty-nine billion in other outlays. The total was over three hundred and forty-one billion.

The Tax Program. Tax increases began as early as 1940. As the fantastic production goals of 1942 began to be set up, arguments arose as to what additional levies should be made. In October the "greatest tax bill in his-

tory" reached out to take in every married couple whose income was more than twelve hundred dollars a year and every single person whose income was more than five hundred. A "victory tax" (with certain adjustments) was imposed on incomes over six hundred and twenty-four dollars, normal rates were increased from four to six per cent, and surtaxes were instituted ranging from thirteen per cent on the first two thousand dollars of taxable income to eighty-two per cent on that above two hundred thousand. Corporation taxes were raised appreciably, and the toll on excess profits was jumped to ninety per cent, though certain postwar rebates were pledged for reconversion purposes. Excise taxes too struck at everything that promised revenue. Americans quickly began to learn the enormity of the cost of making war. The impossibility of exacting vast sums in taxes long after incomes had been received soon became obvious. In June, 1943, a modified version of a plan proposed previously by Beardsley H. Ruml of the New York Federal Reserve Bank and R. H. Macy and Company was adopted. Thereafter stated sums were withheld for the government by employers from wages and salaries paid their employees; persons who received incomes in other forms made quarterly payments to the treasury.

The heavy collections from the people were not inspired altogether by war needs. They were in part intended as a check on inflation. There was no general agreement, however, with the philosophy of the financiers; objections were especially vigorous on the part of those whose incomes had lagged behind rising costs and those who had at real sacrifice put every available penny into war bonds. In 1944 Congress rebelled against further taxes and rebuked the President by a decisive vote. Habits and traditions peculiar to the democracy prevented the use of forced loans and of sales taxes. The latter, if properly drafted, might without much hardship on anyone have arrested the all too evident buying of thousands of tons of shoddy merchandise.

The Borrowing Program. Borrowing as well as taxing was resorted to in the raising of money for carrying on the war. The public debt climbed steadily upward from less than forty-nine billion dollars on June 30, 1941, to more than two hundred and fifty-eight billion on June 30, 1945. Eight great bond drives were launched, and a persistent program of pay deductions was maintained; war-stamp sales were encouraged also. Though military personnel and other individuals frequently sought results in the selling crusades by picturing tragedies that would come to sons and daughters in the service if purses were not opened wide, one of the primary purposes of the sale of "E" bonds of small denominations to ordinary citizens was

to take up surplus money in circulation. Monthly redemptions often ran high, but by fixing values at given dates the government guarded against postwar profiteering such as had occurred after the bitter struggle of 1917-1918.

The Civilian Economy in War. In November, 1941, seventeen per cent of the national income was being spent on the fabrication of war goods, and it was predicted that the figure would rise to twenty-seven during 1942. Shortly after Pearl Harbor the President set a goal of fifty per cent. That one of every two units produced was to be turned to the prosecution of war meant lean days for the civilian economy. It meant that unless quick action was taken, prices and purchase distribution would be determined by individual wealth rather than by individual need. No one could miss the close connection between war and inflation.

Price Control. While efforts to control prices had begun as early as 1940, the tremendous slack in the economic structure absorbed for a time without revealing inflationary tendencies the rising demand of consumers with an ever-increasing amount of money in their pockets. By the summer of 1941, however, the shape of the future was clearly to be seen. The President felt it necessary to ask for legislation that would "include authority to establish ceilings for prices and rents, to purchase materials and commodities when necessary, to assure price stability, and to deal more extensively with excesses in the field of installment credit." Though nothing was done immediately, before the end of the year Leon Henderson of the OPACS, using persuasion, warnings, requests, and agreements, put ceilings on more than thirty commodities and cut automobile production appreciably.

The attack on Pearl Harbor prompted aggressive action. The first problem was to prevent speculative increases in the prices of articles obtainable only from regions within the Japanese sphere. Henderson and his assistants conferred all that fateful Sunday, and the next morning various exchanges dealing in grains, oils, and other products were asked by long-distance telephone to hold prices down. On Thursday emergency ceilings were placed on green coffee, unprocessed pepper, and cocoa beans and cocoa butter; a few days later iron and steel products sold by jobbers, dealers, and distributors were added to the list. Throughout the rest of December Henderson's vigorous hand clamped down on nervous prices wherever he found them.[7] It was apparent, however, that inflation was slowly be-

[7] A run on flashlight bulbs and batteries and used burlap bags (for barricades) on the Pacific coast brought the first price-control schedule on the retail level. Soon schedules had to be issued on a nation-wide basis on such items as sugar, leather, cigarettes, new rubber tires and tubes, and domestic cooking and heating stoves throughout the nation.

coming a general conflagration that the government could no longer keep in hand by snuffing out small danger spots; the time had come for general control on the retail level.

Congress on January 30, 1942, passed after much debate an Emergency Price Control Act, authorizing the creation of an Office of Price Administration and giving to its administrator ample statutory power to act. While there was critical need for an all-embracing program, wage rates and farm prices, two of the primary disturbing elements in the worsening situation, were for the most part exempted. Already the slack in the existing productive structure had been used up, and new plants were essential, even though they would consume iron and steel and other much-sought materials. More than that, the demands of the armed services had with increasing mobilization expanded to include large amounts of clothing and other items that were used in quantity by civilians, and the factories that had turned out such popular products as automobiles, washing machines, refrigerators, and radios were busy on war orders. In the meantime incomes were growing rapidly: employment was up, hourly earnings had risen, corporate profits were increasing, and dividends had jumped sharply. It was estimated that consumer spending power during the year, notwithstanding heavy taxes, possible liberal purchases of bonds and savings stamps, and substantial cancellations of debts, would reach approximately eighty-six billion dollars. On the other hand, it was predicted that the value of the goods to be bought would scarcely exceed sixty-nine billion. The figures were purely human figures and not, as Leon Henderson suggested, the cold and unquestionable statistics of a machine, yet it was evident that Americans would have a surplus of some seventeen billion dollars with which to bid against one another for the things to be bought. This economic imbalance would bring higher prices and in turn higher wages, but higher wages would necessitate higher prices again, and they would make higher wages unavoidable—hence an endless and vicious circle. It was obvious that both in industry and in agriculture collective bargaining and the free play of the law of supply and demand must be temporarily checked.

On April 27 President Roosevelt recommended to Congress a seven-point attack on inflation. Five of the measures he proposed were regulatory in nature; they were, briefly, heavy taxes on profits, over-all ceilings on prices from manufacturer to consumer and on rents in defense areas, stabilization of wages, stabilization of farm prices (with parity prices instead of the one hundred and ten of parity that Congress had voted), and nation-wide rationing of essential and scarce commodities. The other two were

persuasive; they were the encouragement of bond purchases and repayments of debts and the discouragement of credit and installment buying. The next day OPA issued its General Maximum Price Regulation and "a series of orders paving the way for rent control in 302 additional defense areas in 46 States and Puerto Rico." To the general public the most significant part of the pronouncement was that after July 1, 1942, prices for goods and services were not to exceed those charged in March. No miracle resulted from this all-inclusive regulation. Wages moved upward by many means, including upgrading and changing of jobs, and farm prices were far from stable. In October the machinery of control was widened and centralization of efforts was attempted through the creation of the Office of Economic Stabilization, headed by James F. Byrnes, who resigned from the Supreme Court bench to accept the appointment. In spite of "hold the line" appeals from the White House, stability was never attained. The value of the experiment, however, is fully evident in the price charts of the war years.

Rationing. Closely allied to price control was rationing, for price control could do no more than make it theoretically possible for the poor as well as the rich to purchase basic needs. In other words, controlling prices was concerned with preserving ability to buy, while rationing was concerned with the equitable distribution, local and national, of the supplies that were available. Since civilians alone, generally speaking, were producers, allocation of civilian goods for maintaining the human forces of production at efficient levels was as essential as was allocation of raw materials for maintaining the machines of the war plants at high speeds. That fact was frequently overlooked. Many factors led to maldistribution. The steady rise of incomes tended to bring absorption of products at or near the sources of manufacture, thus checking shipments to distant points. Even more serious was the situation at retail outlets. As more and more housewives and other family shoppers turned to the war plants and long hours of employment, shelves in the grocery stores in particular were emptied of scarce items by those fortunate enough to have opportunity to do their buying at customary hours. Storekeepers in some cases did what they could to divide their stocks fairly by withholding a part of their meager supplies for late shoppers; others sold only to regular customers. It was possible in late 1942 and early 1943 for householders with plenty of money and points to go without such basic foods as butter and meat for weeks. Nevertheless, restriction of purchases helped immensely in equalizing distribution and in deterring hoarding.

Rationing, though of four different types, rested fundamentally upon

the two principles of equality and need. Point rationing guaranteed to all persons in the nation a right to buy like amounts of food, kind and price depending upon their own selections;[8] uniform coupon rationing granted to every person the right to buy within a stated period a pair of shoes or five pounds of sugar; differential coupon rationing gave to a particular group—owners (or renters) of homes, industrial plants, and cars and trucks—the right to buy fuel oil and gasoline in quantities determined by general measurements such as size of home, climate, and use and essential nature of work performed; and certificate rationing granted to single individuals on application and proof of need the right to buy a specified item such as an automobile, a tire, a stove, or a pair of rubber boots at a given time.[9]

Administratively rationing was put into operation through five thousand five hundred and sixty-nine local boards manned by volunteer workers. Every activity of each community was represented on the boards, the schoolteachers rendering particularly valuable service. Notwithstanding delays, favoritism, and inefficiency in some places, rationing won hearty approval from the people.

The Civilian in the War. Price control and rationing were not the only things that affected civilian economy during the war. Though there were loafers and hoarders and "black marketeers" and dancers in the night spots celebrating profitable days, on the whole the ordinary civilian, whatever his position before Pearl Harbor, felt his humbleness and his deep obligation to the few who were doing so much. He was with few exceptions willing to undertake any task, and that sometimes meant as complete disruption in his life as did military service to the millions who uncomplainingly went off to fight. Filling-station operators, salesmen, storekeepers, professional men and women, and a great number of other people were compelled to take up work that was sometimes unfamiliar to them. Manufacturers frequently found their plants being to a large degree directed by the inexperienced as inspectors, expediters, and other personnel of the government buying agencies flocked through their doors. The "war worker" in every field of activity came under new disciplines. It is true

[8] Coupons were used in the purchase of foods, but the tokens (red for meats, butter, margarine, canned fish, cheese, and canned milk and blue for canned and bottled vegetables and fruits and juices) that were used for change are probably best remembered.

[9] *Rationed Goods:* 1942: January—tires; February—passenger automobiles; March—typewriters; April—sugar; May—gasoline in the eastern shortage area; July—bicycles; October—oil in thirty states and rubber footwear; and December—gasoline throughout the nation and stoves. 1943: February—shoes; March—meat, lard, shortening and oils, butter, margarine, cheese, and processed foods (canned, bottled, and frozen vegetables and fruits, dried fruits, and dried beans); September—firewood and coal in the Pacific Northwest; and November—jams, jellies, and fruit butters.

that in some instances he was looking only for more pay; in most cases, however, he had a real contribution to make. He grumbled little when his abilities were ignored. He was, nevertheless, often disturbed by the pomposity of those who had recently come to authority, by the accusation that he got much money for little work, by impudence on the part of sellers in a sellers' market, by the unjustified privileges of "desk" officers in military establishments that were essentially civilian, by the inordinate boastings of service officials, and by blundering and sometimes flagrant incompetence. The homemaker did not understand how she could cut out the ends of and flatten her cans for the tin-reclaiming plants without a can opener or why scrap she carefully saved was never collected. Throughout the war waste, human and material, was everywhere apparent: in the overstaffed bureaucracies; in the idle officers and hoarded equipment in the military procurement agencies; in the vacant parking lots for shoppers in the urban communities at the terminals of transportation facilities, where drivers from the outlying districts on their way to their jobs had to find places to park wherever they could; and in the crisscrossing of workers who fought for space on streetcars, subways, and buses as they traveled miles to jobs that were identical with ones in their own neighborhoods. A surprising amount of energy was in one way or another siphoned off from production by the petty tyranny of needless managerial thoughtlessness.[10]

But the task to which America set herself in December, 1941, was magnificently done. Winning the war, however, was not to the glory alone of the military as an institution, for the great majority of the service personnel had been but yesterday civilians. Nor was the industrial achievement the part alone of unionism, for no small number of the people who made planes and tanks and guns were housewives and other transients on the labor scene who a short time before had been unknown in the factories. The victory was the victory of the whole nation.

[10] One insignificant yet real example of obnoxious thoughtlessness was the requirement that all war workers display their ages prominently on their identification badges. Even health and safety were sometimes endangered; at one government buying installation in Philadelphia thousands of workers released at four-thirty each afternoon were loaded on to streetcars at only three points while the whole yard was available. No little resentment was stirred by open sale of such economic refinements as cleansing tissue only to officers at depot sales counters and by provision of facial-quality tissue, toilet soap, and clean white towels in the officers' washrooms and only harsh tissue, crude soap, and scraps of nonabsorbent waste khaki material (distributed weekly) for civilian workers.

Chapter 39

THE ECONOMIC PROBLEMS OF PEACE

On May 7, 1945, General Gustav Jodl signed for Germany an Act of Military Surrender, and two days later the terms became effective. On August 14 announcement was made from the White House that Japan had capitulated; formal signing of the documents took place on the battleship *Missouri* on September 2. The greatest war in history was over. The celebrations that spread throughout the globe, however, soon ended. Never before had the world faced the future with so many misgivings. An astounding number of people had in one way or another been uprooted. Destruction had visited great areas of the earth with appalling effectiveness, leaving vast piles of rubble stretching from England across continental Europe and northern Africa and through Russia and China to Japan and the islands of the Pacific. Human as well as material resources had been struck a telling blow; the host of dead and maimed and the legion of those who would never be born would leave gaping holes in the productive population of the coming years. Millions of men and women in the military forces were scattered over all the continents, and other millions of "displaced persons" wandered without homes. The iron hands of the machines that everywhere had been turned to producing the instruments of warfare were for the most part now useless. The clouds that had mushroomed above Hiroshima on August 6, 1945, promised destruction to all mankind unless the marvels of the "atomic age" were turned altogether to the building of a new and better universe in which energy without laborious effort was a reality.

The political as well as the economic structure of the world had been deranged. Orderly government was nonexistent in many places, and, with the sole exception of the enigmatic Joseph Stalin of Russia, old leaders among both the vanquished and the victors had disappeared. Churchill had been defeated at the polls; Hitler presumably had committed suicide; Mussolini had been battered to death and ignominiously hung by his feet on a public square in Milan; Hirohito had been unhorsed as an emperor if not unthroned as a religious ruler; and the body of Franklin D. Roose-

velt had been laid to rest in a simple grave on his Hyde Park estate along the Hudson. Shortly before his death the weary President had written for an address which he never delivered, "The only limit to our realization of tomorrow will be our doubts of today."

The people of the United States were indeed doubtful of the future, but few could escape the knowledge that upon America would rest in large measure the material burdens of reconstruction throughout the world. The surging energy that had driven the nation forward after Pearl Harbor was missing. Men and women in uniform wanted to come home, and tired homemakers in plants and offices wanted to go back to their families and their kitchens. Consumers wanted to go out into the markets and buy without hampering restrictions the goods they had forgone during the years of war. Producers were unwilling to build on a grand scale new machines for fabricating the things of peace without some assurances as to the economic tomorrow, labor demanded higher wages for shorter hours to compensate for the sacrifices it said it had made during the trying years of conflict, and the public cried for the "open road" of the past. Individual demands, however, ran counter to the needs of the moment, for united action alone could win the peace. The two great problems that had to be solved were, first, to restore the people everywhere to a normal and peaceful life with all the complexities that that implied and, second, to reshape the international economic, political, and social order that wars would come no more.

Military Demobilization. While the surrender of Germany slowed the wheels of production and checked inductions, the American military force still numbered about twelve million persons when the guns were finally silenced. Furthermore, American war materials valued at some sixty billion dollars were scattered over the globe. Besides, tons of goods were in process of manufacture or on their way by rail, highway, or water toward the battlefields. With plans prepared in advance for meeting V-E Day, the railroads between May 2 and May 10 reversed the flow of two hundred thousand tons of freight destined for Europe. More than seven thousand loaded cars were halted in transit on eastern lines, and a large number on western roads were turned around or reconsigned. Efforts to stop war activities completely began in earnest, however, only with the close of hostilities in the Pacific.

The Demobilization of the Military Personnel. The demobilization that began with the surrender of Germany and stepped up rapidly after the fall of Japan was hurried by increasing clamor for speed as the months went on. By the end of 1945 the number in service had been reduced by

six and a half million. But protests from high officials in the army and the navy that the victory was being endangered by the rapid dissipation of military power caused early in 1946 sharp curtailment in discharges. A radio plea by General Eisenhower soothed though it did not quiet the furor that arose, and Congress only after much pressure extended for forty-five days the draft legislation that was to have expired on May 15. The continued demand on the part of the military for occupation forces in Germany, Austria, Italy, and Japan resulted in the last days of June in a reluctant extension of selective service until July 1, 1947. It was specifically understood that the army thereafter would be limited to a million men and the navy and the marine corps together to slightly more than six hundred thousand. Proposals for universal military training brought bitter opposition.

The dissolution of the fighting forces, while it substantially lessened total outlay, did not reduce military expenditures to peacetime levels. Pay increases of fifty per cent for privates and apprentice seamen and smaller amounts in higher ranks were made to encourage enlistments. Terminal-leave pay for officers and maximum demobilization pay of three hundred dollars each for enlisted personnel took large sums. Moreover, unemployment compensation and payments made for tuition and books and supplies as millions of veterans turned to the classroom at government expense pushed costs upward rapidly. Badly needed hospitals for the sick as well as crutches, automobiles, and other aids to the disabled swelled the mounting totals. Various additional grants and bonuses by individual states added further burdens. The ordinary citizen, though for the most part willing to assume his obligations to the veterans, saw the doom of his hopes for tax reductions in the insistence of the military on large armies and huge stocks of munitions. He began, in fact, to wonder if heavy tribute to the government would ever end.

The industrial structure felt the impact of the return of millions of workers to their jobs. Both national and state legislation had sought to preserve for those who had been in the service of their country the rights they had possessed when they went off to war. In spite of the good intentions of everyone involved. however, the pledges proved in general as empty as had those made during the first World War. In some instances the veteran slipped back into his old position and started without incident his new life in an economic world that was in many ways unfamiliar.[1]

[1] Though army polls revealed the fact that not more than half the soldiers desired to return to their old jobs, the great corporations such as Standard Oil of New Jersey and American Telephone and Telegraph took back ninety per cent or more of their former employees; when retraining was necessary, courses were offered at company expense.

But often the workman who had taken up arms had learned new skills and thus shut himself off from his old ways. Frequently the company that had employed him had changed completely as to product and processes and in some cases had disappeared altogether. Legal seniority (or super-seniority, as some suggested) was valueless where there had been no previous service. Adjustments from the viewpoint both of labor and of management were made with difficulty, and occasionally bitterness accompanied by accusations of injustice arose. Fortunately openings were plentiful, and little trouble developed over promises impossible from the beginning to keep.

The "G. I. Bill of Rights," passed in June, 1944, was a basic factor in the economic readjustment of the returning veteran. The educational program was helpful in that it made available to all training for new occupations and to those who could qualify four years in college. Furthermore, it fed the returning veterans, who, so far as industry was concerned, had been unemployed, back into the labor supply slowly. Other features of the bill were important. Notwithstanding abuses, unemployment insurance at the rate of twenty dollars a week for a maximum of fifty-two weeks lessened the compulsion to accept whatever was offered and made it possible for each individual to attempt at least to discover the type of work best suited to his desires and his ability. Too, machinery was set up for guaranteeing loans from private financial institutions for the purchase of homes, farms, and businesses. The results were not always satisfactory. Homes to be bought were few, and the bankers, afraid of the future, let out their money on farms and businesses with reluctance. There was reason for caution, yet borrowers were apt to feel that they were being hampered in their efforts to reestablish themselves economically. In spite of minor irritations, however, the men and women who only recently had discarded their uniforms became with few exceptions quickly indistinguishable from the other millions of busy Americans who were hopeful if fearful of the future.

The Disposal of Surplus Materials. Getting rid of the vast quantities of materials that the military had accumulated proved to be a longer procedure than disbanding the fighting forces. Administrative controversies and physical difficulties in inventorying items brought long delays, and as late as December 2, 1946, the House Special Committee on Postwar Economic Policy and Planning characterized the progress that had been made as "disappointing." The task was a monumental one that had received little serious study. Throughout the war the government had been a juggler in nuts, bolts, and a million other things made unusable by

model changes, but the possible extent of ownership at the end of the war, when possession was taken of all finished goods in the factories and all raw materials in the process of manufacture, was staggering. Early in 1944 Bernard M. Baruch and John M. Hancock in drafting a postwar policy of adjustment had admitted the complexity of the problem and the fact that no solution could finally be worked out until it was known what government-owned plants and machinery would be kept in reserve for future security, what posts and camps would be kept for storage and warehousing, what raw materials obtained from foreign sources would be put into stockpiles, how large an army and navy would be maintained, and whether or not there would be universal military training after the war.

While Baruch and Hancock had suggested a workable sales plan and military procurement officials had made helpful proposals, no aggressive action other than the establishment of a Surplus Property Board had been taken when peace came in 1945. Disposition of surpluses in Europe, which consisted chiefly of motor vehicles, aircraft, fixed installations, maritime property, communications equipment, textiles and wearing apparel, railroad equipment, industrial machinery, fabricated metal products, electrical supplies, and food and beverages, was not difficult. Stocks, handled by the Office of the Army-Navy Liquidation Commissioner until October, 1945, and thereafter by the State Department, were used primarily to help reestablish economic life in the disordered countries. Approximately eighty per cent of the sales were made to foreign governments that would otherwise have purchased new goods on credit in the United States. About twelve per cent went to the United Nations Relief and Rehabilitation Administration and the remaining eight per cent to diplomatic posts and local charitable agencies. Only in the Pacific was there evidence of real waste. There, though some two hundred and seventy-five shiploads of items critically short at home were returned, tons of goods, new and used, were dropped into the ocean or left to be swallowed up by the jungle.

Opinions differed as to how the government should dispose of the smothering domestic surplus, valued roughly at thirty-four billion dollars, which ranged from giant war plants such as Willow Run to tiny screws. The simplest solution was to sell the whole at junk prices, but that had led after the first World War to riches for clever buyers. An alternative was to turn the government into a great selling agent with an eye to profit; that, however, would bring it into direct competition with private business. Moreover, the people, who through burdensome taxes had already paid for the goods, saw no reason for buying at market rates things that at best were poorly suited to civilian use. There was little possibility of

using the stock as an instrument of price control: not only was much of it wholly valueless except for war purposes, but also the government as a seller could not offer the normal guarantees of individual producers.

Whatever course was followed, disposition of such unwieldy properties as the "big inch" and "little inch" pipe lines, airplane factories, aluminum plants, training camps, and war-born towns was bound to bring criticism. Even normal industrial goods were sold with difficulty, and few were disposed of before the acute need had passed. After much administrative floundering the War Assets Administration was created in March, 1946. Regional offices were set up throughout the country, and buying procedures were formulated. But progress was still slow, for the goods had to be offered first to federal agencies, then to veterans for their own small business, professional, or agricultural undertakings,[2] then to the Reconstruction Finance Corporation, then to state and local government agencies, then to certain nonprofit institutions, and last to the general public. Success, except in cases of special heavy discounts and outright gifts, was limited. In the fall of 1948 WAA was still advertising its goods for sale in the newspapers.

Contract Terminations. The final settlements with American manufacturers who were producing war goods were accomplished with commendable dispatch. Industry, remembering the inexcusable bungling and delays that had occurred after the signing of the Armistice in 1918, had insisted that plans be made in advance, and military and governmental planners as well as Congress had early declared that quick action was essential if America was to convert to peace production without alarming increases in unemployment. Every procurement agency had trained "contract-termination teams" before the end of the war, and forms and even notification telegrams were already made out. Swift technological changes during the years of conflict had taught both manufacturers and the government that some sort of orderly accounting must be maintained, and, more than that, they had taught the government that it must negotiate its terminations as well as its contracts. Experiences such as that which followed the complete abandonment of the M-7 tank at a Bettendorf, Iowa, plant after millions of dollars had been spent in getting fabrication under way had demonstrated the utter impossibility of making speedy settlement through the normal procedure of counting up each piece of the discard, preparing a record for the approval item by item of the General Accounting Office, and finally

[2] Public Law 375, 79th Congress, 2d session, provided that WAA might set aside "any surplus property, except real property, for exclusive disposal to veterans for their own personal use." One of the purposes of the law was to make it possible during the automobile shortage to sell jeeps to veterans for private use.

making payment months or years later. It was obvious that in each case the manufacturer and the military must somehow through a well-controlled process of negotiation come to common agreement that, barring fraud, would have full and complete legal standing. The Contract Settlement Act of 1944 had legalized such a course, and subsequent modifications had authorized settlement of claims under five hundred dollars according to the judgment of the terminating officials.

The surrender of Japan set the machinery for canceling contracts into full motion. On the night of August 14, 1945, the War and Navy Departments sent out nearly fifty thousand telegrams ordering stoppage of work on munitions and supplies to the value of some twenty-five billion dollars. The Maritime Commission halted construction on a hundred and thirty-five ships; the Reconstruction Finance Corporation through the Office of Defense Plants ended abruptly more than nine hundred building projects that had been undertaken for the War and Navy Departments and the War Production Board; and the National Housing Agency closed forty-four projects having a total value of over eight and a half billion dollars. In spite of many difficulties, negotiations progressed rapidly. Payments were made as soon as agreements were reached, and wherever delays occurred, loans were advanced if requested. Within a year the task, except for a few stubborn cases, was over, settlements having been appealed in only one of every three thousand contracts.

Contract terminations involved also removal of government-owned machinery and goods from the factories so that they might turn immediately to civilian production. The Reconstruction Finance Corporation had provided machinery for two thousand four hundred private establishments in addition to the thousand plants it owned outright. That equipment, as well as government-owned raw materials in all factories, had to be disposed of. Luckily the manufacturers were able to absorb nearly three-fourths of the property; the remainder was stored in military depots or transferred to the War Assets Administration. For the most part physical removal kept pace with financial settlements.

Human and Industrial Reconversion. Disbanding the military forces and clearing the industrial structure of the cluttering remains of war were not the only phases of the great problem of reconverting men and machines. But to define reconversion merely as the restoration of American life to what it had been before the nation joined in the monumental undertaking of overthrowing the dictators who had come to power is not only to oversimplify the task ahead but to miss the real meaning of the word as well. The term *reconversion,* in fact, was and is a misnomer; what was wanted

actually was *conversion*—conversion from war to peace, and the thrilling plenty that government-bond salesmen, advertisers, and the publicists of the "brave new world" had promised. Even the blindest could not escape the fact that the nation had changed. Negroes had poured out of the South from their scrabbled acres to flush times in the war-swelled towns; farmers in the hill sections of the Middle West and the upper South had fled their thin soil to move on to the pounding factories; families had

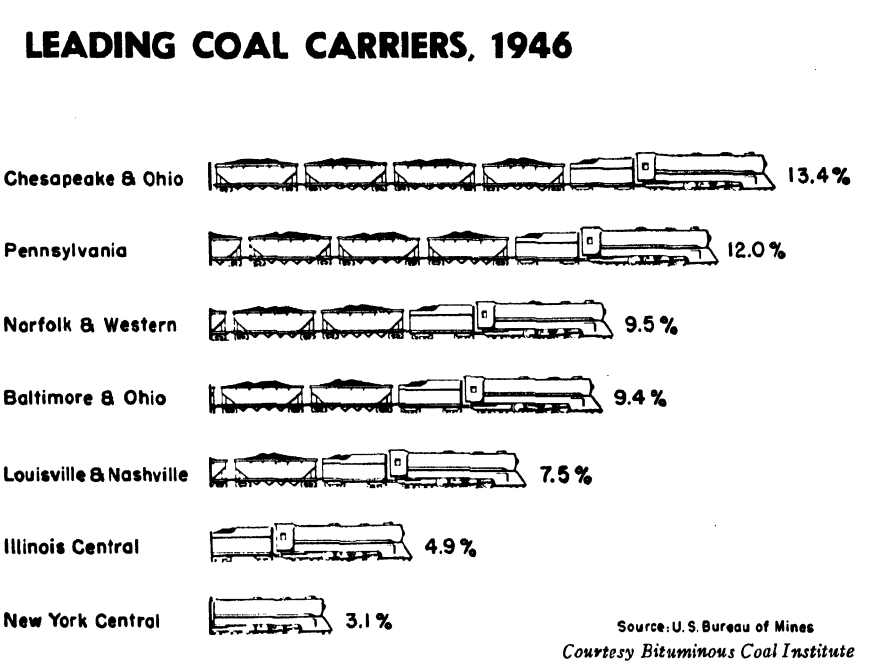


FIGURE 29. ROADS TRANSPORTING COAL, 1946

trekked westward from the one-time dust bowl to Kaiser's shipyards on the muddy flats of Richmond, the plants of plane builders such as Lockheed, Vultee, Consolidated, Douglas, North American, Ryan, and Northrup, and other manufacturing centers on the new and overgrown industrial Pacific coast; and boys and girls and old men and women and those who had been labeled the "unemployable" had found useful places in the busy life about them. All had learned new tastes. To many it seemed as though society had come to feel that things that had been luxuries but a short time before (such as steaks, taxicabs, costly cigars, expensive clothing, and night clubs) had become indispensable symbols of democratic equality. Certainly a new step had been taken in the philosophy of economic wants as those who had been the poor and the middle class began to eschew the substitutes

that science and industry had created in the twenties and thirties and demand the same goods as those who had been the rich had bought.

The painful blunderings of reconversion have to no small extent been the outcome of failure to answer clearly the question, Reconversion to what? There was no desire on the part of the conservatives to go back to the philosophy of the New Deal, or of the liberals to go back to the "normalcy" of the years after the first World War, or of the military to go back to its peacetime obscurity (when the bulk of the tax money of the people had gone into schools and roads and other constructive public undertakings), or of the workers to go back to the swollen rolls of the unemployed that had characterized the thirties, or of the unemployables to go back to idleness. Thus peace meant *creation* rather than *restoration,* and that could be accomplished only through unity and a firm determination of all to forgo individualism, political and economic, until the nation was safely beyond the shoals of war. Unfortunately most individuals were tired of doing without, and they wanted more than anything else to forget restrictions and controls. And so it was that instead of moving "forward with strong and active faith," the various groups of the nation arrayed themselves against one another: the industrialists drew back to their embattled desks, labor put on its warring armor, and the politicians retired to their ancient lairs to fight as their fathers had fought before them.

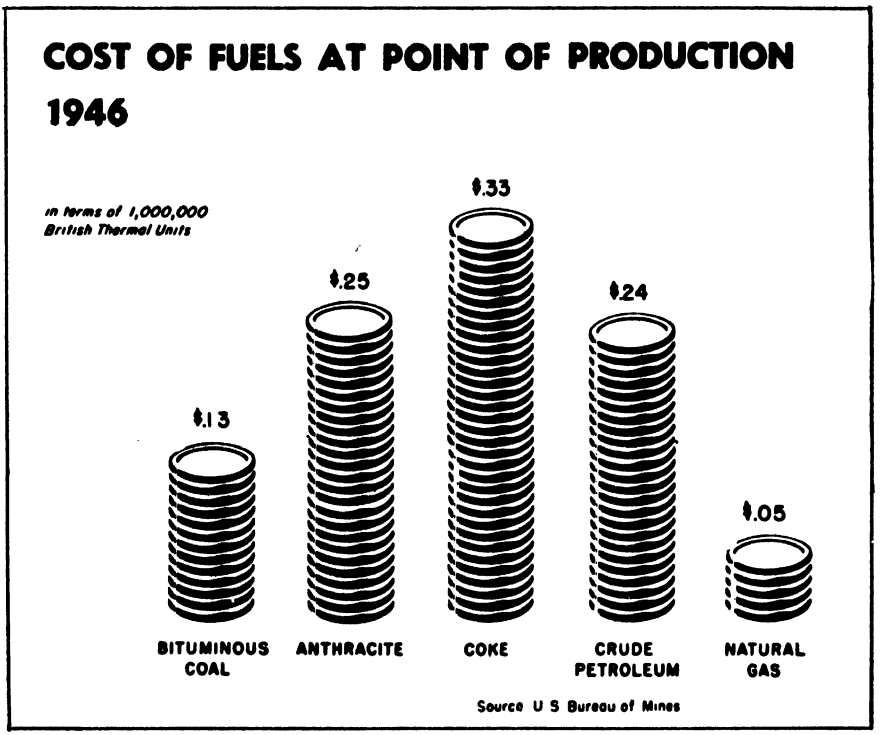
Civilian Production. Whatever the differences of opinion as to how the goal should be reached, the people as a whole were desirous of full employment and full production. That any one faction sought to destroy any other is largely fiction, for all were earnestly concerned with putting the wheels of industry to work. Production was essential. Americans possessed approximately a hundred and forty billion dollars in liquid savings (three times the national income in 1932) with which to bid in the market places. Only an abundance of goods or rigid price controls could save the country from the affliction of runaway prices. Furthermore, unemployment was inevitable unless industry absorbed more workers than ever before in history. Since civilian production during the war when military supplies were the chief concern of the nation had kept up with that of other years and since work had to be found for several million veterans, there was decided pessimism in many quarters on that point. Labor, anxious for active governmental intercession, looked at the situation with gloom; Sidney Hillman predicted that the number of idle before readjustments were finally completed would exceed ten million, and some of his associates believed he was far too conservative. Capital, on the other hand, hoping to avoid restrictions and the irritations of national planning, was optimistic;

experts of the National Association of Manufacturers declared that men without jobs would not exceed a million and a half, and that for only a brief period.

Production did in fact get quickly under way. Before the B-29 propellers that were in progress when the final surrender came had been completed in the Frigidaire plant, new refrigerators were moving along the freshly installed assembly lines. At the Hudson works automobile parts coming into the shops passed parts for the navy's landing-boat engines moving out, and while military personnel guarded government property at General Motors, new cars were taking form in the factories from which they had been banished in February, 1942. Everywhere the industrial structure was being rapidly transformed. John W. Snyder, director of the Office of War Mobilization and Reconversion, which President Roosevelt had set up to succeed the Office of War Mobilization in the fall of 1944, issued a few days after the surrender of Japan a six-thousand-word report bearing the interesting title "From War to Peace: A Challenge." Though it was apparent that the government meant to continue its supervisory role, business was assured that controls would be discontinued as rapidly as possible. Already more than two hundred restrictions had been removed; as they dropped away "like a stripteaser's habiliments," said a writer in *Fortune,* popular delight increased correspondingly. Nothing represented the new freedom more than unrationed gasoline.

Early in September, 1945, President Truman called the vacationing congressmen back to Washington to tell them what had been done about disbanding the military force, canceling contracts, and emptying the factories of war machines and goods and to recommend in a "twenty-one-point program" that they aid the states in enlarging unemployment benefits, provide for full employment, pass permanent fair-employment-practice legislation, extend the federal employment service until June 30, 1947, establish universal military training, enact a housing and slum-clearance program, expand and liberalize social security to include health insurance, lift the floor of wages from forty to sixty-five cents an hour, devise plans for developing natural resources and carrying on essential public works, encourage scientific research, reduce taxes, help the veterans, vote liberal aid to Europe, and, since "restrictions on voluntary salary increase [had] been removed," boost their own pay. But neither business-minded Republicans nor anti-Roosevelt Democrats were greatly concerned. In spite of approval among liberals of the theory of deficit spending by government in economic planning (as expounded particularly by John Maynard Keynes), of the advocacy of social controls by academic and popular econ-

omists, and of the publication of such books as Henry Wallace's *Sixty Million Jobs* and Chester Bowles' *Tomorrow Without Fear,* the Murray-Wagner full-employment bill emerged in February, 1946, as the Maximum Employment Act with little in it to alarm the most cautious. Reconversion continued apace. By April the immediate threat of a large army of unemployed had evaporated and the production of civilian goods according to



Courtesy Bituminous Coal Institute

FIGURE 30. COST OF FUELS

the account books had reached the unprecedented rate of a hundred and fifty billion dollars a year. Reformers saw a bright future ahead; the conservative industrialists rejoiced that the ghost of the New Deal had been laid.

But all was not well within the economic structure. Consumers especially were disgruntled, for whatever the statisticians reported as to the output of the factories, it was clear that in many cases the shelves of the storekeepers were barer than they had been during the war. Automobiles, refrigerators, freezers, lawn mowers, and the host of other goods that people had long wanted and for which they had saved were not available. Nails,

building supplies, sheets, towels, and hundreds of other things could be bought only in small quantities if at all. Black markets in consumers' goods and gray markets in raw materials thrived. Severe shortages developed in such essentials as steel, copper, and paper. The most powerful of the industrial institutions began to use their influence to monopolize, for example, the products of the steel mills and the paper mills.

The plans that both Congress and the President had launched with confidence wavered as the inflationists, the deflationists, the militarists, and the industrialists had each their turn on Capitol Hill and in the White House. Veterans forced to buy poor houses at high prices raised a bitter and justified protest against conditions, but Wilson Wyatt, former mayor of Louisville, Kentucky, who had been appointed housing expediter, was, notwithstanding a bold attack on the problem, able to do no more than provide temporary quarters, mostly for students in college and university towns. Labor, convinced that manufacturers were deliberately holding down production for profit, stepped up its wage demands and increased its strike incidence. Consumers, confronted by ever-increasing prices even on items that had not yet come from the assembly lines, quarreled ineffectively about the rising cost of living.

Civilian production stumbled into 1947 under grave handicaps besides bounding prices and simmering labor-management troubles. The President, stung by the defeat of his party in Congress in the fall of 1946, had shortly after the election removed all controls except those on rents, sugar, and rice. On December 31 the Chief Executive had surrendered his emergency authority with the official declaration that hostilities were at an end. Politics had come to dominate the economic scene. The promised plenty did not appear. Output curves in the charts of large corporations and small businesses alike sagged in some cases well below 1940 levels. The steel mills, desperately short of scrap, were on occasion compelled to pledge to the scrap dealers finished sheets, which generally went into the gray market. The great automobile plants a part of the time worked not more than three or four days a week. Everybody knew that the war had used up tremendous quantities of raw materials, that transitions were difficult, that retooling was time consuming, that retraining workers was expensive, and that strikes were crippling; but the fact still remained that wanted goods were unavailable in a nation that had recently performed production miracles. Organized labor said that lack of faith in the future was delaying progress; capital said that the mere philosophers who were demanding expansion in capacity beyond foreseeable needs when the supply pipes had once been filled were leading with the chips of the risk takers; and the economic

experts said there was an "insatiable demand." Consumers, millions of whom were driving old automobiles, begging suppliers for coal and fuel oil in the winter, living with relatives, and doing without many needs, were bewildered and resentful.

As 1948 drew to a close, goods were still scarce. Perversely enough, however, the cold figures showed beyond a doubt that agriculture was prosperous, that industry had hardly less than the touch of Midas, and that the people were spending at the rate of the traditional drunken sailor. But the parts did not add up to the whole. Savings were being eaten into, and each succeeding month the dollar bought less. That production records were established in many industries did not mean that the outflow of products to the people was greater than ever before. The steel mills, though they turned out more ingots in the first half of the year than in any comparable period in time of peace, did not equal their wartime accomplishments, and much of the metal made was destined for use in railroad engines and cars and in the construction of new industrial and business buildings. The supply of automobiles lagged far behind demand, and the three cheapest makes were higher in price than those in the luxury group in the thirties. Statistically postwar economic progress was impressive, yet in terms of national need production was with few exceptions wholly disappointing.

Inflation Problems. Production troubles were to an appreciable extent the result of the nation's failure to maintain price stability and labor peace. With an excessive amount of money in the hands of the people when the war ended, price control was an essential if inflation was to be prevented. The Office of Price Administration—in spite of a commendable record during the war—fell quickly, however, before the onslaught of the agrarians and the industrialists. To Chester Bowles'[3] vigorous argument that price controls should not be loosened until supply had come into balance with demand, manufacturers countered with the contention that only when they were freed from the guiding strings of government could production outdistance consumption. Bowles had some success in holding the price line, but when the President asked for an extension of OPA of twelve months beyond its expiration date (June 30, 1946), Congress replied with a bill that was so burdened with what the administrator called "booby trap" amendments that it had no real meaning. President Truman vetoed the measure, and, since the lawmakers refused to enact stop-gap legislation, prices, rid of restrictions, pushed upward rapidly. Twenty-eight basic com-

[3] The volatile Leon Henderson had stirred up considerable enmity in Congress, and when he resigned in December, 1942, Prentiss Brown, former senator, was appointed, partly for the purpose of restoring peace between OPA and Congress. Brown was succeeded in October, 1943, by Chester Bowles, New York advertising executive.

modities in something less than four weeks rose more than twenty-four per cent as against thirteen in the three years following the "hold the line" order of May 17, 1943. The "better tomorrow for everybody" that the National Association of Manufacturers had promised when the governmental "roadblocks" to prosperity had been removed was nowhere in sight. Angry housewives, signing petitions in front of the cases where butter and steaks were selling at a dollar or more a pound, were partially responsible for the restoration of feeble life to the moribund OPA on July 23, 1946.

The new law was little better than the bill the Chief Executive had vetoed, and its acceptance aroused a great deal of hostility. Important commodities such as meat, dairy products, poultry, and grains were exempted until August 21, manufacturers were permitted ceilings that would insure the profit margins of 1940, and a three-man "decontrol" board was set up. The reborn control program, unsatisfactory to both its enemies and its friends, had from the beginning no chance of survival. Difficulties and quarrels soon arose, and strong advocates of price restrictions helped deliver the death blow. When raisers of livestock halted the rush of beef and hogs to market as prices leveled off, industrial workers who were aggressively exercising their right to strike in order to increase the prices of their labor bitterly condemned a group of agrarian workers who were seeking the same end. Controls were lifted on October 14, and when the people voted in November that they had, according to the Republican cry, "had enough," the regulatory structure collapsed completely, leaving only renters of houses and apartments to live on the incomes of other days.

Surging demand, released from governmental pressure, swept far beyond production, carrying prices upward with it. Wheat on October 20, 1947, hit three dollars and ten cents a bushel, highest since 1917, and soon the mounting cost of living had passed the record of 1920. Presidential efforts to maintain stability, while they were often wavering and frequently reflective of the adviser in favor at the moment, deserved more support than they received from Congress. Especially pertinent were the warnings from the White House in November, 1947, when the European Recovery Program was getting under way.[4]

By the opening of 1948 the ill effects of the price situation had become

[4] On November 17 the President asked Congress, which he had called into special session, for authority to restrict consumer and bank credits, regulate speculation in commodities, strengthen export controls, direct transportation facilities, promote marketing of livestock at weights calculated to conserve grain, encourage food conservation in the United States and stimulate production abroad, allocate scarce commodities for essential uses, fix rents, ration scarce goods that basically affected the cost of living, and impose price ceilings on critical consumers' and industrial goods and wage ceilings where needed to maintain the price ceilings.

alarmingly apparent. Venturers in small-capital enterprises such as house building feared to contract for future deliveries when costs could not be predicted. Homes that had ranged in price from six to eight thousand dollars in the late thirties had jumped to fifteen thousand or more. Widows of service men who depended on pension checks and the aged who lived on dividends from meager savings were fearfully pinched. Salaried white-collar workers in offices and in the professions curtailed needed purchases severely. Though it was evident that millions of people were spending recklessly, it was equally obvious that other millions were beginning seriously to wonder how much longer they could do without replacements. Many believed that the industrialists and the unions were playing the cards while the public acted as dummy. That, however, was not an accurate analysis, for everybody was involved. Automobiles, washing machines, freezers, vacuum cleaners, clothing, and anything else customers wanted to buy were far dearer than they had been for a generation, yet it was not only the big corporations but the local painters, plumbers, mechanics, and handy men as well who gave credence to the conviction that prices were determined by what the public would bear. In June the Republicans wrote many promises into their platform, and in July the Democrats reasserted their old doctrines. President Truman, grappling single-handed with the issues during the campaign, astounded the pollsters in November.

Wage Conflicts. Upward-moving wages and prices were two sides of the spiraling curve of inflation, and the merry-go-round of increased wages-increased prices made three distinct turns between the fall of 1945 and the spring of 1948. Conflicts on the industrial front were perhaps inevitable. Organized labor emerged from the war with some fifteen million workers enrolled in its ranks, with sizable savings in the hands of members, with a feeling that it had an injustice to right, and with a newly established set of standards, social as well as economic, to maintain. All were tied immediately to the fact that a return to a normal working schedule would greatly reduce the amount of money to be taken home each pay day. Most people in the nation had worked long hours during the war, and a great majority had come to regard an eight-hour day and a five-day week as maximum; but many were far from convinced that wages should be raised in compensation for the shortened hours. In spite of regulatory formulas as to wages, laborers, especially those in the traditionally low-paid groups, had more than anyone else during the war improved their standard of living. To strip them of overtime without increasing basic wages when prices, as estimated by the Bureau of Labor Statistics, were thirty-three per cent more than they had been in 1941 could result only in hardships

for many families. But industrialists felt that to burden their plants with heavy wage payments when they too were going through what was in a way a period of unemployment while retooling and retraining were in progress would endanger reconversion. They had reason to be fearful, but there is some justification for the accusation that they lacked both vision and determination in a crisis that was less grave only in degree than that of 1941.

Serious work stoppages occurred soon after the surrender of Japan; within six weeks probably more than half a million wage earners were involved. The government took control of the refineries of twenty-six oil companies in fifteen states, though it ignored the coal strike notwithstanding its crippling effects. The National Federation of Telephone Workers gave emphasis to its protests against low wages and "poor working conditions" by a four-hour walkout. Hundreds of strikes were impending throughout the nation. President Truman, alarmed by the situation, called a labor-management conference in Washington to press moderation upon laborers and to urge voluntary wage increases upon employers. Agreements were impossible, however, and capital and labor each went its way.

On November 21 the United Automobile Workers' Union called out its hundred and sixty-two thousand members in the plants of General Motors and set the pattern for the future in its demand for a thirty-per-cent advance in pay. The contest between the two war-swollen giants was played primarily to the public. The violence of other days was gone. The press and the radio became the chief instruments of persuasion. Cast against a background of national need, the basic question turned on the ability of the manufacturers to meet the higher payrolls without raising the cost of goods to consumers and without hampering the productive possibilities of the industrial structure. Walter Reuther, vice president of the union, vigorously challenged the automobile makers to prove by their own figures that wage increases could not be made without price boosts. General Motors, declaring that the real issue was whether business should be socialized and regimented, charged Reuther with being less concerned with having a "look at the books" than with putting a "finger in the pie" of management. Early in December the President asked Congress to authorize the establishment of fact-finding boards with power to investigate fully the industrial problems, but his request that the automobile workers go back to their shops "at once" was rejected by the UAW with the comment that it was "ill-advised and undeserved."

The troubles of 1945 were but the beginning of a long series of disturbances on the labor front. The year 1946 opened with a hundred and forty

strikes in progress, and by the end of January belligerent industry and determined labor were fighting each other viciously. Among the striking workers were two hundred thousand from Westinghouse, General Electric, and the electrical division of General Motors; more than two hundred and sixty thousand from the packing houses; seven hundred and fifty thousand from the steel plants in two hundred and fifty cities in twenty-five states; and other thousands from Western Union and the Bell Telephone System, from the manufacturing concerns that turned out farm machinery, from the shops that produced railroad coaches and streetcars, from the utilities concerns in scores of urban centers, from the lumber camps of the Pacific coast, and from many other places. During the twelve months four and a half million workers were involved in stoppages that totaled directly over a hundred and sixteen million man-days of idleness and indirectly a great many more.

President Truman, caught between the cross fire of Chester Bowles of OPA, who wanted to hold the line against advances, and John W. Snyder of OWMR, who wanted to relax price restrictions, compromised by yielding on the one hand in the matter of both prices and wages and setting up on the other new control machinery. On February 15 he announced that pay increases might be made in conformity with "adjustments established in the industry or local labor market area since August 18, 1945," presumably not larger than sixteen to eighteen per cent. Manufacturers were granted the privilege of asking immediately for ceiling increases to meet their expenditure increases. The "bulge in the line" was supposedly "contained" by temporary reestablishment of the Economic Stabilization Board with Bowles at its head. Many people, including William Green of the American Federation of Labor, were convinced that the change would bring no solution of the economic problems that faced the nation.

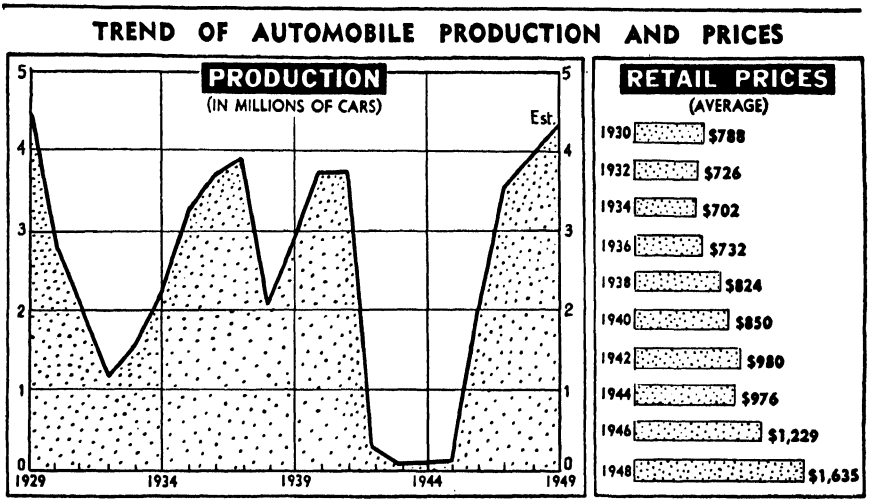
The new formula was used within three days to bring the steel strike to an end by permitting an advance of five dollars a ton in the price of steel and an eighteen-and-a-half-cent pay raise for the workers. On May 16 General Motors agreed to a similar settlement (with liberal vacation privileges in addition), and the automobile workers went back to their shops. Troubles in the coal mines and on the railroads were not so easily resolved. John L. Lewis, consummate politician and, said some, "colossal egotist," was determined to secure gains for his miners. When the question of contract renewal came up, he demanded as a preliminary to wage discussions a strict code of safety measures as well as a health-and-welfare levy that would amount, said the operators, to some seventy million dollars annually. The owners, objecting to the administration of the fund by the mine union

exclusively, refused to consider the latter proposal. At the expiration of the old agreement on March 31 the four hundred thousand members of the United Mine Workers of America, arguing simply that they had no contract, quit the pits. The effect on the industrial structure was immediate. The wheels of the factories in some cases ground to a stop, steel production dropped by more than forty-five per cent, and for a time the "brown outs" and the transportation restrictions of the war years were reinstituted. As public disapproval of the situation mounted, Lewis on May 13 ordered his men back to the mines for twelve days. On May 22 the government took over the industry.

The President had already seized the railroads in order to prevent a strike. Negotiations had been going on between the railroad laborers and operators since July, 1945, but little had been accomplished. In May, 1946, eighteen of the twenty brotherhoods agreed to arbitrate. Only the Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Trainmen refused to accept the eighteen-and-a-half-cent formula even after the government took over the roads on the seventeenth. Thoroughly disgruntled, they walked out on the afternoon of May 23, and rail transportation came to a standstill. Millions of travelers were stranded in stations throughout the nation, tons of freight stood idle, and the steel plants that had managed to get back into production banked their furnaces. The Office of Defense Transportation mobilized every means of transport available to move passengers and essential cargo. Even second-class mail was embargoed. On the evening of the twenty-fourth President Truman demanded that the trains be put back in motion within twenty-four hours. Shortly before the five-o'clock (eastern standard time) deadline the afternoon of the next day, while Congress was discussing the President's recommendations, which included a proposal to draft strikers, A. F. Whitney and Alvaney Johnson, heads of the two brotherhoods, grumblingly ordered their men to return to work. A few days later Secretary of the Interior Julius A. Krug signed as operator of the coal mines a contract with the UMWA in which it was agreed that certain minimum safety regulations would be enforced, that a welfare-and-retirement fund (derived from a levy of five cents a ton) to be administered jointly by owners and miners would be set up, that wages would be increased eighteen and a half cents an hour. and that vacation allowances would be liberalized.

By June, 1946, wages had jumped eighteen to twenty-two cents an hour in the oil, automobile, railroad, steel, electrical, and soft-coal industries as well as in many individual manufacturing plants. The first turn in the prices-wages merry-go-round had been completed. Nobody was the gainer. Labor

was still being hard pressed by the mounting cost of living, the weary public was tired of continual disturbances, owners of small businesses were even angrier than they had been during the war, the President was ready to ask for drastic controls, and Congress was anxious to smother labor with restrictive legislation. Furthermore, the conservatives were eager for a presidential election. The United States, "crippled by New Deal bungling," wrote the Philadelphia *Inquirer* on June 2, "has rocketed from one strike crisis to another while industrial production lagged and inflation perils soared, and while the world stood aghast at the sight of this once powerful Nation floundering in the economic doldrums."



Courtesy The New York Times

FIGURE 31. AUTOMOBILE PRODUCTION AND PRICES, 1929–1949

As the President and Congress quarreled over controls and William Green of the A. F. of L. blamed the "bulge in the line" for the "ills" that were falling on labor, the production situation grew rapidly worse. By August the workers who had led the earlier strikes were threatening to walk out if prices were not rolled back to the June 30 levels, thus starting the second round of wages-prices conflict. Labor, however, was uncertain as to what course to follow. The CIO in general advocated aggressive protests, but Walter Reuther, who after a bitter battle had become president of the UAW, was, he declared, more interested in stabilizing the dollar than in pressing for immediate gains. The American Federation of Labor preferred as a policy conference to conflict.

The first open action was taken by John L. Lewis, who on November 21 in defiance of a government injunction took his men from the pits. In a

dramatic trial in Washington before Judge T. Alan Goldsborough of the Federal District Court the coal "czar" and his union were held in contempt of court. Lewis was fined ten thousand dollars and his organization three and a half million (to be reduced to seven hundred thousand if work was resumed immediately). The decision, described by the mine chieftain as "the ugly recrudescence of 'government by injunction,'" brought from Philip Murray, head of the CIO, a plea for unity among workmen to put down the "deliberate and monstrous movement under way to cripple, if not destroy, the labor movement." The public, weary of the bickerings, began to suspect that the welfare of the country was being forgotten.

The situation was indeed grave. Automobile plants and steel mills were for the most part idle, the port of New York was paralyzed, freight and passenger service on the railroads was greatly curtailed, and thousands of men and women were out of employment. At two o'clock on December 7 Lewis called off the strike so that—he said—the Supreme Court, to which he had appealed his case, might during its deliberations "be free from public pressure superinduced by the hysteria and frenzy of an economic crisis." In a directive to all union members he ordered: "All mines in all districts will resume production of coal immediately until 12 o'clock midnight, March 31, 1947. Each member is directed to return to work immediately to their usual employment, under the wages, working hours and conditions of employment in existence on and before Nov. 20, 1946." Tension in the nation eased perceptibly; with the surrender of Lewis, commented one newspaper, "a great danger passes."

The year 1947 opened with some hope that peace would come to the troubled economic structure. The outlook, however, was not encouraging. Labor was smarting from having been stripped of the protection of the Clayton Act of 1914 and of the Norris-La Guardia Act of 1932, the cost of living was still moving upward, the troubled international situation was having its economic and political effects on America, and the new Republican Congress, elected in November, was in a measure pledged to heavy-handed action. On March 6 the Supreme Court in announcing its decision upholding the verdict against Lewis and his union made work stoppage on the thirty-first, when the contract expired, virtually impossible. But much wrangling occurred between Lewis and Secretary Krug before the miners could be gotten back to work after the "period of mourning" that followed a disastrous mine tragedy at Centralia, Illinois, on March 25 in which more than a hundred lives were lost. In April workers in the railroad, steel, electrical, and automobile industries as well as in individual

plants in other fields gave reality to the second round of wage demands. The average increase granted was about fifteen cents an hour.

Congressional legislation, along with public disapproval, tended to keep labor reasonably well in hand throughout the second half of 1947. Nevertheless, by March, 1948, the third round in the wages-prices conflict was well under way. The cost of living rose to an all-time high. Millions of people began to wonder when the end would come. Though strikes had less popular support in the unions than they had had in the beginning, Lewis, who had deserted the American Federation of Labor in December with the remark that its leaders were "fat and stately asses," still fought for his pension plan. His miners walked out in March, and soon he was before Judge Goldsborough again on contempt charges; he was fined twenty thousand dollars and his union a million four hundred thousand. In May, having walked out of a conference because he did not like Joseph E. Moody, representative of the southern mine owners, he was directed by Judge Goldsborough to bargain with the operators. He eventually won a pension of a hundred dollars a month for all miners over sixty-two who had worked for twenty years in the coal fields.

Other unions were less successful than the UMWA. The railroad brotherhoods were held at their tasks by public pressure, the steel workers were bound to their jobs by contract, and a hundred thousand meat packers who had struck against Armour, Cudahy, Swift, and Wilson in March went back to work in May at the nine-cent raise they had been offered in the beginning. On May 25 the United Automobile Workers and General Motors agreed to tie wages to the cost of living, with the ratio of 1940 as the determining factor. After an original increase of eleven cents an hour by way of equalization and compensation for improved skills, adjustments were to be made each quarter. Roughly, the formula was that each change "of 1.14 points" in the price index of the Bureau of Labor Statistics was to be balanced by a change of one cent in wages. Cuts were not to exceed five cents an hour, and three cents was to be added each year regardless of the prices-wages relations. Other settlements on the same basis soon followed.

Labor Legislation. The postwar restrictions on labor came, first, because of the failure of the national government and of industry to envision a constructive and well-ordered plan of reconversion and, second, because of the unwillingness of labor to admit that disciplines did not necessarily have as their purpose the complete destruction of unionism and collective bargaining. Tempers that should have been controlled flared everywhere. Real issues were at stake, and they deserved more thought than they received.

The evidence seems to indicate that manufacturers might have forgone price advances in many instances and that they sometimes did not comprehend the challenge of the future. They frequently wasted their energies in defense of the old order; it is doubtful, for instance, that the continuation of the Fair Employment Practices Committee was a threat either to democracy or to private enterprise. Labor, on the other hand, was prone to overlook its obligation to recognize the fact that the people who make up modern society are so interdependent that adjustments of grievances in one group may create grievances in others; it nevertheless had a right to expect that everyone would bear equally the burden of returning the nation to the ways of peace.

Though the employment act of February 20, 1946 (which provided for government cooperation in the national effort to make available jobs for all), the defeated Case mediation bill of May (which included severe strike limitations such as a sixty-day cooling-off period, liability for damages, and prohibition through injunction in certain cases), and the Hobbs Act of July (which forbade under heavy fine and long imprisonment interference in any manner with the movement of goods in interstate commerce) were significant and sometimes irritating, it was the Labor Management Relations Act, which Congress passed over the President's veto on June 20, 1947, that aroused the real hostility of labor. This legislation, known as the Taft-Hartley law because it was sponsored in the House by Fred A. Hartley, Jr., of New Jersey, and in the Senate by Robert A. Taft of Ohio, had as its basic purpose, said its creators, modification of the Norris-La Guardia Act of 1932 and of the National Labor Relations Act of 1935 in order that a "fair and equitable labor policy" might thus be achieved through equalization of "existing laws in a manner which will encourage free collective bargaining." That the weight of the law fell almost wholly upon labor was, it was argued, the result of acts and interpretations of acts that had stripped the employer of fundamental rights. The bill as it went to the White House prohibited the calling of strikes or lockouts until the expiration of a sixty-day cooling-off period, made unions suable by employers for breach of contract or for damages suffered through jurisdictional strikes and secondary boycotts, outlawed the closed shop, placed severe restrictions on union shops, forbade expenditures of union funds for political purposes, required the regular publication of financial statements, declared it illegal to deduct dues from an employee's pay check without his specific consent, and empowered the government to delay for eighty days through the use of injunctions labor disturbances that might affect national health or safety. Furthermore, every labor officer was compelled to sign a

statement that he was not a Communist on penalty of losing for his entire union all privileges of law in the bargaining process. The National Labor Relations Board was strengthened, and other machinery was set up for enforcing the legislation. Labor leaders bitterly resented the restrictions and threatened vengeance in the coming elections, but the great mass of the wage earners were primarily interested in homes and food and clothing—and in peace in the world.

World Organization for Peace. The political problems that came out of the war must be left for the most part to political histories. Yet they cannot here be completely ignored, for they are having and will have for a long time to come profound effects on the economic life of the people. Few could doubt at the end of the war that the burden of world reconstruction must rest as heavily upon the United States as had the cost of the fighting. A writer in *Fortune* in September, 1945, commented that America stood out "as the inheritor of more power and more responsibility than any nation on earth." It was obvious that one of the responsibilities was to take the initiative in building a structure that would maintain international peace. Agreement among the recent allies at least should not have been difficult. The thread of united action leads back through the years of the conflict. It is to be seen in lend-lease; in the Atlantic Charter; in the declaration of January, 1942, by the United States, Great Britain, Russia, and China that no separate armistice or peace would be made with the enemy; in the discussions of Churchill and Roosevelt; in the Moscow, Teheran, and other conferences; and in the promises at Yalta. It is to be seen too in various resolutions in Congress as well as in the relief organizations that sought to alleviate to some extent the misery of the victims of war. Various international business and trade compacts made during the conflict had helped to tie the nations together. And always there was the memory of the Wilson peace that had failed.

The charter of the United Nations came directly out of proposals, long in forming, drawn up by Edward R. Stettinius, Jr., of the State Department, Sir Alexander Cadogan of Britain, and Andrei Gromyko of Russia in a meeting in 1944 at Dumbarton Oaks, just outside Washington, that lasted from August 21 to September 28 and by Stettinius, Cadogan, and V. Wellington Koo of China in conferences from September 29 to October 7. In February, 1945, President Roosevelt and his political and military aids talked over the points with representatives of the United Kingdom and the Soviet Union at the Crimea (or Yalta) Conference. "Many months of earnest work are ahead of us all," said the President in his report to Congress on his return, "and I should like to feel that when the last stone is

laid on the structure of international peace it will be an achievement toward which all of us in America have worked steadfastly and unselfishly together." The peace, he continued, must be "based on the sound and just principles of the Atlantic Charter, on the conception of the dignity of the human being, and on the guaranties of tolerance and freedom of religious worship."

The United Nations Conference on International Organization met at San Francisco on April 25, 1945. Already President Roosevelt, who had spoken so hopefully of a lasting peace a few weeks before, was dead. The pressure of a war not yet ended bound the delegates into a reasonably harmonious group, however, and within a month the charter was completed. The "We the peoples of the United Nations" with which the document began had to Americans a familiar sound, and the pledge "to employ international machinery for the promotion of the economic and social advancement of all peoples" seemed a fulfillment of dreams of long standing. The purposes of the organization as officially stated were, first, to "maintain international peace and security"; second, to "develop friendly relations among nations based on respect for the principles of equal rights and self-determination of peoples"; third, to "achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion"; and, fourth, to "be a center for harmonizing the actions of nations in the attainment of these common ends." Fifty nations signed the charter on June 26, 1945.

The organization for world government that the peacemakers set up as the United Nations at San Francisco consisted of a General Assembly in which all member nations were represented, a Security Council composed of eleven member nations (China, France, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States having permanent seats), and an International Court of Justice made up of fifteen elected judges. A Secretariat, a Trusteeship Council, a group of commissions and agencies, and a military staff committee completed the functional machinery. However idealistic in conception, the union had certain inherent weaknesses. The veto power, for instance, by which any of the five permanent members of the Security Council might block important action, especially any involving the use of military force, was to bring a host of troubles in the future.

The Senate of the United States approved American membership in the United Nations with little opposition. But if there was no Henry Cabot

Lodge to condemn the organization, neither was there a Woodrow Wilson to pour out his heart in a plea for acceptance by the world. President Truman, Senator Tom Connally, Senator Arthur H. Vandenberg, and other high officials as well as millions of simple citizens did what they could to bring substance to the glowing phrases that had been written into the charter. The war over, the grim realities did not—as already foretold by the Potsdam Conference of July, 1945—always fit into the dream that had grown through the smoke of battle. Heroic efforts were made to gain united support; too often, however, the appeal was only to fear—and fear is a fleeting thing. Soon Vyacheslav Molotov and Gromyko were shouting hot words to hide their sensitiveness in a new society, soon troops of the United States and England were guarding "freedom" in lands of their recent allies, soon there were rumors that wartime agreements had been mere bargainings, soon the "iron curtain" descended, soon communism was marching westward over eastern Europe, and soon the question of armaments had brought the seemingly insoluble problem of control of the atom bomb. The philosophic planned a superstate—somehow free of national loyalties—that would by force keep order and decency, the pessimistic retired to the wailing wall and wept over the darkness that engulfed their brethren, and the contemptuous cleaned their skirts by accusing world leaders of greed and corruption. The primary difficulty, perhaps, was inability to comprehend the complex forces that determine the erratic course of modern society. The world wanted peace, but peace has not come; four years after the San Francisco meeting the hopeful millions over the earth who are holding up the body of the United Nations are not sure whether it is the quick or the dead.

The Economic Aspects of the World Problem. The work of the peacemakers was complicated by the sometimes overwhelming burden of economic reconstruction. Before the war was many months old, one had had but to look at the physical destruction and the host of wandering hungry to know that rebuilding after the conflict would be a tremendous undertaking. Maldistribution and subnormal production had been as potent forces of disaster as the bombs and shells that fell from the air. Surpluses without transportation facilities are wholly useless, and steers and cows and chickens without food in quantities greater than the "maintenance ration" (enough to keep them alive) produce no meat, milk, or eggs.[5] Private humanitarian organizations had begun soon after the opening of hostilities to care for the needy. In February, 1943, the Food and Agricul-

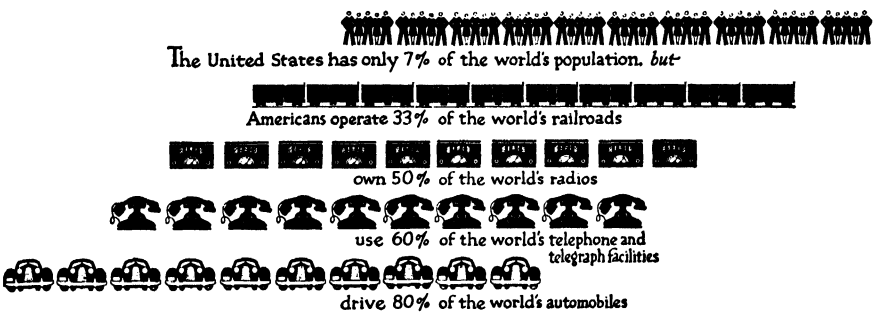
[5] See ch. 1 in Kenneth E. Boulding, *The Economics of Peace* (New York: Prentice-Hall, 1946) for a discussion of physical reconstruction.

ture Organization of the Economic and Social Council of the General Assembly of the embryonic United Nations, seeking to lay the foundation of a structure that would eventually give real meaning to the pledge of the Atlantic Charter that "all men in all lands" might after the war "live out their lives in freedom from fear and want," had met at Hot Springs, Virginia, and set up machinery for the ultimate coordination of the food resources of the world. In November the United Nations Relief and Rehabilitation Administration (UNRRA) had been founded by forty-four allied countries to feed the starving.

Financial reconstruction also had had its beginning before the end of the war. The United Nations Monetary and Financial Conference, meeting at Bretton Woods, New Hampshire, from July 1 to July 22, 1944, had drawn up plans for an International Monetary Fund and an International Bank for Reconstruction and Development. The first, through a common fund "in gold and member currencies . . . equal in value to $8.8 billion" (of which the United States subscribed two and three-quarters billion), provided by forty-four nations, was intended to "stabilize the value of currencies in terms of each other," to "hasten the removal of artificial barriers against the making of payments across boundary lines," and to supply "a supplementary source of foreign exchange to which a member, embarrassed because its international out-payments exceed its international in-payments, may apply for temporary assistance." The second, through loans and other encouragements from its ten-billion-dollar capital (of which the United States contributed more than three billion), was designed to facilitate "the movement of capital both to the countries that have been devastated by war and to those that have long needed assistance in developing their industries and improving their living standard." The bank as planned was to accept no deposits and to make only limited direct loans; its chief function was the insurance of loans made by private investors for the stabilization of the world economic structure and the encouragement of world economic growth.

The end of the war brought earnest but somewhat ineffectual attempts to shape the world economic structure so that the rivalries and jealousies of the past might not be revived. "Already," wrote Assistant Secretary of State William L. Clayton in reporting for an International Conference on Trade and Employment on November 1, 1945, "there exist, or are in process of creation, agencies to deal with emergency relief, with currency, with international investment, with civil aviation, with labor, and with food and agriculture." Already too Congress was debating a proposal to advance credit of three and three-quarters billion dollars to England. But the efforts

to "establish the kind of world we want to live in" collapsed upon themselves under the pressure of new relief and occupation problems. Occupation, far from simple in Japan, was especially difficult in Germany because of division of control and because of the great number of displaced and dispossessed people. Furthermore, since Germany was to be taught a lesson in international behavior, industrial machines could not be put to work lest they start to produce the goods of war, and the experienced in government could not be used to maintain order for fear they might return to the wallow of fascism. Occupation costs were increased by conflicts among the occupying forces; in June, 1948, Stalin closed the roads to Berlin, and the United States took up the hazardous and expensive task of flying food into the American sector of the city.



Courtesy Machinery and Allied Products Institute

FIGURE 32. AMERICAN PURCHASING POWER

Relief came soon after victory to be complicated by politics. While statesmen quarreled bitterly in the meetings of the United Nations and in their own legislative bodies, millions of people from unhappy China eastward to the Atlantic were endangered by internal outbreaks and racked by hunger. It was obvious that human institutions and human stability itself were threatened. Help was desperately needed. The two most powerful countries concerned disagreed, however, as to whether restoration should be based on communistic or democratic principles. There was no hiding the fact that democracy and communism stood face to face while a multitude of destitute looked on.

The "Truman Doctrine." Whether or not the situation could have been avoided is not yet established. At any rate the President, irked by the spread of Russian influence over Finland, Poland, Czechoslovakia, Austria, Rumania, Bulgaria, and other states and the growth of the Communist party in France, Italy, and Greece and far over the world in China, recommended to Congress on March 12, 1947, that the United States by means of

economic and financial aid defend the free peoples of the world against subjugation by armed minorities from within or through political pressure from without. The "Truman Doctrine," as the proposal came to be called, brought much political opposition, but the nation soon embarked upon a policy of maintaining the will of the people in other lands. It quickly became apparent, however, that the will of the people is not easy to determine. Even elections can scarcely be depended upon, for in modern society the instruments of persuasion have such mobility and weight that their application may make arrival at independent decisions difficult if not impossible. Hence Henry Wallace and others charged national officials with following imperialistic practices and with attempting to foist their political beliefs on the world. When four hundred million dollars was voted for aid to Greece and Turkey and three hundred and thirty-two million for relief to Austria, Italy, Greece, and Trieste, criticisms grew stronger and questions were raised as to whether the governments being assisted were either democratic or representative.[6] It was readily observed on both sides of the iron curtain that the plight of distressed states in strategic locations touched the hearts of the helpers more quickly than did that of those located in other regions.

Whatever the political implications of the Truman Doctrine, the fact remains that before the quarrel with Russia arose, the United States had sent with little hope of gain large amounts of money and goods to the poor of the world. Export-Import Bank loans of more than a billion two hundred million dollars were made to France in 1945-1946, a treasury advance of three and three-quarters billion dollars was made to the United Kingdom in 1946, surplus property amounting in value to many millions of dollars was sold on long-term credit to European states at the end of the war, UNRRA aid was extended after the close of hostilities, Austria and Italy and France received relief under the "disease and unrest" program of the War Department, and grants were made to various needy countries through other means. Help was reaching the troubled people from private sources also; in 1946 alone personal remittances of food, clothing, and other items and contributions from voluntary agencies totaled more than half a billion dollars. Altogether American loans, credits, grants, and relief, private and public, between July 1, 1945, and June 30, 1947, reached somewhere between fifteen and twenty billion dollars.

[6] The President was criticised for not having utilized machinery of the United Nations organization; the Vandenberg amendment provided that when and if the United Nations became able to take over the situation, the President was to withdraw aid.

The "Marshall Plan." That human and governmental deterioration in Europe must be checked if the states were to survive was becoming painfully apparent by mid-1947. The "well-rounded and carefully prepared" economic program of which Secretary of State Stettinius had spoken two years before had failed in spite of the extensive aid that had been rendered. In May Under Secretary of State Dean Acheson began to caution Americans that mere guarantees of liberty were not enough. That which had been done, he said, was "far short of what the people of the world need if they are to eat enough to maintain their physical strength and at the same time carry on essential measures of reconstruction and become self-supporting." At Harvard University on June 5, 1947, Secretary of State Marshall, in a review of the discouraging economic situation in Europe in which he declared that "the rehabilitation of the economic structure . . . will require a much longer time and greater effort than had been foreseen," suggested that the United States stood ready to lend all assistance it could to any European program of reconstruction. "Our policy," he asserted in an attempt to lift the proposal above purely national interest, "is directed not against any country or doctrine but against hunger, poverty, desperation, and chaos."

The "Marshall Plan," though it pleased England and France, stirred opposition in Russia. At a "big three" conference in Paris that began on June 27, Foreign Secretary Molotov had his say; already *Pravda* had explained to the Russians that the plan was merely a means of postponing inevitable economic collapse in the United States, and Tass was writing its warning against interference in the internal affairs of the continent by imperialists. The political lines were firmly drawn, and when invitations were sent out for a general meeting in Paris after the failure of the earlier one, only sixteen states finally accepted; Russia, Finland, Poland, Hungary, Rumania, Bulgaria, Yugoslavia, and Czechoslovakia were absent. Soon a "Molotov Plan," expressed in trade pacts and other economic and territorial agreements between the Soviet and her seven satellites, made its appearance.

In the meantime President Truman appointed a number of committees to study the economic aspects of the aid program and began a series of international agreements with the "democratic states" that included cancellation of more than a billion dollars of Italian debts, reestablishment of German production goals at the 1936 levels, formation of a possible customs union, and acceptance of six general principles of conduct in restoration. A special session of Congress was called for November 17 to consider not only "the continued rise in prices" at home but also "the crisis in western Europe."

Congress met in a gloom that promised little joy for Thanksgiving. Europe was desperately short of food and other goods. Short-term plans were expressed in terms of millions of dollars, and the long-range program contemplated expenditures in billions. Austria needed immediately forty-two million dollars, France three hundred and twenty-eight million, and Italy two hundred and twenty-seven million. "They must be helped," said the President, "if their economies are to survive the coming winter and if their political and economic systems are not to disintegrate." But that was not all. Because assistance to Europe would mean increased prices for the scanty supply of things in existence, a return to wartime price and rationing controls was requested. Every American would feel the pinch of helping Europe to its feet again, and the "cold war" with Russia robbed that humanitarian sacrifice of any warmth it might have had.

The European Recovery Program. Nearly ten months after Secretary Marshall's speech at Harvard, Congress authorized a four-year program of aid to Europe that would, it was estimated, cost some seventeen billion dollars. On April 3, 1948, President Truman signed the Foreign Assistance Act, which set up the Economic Cooperative Administration (ECA) and appropriated for its first year of operation six billion ninety-eight million dollars, five billion three hundred million of which was allocated to the European Recovery Program (ERP).[7] Paul G. Hoffman was selected to head ECA soon after its creation. The central office, located in Washington, was ultimately to have branches in all the capitals of the sixteen participating European nations and a mission in China. So far as Europe was concerned, the one chief purpose, perhaps, was to create a united economic effort by supplying essential consumers' goods while the people of the war-disheveled countries turned to rebuilding their basic institutions of culture, of politics, and of physical production. Other objectives included may eventually bring complexities.

The recovery program was the most tremendous enterprise ever undertaken in foreign policy. That the task was not shouldered without opposition is attested by the fact that a new political party sprang up under Henry Wallace as a friend of Russia to fight loudly but hopelessly in the presidential campaign of 1948. Politics, in fact, were evident in various ways. Certainly the great fingers of Stalin's influence stretching out to central Europe, to the Baltic, and to the Mediterranean seemed to many people threats both to democracy and to economic liberty. Time may prove

[7] Two hundred and seventy-five million went to Greek-Turkish military aid, three hundred and thirty-eight million to economic aid for China, a hundred and twenty-five million to military aid for China, and sixty million to the international Children's Emergency Fund of the United Nations.

the dangers to have been exaggerated, but for the moment Americans, fearful of dictators and fonder of their own economic system with all its evils than they had been prone to admit, were willing to add to their heavy burdens in an attempt to guarantee the future. What the fruits of the American adventure will be is not clearly foreseeable. Already hostilities are arising, and, incomprehensible as they sometimes seem, they may be harbingers of returning economic life. The United Nations, in part forgotten, may yet bring peace to a pessimistic world.

BOOKS FOR FURTHER READING

The guiding principle in the construction of the following list of books was to provide in so far as page limitations allowed further references from which the reader might add to his knowledge and the doubtful might either confirm or remove his doubts. Unfortunately lack of space prevented the use of specific references as footnotes in the body of the text, and even here names of publishers and dates of publication have been omitted. Full names of authors, however, have been given so that location of the books in card catalogs might be simplified. Reading lists are not necessarily unfailing guideposts to the best material available. Conflicting opinions as to the basic importance of various theories and developments make it necessary to include a wide range of references.

Characterization of books as good or bad is hazardous, for no volume is wholly the one or the other. A handful of great historians are honored both for their penetrating judgments and for their ability to turn out volume after volume, but many minor historians with sometimes only single volumes to their credit make important contributions. Among the outstanding general histories of value are Charles A. and Mary Beard, *The Rise of American Civilization* (2 vols.); Edward Channing, *A History of the United States* (6 vols.); John Bach McMaster, *History of the People of the United States* (6 vols.); Ellis Paxson Oberholtzer, *History of the United States Since the Civil War* (5 vols.); and James Ford Rhodes, *History of the United States Since the Compromise of 1850* (9 vols.). Valuable cooperative series by leading scholars are *The American Nation: A History,* ed. by Albert B. Hart (28 vols.); *A History of American Life,* ed. by Arthur M. Schlesinger and Dixon Ryan Fox (13 vols.); and *Chronicles of America,* ed. by Allen Johnson (50 vols.). Other helpful series are *Dictionary of American History,* ed. by James Truslow Adams (6 vols.); *Dictionary of American Biography,* ed. by Allen Johnson and Dumas Malone (20 vols.); and *Encyclopedia of the Social Sciences,* ed. by Edward R. A. Seligman and Alvin Johnson (15 vols.). The most useful documentary collections are *Selections from the Economic History of the United States,* ed. by Guy S. Callender; John R. Commons *et al., Documentary History of American Industrial Society* (10 vols.); Felix Flugel and Harold U. Faulkner, *Readings in the Social and Economic History of the United States;* Albert B. Hart, *American History Told by Contemporaries* (5 vols.); and Louis B. Schmidt and Earl D. Ross, *Readings in the Economic History of American Agriculture.*

Excellent economic material is to be found in *Quarterly Journal of Economics* (from 1886), *American Economic Review* (from 1911), *Annals of the American Academy of Political and Social Science* (from 1890), *Agricultural History* (from 1927), *Bankers' Magazine* (from 1847), *Commercial and Financial Chronicle* (from 1865), *Journal of Commerce* (from 1827), *Journal of Political Economy* (from 1892), *and Journal of Economic History* (from 1941). Helpful also for the time covered are such periodicals as *DeBow's Review* (1847-1869), *Hunt's Merchants' Magazine and Commercial Review* (1839-1870), and *Journal of Economic and Business History* (1928-1932). Economic and social questions are discussed with vigor in the 1880's and 1890's in *Bradstreet's, Dun's Review, Forum, North American Review, Yale Review, Review of Reviews,* and other magazines of the period.

The most helpful atlases are James Truslow Adams, *Atlas of American History;* Charles O. Paullin, *Atlas of the Historical Geography of the United States;* and William R. Shepherd, *Historical Atlas.*

I. The Colonial Era. On the general European background Carl Stephenson's *Medieval History* and James W. Thompson's *Economic and Social History of Europe in the Late Middle Ages* are interesting. An especially good survey is Edward P. Cheyney's *European Background of American History;* his *The Dawn of a New Era, 1250-1453* is a fruitful summation of long years of study. Four texts that cover the economic phases of early European history are Harry Elmer Barnes, *Economic History of the Western World;* Shepherd B. Clough and Charles W. Cole, *Economic History of Europe;* Clive Day, *Economic Development in Europe;* and Herbert Heaton, *Economic History of Europe.* Specific studies of English economic conditions are Ephraim Lipson, *The Economic History of England* (3 vols.) and Frederick C. Dietz, *An Economic History of England.* European expansion is set forth in Wilbur C. Abbott, *Expansion of Europe;* John R. Seeley, *Expansion of England;* and William H. Woodward, *A Short History of the Expansion of the British Empire.* The commercial aspect is emphasized in Lawrence B. Packard, *The Commercial Revolution.*

The best discussion of exploration in the region now occupied by the United States is perhaps John Bartlet Brebner, *The Explorers of North America.* Among the accounts of individual explorers are Charles R. Beazley, *John and Sebastian Cabot* and *Prince Henry the Navigator;* Kingsley G. Jayne, *Vasco da Gama and His Successors;* Joaquin P. O. Martins, *The Golden Age of Prince Henry the Navigator;* Samuel E. Morison, *Admiral of the Ocean Sea;* Edgar Prestage, *The Portuguese Pioneers;* and James A. Williamson, *Voyages of the Cabots.*

Herbert E. Bolton and Thomas M. Marshall, *The Colonization of North America* and Herbert I. Priestley, *The Coming of the White Man* present a reasonably complete picture of colonization in the New World. Detailed accounts of Spanish colonization are to be found in Frank W. Blackmar, *Spanish Institutions of the Southwest;* Herbert E. Bolton, *The Spanish Borderlands;* Edward G. Bourne, *Spain in America;* and Bourne's edition of Roscher, *The Spanish Colonial System.* William H. Prescott's *The Conquest of Mexico* and *The Conquest of Peru* are classics in historical literature. Commercial aspects of Spanish expansion are set forth in Clarence H. Haring, *The Buccaneers in the West Indies* and in Philip A. Means, *The Spanish Main.* French colonial attempts can be seen in A. L. Burt, *The Old Province of Quebec;* William B. Munroe, *Crusaders of New France;* Reuben G. Thwaites, *France in America;* and George M. Wrong, *The Rise and Fall of New France.* At least one of the classic volumes by Francis Parkman should be read. Dutch settlement is presented in George Edmundson, *Anglo-Dutch Rivalry During the First Half of the Seventeenth Century;* Maud W. Goodwin, *Dutch and English on the Hudson;* John H. Innes, *New Amsterdam and Its People;* and Thomas A. Janvier, *The Dutch Founding of New York.* Amandus Johnson in *The Swedish Settlements on the Delaware* and in other writings has told the story of Swedish colonial efforts. Basic facts in English colonization are to be found in texts such as Oliver H. P. Chitwood, *A History of Colonial America* and Curtis P. Nettels, *The Roots of American Civilization.* Special studies are James Truslow Adams, *The Founding of New England;* Charles M. Andrews, *The Colonial Period;* Carl L. Becker, *Beginnings of the American People;* Wesley F. Craven, *Dissolution of the Virginia Company: the Failure of a Colonial Experiment;* William I. Hull, *William Penn and the Dutch Quaker Migration to Pennsylvania;* Frances Rose-Troup, *The Massachusetts Bay Company and Its Predecessors;* William R. Scott, *The Constitution and Finance of English, Scottish, and Irish Joint Companies to 1720;* and Lyon G. Tyler, *England and America.* Richard H. Gretton, *The English Middle Class* is an interesting exposition of the discontent of the Puritans; and George L. Beer, *The Origins of the British Colonial System* is a challenging volume by one of the most brilliant of the colonial historians.

The colonists were profoundly affected by geographic conditions. Geography comes to life in Ellen Churchill Semple's *American History and Its Geographic Conditions,* and

Arthur M. Schlesinger offers stimulating interpretations in his *New Viewpoints in American History*. Other scholarly volumes concerned with physical surroundings are Isaiah Bowman, *Forest Physiography;* Albert P. Brigham, *Geographic Influences in American History;* Nathaniel S. Shaler, *Nature and Man in America;* and Joseph Russell Smith, *North America.*

Important studies devoted in whole or in part to colonial agriculture are Philip A. Bruce, *Economic History of Virginia in the Seventeenth Century* (2 vols); Percy W. Bidwell and John I. Falconer, *History of Agriculture in the Northern United States, 1620-1860;* Lyman Carrier, *The Beginnings of Agriculture in America;* Avery O. Craven, *Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860;* Lewis C. Gray, *History of Agriculture in the Southern United States to 1860;* Thomas Jefferson Wertenbaker, *The Planters of Colonial Virginia;* William B. Weeden, *Economic and Social History of New England, 1620-1789;* and Carl R. Woodward, *Ploughs and Politics.* Meyer Jacobstein's *The Tobacco Industry in the United States* has material on Virginia's first great crop, and Lawrence Henry Gipson's *Lewis Evans* contains descriptions of the agricultural practices of the Pennsylvania Germans. On land distribution see James C. Ballaugh, "Introduction to Southern Economic History—the Land System," American Historical Association, *Annual Report* for 1897; Beverley W. Bond, *Quit-Rent System in the American Colonies;* and Melville Egleston, *The Land System of the New England Colonies.*

John L. Bishop, *A History of American Manufactures from 1608 to 1860;* Victor S. Clark, *History of Manufactures in the United States, 1607-1860;* and John G. Glover and William B. Cornell, eds., *The Development of American Industries* are three general studies of manufacturing. Arthur C. Bining, *Pennsylvania Iron Manufacture in the Eighteenth Century;* Curtis P. Nettels, "The Menace of Colonial Manufacturing," *New England Quarterly,* vol. iv (April, 1931), pp. 230-269; and Rolla M. Tryon, *Household Manufactures in the United States, 1640-1860* are special studies of value. Lumbering is inadequately pictured in James E. Defebaugh, *History of the Lumber Industry of America.* Robert G. Albion's *Forest and Sea Power* is mostly concerned with the forest as a source of materials for ships.

Sectional studies emphasizing trade are Vernon W. Crane, *The Southern Frontier;* Charles A. Hanna, *The Wilderness Trail;* Francis X. Moloney, *The Fur Trade in New England;* and Albert T. Volwiler, *George Crogan and the Westward Movement.* Charles W. Alvord, *The Mississippi Valley in British Politics* interrelates trade and imperial policy. On the French trade see Henry P. Bigger, *The Early Trading Companies of New France;* Harold A. Innis, *The Fur Trade in Canada;* and Louise P. Kellogg, *The French Régime in Wisconsin and the Northwest.* On the fishing industry see Ralph G. Lounsbury, *The British Fishery at Newfoundland* and Raymond McFarland, *A History of the New England Fisheries.* Elmo P. Hohman, *The American Whaleman* and Walter S. Tower, *History of the American Whale Fisheries* give reasonably complete pictures of the whaling industry.

General histories of commerce are Clive Day, *History of Commerce of the United States* and Emory R. Johnson, Thurman W. Van Metre, Grover G. Huebner, and David S. Hanchett, *History of Domestic and Foreign Commerce of the United States* (2 vols.). Interesting material is to be found also in Willis J. Abbot, *The Story of Our Merchant Marine;* John H. Frederick, *The Development of American Commerce;* Charles M. MacInnes, *The Early English Tobacco Trade;* and Leila Sellers, *Charleston Business on the Eve of the American Revolution.* Channing in his great *A History of the United States,* Gipson in his masterly *British Empire Before the American Revolution,* and Beer in his various brilliant volumes present colonial commerce with a perception that reflects their ripe scholarship. Original material on an exciting phase of trade is John Franklin Jameson, ed., *Privateering and Piracy in the Colonial Period.* The works of Beer and

Herbert L. Osgood are outstanding on British mercantilism. See also Hugh E. Egerton, *A Short History of British Colonial Policy;* John W. Horrocks, *Short History of Mercantilism;* Arthur D. Innes, *Britain and Her Rivals in the Eighteenth Century;* Edgar A. J. Johnson, *American Economic Thought in the Seventeenth Century;* and John R. Seeley, *Growth of British Policy* (2 vols.).

Davis R. Dewey, *Financial History of the United States* is a brief outline of bare essentials in monetary history. Andrew McF. Davis, ed., *Colonial Currency Reprints* is a collection of source material. Curtis P. Nettels, *The Money Supply of the American Colonies Before 1720* is probably the best single volume on colonial money. William J. Shultz and M. R. Caine, *Financial Development of the United States* is a convenient basic survey of developments.

Colonial life is best studied in the original letters and diaries of the settlers and, after publication began, in the newspapers of the time. Thomas J. Wertenbaker has contributed much to an understanding of the subject. His *The First Americans, Patrician and Plebian in Colonial Virginia, Planters of Colonial Virginia, The Golden Age of Colonial Culture,* and *The Southern Colonies, The Middle Colonies,* and *The Puritan Oligarchy* in his *Founding of American Civilization* present a well-drawn canvas on a colony-wide basis. James Truslow Adams, *The Founding of New England* and *Provincial Society;* Carl Bridenbaugh's *Cities in the Wilderness;* Harold D. Eberlein and Courtland V. D. Hubbard, *Portrait of a Colonial City* are all good. Among other interesting volumes are George F. Dow, *Every-Day Life in the Massachusetts Bay Colony;* Edward Eggleston, *The Transit of Civilization from England to America;* Samuel E. Morison, *Builders of the Bay Colony;* Harold R. Shurtleff, *The Log Cabin Myth;* Louis B. Wright, *First Gentlemen of Virginia;* and Laurence C. Wroth, *The Colonial Printer.*

Colonial population and the effect of the various groups on colonial economic life are to be seen in Albert B. Faust, *The German Element in the United States;* Henry J. Ford, *The Scotch-Irish in America;* Maude Glasgow, *The Scotch-Irish in Northern Ireland and in the American Colonies;* Evarts B. Greene and Virginia D. Harrington, *American Population Before the Federal Census of 1790;* Arthur H. Hirsch, *The Huguenots of Colonial South Carolina;* and Stella H. Sutherland, *Population Distribution.* Material on laborers, indentured servants, and slaves is to be found in James C. Ballaugh, *White Servitude in the Colony of Virginia;* John S. Bassett, *Slavery and Servitude in the Colony of North Carolina;* Jeffrey R. Brackett, *The Negro in Maryland;* Karl F. Geiser, *Redemptioners and Indentured Servants in the Colony and Commonwealth of Pennsylvania;* Cheesman A. Herrick, *White Servitude in Maryland;* Marcus W. Jernegan, *Laboring and Dependent Classes in Colonial America;* Samuel McKee, *Labor in Colonial New York;* and Abbot E. Smith, *Colonists in Bondage.* See also references on slavery in section III.

II. The Period of Revolution and Readjustment, *1763-1816.* The general background of the Revolution is admirably shown in vol. ii of Channing's *A History of the United States* and in vol. i of Gipson's *The British Empire Before the American Revolution.* Charles M. Andrews, *The Colonial Background of the American Revolution;* Carl Becker, *The Eve of the Revolution;* and Claude H. Van Tyne, *Causes of the War of Independence* are among the briefer accounts. Other volumes that both present general material and illuminate the sources of colonial conflict are James Truslow Adams, *Revolutionary New England;* Clarence W. Alvord, *The Mississippi Valley in British Politics;* Edith A. Bailey, *Influences Toward Radicalism in Connecticut, 1754-1775;* Charles A. Barker, *The Background of the Revolution in Maryland;* John Spencer Bassett, *Regulators of North Carolina,* American Historical Society *Reports,* 1894; George L. Beer, *British Colonial Policy, 1754-1765;* George A. Cribbs, *Frontier Policy of Pennsylvania;* Hamilton J. Eckenrode, *Revolution in Virginia;* Virginia D. Harrington, *The New York Merchant on the Eve of the Revolution;* Matt B. Jones, *Vermont in the Making, 1750-*

1777; Donald L. Kemmerer, *The Path to Freedom: The Struggle for Self-Government in New Jersey, 1703-1776;* Charles H. Lincoln, *Revolutionary Movement in Pennsylvania;* Irving Mark, *Agrarian Conflicts in New York, 1711-1775;* Arthur M. Schlesinger, *New Viewpoints in American History;* and Leila Sellers, *Charleston Business on the Eve of the Revolution.*

The Revolution itself has attracted many brilliant writers. See Claude H. Van Tyne, *The War of Independence;* Charles H. McIlwain, *The American Revolution; a Constitutional Interpretation;* and Robert L. Schuyler, *Parliament and the British Empire.* Interesting general and special material is to be found in Carl Becker, *Declaration of Independence;* Edmund C. Burnett, *The Continental Congress;* J. Franklin Jameson, *The American Revolution Considered as a Social Movement;* and Allan Nevins, *American States During and After the Revolution, 1775-1789.* Military and naval affairs are discussed in Louis Clinton Hatch, *Administration of the American Revolutionary Army;* Victor L. Johnson, *The Administration of the American Commissariat During the Revolution;* and Charles O. Paullin, *The Navy of the American Revolution.* On economic and financial matters see the general volumes of Clark, Dewey, and Johnson on manufacturing, finance, and commerce respectively. Interesting special studies are Charles J. Bullock, *The Finances of the United States from 1775 to 1789;* Robert A. East, *Business Enterprise in the American Revolutionary Era;* Ellis Paxson Oberholtzer, *Robert Morris, Patriot and Financier;* Charles E. Russell, *Haym Salomon and the Revolution;* and Arthur M. Schlesinger, *The Colonial Merchant and the American Revolution.*

The story of the west before and during the Revolution is told in Thomas P. Abernethy, *Western Lands and the American Revolution;* Clarence W. Alvord, *The Illinois Country, 1673-1774;* Charles A. Hanna, *The Wilderness Trail;* Archibald Henderson, *Conquest of the Old Southwest, 1740-1800;* Burke A. Hinsdale, *The Old Northwest;* Archer B. Hulbert, *Boone's Wilderness Road;* and William S. Lester, *The Transylvania Colony.*

Andrew C. McLaughlin, *Confederation and the Constitution* has long been a standard account of the Confederation period. McLaughlin, however, emphasizes political, economic, and financial difficulties only in relation to what he regarded as basic principles of government and neglects completely the human factors involved. John Fiske, *The Critical Period in American History, 1783-1789,* though delightfully written, is old and perhaps too pessimistic. A reasonably satisfactory picture of the economic and social conditions of the time can be found in volume i of McMaster's *History of the People of the United States,* and additional material on many phases of the Confederation government is available in Edmund C. Burnett, *The Continental Congress.* Merrill Jensen, *The Articles of Confederation* is a carefully done modern study that stresses the economic factors involved. Two recent volumes on the relation of government and economics are Oscar Handlin and Mary Flug Handlin, *Commonwealth: A Study of the Role of Government in the American Economy: Massachusetts, 1774-1861* and Louis Hartz, *Economic Policy and Democratic Thought: Pennsylvania, 1776-1860.* Other special studies of interest are Herbert B. Adams, *Maryland's Influence on Land Cessions to the United States;* James Truslow Adams, *New England in the Republic, 1776-1850* (especially for material on Shays' rebellion); Samuel F. Bemis, *Jay's Treaty;* Solon J. and Elizabeth H. Buck, *The Planting of Civilization in Western Pennsylvania;* Thomas C. Cochran, *New York and the Confederation;* Allan Nevins, *The American States During and After the Revolution, 1775-1789;* Ernest W. Spaulding, *New York in the Critical Period;* Richard J. Upton, *Revolutionary New Hampshire;* and Arthur B. Whitaker, *The Spanish-American Frontier.* See volumes on the west previously cited and Jay A. Barrett, *Evolution of the Ordinance of 1787* for the various land ordinances enacted during the Confederation period.

Two collections of interesting source material on the making of the Constitution are Max Farrand, *Records of the Federal Convention* (4 vols.) and Charles C. Tansill, *Docu-*

ments Illustrative of the Formation of the Union. Max Farrand, *Framing of the Constitution* and *Fathers of the Constitution;* Robert L. Schuyler, *The Constitution of the United States;* and Charles Warren, *The Making of the Constitution* are traditional general studies. Charles A. Beard, *Economic Interpretation of the Constitution* is the classical statement of the economic interpreters. On the problem of adoption see Jonathan Elliot, *Debates in the Several State Conventions* and the various special studies of individual states. *The Federalist* has appeared in several editions; the articles, written by Hamilton, Jay, and Madison, present most lucidly the contemporary arguments for the adoption of the Constitution. John S. Bassett, *The Federalist System* and Edward Channing, *The Jeffersonian System* are general accounts of the beginning years of the nation under the Constitution. More detailed discussion is found in vol. iv of Channing and vols. i and ii of McMaster. Biographies are helpful: Nathan Schachner, *Alexander Hamilton* is a recent study, and a definitive life of George Washington by Douglas S. Freeman is in progress. Dumas Malone, *Jefferson and His Time* is one of the latest biographies of Jefferson.

Studies emphasizing economic and financial subjects are Leland D. Baldwin, *Whiskey Rebels: The Story of a Frontier Uprising;* John T. Holdsworth and Davis R. Dewey, *The First and Second Banks of the United States;* Harold Hutcheson, *Tench Coxe: A Study in American Economic Development;* Philip D. Jordan, *The National Road;* James W. Livingood, *The Philadelphia-Baltimore Trade Rivalry, 1780-1860;* and Edgar S. Maclay, ed., *Journal of William Maclay.* Albert J. Beveridge, *The Life of John Marshall* (4 vols.), though biased in favor of the Chief Justice, contains good material on the relation of the Supreme Court to the economic development of the young nation. Harry Toulmin, *The Western Country in 1793: Report on Kentucky and Virginia,* ed. by Marion Tinling and Godfrey Davies, and Daniel Drake, *Pioneer Life in Kentucky, 1785-1800,* ed. by Emmet Field Horine, describe life on the frontier during a part of the period. See also Thomas P. Abernethy, *From Frontier to Plantation in Tennessee; A Study in Frontier Democracy.* Clarence W. Alvord, *The Illinois Country;* Beverly W. Bond, *Civilization of the Old Northwest;* and Milo M. Quaife, *Chicago and the Old Northwest* discuss in particular government and settlement. The Indian troubles are presented in general in Emerson Wildes, *Anthony Wayne* and Thomas Boyd, *Mad Anthony Wayne.*

The commercial difficulties that plagued the nation and played a significant part in the coming of the War of 1812 are summarized in Channing, vol. iv. More specific studies are Gardner W. Allen, *Our Naval War with France* and *Our Navy and the Barbary Corsairs;* Walter W. Jennings, *The American Embargo;* Louis M. Sears, *Jefferson and the Embargo;* and Arthur P. Whitaker, *The Mississippi Question, 1795-1803.* An interestingly written story of the war is Julius W. Pratt, *Expansionists of 1812;* see also Alfred L. Burt, *The United States, Great Britain and British North America from the Revolution to the Establishment of the Peace after the War of 1812.*

III. The Foundation Years of National Economy, *1816-1865.* The master historian of the westward movement is Frederick Jackson Turner. His *The Rise of the New West, 1819-1829* and *The United States: 1830-1850* are general presentations. *The Frontier in American History* is a collection of the most brilliant of the Turner essays on special phases of western history. Excellent chapters are to be found in Channing, vol. v, and McMaster, vols. ii-v. Frederic L. Paxson, *History of the American Frontier, 1763-1893* is a Pulitzer-prize-winning general survey of the field. Other interesting studies are Eugene C. Barker, *Mexico and Texas, 1821-1835;* Hiram M. Chittenden, *The American Fur Trade of the Far West* (3 vols.); Dan E. Clark, *The West in American History;* Katherine Coman, *Economic Beginnings of the Far West* (2 vols.); Bernard A. DeVoto, *The Year of Decision, 1846* and *Across the Wide Missouri;* Cardinal L. Goodwin, *The Trans-Mississippi West;* LeRoy R. Hafen, *Western America;* Robert E. Riegel, *America Moves*

West; Rupert N. Richardson and Carl C. Rister, *The Greater Southwest;* and Joseph Schafer, *History of the Pacific Northwest.*

General studies of agriculture are listed in section I; see also Liberty H. Bailey, *Cyclopedia of American Agriculture,* vol. iv, and Joseph Schafer, *The Social History of Agriculture.* An interesting source is Herbert A. Kellar, ed., *Solon Robinson, 1825-1851* (2 vols.). Ulrich B. Phillips, *Life and Labor in the Old South* and William E. Dodd, *The Cotton Kingdom* are delightfully written studies of the South by two outstanding students of the section. Other volumes on the cotton empire are Harris Dickson, *The Story of King Cotton;* Frances P. Gaines, *The Southern Plantation;* and James A. B. Scherer, *Cotton as a World Power.* See also Avery O. Craven, *The Coming of the Civil War* and Allan Nevins, *Ordeal of the Union* (2 vols.).

On farm machinery see William T. Hutchinson, *Cyrus Hall McCormick, Seed-Time, 1809-1856;* Cyrus McCormick, *The Century of the Reaper;* and Fowler McCormick, *The Development of Farm Machines.* Albert L. Demaree, *The American Agricultural Press, 1819-1860* and Alfred C. True, *A History of Agricultural Education in the United States* contain interesting material.

The general studies of industry listed in section I apply to the period before the Civil War. See also Frederick J. Allen, *The Shoe Industry;* Albert S. Bolles, *Industrial History of the United States;* Kathleen Bruce, *Virginia Iron Manufacture in the Slave Era;* Jacob H. Burgy, *The New England Cotton Textile Industry: A Study in Industrial Geography;* Arthur H. Cole, *American Wool Manufacture* (2 vols.); Arthur H. Cole and Harold F. Williamson, *The American Carpet Manufacture;* Katherine Coman, *The Industrial History of the United States;* Melvin T. Copeland, *The Cotton Manufacturing Industry in the United States;* Louis M. Hacker, *The Triumph of American Capitalism;* Matthew B. Hammond, *The Cotton Industry;* Malcolm Keir, *Manufacturing;* Charles B. Kuhlmann, *Development of the Flour-Milling Industry in the United States;* Benjamin F. Lemert, *The Cotton Textile Industry of the Southern Appalachian Piedmont;* Broadus Mitchell, *The Rise of Cotton Mills in the South* and *William Gregg, Factory Master of the Old South;* Simon N. D. North, *A Century of American Wool Manufacturing;* Paul H. Nystrom, *Textiles;* Holland Thompson, *From the Cotton Fields to the Cotton Mills;* Caroline F. Ware, *The Early New England Cotton Manufacture;* Lyman H. Weeks, *A History of Paper-Manufacturing in the United States;* Richard G. Wood, *History of Lumbering in Maine;* and Thomas M. Young, *The American Cotton Industry.* The growth of factory towns in New England is illustrated in Constance McL. Green, *Holyoke, Massachusetts;* Margaret T. Parker, *Lowell, a Study in Industrial Development;* and Vera Shlakman, *Economic History of a Factory Town: A Study of Chicopee, Massachusetts.* Preston W. Barker, *Charles Goodyear, Connecticut Yankee and Rubber Pioneer* is the story of one of the inventor-industrialists of the period. See section V for references to inventors and inventions.

The most useful general studies of transportation are Charles H. Ambler, *A History of Transportation in the Ohio Valley;* Seymour Dunbar, *History of Travel in America* (4 vols.); William F. Gephart, *Transportation and Industrial Development in the Middle West;* Archer B. Hulbert, *Historic Highways of America* (16 vols.); Caroline E. MacGill and others, *History of Transportation in the United States Before 1860;* and Ulrich B. Phillips, *A History of Transportation in the Eastern Cotton Belt to 1860.* On the railroads see Charles F. Adams, Jr., *Railroads: Their Origin and Problems;* Edwin P. Alexander, *The Pennsylvania Railroad: A Pictorial History;* Thomas D. Clark, *A Pioneer Southern Railroad;* Paul W. Gates, *The Illinois Central Railroad and Its Colonization Work;* Lewis H. Haney, *A Congressional History of Railways in the United States to 1850;* Edward Hungerford, *The Story of the Baltimore and Ohio Railroad* (2 vols.) and *A Century of Progress, History of the Delaware and Hudson Company;* Edward C. Kirkland, *Men, Cities, and Transportation: A Study in New England History;* Edward

H. Mott, *Between the Ocean and the Lakes, the Story of Erie;* and Howard W. Schotter, *The Growth and Development of the Pennsylvania Railroad.* Alvin F. Harlow, *Old Waybills* is a popular story of the express companies. Roads and turnpikes have received little study. Most of the river literature is romantic, but among the useful books are Leland D. Baldwin, *The Keelboat Age on Western Waters;* Fred E. Dayton, *Steamboat Days;* Frank H. Dixon, *A Traffic History of the Mississippi River System;* Garnett L. Eskew, *Pageant of the Packets;* Mildred L. Hartsough, *From Canal to Steel Barge on the Upper Mississippi;* and William J. Peterson, *Steamboating on the Upper Mississippi.* See also Hiram M. Chittenden, *History of Early Steamboat Navigation on the Missouri River* (2 vols.). The most popular general study of the canals is Alvin F. Harlow, *Old Towpaths, The Story of the American Canal Era.* Special studies are Elbert J. Benton, *The Wabash Trade Route in the Development of the Old Northwest;* Ernest L. Bogart, *Internal Improvements and State Debts in Ohio;* Wayland F. Dunaway, *History of the James River and Kanawha Company;* Chester L. Jones, *Economic History of the Anthracite Tidewater Canals;* James W. Putnam, *The Illinois and Michigan Canal: A Study in Economic History;* Walter S. Sanderlin, *The Great National Project: A History of the Chesapeake and Ohio Canal;* and Noble E. Whitford, *History of the Canal System of the State of New York* (2 vols.). The two best volumes on the telegraph are Alvin F. Harlow, *Old Wires and New Waves* and Robert L. Thompson, *Wiring a Continent.*

On inland commerce see references in section I. Reuben G. Thwaites, *Early Western Travels* contains much information on commerce in the West. On the lake traffic see the various volumes in the *American Lake Series,* ed. by Milo M. Quaife; James C. Mills, *Our Inland Seas, Their Shipping and Commerce for Three Centuries;* and Ralph G. Plumb, *History of the Navigation of the Great Lakes.* Wyatt W. Belcher, *The Economic Rivalry Between St. Louis and Chicago, 1850-1880* is one phase of the story of the wresting of commercial supremacy from the river towns by the lake cities.

On the shipping industry see Willis J. Abbot, *The Story of Our Merchant Marine;* Winthrop L. Marvin, *The American Merchant Marine;* Ralph D. Paine, *The Old Merchant Marine;* and John R. Spears, *The Story of the American Merchant Marine.* Samuel E. Morison, *The Maritime History of Massachusetts, 1783-1860* and Robert G. Albion, *The Rise of New York Port, 1815-1860* are two excellent special studies. The story of fishing and whaling is told in Raymond McFarland, *A History of New England Fisheries;* George F. Dow, *Whale Ships and Whaling;* Elong P. O. Hohman, *The American Whalemen;* Charles B. Hawes, *Whaling;* and James Travis Jenkins, *A History of the Whale Fisheries.* On other phases of ocean commerce see Frank L. Benns, *The American Struggle for the British West Indian Carrying Trade, 1815-1830;* Norman S. Buck, *The Development of the Organization of Anglo-American Trade, 1800-1850;* Foster Rhea Dulles, *The Old China Trade;* and Kenneth S. LaTourette, *Voyages of American Ships to China, 1784-1844.* Relations with Latin America are depicted in Charles L. Chandler, *Inter-American Acquaintances* and Frank R. Rutter, *South American Trade of Baltimore.* Material on American ships and shippers is to be found in Howard I. Chapelle, *The History of American Sailing Ships;* Arthur H. Clark, *The Clipper Ship Era, 1843-1869;* and Carl C. Cutler, *Greyhounds of the Sea: The Story of the American Clipper Ship.* The subsidy question is discussed in Marguerite M. McKee, *Ship Subsidy Question in United States Politics.*

Among the studies that are concerned with the business structure and with men of business are Thomas C. Cochran and William Miller, *The Age of Enterprise;* Kenneth M. Porter, *The Jacksons and the Lees; Two Generations of Massachusetts Merchants* (2 vols.); Alfred H. Stone, "The Cotton Factorage System of the Southern States," *American Historical Review,* vol. 20 (April, 1915), pp. 557-65; Robert T. Thompson,

Colonel James Neilson: A Businessman of the Early Machine Age in New Jersey; and Archibald D. Turnbull, *John Stevens, An American Record.*

Material on money, banking, and tariff is limited. On banking see Robert E. Chaddock, *The Safety Fund Banking System in New York;* Charles A. Conant, *History of Modern Banks of Issue;* Davis R. Dewey, *State Banking before the Civil War;* Joseph E. Hedges, *Commercial Banking and the Stock Market before 1863;* David Kinley, *The Independent Treasury of the United States and Its Relations to the Banks of the Country;* and Harry E. Miller, *Banking Theories in the United States before 1860.* Ralph C. H. Catterall, *The Second Bank of the United States* is the standard reference on that subject. Other books that pay particular attention to the monetary troubles of the Jackson period are Edward G. Bourne, *The History of the Surplus Revenue of 1837;* Reginald C. McGrane, ed., *The Correspondence of Nicholas Biddle Dealing with National Affairs, 1807-1844;* and Arthur M. Schlesinger, Jr., *The Age of Jackson.* The panic of 1837 is ably presented in Reginald C. McGrane, *The Panic of 1837;* see also Charles A. Collman, *Our Mysterious Panics, 1830-1930.* Other phases of the financial question are discussed in Arthur H. Cole, *Wholesale Prices in the United States, 1770-1861;* Reginald C. McGrane, *Foreign Bondholders and American State Debts;* William A. Scott, *The Repudiation of* State Debts; Walter B. Smith and Arthur H. Cole, *Fluctuations in American Business, 1790-1860;* and Margaret G. Myers, *The New York Money Market: Origins and Development.* There is no satisfactory history of the tariff. Edward Stanwood, *American Tariff Controversies in the Nineteenth Century;* and Ida M. Tarbell, *The Tariff in our Times;* and Frank W. Taussig, *The Tariff History of the United States* are useful surveys. The tariff troubles of the Jackson era are discussed in biographies of Jackson, Clay, and Calhoun. See also William E. Dodd, *Expansion and Conflict* and Chauncey S. Boucher, *The Nullification Controversy in South Carolina.*

On the economic thought of the time see John F. Bell, "Frederick List, Champion of Industrial Capitalism," *Pennsylvania Magazine of Biography and History,* vol. 66 (January, 1942), pp. 56-83; Earl L. Bradsher, *Mathew Carey;* Margaret E. Hirst, *Life of Friedrich List;* Abraham D. H. Kaplan, *Henry Charles Carey;* Bernard Mayo, *Henry Clay, Spokesman of the West;* Kenneth W. Rowe, *Mathew Carey; A Study in American Economic Development;* and Richard G. Stone, *Hezekiah Niles as an Economist.*

Carl Russell Fish, *The Rise of the Common Man, 1830-1850* and Nevins, *Ordeal of the Union* provide probably the best available picture of life in the nation in the three decades preceding the Civil War. McMaster is especially good on certain phases of economic activity.

Special census reports and the 1911 *Report* of the Immigration Commission (42 vols.) provide statistical material on immigration. See also Edith Abbott, *Historical Aspects of the Immigration Problem;* George M. Stephenson, *History of American Immigration, 1820-1924;* and Carl Wittke, *We Who Built America.* Special studies such as William F. Adams, *Ireland and Irish Emigration to the New World from 1816 to the Famine;* Theodore C. Blegen, *Norwegian Migration to America, 1825-1860;* Florence E. Janson, *Background of Swedish Immigration, 1840-1930;* Stanley C. Johnson, *History of Emigration from the United Kingdom to North America;* and Edward F. Roberts, *Ireland in America* are helpful. See references under section I and section IV.

On labor John R. Commons and associates, *History of Labour in the United States* (4 vols.) and Commons and others, *Documentary History of American Industrial Society* (10 vols.) are the most useful detailed volumes. Brief general studies are Mary Beard, *A Short History of the American Labor Movement;* Frank T. Carlton, *History and Problems of Organized Labor;* Marjorie S. Clark and S. Fanny Simon, *The Labor Movement in America;* George G. Groat, *An Introduction to Organized Labor in America;* and Selig Perlman, *A History of Trade Unionism in the United States.* Norman J. Ware, *The Industrial Worker, 1840-1860* is an excellent special study. Edith Abbott, *Women in*

Industry and Vera Shlakman, *Economic History of a Factory Town: A Study of Chicopee, Massachusetts* are interesting studies of conditions in the early textile mills.

The socio-economic experiments and utopian dreams of the period are pictured in William A. Hinds, *American Communities and Co-operative Colonies;* Charles Nordhoff, *The Communistic Societies of the United States from Personal Visits and Observation;* and John H. Noyes, *History of American Socialism.* New Harmony is described in Richard W. Leopold, *Robert Owen* and George B. Lockwood, *New Harmony;* the Oneida community in Pierrepont B. Noyes, *My Father's House;* Brook Farm in Octavius B. Frothingham, *George Ripley* and Lindsay Swift, *Brook Farm;* and the various Shaker settlements in Marquerite F. Melcher, *Shaker Adventure.*

Economic and social life provoked much writing, especially by foreign travelers. Among the easily available books are E. Douglas Branch, *The Sentimental Years;* Fredrika Bremer, *The Homes of the New World: Impressions of America;* Charles Fenno Hoffman, *A Winter in the West* (2 vols., published as "By a New Yorker"); Kellar, ed., *Solon Robinson;* Harriet Martineau, *Society in America;* Meade Minnigerode, *The Fabulous Forties, 1849-1850;* Allan Nevins, *American Social History as Recorded by British Travellers;* Una Pope Hennessy, ed., *The Aristocratic Journey, Being the Outspoken Letters of Mrs. Basil Hall;* and Alice Felt Tyler, *Freedom's Ferment.* The volumes in the *American Lakes Series,* ed. by Milo M. Quaife, contain much interesting material; see especially Harlan H. Hatcher, *Lake Erie.* See also Frank L. and Harriet C. Owsley, "The Economic Basis of Society in the Late Ante-Bellum South," *Journal of Southern History,* vol. vi (February, 1940), pp. 24-45.

Economic material on the Civil War is limited. Pertinent chapters in Rhodes and other general histories are helpful, and certain volumes in *The American Nation: A History* and in *The South in the Building of the Nation* are of value. See also James Truslow Adams, *America's Tragedy;* Arthur C. Cole, *The Whig Party in the South* and *The Irrepressible Conflict;* Avery O. Craven, *The Coming of the Civil War* and *The Repressible Conflict;* William E. Dodd, *The Cotton Kingdom;* Carl Russell Fish, *The American Civil War;* George F. Milton, *Conflict; The American Civil War* and *Eve of Conflict; Stephen A. Douglas and the Needless War;* and Roy F. Nichols, *The Disruption of American Democracy.*

On slavery and the slave question see Frederic Bancroft, *Slave-Trading in the Old South;* John S. Bassett, *The Southern Plantation Overseer as Revealed in His Letters;* Benjamin G. Brawley, *A Short History of the American Negro;* William E. B. Du Bois, *Suppression of the African Slave Trade;* Ralph B. Flanders, *Plantation Slavery in Georgia;* Albert Bushnell Hart, *Slavery and Abolition;* Frank H. Hodder, "Some Phases of the Dred Scott Case," *Mississippi Valley Historical Review,* vol. 16 (June, 1929), pp. 3-22; Ulrich B. Phillips, *American Negro Slavery;* Charles W. Ramsdell, "The Natural Limits of Slavery Expansion," *Mississippi Valley Historical Review,* vol. 16 (September, 1929), pp. 151-171; Robert R. Russel, "The General Effects of Slavery upon Southern Economic Progress," *Journal of Southern History,* vol. 4 (February, 1938), pp. 34-54; Wendell H. Stephenson, *Isaac Franklin, Slave Trader and Planter of the Old South;* Charles S. Sydnor, *Slavery in Mississippi;* Rosser H. Taylor, *Slave Holding in North Carolina: An Economic View;* and Harrison A. Trexler, *Slavery in Missouri.*

Sectional controversy and secession are described in Avery O. Craven, *Edmund Ruffin, Southerner, A Study in Secession;* Clarence P. Denman, *Secession Movement in Alabama;* Dwight L. Dumond, *The Secession Movement;* Philip S. Foner, *Business and Slavery: the New York Merchants and the Irrepressible Conflict;* Robert R. Russel, *Economic Aspects of Southern Sectionalism;* Henry T. Shanks, *Secession Movement in Virginia;* Henry H. Simms, *A Decade of Sectional Controversy, 1851-1861;* Charles S. Sydnor, *The Development of Southern Sectionalism;* and John G. van Deusen, *Economic Basis of Disunion in South Carolina.* Two excellent source collections are Dwight

L. Dumond, ed., *Southern Editorials on Secession* and Howard C. Perkins, ed., *Northern Editorials on Secession* (2 vols.).

The problem of finance in the North is discussed in Don C. Barrett, *The Greenbacks and the Resumption of Specie Payments, 1862-1879;* Andrew McF. Davis, *The Origin of the National Banking System;* Henrietta M. Larson, *Jay Cooke, Private Banker;* Wesley C. Mitchell, *A History of the Greenbacks;* Ellis Paxson Oberholtzer, *Jay Cooke, Financier of the Civil War;* and James L. Sellers, "An Interpretation of Civil War Finance," *American Historical Review,* vol. 30 (January, 1925), pp. 282-291. Various phases of the economic and industrial problems are presented in George W. Dalzell, *The Flight from the Flag, The Continuing Effect of the Civil War upon the American Carrying Trade;* Emerson D. Fite, *Social and Industrial Conditions in the North during the Civil War;* William B. Hesseltine, *Lincoln and the War Governors;* Fred A. Shannon, *The Organization and Administration of the Union Army, 1861-1865* (2 vols.); and Harry E. Smith, *The United States Federal Internal Tax History from 1860 to 1871.* Northern relations with England are excellently presented in Ephraim D. Adams, *Great Britain and the American Civil War* (2 vols.).

Southern economic and financial problems are in part related in Francis B. C. Bradlee, *Blockade Running during the Civil War;* Ellis Merton Coulter, "Effects of Secession upon the Commerce of the Mississippi Valley," *Mississippi Valley Historical Review,* vol. 3 (December, 1916), pp. 275-300; Charles W. Ramsdell, "The Control of Manufacturing by the Confederate Government," *ibid.,* vol. 8 (December, 1921), pp. 231-249, and "The Confederate Government and the Railroads," *American Historical Review,* vol. 22 (July, 1917), pp. 794-810; James G. Randall, *The Confiscation of Property during the Civil War;* James L. Sellers, "Economic Incidence of the Civil War in the South," *Mississippi Valley Historical Review,* vol. 14 (September, 1927), pp. 179-191; and Samuel B. Thompson, *Confederate Purchasing Operations Abroad.* Frank L. Owsley, *King Cotton Diplomacy* is a general study of the foreign relations of the Confederacy.

William A. Dunning, *Reconstruction, Political and Economic* and Walter L. Fleming, *Documentary History of Reconstruction* (2 vols.) are valuable. Claude G. Bowers, *The Tragic Era* is a dramatic story; Robert S. Henry, *The Story of Reconstruction* is more prosaic. The latest study is Ellis Merton Coulter, *The South During Reconstruction.* See also Howard K. Beale, *The Critical Year;* Paul H. Buck, *The Road to Reunion;* Richard N. Current, *Old Thad Stevens;* George F. Milton, *The Age of Hate; Andrew Johnson and the Radicals;* Allan Nevins, *The Emergence of Modern America, 1865-1878;* and Randall, *The Civil War and Reconstruction.* Inspired in many cases by Professor Dunning, one or more excellent histories of Reconstruction in the various states have appeared. For further references see the bibliographies in Randall and in Coulter. The sorry details of postwar corruption are told in Allan Nevins, *Hamilton Fish: The Inner History of the Grant Administration.* Further material is to be found in the press of the time and in the biographies of the leading men of the day. On expansion into the "Last Frontier" see the references at the beginning of this section. See also E. Douglas Branch, *Westward, the Romance of the American Frontier;* Harold E. Briggs, *Frontiers of the Northwest: A History of the Upper Mississippi Valley;* Everitt N. Dick, *The Sod-House Frontier;* Emerson Hough, *The Passing of the Frontier;* Frederic L. Paxson, *The Last Frontier* and *When the West is Gone;* Glenn C. Quiett, *They Built the West;* and Walter Prescott Webb, *The Great Plains.* The miners' frontier is described in James V. Frederick, *Ben Holladay, the Stagecoach King;* Carl B. Glasscock, *The Big Bonanza; the Story of the Comstock Lode* and *The War of the Copper Kings;* Oscar Lewis, *Silver Kings;* George D. Lyman, *The Saga of the Comstock Lode;* Glenn C. Quiett, *Pay Dirt, a Panorama of American Gold Rushes;* Thomas A. Rickard, *The History of American*

Mining; Grant H. Smith, *The History of the Comstock Lode;* and William J. Trimble, *The Mining Advance into the Inland Empire.*

The basic introduction to the cow country is Webb's *The Great Plains.* The cowboy and his life are pictured fully in Andy Adams, *The Log of a Cowboy;* E. Douglas Branch, *The Cowboy and His Interpreters;* Struthers Burt, *Powder River;* Edward E. Dale, *The Range Cattle Industry* and *The Cow Country;* Emerson Hough, *The Story of the Cowboy;* Charles Lindsay, *Big Horn Basin;* Ernest S. Osgood, *The Day of the Cattleman;* Ora B. Peake, *The Colorado Cattle Range Industry;* Louis Pelzer, *The Cattleman's Frontier;* Philip A. Rollins, *The Cowboy;* Floyd B. Streeter, *Prairie Trails and Cow Towns;* and Robert M. Wright, *Dodge City, the Cowboy Capital.* The sheep raisers are seen in Edward N. Wentworth, *American Sheep Trails: History, Personalities.*

IV. The Golden Age of Industry. Much material on manufacturing in the years after the Civil War is to be found in the census reports; they must be used carefully, however, for they are sometimes open to question and the figures for different decades are not always comparable. Burton J. Hendrick, *The Age of Big Business;* Malcolm Keir, *Manufacturing;* Ida M. Tarbell, *Nationalizing of Industry;* Joseph V. Woodworth, *American Tool Making and Interchangeable Manufacturing;* and Carroll D. Wright, *Industrial Evolution of the United States* are useful general studies.

Histories of the various industries are uneven in value, and many are wholly inadequate. The story of iron and steel can in part be traced in Adolphus O. Backert, ed., *The A B C of Iron and Steel;* James H. Bridge, *Inside History of the Carnegie Steel Company;* Herbert N. Casson, *Romance of Steel;* Stewart H. Holbrook, *Iron Brew, a Century of American Ore and Steel;* Joseph R. Smith, *Story of Iron and Steel;* and James M. Swank, *History of the Manufacture of Iron in All Ages.* Biographies of individual industrialists are fruitful sources of information; see especially George B. Harvey, *Henry Frick;* Burton J. Hendrick, *Life of Andrew Carnegie* (2 vols.); Allan Nevins, *Abram S. Hewitt, with Some Account of Peter Cooper* and *Selected Writings of Abram S. Hewitt;* and Ida M. Tarbell, *Life of Elbert H. Gary: the Story of Steel.* Interesting material on ore mining is found in Grace Lee Nute, *Lake Superior;* two special studies are Minnesota Historical Records Survey, *The Cuyuan Range: A History of a Minnesota Iron Mining District* and Henry R. Mussey, *Combination in the Mining Industry: A Study of Concentration in Lake Superior Iron Ore Production.* On the textiles industry see the references on industry in section III. Among the most useful volumes on the foods industry are Lawrence O. Cheever, *The House of Morrell;* Rudolph A. Clemen, *The American Livestock and Meat Industry;* James H. Collins, *The Story of Canned Foods;* Charles B. Kuhlman, *The Development of the Flour Milling Industry in the United States;* and Harper Leech and John C. Carroll, *Armour and his Times.* Other industries are presented in John Ise, *United States Forest Policy;* Robert H. Persons, *The Early Days of the Power Station Industry;* and Hugo Schlalter, *History of the Explosives Industry in America.* On the oil industry see Paul H. Giddens, *The Birth of the Oil Industry;* John Ise, *United States Oil Policy;* Allan Nevins, *John D. Rockefeller: The Heroic Age of American Enterprise* (2 vols.); and Ida M. Tarbell, *The History of the Standard Oil Company.*

Closely related to the growth of industry was the progress of inventive genius. On inventions see Roger Burlingame, *Engines of Democracy: Invention and Society in Mature America;* Edward W. Byrn, *The Progress of Invention in the Nineteenth Century;* Frank L. Dyer and Thomas C. Martin, *Edison, His Life and Inventions;* Harry Jerome, *Mechanization in Industry;* Waldemar B. Kaempffert, ed., *Popular History of American Inventions* (2 vols.); Michael I. Pupin, *From Immigrant to Inventor;* Holland Thompson, *The Age of Invention;* and Abbott P. Usher, *A History of Mechanical Inventions.* The story of the telephone is told in the census reports and in Herbert N. Cas-

son, *History of the Telephone;* Thomas A. Watson, *The Birth and Babyhood of the Telephone;* and Catherine D. Mackenzie, *Alexander Graham Bell.* Two items on the typewriter are *The Story of the Typewriter* (published by the Herkimer County, New York, Historical Society) and Frederic Heath's "The Typewriter in Wisconsin," *Wisconsin Magazine of History,* vol. 27 (March, 1944), pp. 263-275. The development of electrical equipment may be followed in the *Electrical World.* See also John O. Kraehenbuehl, *Electrical Illumination;* Thomas C. Martin and Stephen L. Coles, *The Story of Electricity;* Henry G. Prout, *A Life of George Westinghouse;* Henry Schroeder, *History of Electric Light;* and Alfred Still, *Soul of Amber; the Background of Electrical Science.* Kenneth Björk, *Saga in Steel and Concrete* is an excellent account of the contribution of Norwegian immigrants to industry and invention.

See references on labor in section III. Other books of interest are Richard T. Ely, *The Labor Movement in America;* Herbert Harris, *American Labor;* Robert F. Hoxie, *Trade Unionism in the United States;* Dale Y. Taylor, *Labor Economics and Labor Problems;* and Leo Wolman, *Growth of American Trade Unions.* Interesting material on the Knights of Labor may be found in Joseph R. Buchanan, *Story of a Labor Agitator;* Harry J. Carman, Henry David, and Paul N. Guthrie, eds., *The Path I Trod: The Autobiography of Terence V. Powderly;* and Terence V. Powderly, *Thirty Years of Labor.* On the American Federation of Labor see Samuel Gompers, *Seventy Years of Life and Labor* (2 vols.); Rowland H. Harvey, *Samuel Gompers;* and Lewis L. Lorwin, *The American Federation of Labor.* The lot of women in industry is described in Edith Abbott, *Women in Industry;* Adelaide M. Anderson, *Women in the Factory;* and Helen L. Sumner, *History of Women in Industry in the United States.* Paul H. Douglas, *The Theory of Wages* and the U. S. Bureau of Labor Statistics, *History of Wages in the United States from Colonial Times to 1928* are helpful. Industrial conflicts may be studied in Louis Adamic, *Dynamite, The Story of Class Violence in America;* Henry David, *History of the Haymarket Affair;* John A. Fitch, *The Causes of Industrial Unrest;* John L. Griffin, *Strikes: A Study of Quantitative Economics;* Almont Lindsey, *The Pullman Strike;* Benjamin McK. Rastall, *The Labor History of the Cripple Creek District;* and Samuel Yellen, *American Labor Struggle.* The story of the Molly Maguires is told in James W. Coleman, *The Molly Maguire Riots* and in Marvin W. Schlegel, *Ruler of the Reading: The Life of Franklin B. Gowan.* See Hendrick's *Life of Andrew Carnegie* on the Homestead strike and Allan Nevins' *Grover Cleveland* and McAllister Coleman's *Eugene V. Debs* on the Pullman-Chicago strike.

John R. Commons, *Races and Immigrants in America,* though old, is still the classic study of immigration. Marcus L. Hansen, *The Atlantic Migration* and *The Immigrant in American History* are excellent. See also Grace Abbott, *The Immigrant and the Community;* Theodore Blegen, *Norwegian Migration to America* (2 vols.); Philip Davis and Bertha Schwartz, *Immigration and Americanization;* Roy L. Garvis, *Immigration Restrictions;* John P. Gavit, *Americans by Choice;* Jeremiah W. Jenks and William Jett Lauck, *The Immigration Problem;* and Frank J. Warne, *The Tide of Immigration.* There are special studies of the movement of every racial group in Europe. The Chinese problem is discussed in Mary R. Coolidge, *Chinese Immigration* and George F. Seward, *Chinese Immigration in its Social and Economic Aspects;* the Japanese in Yamato Ichibashi, *Japanese in the United States* and Sidney L. Gullick, *The American Japanese Problem.* Edith Abbott, *Immigration, Select Documents and Case Records* and Mary K. Reedy, *Selected Articles on Immigration* are useful.

Most of the references cited under agriculture in sections I and III are applicable. There is no good history of agriculture for the period. The *Yearbook* of the Department of Agriculture and the Census Bureau monographs are particularly helpful. See also Ernest L. Bogart, *Economic History of American Agriculture;* Wilson Gee, *The Social Economics of Agriculture;* and Norman S. B. Gras, *History of Agriculture in Europe and*

America. Fred A. Shannon, *The Farmer's Last Frontier, Agriculture, 1860-1897* is the best general study of the subject for those years. On tenancy see Robert P. Brooks, *The Agrarian Revolution in Georgia* and Emanuel A. Goldenweiser and Leon E. Truesdell, *Farm Tenancy in the United States* (Census monograph No. 4 of the 1920 census). Contemporary material on the agrarian revolt is extensive, but it is highly colored by the personal attitude of the individual writer. The rise of the Grange is to be seen in Solon J. Buck's *The Granger Movement* and in his more general *The Agrarian Crusade.* See also Arthur E. Paine, *The Granger Movement in Illinois.* The best book on the Populists is John D. Hicks, *The Populist Revolt.* Hallie Farmer, "The Economic Background of Frontier Populism," *Mississippi Valley Historical Review,* vol. 10 (March, 1924), pp. 406-427, is excellent. Good books on the Populist movement in the states are Alex M. Arnett, *The Populist Movement in Georgia;* John B. Clark, *Populism in Alabama;* Roscoe C. Martin, *The Peoples' Party in Texas;* Herman C. Nixon, *The Populist Movement in Iowa;* William D. B. Sheldon, *Populism in the Old Dominion;* and Francis B. Simkins, *The Tillman Movement in South Carolina.*

Useful references on the economic structure are given in section III. John Moody, *The Railroad Builders* is a general study. On the transcontinental lines see Glenn D. Bradley, *Story of the Santa Fe;* Stuart Daggett, *Chapters in the History of the Southern Pacific;* John P. Davis, *The Union Pacific;* Edwin L. Sabin, *Building the Pacific Railway;* Eugene V. Smalley, *History of the Northern Pacific;* and Henry K. White, *History of the Union Pacific Railway.* Among the leading books on eastern roads are Jules I. Bogen, *The Anthracite Railroads;* Howard D. Dozier, *A History of the Atlantic Coast Line Railroad;* Edward Hungerford, *Men and Iron, the History of the New York Central* and *Men of Erie: A Story of Human Effort;* and Frank W. Stevens, *The Beginnings of the New York Central Railroad.* See also James B. Hedges, *Henry Villard and the Railways of the Northwest* and Robert E. Riegel, *The Story of Western Railroads.* On railroad practices and abuses both Rhodes and Oberholtzer give considerable attention to the Crédit Mobilier; see also Jay B. Crawford, *The Crédit Mobilier of America.* Western reaction is presented in part in John M. Bonham, *The West and the Railroads* and in William Larrabee, *The Railroad Question.* Revealing also is Charles F. Adams, *Chapters of Erie.* On railroad regulation see Frank H. Dixon, *State Railroad Control;* Henry S. Haines, *Restrictive Railway Legislation;* Balthasar H. Meyer, *Railroad Legislation in the United States;* and Isaiah L. Sharfman, *The Interstate Commerce Commission* (5 vols.).

On river and canal transportation see references in section III, as well as various volumes of the *American Lakes Series.* See also Norman Beasley, *Freighters of Fortune;* George A. Cuthbertson, *Freshwater: a History and a Narrative of the Great Lakes;* and Walter Havighurst, *The Long Ships Passing.*

Material on the tariff in the period is unsatisfactory. Among the useful biographies, autobiographies, and recollections of outstanding figures in the tariff argument are James A. Barnes, *John G. Carlisle;* David S. Muzzey, *James G. Blaine;* Allan Nevins, *Grover Cleveland;* Charles S. Olcott, *Life of William McKinley* (2 vols.); and William A. Robinson, *Thomas B. Reed, Parliamentarian.*

Alexander D. Noyes, *Forty Years of American Finance* is a useful general presentation. See also George E. Barnett, *State Banks and Trust Companies Since the Passage of the National Bank Act;* Don C. Barrett, *Greenbacks and the Resumption of Specie Payments;* Andrew McF. Davis, *The Origin of the National Banking System* (National Monetary Commission reports); Alonzo B. Hepburn, *History of Coinage and Currency in the United States;* James Lawrence Laughlin, *History of Bimetallism in the United States;* Wesley C. Mitchell, *History of the Greenbacks;* Alexander D. Noyes, *History of the National-Bank Currency;* James G. Smith, *The Development of Trust Companies in the United States;* Horace White, *Money and Banking;* and Murray S. Wildman, *Money Inflation in the United States.*

Financial crises in fact and theory may be studied in Otto C. Lightner, *The History of Business Depressions;* Wesley C. Mitchell, *Business Cycles;* William C. Schluter, *Economic Cycles and Crises;* Oliver M. W. Sprague, *History of Crises under the National Banking System;* Thorstein Veblen, *Theory of Business Enterprise;* and Frank P. Weberg, *The Background of the Panic of 1893.* See also the Oberholtzer and Larson biographies of Jay Cooke for further material on the panic of 1873 and other biographies of the time.

On silver in Congress see Fred W. Wellborn, "The Influence of the Silver-Republican Senators, 1889-1891," *Mississippi Valley Historical Review,* vol. xiv (March, 1928), pp. 462-480, and Jeannette P. Nichols, "Silver Diplomacy," *Political Science Quarterly,* vol. xlviii (December, 1935), pp. 565-588. Donald D. McMurry, *Coxey's Army* discusses one of the episodes that resulted from the economic unrest of the times.

Unfortunately the material on the "Battle of the Standards" is frequently prejudiced and is often not founded on basic research. The gold-standard arguments were presented vigorously in the standard magazines of the day, in thousands of pamphlets such as Horace White's "The Gold Standard; How it Came into the World and Why it will Stay," and in such compendiums as *Solid Money.* On the part of the "radicals" there is no substitute for the letters and records of the people. The philosophic background of discontent can be seen in Henry George, *Progress and Poverty;* Edward Bellamy, *Looking Backward;* and Henry D. Lloyd, *Wealth against Commonwealth.* The drift to a practical program is discernible in material on the Grange and the Populist party; in Fred E. Haynes, *Third Party Movement since the Civil War;* in Shannon's *The Farmers' Last Frontier;* in the price charts; in the railroad histories; and in the poignant stories of such writers as Willa Cather and Hamlin Garland.

The election is traditionally pictured—with many inaccuracies—in Harry T. Peck, *Twenty Years of the Republic* and in Mark Sullivan, *Our Times: The Turn of the Century.* The most widely read silver advocate was William H. Harvey of Chicago; from the Coin Publishing Company came the famous *Coin's Financial School, Coin's Financial School Up to Date,* and *A Tale of Two Nations.* Among other works were Mrs. Sarah E. V. Emery, *Seven Financial Conspiracies;* S. S. King, *Seedtime and Harvest;* Ignatius Donnelly, *American People's Money;* and Edward A. Ross, *Honest Dollars.* William J. Bryan, *The First Battle* is a useful volume on the campaign; see Marian Silveus' "The Antecedents of the Campaign of 1896," an unpublished Wisconsin doctoral dissertation of 1933. Helpful biographies and articles are Barnes, *Carlisle;* Thomas Beer, *Hanna;* William V. Byars, *An American Commoner;* Waldo R. Browne, *Altgeld of Illinois;* Herbert D. Croly, *Marcus Alonzo Hanna;* Elmer Ellis, *Henry Moore Teller;* Nevins, *Cleveland;* Paxton Hibben, *The Peerless Leader;* Olcott, *The Life of William McKinley;* Arndt M. Stickles, *Simon Bolivar Buckner, Confederate Knight;* and Morris R. Werner, *Bryan.* See also James A. Barnes, "Myths of the Bryan Campaign," *Mississippi Valley Historical Review,* vol. xxxiv (December, 1947), pp. 367-404, and Harvey Wish, "John Peter Altgeld and the Background of the Campaign of 1896," *ibid.,* xxiv (March, 1938), pp. 503-518.

Among the general studies of trusts are John R. Commons, *Legal Foundations of Capitalism;* Jeremiah W. Jenks and Walter E. Clark, *The Trust Problem;* and William Z. Ripley, *Trusts, Pools, and Corporations.* John Moody, *The Truth About the Trusts;* Matthew Josephson, *The Robber Barons;* and Gustavus Myers, *History of the Great American Fortunes* (3 vols.) are muckrakish in character. Antitrust legislation is discussed in Albert H. Walker, *History of the Sherman Law* and in Edward Berman, *Labor and the Sherman Act;* the regulation of commerce in John R. Dos Passos, *The Inter-State Commerce Act: An Analysis of Its Provisions* and Frederick N. Judson, *The Law of Interstate Commerce and its Federal Regulations.*

Arthur M. Schlesinger, *The Rise of the City* provides both an excellent introduction

to the subject and a workable bibliography for further reading. The census reports, regular and special, are a storehouse of information. See also Adna F. Weber, *The Growth of Cities in the Nineteenth Century;* Robert A. Woods, *The City Wilderness;* and Carroll D. Wright, *The Slums of Baltimore, Chicago, New York,* and *Philadelphia* (U. S. Commissioner of Labor, Seventh Special Report, 1894). City yearbooks often contain information on physical progress. The Fiftieth Anniversary Number of the *Scientific American,* July 25, 1896, summarizes technical advances to that time. On city transportation see Harry J. Carman, *The Street Surface Railway Franchises of New York City;* Charles H. Cooley, *Statistics of Street Railway Transportation,* in Eleventh Census of the United States; and Special Report of the Census Office, *Street and Electric Railways, 1902.* See also Edward S. Mason, *The Street Railways in Massachusetts.* John A. Miller, *Fares Please!* is the best popular account of city transportation. Urban services have been little studied. Usable bibliographies of phases of urban life may be found in the individual histories of various activities. Minutes of city councils reveal the conflicts between the economic and the social thinkers concerning the basic purposes of the city itself and of city utilities. The city vulture is pictured in Herbert Asbury, *Sucker's Progress* and a host of other books.

Thomas A. Bailey, *A Diplomatic History of the American People* and Samuel F. Bemis, *A Diplomatic History of the United States* give the basic facts concerning the beginnings of expansion. See also Samuel F. Bemis, ed., *The American Secretaries of State,* vols. 7-10; Carl Russell Fish, *The Path of Empire;* Parker T. Moon, *Imperialism and World Politics;* Benjamin H. Williams, *Economic Foreign Policy of the United States;* and William F. Willoughby, *Territories and Dependencies of the United States, Their Government and Administration.* Joseph Barnes, ed., *Empire in the East* and William H. Haas, ed., *The American Empire* are interesting general surveys.

Material on the Spanish-American War and the immediate consequences is abundant; three popular books are Tyler Dennett, *John Hay;* Walter Millis, *The Martial Spirit;* and Julius W. Pratt, *Expansionists of 1898.* See section VII for further references, particularly on the economic aspects of expansion, territorial and otherwise.

V. The Years of Transition, *1900-1929.* Harold U. Faulkner, *The Quest for Social Justice, 1898-1914* is a social study with much economic material. Cornelius C. Regier, *The Era of the Muckrakers* is a satisfactory survey of the work of that group. Economic forces are apparent in Claude G. Bowers, *Beveridge and the Progressive Era;* Kenneth W. Hechler, *Insurgency: Personalities and Politics of the Taft Era;* and George Mowry, *Theodore Roosevelt and the Progressive Era.* Trust busting and industrial regulation are discussed in Pringle's *Roosevelt;* in Balthaser H. Meyer's *A History of the Northern Securities Case;* in the histories of the Sherman Anti-Trust Act; and, for the railroads in particular, in the writings of William Z. Ripley.

The labor situation at the turn of the century is summarized in the final report, published in 1902, of the Industrial Commission and in 1915 in the final report of the Commission on Industrial Relations. Other official reports are *Report to the President on the Anthracite Coal Strike of May-October, 1902,* by the Anthracite Coal Strike Commission and *Report on Conditions of Employment in the Iron and Steel Industry in the United States,* by the Bureau of Labor. Reports were made also (1912) on the strike of the textile workers in Lawrence, Massachusetts, and on conditions in the coal mines of Colorado (published in 1914). On the miners see also Elsie Glück, *John Mitchell, Miner;* John Mitchell, *Organized Labor;* and Andrew Roy, *A History of the Coal Miners of the United States.* Among the books on wages and working conditions that appeared between 1900 and 1917 are Robert Chapin, *The Standard of Living Among Workingmen's Families in New York City;* Whitney Coombs, *The Wages of Unskilled Labor in the Manufacturing Industries in the United States;* Robert Hunter, *Poverty;* Harry W. Laidler, *Boycotts*

and the Labor Struggle; John A. Ryan, *A Living Wage;* Isaac M. Rubinow; *Social Insurance;* Henry R. Seager, *Social Insurance;* and Frank H. Streightoff, *The Standard of Living Among the Industrial People of America.*

Material on the financial program of the Wilson administration is uneven in quality. On the tariff see references in section IV; see also Percy W. Ashley, *Modern Tariff History* and Thomas W. Page, *Making the Tariff in the United States.* On the Federal Reserve System see the writings of members of Wilson's cabinet, especially David F. Houston, *Eight Years with Wilson's Cabinet* and William G. McAdoo, *Crowded Years.* See also Carter Glass, *An Adventure in Constructive Finance.* Historical studies of the system include Charles O. Hardy, *Credit Policies of the Federal Reserve System;* Seymour E. Harris, *Twenty Years of the Federal Reserve Policy;* Edwin W. Kemmerer, *A. B. C. of the Federal Reserve System;* J. Laurence Laughlin, *The Federal Reserve Act, Its Origins and Problems;* Robert L. Owen, *The Federal Reserve Act;* Harold L. Reed, *Development of Federal Reserve Policy;* Charles S. Tibbetts, *State Banks and the Federal Reserve System;* Henry Parker Willis, *The Federal Reserve System;* Paul M. Warburg, *The Federal Reserve System* (2 vols.); and William O. Weyforth, *The Federal Reserve Board.*

On agricultural credit reform see Clara Eliot, *Farmer's Campaign for Credit;* William S. Holt, *The Federal Farm Loan Bureau;* Edwin R. A. Seligman, *Economics of Farm Relief;* and Ivan Wright, *Bank Credit and Agriculture Under National and Federal Reserve Banking Systems.*

On the coming of hostilities Frederic L. Paxson, *American Democracy and the World War,* vol. i, 1913-1917, and Charles C. Tansill, *America Goes to War* are excellent. See also Alex M. Arnett, *Claude Kitchen and the Wilson War Policies;* Newton D. Baker, *Why We Went to War;* Sidney B. Fay, *Origins of the World War* (2 vols.); Clinton Hartley Grattan, *Why We Fought;* Walter Millis, *The Road to War;* Bernadotte E. Schmitt, *The Coming of the War* (2 vols.); and Charles Seymour, *American Diplomacy during the World War* and *American Neutrality.*

Much material on the war is to be obtained from the publications of the State Department and the reports of the Director-General of Railroads, the Council of National Defense, the United States Housing Corporation, the Food Administration, the Fuel Administration, and the War Trade Board. See also "Mobilizing America's Resources for the War," in the *Annals* of the American Academy of Political and Social Science, vol. lxxviii, 1918; Ray Stannard Baker, *Woodrow Wilson, Life and Letters,* vols. v-viii; Bernard M. Baruch, *American Industry in the War: A Report of the War Industries Board;* Arthur Bullard, *Mobilising America;* Grosvenor B. Clarkson, *Industrial America in the World War;* William S. Culbertson, *Commercial Policy in War Time and After;* Charles G. Dawes, *A Journal of the Great War* (2 vols.); James A. Emery and Nathan B. Williams, *Governmental War Agencies Affecting Business;* Johnson Hagood, *The Services of Supply;* Frederic L. Paxson, *America at War, 1917-1918;* and Charles R. Van Hise, *Conservation and Regulation in the United States During the World War.* Railroad problems are seen in Frank H. Dixon, *The Railroads and Government;* Albert R. Ellingwood and Whitney Coombs, *The Government and Railroad Transportation;* and Walker D. Hines, *War History of American Railroads.* Louis E. Van Norman, *War-Time Control of Commerce* is useful, and Edward N. Hurley, *The Bridge to France* tells the story of transportation overseas to the war front.

On agriculture and labor see William C. Mullendore, *History of the United States Food Administration;* Edwin G. Nourse, *American Agriculture and the European Market;* the three volumes by Frank M. Surface (*American Pork Production in the World War, The Stabilization of the Price of Wheat during the War,* and *The Grain Trade during the World War*); Alexander M. Bing, *War-Time Strikes and their Adjustment;* Samuel Gompers, *American Labor and the War;* Hugh S. Hanna and William Jett Lauck, *Wages and the War;* and Gordon S. Watkins, *Labor Problems and Labor Administration in*

the United States during the World War. War finances and war costs are detailed in Ernest L. Bogart, *Direct and Indirect Costs of the Great World War* and *War Costs and their Financing;* John M. Clark, *The Costs of the World War to the American People;* Jacob H. Hollander, *War Borrowings;* Alexander D. Noyes, *War Period of American Finance;* and Herbert Stein, *Government Price Policy in the United States during the World War.* The best book on demobilization is James R. Mock and Evangeline Thurber, *Report on Demobilization.* For references on the war debts see books listed under money and debts in section VII.

Two outstanding studies of the twenties are *Recent Economic Changes in the United States* (2 vols.), prepared by the Committee of Recent Economic Changes of the President's Conference on Unemployment, and *Recent Social Changes in the United States* (2 vols.), prepared by the President's Research Committee on Social Trends. Other useful books with a more or less general approach are James Truslow Adams, *Our Business Civilization;* Samuel H. Adams, *The Incredible Era;* Frederick L. Allen, *Only Yesterday;* Ralph Borsodi, *This Ugly Civilization;* Louis M. Hacker, *American Problems of Today;* James C. Malin, *The United States After the World War;* Frederick L. Paxson, *Postwar Years: Normalcy, 1918-1923;* and Preston W. Slosson, *The Great Crusade and After.*

Material on the development of traditional factories has been cited in section IV. See also Ernest L. Bogart and Charles E. Landon, *Modern Industry;* Thomas N. Carver, *Present Economic Revolution in the United States;* Wilford I. King, *The National Income and Its Purchasing Power;* Broadus Mitchell and George S. Mitchell, *The Industrial Revolution in the South;* Rexford G. Tugwell, *Industry's Coming of Age;* and Stuart Chase's three volumes: *The Tragedy of Waste, Prosperity, Fact or Myth,* and *Men and Machines.* On the automobile see Herbert L. Barber, *The Story of the Automobile;* Ralph C. Epstein, *The Automobile Industry;* Edward D. Kennedy, *The Automobile Industry;* Theodore F. MacManus and Norman Beasley, *Men, Money and Motors;* and Lawrence H. Seltzer, *A Financial History of the American Automobile Industry.* David L. Cohn, *Combustion on Wheels, An Informal History of the Automobile Age* is a pleasantly written popular account of the "car." Malcolm W. Bingay, "Get a Horse!" in the *Saturday Evening Post,* June 29, 1940, is a revealing article by a journalist who lived through the pioneering days in Detroit; even more interesting is his "The Motors Boys in Action," *ibid.,* July 6, 1940. Henry Ford among the automobile builders has received most attention. *My Life and Work* (written in collaboration with Samuel Crowther) is Ford's own story. See also Sarah T. Bushnell, *The Truth About Henry Ford.* Keith Sward, *The Legend of Henry Ford* is bitingly critical. On outward technical progress there are no substitutes for photographs and the "antique" shows.

On the moving-picture and radio industries see Maurice Bardeche and Robert Brasillach, *History of the Motion Pictures;* Eugene Harley, *World-wide Influences of the Cinema;* Mae D. Huettig, *Economic Control of the Motion Picture Industry;* Lewis Jacobs, *The Rise of the American Film; a Critical History;* and Margaret F. Thorp, *America at the Movies.* Radio is discussed in Thomas T. Eoyang, *An Economic Study of the Radio Industry in the United States;* Alfred N. Goldsmith and Austin C. Lescarboura, *This Thing Called Broadcasting;* and Paul Schubert, *The Electric World: the Rise of Radio.* On aviation see John H. Frederick, *Commercial Air Transportation;* Fred C. Kelly, *The Wright Brothers;* Claude E. Puffer, *Air Transportation;* and Henry L. Smith, *Airways; the History of Commercial Aviation in the United States.*

Big business and its growth are discussed in James L. Bonbright and Gardiner C. Means, *The Holding Company;* Adolph A. Berle and Gardiner C. Means, *The Modern Corporation and Private Property;* Alfred L. Bernheim, *Big Business, Its Growth and Its Place* (for the Twentieth Century Fund); Frank A. Fetter, *The Masquerade of Monopoly;* Harry W. Laidler, *Concentration of Control in American Industry;* Hilman S. Raushen-

bush, *The Power Fight;* William Z. Ripley, *Main Street and Wall Street;* and Henry R. Seager and Charles A. Gulick, Jr., *Trust and Corporation Problems.* On public control see Thomas C. Blaisdell, Jr., *The Federal Trade Commission, An Experiment in the Control of Business;* John M. Clark, *Social Control of Business;* and Dexter M. Keezer and Stacy May, *Public Control of Business.*

The doleful agricultural situation may be seen in part in John D. Black, *Agricultural Reform in the United States;* Joseph S. Davis, *The Farm Export Debenture Plan;* James E. Boyle, *Farm Relief, a Brief on the McNary-Haugen Plan and Marketing of Agricultural Products;* Andrew A. Bruce, *Non Partisan League;* Arthur Capper, *The Agricultural Bloc;* Clara Eliot, *The Farmers' Campaign for Credit;* Nathan Fine, *Labor and Farmer Parties in the United States;* Paul R. Fossum, *The Agrarian Movement in North Dakota;* Herbert E. Gaston, *The Nonpartisan League;* E. A. Goldenweiser and L. E. Truesdell, *Farm Tenancy in the United States* (Census Monograph No. 4, 1924); Isaac Lippincott, *What the Farmer Needs;* National Industrial Conference Board, *The Agricultural Problem in the United States;* Edwin G. Nourse, *American Agriculture and the European Market;* Stuart A. Rice, *Farmers and Workers in American Politics;* Charles E. Russell, *The Story of the Nonpartisan League;* and George F. Warren and Frank A. Pearson, *The Agricultural Situation.*

On the labor problem see Abraham Berglund, George T. Starnes, and Frank T. De Vyrer, *Labor in the Industrial South;* Carroll R. Daugherty, *Labor Problems in American Industry;* John S. Gambs, *Decline of the I. W. W.;* Felix Frankfurter and Nathan Greene, *The Labor Injunction;* Selig Perlman and Philip Taft, *History of Labor in the United States* (vol. 4 of Commons and associates, *History of Labour in the United States*); David J. Saposs, *Left-Wing Unionism;* and Edwin E. Witte, *The Government and Labor Disputes.*

On transportation see Albert R. Ellingwood and Whitney Coombs, *The Government and Railroad Transportation;* Arnold K. Henry, *The Panama Canal and the Intercoastal Trade;* David P. Locklin, *Railroad Regulation Since 1920;* Harold G. Moulton, *Waterways vs. Railways;* Rogers MacVeagh, *The Transportation Act of 1920;* Harry D. Wolf, *Railroad Labor Board;* and Paul T. David, *The Economics of Air Mail Transportation.*

Most of the books concerned with the depression are listed under the New Deal. Some of the most interesting studies that encompass the events and problems of 1929-1932 are Frederick L. Allen, *Only Yesterday;* Charles A. and Mary Beard, *America in Midpassage;* John M. Blair, *Seeds of Destruction;* Wallace B. Donham, *Business Adrift;* Paul H. Douglas and Aaron Director, *Problem of Unemployment;* Mauritz A. Hallgren, *Seeds of Revolt;* Alvin Hansen, *Fiscal Policy and Business Cycles;* Francis W. Hirst, *Wall Street and Lombard Street;* Irvin Fisher, *The Stock Market Crash and After;* Jonathan N. Leonard, *Three Years Down;* Wilford I. King, *The National Income and Its Purchasing Power;* National Industrial Conference Board, *Major Forces in the World Business Depression;* Lionel C. Robbins, *The Great Depression;* George V. Seldes, *The Years of the Locust: America, 1929-1932;* and George Soule, *A Planned Society.* On President Hoover see Herbert Clark Hoover, *American Individualism;* Eugene Lyons, *Our Unknown Ex-President;* Rexford G. Tugwell, *Mr. Hoover's Economic Policies;* and Ray Lyman Wilbur and Arthur M. Hyde, *The Hoover Policies.*

VI. Uncertainty and Experiment, *1933-1941.* Basic in any study of the eventful years of the thirties are the nine volumes of *Public Papers and Addresses of Franklin D. Roosevelt,* compiled and collated by Judge Samuel I. Rosenman. Indispensable also are the reports and the studies and research monographs of the many government agencies. Helpful too are the writings of the President and his associates. Among the most interesting are Franklin D. Roosevelt, *Looking Forward* and *On Our Way;* Harry L. Hopkins, *Spending to Save;* Harold L. Ickes, *Back to Work;* Raymond Moley, *After Seven Years;*

Frances Perkins, *People at Work* and *The Roosevelt I Knew;* Henry A. Wallace, *New Frontiers;* and Rexford G. Tugwell, *The Battle for Democracy.*

Among the more or less general accounts of the Roosevelt years are Charles A. Beard, *The Future Comes;* Charles A. and Mary Beard, *America in Midpassage;* Charles A. Beard and George H. E. Smith, *The Old Deal and the New;* Eleanor L. Dulles, *Depression and Reconstruction;* Editors of the *London Economist, The New Deal;* Clarence J. Enzler, *Some Social Aspects of the Depression;* Louis Hacker, *Short History of the New Deal;* Ernest K. Lindley, *The Roosevelt Revolution: First Phase* and *Half Way With Roosevelt;* Broadus Mitchell, *Depression Decade, 1929-1941;* William F. Obgurn, ed., *Social Change and the New Deal* and *Social Changes During Depression and Recovery;* Basil Rauch, *The History of the New Deal, 1933-1938;* and Dixon Wecter, *The Age of the Great Depression.* Ernest K. Lindley, *Franklin D. Roosevelt: a Career in Progressive Democracy* is a sympathetic biography, and Robert E. Sherwood, *Roosevelt and Hopkins* made the Book-of-the-Month Club. Gerald W. Johnson, *Roosevelt: Dictator or Democrat* is provocative.

The attempts to reshape social economy inspired much study and comment. On the emergency banking measures see Charles C. Colt and Nathaniel S. Keith, *28 Days, a History of the Banking Crisis;* Marcus Nadler and Jules I. Bogen, *The Banking Crisis;* National Industrial Conference Board, *The Banking Situation in the United States;* James F. T. O'Connor, *The Banking Crisis and Recovery under the Roosevelt Administration;* Leo Pasvolsky, *Current Monetary Issues;* Cyril B. Upham and Edwin Lamke, *Closed and Distressed Banks.* Later financial developments are discussed in Frank Cyril James, *The Economics of Money, Credit, and Banking;* Gove G. Johnson, *The Treasury and Monetary Policy;* Harold G. Moulton, *Financial Organization and the Economic System;* James D. Paris, *Monetary Policies of the United States, 1932-1938;* Ferdinand Pecora, *Wall Street Under Oath;* and Ray B. Westerfield, *Our Silver Debacle.* The various banking acts and the acts creating the Securities and Exchange Commission and other agencies may be found in the United States Code, 1940 edition; the operation of the Securities and Exchange Commission, the Federal Deposit Insurance Corporation, the Home Owners Loan Corporation, the Federal Housing Administration, etc. may be found in the annual reports of those organizations.

On housing see Carol Aronovici, *Housing the Masses;* Louis H. Pink, *The New Day in Housing;* Langdon W. Post, *The Challenge of Housing;* Michael W. Straus and Talbot Wegg, *Housing Comes of Age;* and Nathan Straus, *The Seven Myths of Housing.* Material issued by the Tennessee Valley Authority and its associated organizations such as the Rural Electrification Administration and the Electric Farm and Home Authority is voluminous. See also Robert L. Duffus, *The Valley and Its People: a Portrait of T. V. A.;* Clarence L. Hodge, *The Tennessee Valley Authority;* David E. Lilienthal, *T. V. A.: Democracy on the March;* Charles Herman Pritchett, *TVA: a Study in Public Administration;* and Willson Whitman, *God's Valley.* Frederick L. Bird and Frances M. Ryan, *Public Ownership on Trial* and William A. Prendergast, *Public Utilities and the People* are hostile, and the "yardstick" controversy is seen especially in James C. Bonbright, *Public Utilities and the National Power Policies.*

Some of the leading books on social security are Eveline M. Burns, *Towards Social Security;* Abraham Epstein, *The Challenge of the Aged* and *Insecurity;* Paul H. Douglas, *Social Security in the United States;* Marietta Stevenson and Ralph E. Spear, *The Social Security Program;* and Maxwell S. Steward, *Social Security.*

The NRA is presented from the viewpoints of its two administrators in Hugh S. Johnson, *The Blue Eagle from Egg to Earth* and Donald R. Richberg, *The Rainbow.* Other books of a general and sometimes critical nature are Adolf A. Berle, Jr., and others, *America's Recovery Program;* Douglass V. Brown, *The Economics of the Recovery Program;* Charles L. Dearing, *The A. B. C. of the N. R. A.;* Michael F. Gallagher,

Government Rules Industry; George B. Galloway, *Industrial Planning under the Codes;* Leverett S. Lyon and others, *The National Recovery Administration;* Harold G. Moulton and others, *The Recovery Problem in the United States;* and Charles F. Roos, *NRA Economic Planning.* The policies and purposes of AAA are best expressed in the speeches of Secretary Henry Wallace and his associated administrators in the Department of Agriculture. The *Yearbook* and other general and specific publications of the department are of outstanding value. The Bureau of Home Economics, directed by Louise Stanley, published in cooperation with WPA a series of bulletins on consumer purchases on farms, in villages, and in urban centers (Miscellaneous Publications of the Department of Agriculture). See Wallace's *New Frontiers, America Must Choose,* and *Whose Constitution.* Special studies of the agrarian experiment are John D. Black, *The Dairy Industry and the AAA;* Joseph S. Davis, *Wheat and the AAA;* Edwin G. Nourse, *Marketing Agreements under the AAA;* and Henry T. Richards, *Cotton and the AAA.* More general and somewhat critical are Joseph S. Davis, *On Agricultural Policy, 1926-1938* and Edwin G. Nourse, Joseph S. Davis, and John D. Black, *Three Years of the Agricultural Adjustment Administration.* George N. Peek (with Samuel Crowther), *Why Quit Our Own* is a protest against AAA and a plea for private enterprise.

On relief, as in other experiments of the New Deal, the most detailed information is to be found in the reports and other publications of the agencies involved. Progress reports of FERA, PWA, and WPA, for instance, are especially complete. Doris Carothers' *Chronology of the Federal Emergency Relief Administration* and the research monographs issued by WPA are of particular value, as are also the "Social Problem" pamphlets of WPA and NYA. See also Grace Adams, *Workers on Relief;* American Association of Social Workers, *This Business of Relief;* Josephine C. Brown, *Public Relief, 1929-1939;* Paul Douglas and Aaron Director, *The Problem of Unemployment;* Arthur D. Gayer, *Public Works in Prosperity and Depression;* Donald S. Howard, *The WPA and Federal Relief Policy;* Jack F. Isakoff, *The Public Works Administration;* Marie D. Lane and Francis Steegmuller, *America on Relief;* and Willson Whitman, *Bread and Circuses.* Betty and Ernest K. Lindley, *A New Deal for Youth* is the story of NYA. The work of the CCC and other work projects is set forth in the progress reports of the Works Program, WPA; see also the Federal Security Agency's *The CCC at Work.*

On labor during the New Deal years see the various reports of the Department of Labor, especially those of the Bureau of Labor Statistics; the reports, general and specific, of the NLRB; and the reports of the "Civil Liberties Committee" of the Senate. See also John B. Andrews, *Labor Laws in Action;* Margarete A. Beney, *Wages, Hours and Employment in the United States;* Robert R. Brooks, *When Labor Organizes, Unions of their Own Choosing;* Clinch Calkins, *Spy Overhead;* Marjorie R. Clark and Fanny Simon, *The Labor Movement in America;* Carroll R. Daugherty, *Labor under the N.R.A.;* Herbert Harris, *American Labor* and *Labor's Civil War;* Leo Huberman, *The Labor Spy Racket;* Herbert J. Lahne, *The Cotton Mill Worker;* Edward Levison, *Labor on the March;* Lewis L. Lorwin and Arthur Wubnig, *Labor Relations Board;* Joseph Rosenfarb, *The National Labor Policy and How It Works;* Harold Seidman, *Labor Czars: A History of Labor Racketeering;* Sumner S. Slichter, *Union Policies and Industrial Management;* Emanuel Stein and others, *Labor and the New Deal* and *Labor Problems in America;* Benjamin Stolberg, *The Story of the C.I.O.;* Mary Vorse, *Labor's New Millions;* John Raymond Walsh, *The C.I.O.;* James A. Wechsler, *Labor Baron, a Portrait of John L. Lewis;* and Kenneth White, *Labour and Democracy in the United States.*

On conservation, human and material, see Hugh H. Bennett, *Soil Conservation and Flood Control;* Stuart Chase, *Rich Land, Poor Land;* Harlow S. Person, *Little Waters;* and Paul B. Sears, *Deserts on the March.* Regional studies and commentaries are for the West, *The Future of the Great Plains* (2 vols.), report of the Mississippi Valley Committee, and *The Western Range,* Department of Agriculture, and for the South, Wilbur I.

Cash, *The Mind of the South;* Jonathan Daniels, *A Southerner Discovers the South;* Howard W. Odum, *Southern Regions of the United States;* and Rupert B. Vance, *Human Geography of the South.*

Rural poverty and the human problems involved inspired many studies in the thirties. See Rupert B. Vance, *Rural Relief and Recovery* (number 3 in WPA's social-problems pamphlets) and *Farm Tenancy,* report of the President's Committee (published under the auspices of the National Resources Committee). *Technology on the Farm* (Bureau of Agricultural Economics), *Toward Farm Security* (Department of Agriculture), and *Migration of Workers* (2 vols., Department of Labor) are particularly useful. Other books of interest are Oliver E. Baker, Ralph Borsodi, and Milburn L. Wilson, *Agriculture in Modern Life;* Edmund de S. Brunner and John H. Kolb, *Rural Social Trends;* Edmund de S. Brunner and Irving Lorge, *Rural Trends in Depression Years;* Wilson Gee, *Social Economics of Agriculture;* Charles S. Johnson, Will W. Alexander, and Edwin R. Embree, *The Collapse of Cotton Tenancy;* Carey McWilliams, *Factories in the Field* and *Ill Fares the Land;* Bruce L. Melvin and Elna N. Smith, *Rural Youth: Their Situation and Prospect* (WPA monograph xv); Arthur F. Raper, *Preface to Peasantry;* Arthur F. Raper and I. de A. Reid, *Sharecroppers All;* Thomas J. Woofter, Jr., and others, *Landlord and Tenant on the Cotton Plantation;* and Thomas J. Woofter, Jr., and Ellen Winston, *Seven Lean Years.* Erskine Caldwell in *Tobacco Road* and *God's Little Acre* and John Steinbeck in *Grapes of Wrath* have, with the novelist's privilege of distortion, written of the poor of the land.

Industry, finance, and business also were the subjects of many books in the thirties. Outstanding among the publications were the hearings before the Temporary National Economic Committee (commonly referred to as TNEC). Popular too were the reports of the Brookings Institution, especially Edwin G. Nourse and others, *America's Capacity to Produce;* Maurice Leven, Harold G. Moulton, and Clark A. Warburton, *America's Capacity to Consume;* Harold G. Moulton, *The Formation of Capital;* and Harold G. Moulton, *Income and Economic Progress.* See also Frederick L. Allen, *Lords of Creation;* Thurman W. Arnold, *The Folklore of Capitalism* and *Democracy and Free Enterprise;* Arthur R. Burns, *The Decline of Competition;* Stuart Chase, *Idle Money, Idle Men;* John M. Clark, *The Social Control of Business;* Merle Fainsod and Lincoln Gordeon, *Government and the American Economy;* Michael F. Gallagher, *Government Rules Industry;* Edward D. Kennedy, *Dividends to Pay;* Ferdinand Lundberg, *America's 60 Families;* Leverett S. Lyon, Myron W. Watkins, and Victor Abramson, *Government and Economic Life* (2 vols.); Frederick C. Mills, *Price in Recession and Recovery;* Alexander D. Noyes, *The Market Place;* Ferdinand Pecora, *Wall Street Under Oath;* Strother H. Walker and Paul Sklar, *Business Finds Its Voice.*

VII. World Conflict and New World Problems. In addition to the general books listed in section V, see Grover Clark, *The Balance Sheet of Imperialism;* Archibald C. Coolidge, *United States as a World Power;* William S. Culbertson, *International Economic Policies;* Parker T. Moon, *Imperialism and World Politics;* Scott Nearing, *The American Empire;* and Benjamin H. Williams, *Economic Foreign Policy of the United States.* Further references are conveniently found in the diplomatic history texts by Bailey and by Bemis. Useful also is the *Guide to the Diplomatic History of the United States,* excellently edited by Samuel F. Bemis and Grace G. Griffin.

The traditional textbooks on Latin America contain fairly complete and well-arranged bibliographies. Some interesting general studies are Mordecai Ezekiel, *Economic Relations Between the Americas;* Frederick M. Halsey, *Investments in Latin America;* Scott Nearing and Joseph Freeman, *Dollar Diplomacy;* Dexter Perkins, *Hands Off! A History of the Monroe Doctrine;* and Max Winkler, *Investments of United States Capital in Latin America.* General studies of the Caribbean include Wilfred H. Calcott, *The*

Caribbean Policy of the United States; Howard C. Hill, *Roosevelt and the Caribbean;* Chester L. Jones, *The Caribbean Since 1900;* Dana G. Munro, *The United States and the Caribbean Area;* and James Fred Rippy, *The Caribbean Danger Zone.*

Some of the many studies of particular countries (consult the diplomatic guides and the card catalogs under specific names) are Edgar W. Turlington, *Mexico and Her Foreign Creditors;* Victor S. Clark and others, *Porto Rico and Its Problems;* Arthur D. Gayer, Paul T. Homan, and Earle K. James, *The Sugar Economy of Porto Rico;* Isaac J. Cox, *Nicaragua and the United States;* Charles C. Tansill, *The Purchase of the Danish West Indies;* Carl Kelsey, *American Intervention in Haiti and the Dominican Republic;* James Fred Rippy, *The Capitalists and Colombia;* and Russell H. Fitzgibbon, *Cuba and the United States.* Henry F. Pringle's *Theodore Roosevelt* contains a detailed account of the canal manipulations and references for further reading. Far Eastern relations are discussed in Thomas A. Bailey, *Theodore Roosevelt and the Japanese-American Crises;* Frederick V. Field, ed., *Economic Handbook of the Pacific Area;* Alfred W. Griswold, *The Far Eastern Policy of the United States;* Joseph R. Hayden, *The Philippines;* Theodore W. Overlach, *Foreign Financial Control in China;* Charles F. Remer, *Foreign Investments in China;* and Henry L. Stimson, *The Far Eastern Crisis.* Joseph Barnes, ed., *Empire in the East,* is a useful survey.

Some special studies of world affairs with particular emphasis on the twenties and thirties are Charles A. Beard, *The Idea of National Interest;* Raymond Leslie Buell, *The Washington Conference;* Denna F. Fleming, *The United States and World Organization;* Yamato Ichihashi, *The Washington Conference;* David Hunter Miller, *The Peace Pact of Paris;* Dexter Perkins, *America and Two Wars;* and Benjamin H. Williams, *The United States and Disarmament.*

Money and war debts are discussed in Robert W. Dunn, *American Foreign Investments;* Herbert Feis, *Europe, the World's Banker, 1870-1914;* Charles K. Hobson, *The Export of Capital;* Cleona Lewis, *America's Stake in International Investments;* Charles F. Remer, *American Investments in China* and *Foreign Investments in China;* Frank A. Southard, Jr., *American Industry in Europe;* William T. Stead, *The Americanization of the World;* and Max Winkler, *Foreign Bonds, An Autopsy.* On the war-debt question see Harold G. Moulton and Leo Pasvolsky, *War Debts and World Prosperity.* See also the annual reports of the Secretary of the Treasury and *Selected Articles on Interallied Debts and Revision of the Debt Settlement,* compiled by James T. Gerould and Laura Shearer Turnbull. The British view is expressed in David Lloyd George, *The Truth About Reparations and War-Debts.*

War bibliographies for World War II are available at most library desks. Among the interesting books on the prelude to war are Charles A. Beard, *American Foreign Policy in the Making, 1932-1940: A Study in Responsibilities;* Thomas A. Bisson, *American Policy in the Far East, 1931-1940;* Floyd A. Cave and associates, *The Origins and Consequences of World War II;* Forrest Davis and Ernest K. Lindley, *How War Came;* Department of State, *Peace and War: U.S. Foreign Policy, 1931-1941;* Charles G. Haines and Ross J. S. Hoffman, *The Origins and Background of the Second World War;* Harold S. Quigley, *Far Eastern War, 1937-1941;* James T. Shotwell, *On the Rim of Abyss;* Merze Tate, *The Disarmament Illusion;* and John W. Wheeler-Bennett, *The Pipe Dream of Peace, the Story of the Collapse of Disarmament.* See Charles A. Beard, *President Roosevelt and the Coming of the War, 1941: A Study in Appearances and Realities* for a radical view as to war guilt. The isolationist-neutrality question is discussed in Norman Angell, *America's Dilemma: Alone or Allied;* Hamilton Fish Armstrong, *We or They;* Hanson W. Baldwin, *United We Stand;* Charles A. Beard, *A Foreign Policy for America;* Edwin Borchard and William P. Lage, *Neutrality for the United States;* Raymond Leslie Buell, *Isolated America;* Edward Mead Earle, *Against This Torrent;* George F. Eliot, *The Ramparts We Watch;* Jerome Frank, *Save America First;* Hubert C. Herring, *And So to*

War; Walter Johnson, *The Battle Against Isolation;* Max Lerner, *It's Later Than You Think;* and Clarence K. Streit, *Union Now* and *Union Now With Britain.*

The story of the war will be long in telling. The *Congressional Record* and especially the hearings and reports of congressional committees are useful. Business advisory publications such as *Priorities and Allocations,* issued by the Research Institute of America, often supply details not obtainable elsewhere. *Victory,* official weekly bulletin of the agencies in the Office of Emergency Management, is a storehouse of information of the type that might be printed. The *Daily News Record* of the textiles industry kept unusually well informed about procurement matters in clothing. Among the leading books published during the war on theory and fact in the problems of mobilization and utilization of resources are Robert A. Brady, *Economics of War;* Charles O. Hardy, *Wartime Control of Prices;* Seymour E. Harris, *Economics of America's Defense* and *Economics of America at War;* Edward Pendleton Herring, *The Impact of War;* Harry N. Holmes, *Strategic Materials and National Strength;* Erling M. Hunt, ed., *America Organizes to Win the War;* Captain William McKee and Louis J. Wiesen, *American Economic Objectives;* Emanuel Stein, James D. Magee, and William J. Roman, *Our War Economy: Government-Production-Finance;* George A. Steiner, ed., *Economic Problems of War;* and Chester W. Wright, ed., *Economic Problems of War and Its Aftermath.* The most valuable single volume on wartime production is Donald M. Nelson, *Arsenal of Democracy.* See also Walter W. Wilcox, *The Farmer in the Second World War.* The reports by General George G. Marshall, Fleet Admiral Ernest J. King, and General Dwight D. Eisenhower are excellent statements of the vast tasks involved in the conduct of the war; they present clearly the accomplishments but frequently gloss over costly errors. The general histories of the war are inadequate; among the best are Walter P. Hall, *Iron Out of Calvary; An Interpretative History of the Second World War;* Francis T. Miller, *History of World War II;* and Roger W. Shugg and H. A. DeWeerd, *World War II: A Concise History.* Edgar McInnis' year-by-year history is reasonably detailed; his *The War: Sixth Year* has some interesting cost summaries.

The best sources of information concerning the transformation from war to peace are the official publications of the government (especially congressional programs and investigations, executive reports, reports of the army and of the navy, and reports of the Smaller War Plants Corporation, of the War Assets Administration, of the Labor Department, and of the Treasury Department), reports and releases of the great industrial corporations, and the newspapers and magazines. Congressional investigations more than anything else present the problem of reconversion in relation to the new needs of the nation rather than as a mere return to the days before war. The annual budget report and the President's economic reports to Congress are storehouses of economic and financial information.

Some of the issues coming up are discussed and debated and approved and condemned in a host of articles in periodicals and in such books as Chester Bowles, *Tomorrow Without Fear;* Henry A. Wallace, *Sixty Million Jobs;* Friedrich A. Hayek, *The Road to Serfdom;* John Maurice Clark, *Alternative to Serfdom;* Francis E. Merrill, *Social Problems on the Home Front;* David M. Wright, *Democracy and Progress;* Gunnar Myrdal, *An American Dilemma: The Negro Problem and Modern Democracy* (2 vols.); and Robert C. Weaver, *Negro Labor, A National Problem.* Sectional problems are discussed in Ellis G. Arnall, *What the People Want;* Jonathan Daniels, *A Southerner Discovers the South;* and Avrahm G. Mezerik, *The Revolt of the South and West.*

Basic in the study of the peace efforts are the publications of the United Nations. These range from reports of the meetings at Bretton Woods and Dumbarton Oaks through reprints of the founding document and simple charts illustrating the organization to complex studies by the various committees and research groups of the UN; most libraries have a complete listing. Important also are documents of the House and the Senate deal-

ing with the question; the State Department has issued many helpful publications of one type or another.

Writings on peace began with the war. Clarence K. Streit, Ely Culbertson, and others pushed particular plans, and many books appeared. See Vera Micheles Dean, *The Four Cornerstones of Peace;* Herbert Hoover and Hugh Gibson, *Problems of Lasting Peace;* Harry P. Howard, *America's Role in Asia;* Owen Lattimore, *Solution in Asia;* Walter Lippman, *United States Foreign Policy;* Hiram Motherwell, *The Peace We Fight For;* Nathaniel Peffer, *Basis for Peace in the Far East;* Emery Reves, *The Anatomy of Peace;* Nicholas J. Spykman, *America's Strategy in World Politics;* Sumner Welles, *The Time for Decision;* and Wendell L. Willkie, *One World.* On the practical problems of restoration see Kenneth E. Boulding, *The Economics of Peace.*

American aid to Europe may be followed with some completeness in the hearings and committee reports of Congress and in the *Congressional Record. Fortune, Time, Newsweek,* and other magazines, as well as the great newspapers of the nation, contain interesting articles, charts, graphs, and photographs on the organizational structure of ECA, on the needs of Europe, on the cost of relief, and on the personalities involved. One of the best books on the recovery experiment is Seymour E. Harris, *The European Recovery Program.* Whatever the source, pessimism is widespread. The scientist's gloomy view may yet be modified; see, however, John Richard Hersey, *Hiroshima;* Norman Cousins, *Modern Man is Obsolete;* Bernard Brodie, ed., *The Absolute Weapon: Atomic Power and World Order;* and David Bradly, *No Place to Hide.*

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