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SUCCESSFUL LIVING
IN THIS
MACHINE AGE

SUCCESSFUL LIVING IN THIS MACHINE AGE

by

EDWARD A. FILENE

In collaboration with
Charles W. Wood

With an introduction by Sir Francis Goodenough, C.B.E.
Chairman of the International Committee on Distribution of the International Chamber of Commerce

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FOREWORD

WE are living to-day in a new era. We are witnessing the birth throes of a new epoch, rather than the death throes of the old. The Industrial Era as England knew it in the Victorian days is dead and gone; and those who think and act as if those days were with us still or would ever return, are but ghosts amongst the living, without substance and power.

The new Industrial Era has begun; and it is firstly an era of international industrial and commercial relations, more inter-related and interdependent than ever before, in which Britain no longer dominates the world, without serious rival, as she did until the beginning of this century; and it is, secondly and most notably, an era in which mass production has begun to play an important part; is certainly destined to play a great and growing and ultimately dominating part; and will, I believe, prove a wholly beneficent factor.

I believe that, through scientific production of what the masses of the peoples throughout the world want and, still more, what they will readily learn to want if scientific salesmanship be adopted — at prices at which those masses can buy, not only can and will work be found for all employable labour but poverty can and will be abolished from our civilization, except in so far as it is due to incorrigible vice. In other words, by scientific methods of manufacture and marketing, the standard of living can and will

be raised to a level of comfort and leisure for the masses at present undreamed of by the visionaries and unachievable by any of the methods advocated by the most practical of them.

We have a long road to travel out of the Economic morass in which the world at present is floundering before that goal is reached, but what a prospect of a beneficent national and international service, through practical work in Commerce and Industry, such a belief holds out to all thoughtful men and women.

Obviously, indeed, there is demanded thoughtfulness of a high order for the achievement of such a high result. Such a policy and the putting of it into practice demands the abandonment of many traditional habits and ways of thought, of many traditional methods and of much traditional policy.

It requires a refusal to rely upon any State-aid as a substitute for, instead of a complement to, individual thought and action, initiative and courage. It calls for deep and clear thought and strenuous action, both individual and collective; for fearless and thorough examination of the facts and of all the facts, the whole truth and nothing but the truth, regarding present conditions here and throughout the world.

Holding these views, as I have come to do with ever increasing certainty as I have been studying the facts in the past months, it will be realized how cordially I welcome the publication in this country of Mr. Filene's most interesting book in which he

examines the subject of Mass Production from angle after angle with ever growing conviction that —

> 'The great opportunity for the masses of mankind to rise above the struggle for existence, and to partake of the life of which the artists and poets and preachers are for ever talking, lies in the extension and perfection of mass production methods, and in an understanding of the truths upon which those methods are based'; in other words, we have 'discovered the business necessity for high wages, low prices, a shorter workday, with more leisure, more money and a higher and ever higher standard of living for all.'

For the information of those not already familiar, as many are, with the facts, let me say that Mr. Filene is a business man who has made a fortune by the management of a large department store in Boston, U.S.A. He has spent all his life in the practice of commerce and he has been outstandingly successful. But he is one of those business men to whom may be applied his own description of Henry Ford — 'He learned, in time, to be sure — and probably always knew — that just being rich is not a worthwhile human objective, and that one might as well aim at just being fat.'

Because he held that view, Mr. Filene was interested in the processes of business, not as an end in themselves, but as a means to a wider and fuller life for the community. In this book he summarises the experience of a lifetime spent in observing business from

this standpoint, a lifetime which has largely coincided with that marvellous expansion of mechanical production which we call the industrial revolution.

It is the fact of that expansion which forms the core of his argument. Power machinery has made mass production possible. 'Mass production is not simply large-scale production. It is large-scale production based upon a clear understanding that increased production demands increased buying, and that the greatest total profits can be obtained only if the masses can and do enjoy a higher and ever higher standard of living.'

Mr. Filene considers the effect of the machine technique, and the mass production which it has made possible, in relation to every aspect of business and many other departments of life — the family, politics, tariffs, world peace, education, religion, beauty, health, housing, agriculture. Throughout his book he traces our present failures and discontents to an inability to realize the two essential points which have been mentioned — that machinery, which has its origin in facts, can only be managed successfully by thinking in terms of facts, and that the increased production which it makes possible cannot be marketed profitably save in terms of increased purchasing power for the community as a whole.

The author is neither a Communist nor a Socialist. 'The profit motive, whatever may be said against it, has proved dependable, steady, always on the job. . . . Such a dependable motive power as this is surely

worth considering. If it can be attached to a machine well designed to serve the common welfare, the common welfare would seem to be assured, whereas if the common welfare is dependent upon keeping idealism at white heat, there is no such assurance.' On the other hand, his book will seem revolutionary to many business men in that he attacks mercilessly much of the accepted ideas on commerce and industry. Thus 'what people tried to do with the factory system they tried to do with minds which had been moulded by feudalism.' Or again, 'the traditions of banking were not developed in the machine civilization. They were developed in the days when it was necessary to create a machine civilization out of an agricultural civilization. It is necessary to discard those traditions now only because the machine civilization has been created.'

For this reason many will disagree with Mr. Filene. His book is uncomfortable company for autocrats or for those who are enamoured of a class division of society. But, at a time such as the present, no business man in a position of responsibility can afford to ignore any experienced student of economic questions who suggests methods by which the world may escape from its distresses. Disagreement is in itself stimulating to that clearer thought which must be the necessary preliminary to a more rational arrangement of the world's housekeeping.

To those who are inclined to think that mass production makes for a hideous monotony of life for the worker and in the product of his work, Mr.

Filene gives an answer that will make many of them think again:

'It is poverty which standardizes, and mass production cannot endure mass poverty. Poverty standardizes because it necessitates the spending of all one's time and energy upon the problem of keeping alive. If one's income is limited to fifteen cents a day, one must live in much the same way as does anyone else whose income is limited to fifteen cents a day, for there simply are not many ways of keeping alive on fifteen cents a day.

Raise the general income to fifteen dollars a day, and there is at least some choice. The timid soul, of course, may not exercise this choice, and may insist upon imitating his neighbour, who is similarly imitating some other neighbour; but after one has experienced the futility of such proceedings, there is the chance, at least, of his striking out for himself, to achieve successful living in accordance with the actual laws of his personal being and the actual opportunities of his environment.

Whether for good or ill, mass production is surely liberating man. It is giving him power, but it is as yet a most confusing power, for it is power which cannot be employed successfully in the domination of his fellow man. All man's experiences, all his traditions, have caused him to associate the possession of power with such domination; but mass production substitutes facts for traditions, even in the matter of achieving a successful life.'

This book should be widely read. Those who are

least in sympathy with its conclusions will enjoy the simplicity, thoroughness, and withal the wit and good temper with which it is written. Nor can any reader remain in doubt as to Mr. Filene's sincerity and practical sense.

FRANCIS GOODENOUGH, C.B.E.
Chairman of the International Committee on Distribution of the International Chamber of Commerce

A DEFINITION

Mass Production is not simply large-scale production. It is large-scale production based upon a clear understanding that increased production demands increased buying, and that the greatest total profits can be obtained only if the masses can and do enjoy a higher and ever higher standard of living. For selfish business reasons, therefore, genuine mass production industries must make prices lower and lower and wages higher and higher, while constantly shortening the workday and bringing to the masses not only more money but more time in which to use and enjoy the ever-increasing volume of industrial products. Mass Production, therefore, is production for the masses. *It changes the whole social order. It necessitates the abandonment of all class thinking, and the substitution of fact-finding for tradition, not only by business men but by all who wish to live successfully in the Machine Age. But it is not standardizing human life. It is liberating the masses, rather, from the struggle for mere existence and enabling them, for the first time in human history, to give their attention to more distinctly human problems.*

For his invaluable assistance in the preparation of this book the author acknowledges his indebtedness to Charles W. Wood

SUCCESSFUL LIVING
IN THIS
MACHINE AGE

I

MASS PRODUCTION AND SUCCESSFUL LIVING

EVERYBODY wants to be successful. Everybody is trying to be successful. Even the beggar who has quit working, on the theory that the world owes him a living, is generally doing his level best to collect it. Even the smart young cynics of our new literary set, who are engaged in satirizing our struggle for success, are trying to satirize it successfully.

Actually it is not success, but some of the ancient formulas of success, to which this generation takes exception.

I cannot, for instance, proclaim from my shopkeeper's tower that success is the inevitable fruit of industry, honesty and thrift. I know that industry, honesty and thrift are necessary virtues, but I shall be reminded that millions of the most industrious, honest and thrifty people on earth recently starved to death in China.

Nor can I claim that 'stick-to-itiveness' will bring success. One might stick to his job like a fly to a piece of fly-paper and be no more successful than the fly.

'Hitch your wagon to a star' may be good poetry, but it may be very bad advice. What kind of wagon? And what kind of star? A very good milk wagon may be entirely unsuited to traffic on the Milky Way.

Human nature being what it is, however, we must always be trying to find out how to live humanly. The lower animals may be born with instincts which tell them how to fulfil their animal destinies. But human beings are not so equipped. It is necessary for each generation to *find* its formulas for successful living, even if it is necessary for succeeding generations to tear up those formulas.

Evolution is not opposed to formulas; it is simply the process by which formulas are outgrown. Good formulas, like good eggs, must not be kept too long.

The simple fact is that we have come into a new world, and the charts of the world we used to live in no longer serve our need. A new human society is being born. There are no new laws; but the law of Nature is the law of change, and new times necessitate a new attitude.

Eggshells are good, and every egg should have one. It keeps an egg in its proper place, up to the time when it ceases to be the proper place. When that time comes, a conflict may develop between the egg and the shell — the shell doing its best to keep the egg inside, and the egg becoming more and more imbued with the necessity of getting out. If the egg is successful in this contest, a more abundant life is possible. If the shell is successful, there's a mess. The eggshell in such a crisis, is a glorious tradition, and it can be proved conclusively that the egg could never have become a successful egg without it. Nevertheless, if the tradition isn't broken when it should be broken, the result is a total loss.

Success, it must be apparent, is relative. Not only is it necessary to amend the old formulas of success, but success in one period of existence may be a very different thing from success in any other. One could never learn to drive a motor car by hearing Grandpa tell how he used to drive a mule, no matter how successful a mule-driver the old gentleman might have been. It is not only that his rules would hardly apply, but, ten chances to one, his purposes and his objectives were not exactly the purposes and objectives of the would-be motorist.

I am aware that there is a considerable demand in America for inspirational literature, and that many writers receive as much as $50 a week for telling their readers how to become millionaires. One may even learn how to become a Cæsar or a Napoleon in Twelve Easy Lessons — how to dominate every situation and how to master every problem which may possibly arise. But all this is achieved, I understand, through 'personality,' 'magnetism' and many other mysteries with which I am unacquainted; and I beg therefore to be excused.

Even if I were in possession of an accurate formula by which everyone might become a great business leader, I should hesitate to give it out. Business leadership is the crying need of the moment; but a world made up only of business leaders would be a horrible world to live in.

On the other hand, a world in which business is not carried on successfully is always a horrible world.

Business success, concededly, is not everything. If it

were everything, in fact, it would be nothing. It might keep the race alive, but what would be the use of keeping a race alive if it had nothing more to do than to keep alive? It is culture and art and idealism, it is religion and spiritual aspiration, which give a meaning to life. Material success is important only because it makes all these other developments possible. Getting a living is imperative if we hope to achieve life; but getting a living successfully does not necessarily mean successful living.

Successful living is, first of all, conscious living. Intoxication may drown our troubles, and opiates may deaden our pains, but neither can be associated with any sane notion of success. The successful life is positive. It seeks to master its environment, not to run away from reality, and to discover its relations and its obligations rather than to avoid them. To live successfully in the machine age it is necessary to find out what the machine age is. To whom does it relate us? To whom does it make us responsible? No one, surely, could be a successful husband and father, if he did not know or care which woman was his wife, or which children were dependent upon him.

There are those, I know, who do not like the machine age and are constantly pointing out how much happier we would all be if we would only go back to some previous form of civilization, or on to some world of dreams. But this is rather pointless. A chicken which finds scratching difficult might prefer to go back to the egg from which it came, or to quit being a chicken and become a fish perhaps, instead; but if so, there

isn't much that he can do about it. This *is* the machine age. It is the only age in which any of those now living can try to be successful. If it offers us an opportunity to make a better civilization, well and good. But we must understand it. We must find out what its actual conditions are and abide by them. This applies quite as much to artists and poets and preachers as it does to business men. We may or we may not try to understand the world in which we live; but if we do not achieve some understanding of it, we cannot live in it successfully.

Some will say, I know, that they are not interested in economics, or in business. But they are mistaken. What they should say is that they do not wish to recognize any such interest. They may not know it, but they are as vitally interested in this new industrial order as is any business man. In the first place, no matter how spiritual they may be, they do have economic problems. In the second place, they belong to human life, and what is happening to human life is happening to them. When earthquakes get busy, we cannot ignore them on the ground that we are not interested in seismology. We may be the most confirmed landlubbers; nevertheless, the ocean is bound to arouse our interest if we have just fallen in.

All of us are suddenly being precipitated into a new human society, and human nature being what it is, we cannot live outside human society. A few of us, to be sure, may become hermits. We may give up the comforts of civilization. We may go into the wilderness, and we may fancy that we have cut

ourselves off from social connections. But it will be mere fancy. The chances are we will take some books along, forgetting that it required ages of social contacts to develop any written language and thus to make books possible. If we are wise, we will also bring with us some socially acquired arts, some knowledge, for instance — and some socially acquired, not instinctive knowledge — of the kind of food upon which man can live, and of how to raise or catch and cook it.

Not many, of course, will make an open effort to secede from human society. Not many are able to do so. Many may dream of getting away from the machine civilization, and living perhaps in some South Sea paradise; but it costs money, they discover, to indulge such dreams; and it is by getting *into* the machine civilization, not by getting away from it, that one gets money.

Incidentally, the only way that one can go to the South Sea Islands is to go there in a machine; and it is the machinery of modern business — of advertising, of printing and publishing, of organized lecture tours and radio talks, or of moving pictures — through which one gets the notion that he would like to go.

While few can escape physically from the machine civilization, there are many who are for ever trying to escape mentally or spiritually. They retreat into what they call the world of thought, as though there could be a world of thought apart from the world of actual human relations. They may even interpret Greek and Roman culture in terms of the economic order of their time; but economic practice and human culture

to-day, they fancy, can go their separate ways. They can't.

There is a tendency to ridicule the business man for his sordid preoccupation with profits. If he is inconsolable because he is not getting profits, there is a tendency to tell him that he ought not to want them so badly, just as there is a tendency on the part of the smugger middle-classes to urge more 'practical' objectives upon their poetic and idealistic acquaintances.

Nothing much happens, however, as a result of all this urging. Business men go on trying to be business men and artists go on trying to be artists. This, I think, is rather fortunate. If business men did not want profits, they might, I grant, escape a lot of worries. But they wouldn't do any business. There would be no trade in the world, and no trade routes, and therefore no mingling of clan with clan, and no development of civilizations and of language and literature and art.

Business success is very definitely related to human success, for it is in business, although the business man himself may never have noticed it, that the social set-up is determined, and it is impossible to proceed with any human development without relation to the human set-up. Even the institution of the family, which has had so much to do with the shaping of all human thought and sentiment, was basically an economic institution. If the family had not succeeded in its economic objectives, if it had failed to nourish the babies and keep them alive until maturity, and to

educate and train them in the art of keeping alive, no mental or spiritual family culture would ever have been possible.

This book, then, will have much to do with business success, but it is not being written solely for business men. It is being written for all who want to live successfully in the machine age. I am writing it, not because of any claim to superior authority, but because no other business man has yet seen fit to undertake the task; and it is a book which in the very nature of the subject must be written by a business man. It is on the frontier of business that the truths of this new machine civilization are being discovered. The business man may not be the best critic of that civilization. His training may even unfit him to describe it as it should be described. Nevertheless, some of the truths which he is in a position to discover are important social truths, as important to everybody as they are to him, and they cannot too quickly become matters of common knowledge.

The schools, unfortunately, in this machine civilization, are telling almost nothing about what the machine civilization actually is. They cannot be blamed for this, for schools were born and reared in an altogether different social order, and they are still trying to interpret life in terms of the set-up of another age. They may teach business, but they teach it largely in terms of technical organization, bookkeeping and accounting and budgeting, and not in terms of the social revolution which business is bringing about. They may teach automobile mechanics, but

they do not interpret to their students what the motor car is actually doing to human life.

Even the current use of the term 'machine civilization' is not very enlightening. It is a good enough term, if used properly, but those who use it most seem to understand it least. They may agree that machine production is inevitable; nevertheless, they seem to hold the profound conviction that the machine age is one thing and civilization another. Trained in the traditional philosophies, they try to apply their traditional thinking to utterly new situations; and when the facts refuse to conform to the philosophies, they conclude that there must be something wrong with the facts.

That is why I have employed the term 'mass production world.' Mass production is the culmination of machine production. It came because it had to come. Like it or not, we must accept it; but mass production has the advantage of being a term which everybody may understand.

Very few do understand it, even of those who think they understand the machine civilization. The machine civilization, as they see it, is a civilization so full of machinery that there isn't any room for human life, and to ask them to study this machinery, and find out how it actually works, may be asking the impossible. They may not be machine-minded at all. They may have no talent for mechanics. Moreover, if they try to study the civilization by studying machinery, they may find people employing machinery for all sorts of evil purposes. They may

find machines used to exploit child labour. They may find criminal gangs, riding in high-power machines and armed with machine-guns. They may even find that man's mechanical genius has found some of its most accurate expressions in evolving machinery for war and for the extermination of his fellow man.

For one who really tries to find the meaning of mass production, no such confusion will result. Machinery may be used for anything; but mass production, which is the most effective method yet discovered for the use of machinery, can be used successfully only for certain purposes.

Because it is the most effective method, it is the most profitable method. Therefore it already dominates the market and must displace all the old traditional methods. The very 'lust for profit' makes this certain. Although not more than twenty-five per cent of production in America, the most highly developed industrial country, has yet been organized under true mass production methods, it is only a question of time, and of a short time at that, when the bulk of production and distribution will be carried on by mass production principles, not only in America but in all the countries which hope to compete with America in the matter of world trade.

Mass production, however, is profitable to others than employers. Demonstrably, it is the most profitable method yet discovered for industrial employees. It pays the highest wages. I shall explain why, later. It is enough to say now that it does so because it can and because it must.

Mass production is also more profitable to consumers. Mass production means low prices, whether there is competition or not. Strangely, it does not make prices low for the purpose of eliminating competition or of injuring its competitors. Mass production has no interest in eliminating competition, and does not want to injure its competitors. This is not because mass producers are necessarily good, high-minded men, but because mass production industries have discovered that they are more prosperous when their competitors also are more prosperous. This too will all be explained in time. It is enough now to say that mass production constantly seeks to sell its products at the lowest possible prices, and tries to make those prices lower and lower, because that is the way in which the greatest total profits may be attained.

Mass production, then, is good for employers and workers and the consuming public. That means all of us. But it does not mean *all* of all of us. We are all employers or workers or consumers, to be sure, but most of us are something vastly more. Most of us are human beings, and because we are human beings, we long to rise above the mere job of staying alive. We have some trace, at least, of spiritual aspiration, and we do well to ask how mass production will affect that.

There are several ways of answering this question, but they must all begin with an understanding of mass production.

We must remember first that mass production is *production for the masses.* It is production motivated by

the desire to sell the greatest possible quantities by giving the greatest possible values at the lowest possible cost to the greatest possible number of people. It is so motivated, however, not because of any sudden outburst of altruism, but because the great stream of human selfishness compels that line of action. Since mass production must have the widest possible market, this complete abandonment to service is imperative.

Whether this in itself contains any cultural advantage I shall not discuss here. Conceivably, we might have the busy co-operation of an ant-hill, and not have a very high order of culture at that. Whatever culture we do have, will certainly not be the old time class culture. Mass production, whether we like it or not, must destroy the old class system of society, and it must organize the whole economic machinery for the economic benefit of the masses.

Since thus giving real service is presently to become the only course that pays, mass production cannot provide for those who will not serve. There can be no leisure classes, and this certain elimination of the leisure classes is doubtless responsible for most of the intensely emotional attacks upon mass production. From the leisure classes, it has been pointed out, all the culture of human history has come. Books were written, pictures painted and all the great architectural achievements designed, not by those who had to exhaust their time and energy in labour, but by those who were made free by the accident of social privilege to do as they wanted to do.

While there will be no leisure classes under mass production, there will be leisure — such a volume of leisure as the world has never known before. This approaching leisure is already manifesting itself in the eight-hour day for workers, and even in the five-day week. This has happened, although mass production has just begun. Mass production must sell its products, and it must sell an ever-increasing volume of products to the masses; and if the masses do not have an ever-increasing supply of leisure, they will not become consumers on a sufficiently large scale.

What they shall consume, however, must be their business, not the business of the producers, to dictate. For mass production begins with discovering what the masses want, and since it gets its profits only from what the masses buy, it cannot live unless it finds out accurately. Under a political dictatorship of industry the industrial administration might decide what is to be made, and distribute the product arbitrarily to the public; but under mass production the consumer necessarily has full say. He buys what he wants, and producers, who have not scientifically discovered what a sufficiently large number of people want, cannot succeed.

I do not mean, of course, that the masses *now* enjoy all the opportunities which mass production promises. If that were so, there would be no necessity for writing such a book as this. This book is written at a time when it has first become certain that we are to live in a mass production world, and when very few people

have yet gone to the trouble of finding out exactly what mass production really is.

Many confuse it still with mere large-scale production, utterly ignoring its business necessity for high wages, shorter hours, low prices and a higher standard of living. By ignoring this, they ignore the essential human relations of the new social set-up, and they jump to the conclusion that, since painting and poetry cannot be successfully executed by machinery, mass production will create an ugly world; or that since the life is more than meat and the body more than raiment, a social order of material abundance must sap the moral and spiritual fibre of humanity.

No one interested in successful living can afford to jump to such conclusions. Nor can he afford to jump to any opposite conclusions, for mass production brings with it new problems which the world has never had to face before. To accept the new order in a spirit of gullible optimism is to unfit oneself for an intelligent consideration of those problems.

There is, for instance, the tremendous problem of leisure. Relatively few people, in any social order, have known how to organize leisure in such a way as to escape the tyranny of fixed convention or the boredom of ignorant self-indulgence. But this burden of leisure, if we wish to call it that, is coming. It is almost here, and it calls for a revision of our educational theories and efforts. The old conventions, it has been noted, are already yielding; and the codes which grew so naturally out of other social set-ups are being violated right and left. The new order must find a new

morality based upon a new understanding of human relations, and a more practical control of long pent-up human impulses.

That mass production is creating an ugly world seems to have no foundation in fact. Man has always longed for beauty, and mass production is giving him the power to make his world more beautiful. Mass production, instead of creating sameness, is bringing an infinite variety into the lives of masses who were compelled to face the dreary monotony of previous times. It turns out millions of automobiles, to be sure, which are pretty much alike, but the millions who drive them go their separate ways, instead of being bound, as they used to be bound, by the tyranny of their immediate neighbours. It has brought moving and talking pictures to millions, and pictures of a sort, it must be admitted, whose comedy sometimes seems tragic and whose tragedy sometimes seems ridiculous. But these pictures have also brought the sights and sounds of the whole world to everybody's senses, and have done away with the old provincialisms in many ways.

That mass production is at least bringing numberless opportunities to the masses is undeniable. Just how the masses will rise to these opportunities I do not profess to know, but I do know that they will not and cannot rise to opportunities which do not exist. The great opportunity for the masses of mankind to rise above the struggle for existence, and to partake of the life which the artists and poets and preachers are for ever talking about, lies in the extension and perfection of mass production methods, and in an understand-

ing of the truths upon which those methods are based.

It is poverty which standardizes, and mass production cannot endure mass poverty. Poverty standardizes because it necessitates the spending of all one's time and energy upon the problem of keeping alive. If one's income is limited to fifteen cents a day, he must live in much the same way as does anyone else whose income is limited to fifteen cents a day, for there simply are not many ways of keeping alive on fifteen cents a day.

Raise the general income to fifteen dollars a day, and there is at least some choice. The timid soul, of course, may not exercise this choice, and may insist upon imitating his neighbour, who is similarly imitating some other neighbour; but after one has experienced the futility of such proceedings, there is the chance, at least, of his striking out for himself, to achieve successful living in accordance with the actual laws of his personal being and the actual opportunities of his environment.

Whether for good or ill, mass production is surely liberating man. It is giving him power, but it is as yet a most confusing power, for it is power which cannot be employed successfully in the domination of his fellow man. All man's experiences, all his traditions, have caused him to associate the possession of power with such domination; but mass production substitutes facts for traditions, even in the matter of achieving a successful life.

Just what is mass production doing to us? Just what are the facts? The sole purpose of this book is to find the answers to these questions.

II

MASS PRODUCTION AND BUYING POWER

MUCH is said nowadays about the extreme complexity of modern business. Not enough is said about its simplicity.

Business, as Henry Ford does it, is quite understandable. The old-style business as it has traditionally been done defies human understanding and causes the otherwise able and up-to-date business man to believe in inevitable 'business cycles' much as his forebears believed in evil spirits.

We can all understand the economic arrangement of the ancient patriarchal family. It carried on production and distribution, but little if any trade. What was produced was produced for the whole family and distributed to the whole family. There may have been injustices. Some of the children may have been pets and some of them may have had a relatively hard time. Nevertheless, the family assumed responsibility for the physical needs and economic support of all its members; and whatever was produced was produced for the purpose of filling some specific need. There was nothing complicated about such an arrangement as that.

It was when the family began to produce partly for itself and partly for outsiders towards whom it

recognized no such responsibility that complications set in. The change was such a gradual process, indeed, that it probably caused no particular bewilderment. It just naturally happened that a family would produce more wheat, or raise more sheep, or make more implements, perhaps, than it needed for its own use, while it was rather short of some product of which some other family had happened to produce a surplus. Exchange, in such a situation, was profitable to both sides.

It was so profitable, in fact, that the practice grew; and certain persons, with an eye to profit, began to specialize in trading the surplus of one family for the surplus of some family which lived at such a distance as to make direct barter, without the intervention of such a middleman, impracticable.

When this practice of trading developed, things became more complicated. No family, in the end, it seemed, could live quite so completely unto itself as families traditionally had lived. Even if it didn't want to trade, it had to help support the institutions which now had to be set up to keep the trade routes in order. That is, it had to pay taxes to support some 'ruling family'— the institution which eventually became known as the state. Many families, in fact, quit tilling the soil and specialized instead in making things to trade. Even to-day, we speak of 'learning a trade,' although the learner does not intend to engage in trade at all.

Little by little, through the centuries, more and more of men's energies went into making things to

sell, and selling them; but not until the first industrial revolution occurred did this become the dominant economic practice.

Then came confusion. That confusion is now understandable, but while it was on, the thing which was known as the business system was not understandable. Profound scholars studied it, supposing that it was a system, but the result was a 'dismal science' known as economics, which was dismal principally because it was not a science.

Studying a system which was not a system could of course lead nowhere, no matter how intellectual the scholars might be. And this so-called business system was not a system.

The family was a system. It consisted of producers and consumers — of the same persons, in fact, functioning in both capacities. Production was definitely related to consumption, and consumption to production. If production was good, consumption automatically became good; and only if production was poor did the members of the family become poor.

But this new, so-called economic system consisted of producers and sellers. The buyers and consumers were not included, although production and sales were necessarily dependent upon purchases and consumption. Things were no longer being produced primarily for use, they were being produced to sell; and not to sell to human beings because of their need for them, but to sell to a vague, impersonal conception known as 'the market' which seemed to have little definite relation to human need.

It must have been known, of course, that there could have been no market unless there was some real or fancied human need. People would not buy things in any great quantities unless they wanted to have them, either to use themselves or to sell to others who might wish to use them. But it was not human wants which business considered. It was, at best, the wants of those who happened to have purchasing power.

How people got their purchasing power was a detail of business with which, it was supposed, business men did not need to concern themselves. Buying power, it must have seemed to them, just happened. God willed, as they thought, that a few people here and there should be rich, and that the masses should be very poor; and that being the case, the masses couldn't be expected to buy very much, and one could not do a very profitable business with the masses anyway. The way to do business, it was supposed, was to offer things for sale to people who had plenty of money; and if one got a large profit on everything he sold to such people he would be doing about as well as could be expected.

Even the majority of the producers, in fact, were not included in this concept of the business structure. It was only the owners of factories and those who held a property interest in them. The vast majority of the producers were mere employees. They were just labour; and labour was supposed to be a commodity just like anything else, to be bought as cheaply as the buyer could buy it, and to be sold as dearly as the seller could sell.

Occasionally a factory owner tried to be good to his employees, and to include them in the benefits which his business was receiving, sometimes by higher wages, sometimes by profit-sharing, sometimes by trying to develop a cosy 'family' atmosphere within the factory. At times such schemes, although not entered upon with such an intention, proved profitable. At other times they failed. But no one seemed to know why. If they were successful, it was often supposed that God had put natural law aside for the time being and blessed this particular employer for being good. If they failed, it was likely to be laid to the human depravity of the employees. No one seemed to understand that a factory could not be a family.

A family, in the old patriarchal days when the family was the economic system, could live unto itself. That, in fact, is what made it an economic system. But no factory could live unto itself; it had to depend upon the buyers of its products, whatever part of the world they might be living in, or however alien they might seem to the factory workers. But these buyers were not included in the factory programme, even of the good, generous, idealistic employer; and even the welfare of the factory workers was not included in the average factory programme. It was not considered 'good business' to include it.

And all this time (although nobody seemed to notice it) good business depended upon the manufacture and distribution, not merely of goods, but of buying power. All the traditional concepts of wealth were

false. Factory production was making them false, and factory practice was actually proving them to be false; but, until the advent of mass production, nobody could understand why.

It was universally supposed, for instance, that labour was a commodity. Nevertheless, labour could not and did not act like a commodity. It acted like human beings. It acted, in fact, from much the same motives with which employers acted, and not even the most dismal economist supposed that employers were commodities.

Workers struck for higher wages, and employers hated and fought them for doing so. Nevertheless, when they got higher wages, although the workers themselves had no such intention, they often benefited their employers. For they gained more buying power; and while they may not have directly bought the things which their particular employers had to sell, they bought a lot of other things with these higher wages and made business that much better in many other lines.

By buying these things, moreover, they created a demand for more employment, and this greater demand for labour sent the price of labour up, so that workers generally were likely soon to have more buying power, and business then boomed in almost every line. In other words, there was a period of 'good times.' There were many reasons, of course, for the recurrence of these periods, but one of the principal causes was that labour, organized in labour unions, fought desperately for higher wages against what both sides

commonly supposed to be the employers' best interests.

These good times, however, did not usually last very long. And the principal reason that they did not last was that the added buying power which the workers had gained was soon taken away from them, not directly by lowering wages, but by increasing prices. Everybody supposed that the employers were selfish, and no doubt they were. But the cause of their undoing in these recurring panics was not their selfishness but their failure to attend to the necessary work of producing and distributing buying power.

The purpose of business is to supply human wants, not to enforce any divine right to tax consumers, just as surely as the purpose of government is to ensure justice and order and not to enforce any divine right to govern. A business, like a government, may honestly fail in its purpose; and in that case, some stronger, even though not so well-intentioned, power may succeed. But if a government utterly ignores its purpose, and supposes that it exists for the pleasure of the governors, its doom is already sealed; and if business imagines it can make profits by producing goods which by too high prices it prevents customers from buying, the doom of that business is sealed.

Business men, to be sure, for a century and a half, did suppose exactly that, and ninety per cent or more of those who entered business failed. It cannot be said, moreover, that the remaining ten per cent went in very determinedly for service. But in an army of blind men, a one-eyed man will be the leader; and the

business which did give the best service, everything being considered, survived.

Many of these, by their better methods, were able to undersell all competition and became great 'trusts.' Then, instead of continuing their better methods, which had made it possible for them to increase the buying power of the public through lower prices, they betrayed a complete ignorance of the real principles of success and tried to make prices high once more.

Eventually the idea of mass production dawned. It can hardly be said that anyone invented it, but Henry Ford was its first large-scale demonstrator. Even before Ford's time Andrew Carnegie had discovered that the steel business could make greater profits by manufacturing all the steel it could, and selling it at low prices, than by limiting production and charging prices which such limited and therefore such expensive production would seem to make necessary. But Carnegie fought his employees, and could not see that the wages which the labour unions demanded were advantageous also to his business. It remained for Ford to give higher wages than even the unions demanded, along with shorter hours, and simultaneously to reduce the price of his product to a point which enabled the masses to buy it, and to build up such a business for him that his profits were far greater than Carnegie's.

This was an astounding thing to do. The whole world blinked and rubbed its eyes, and business men everywhere were puzzled to distraction. Ford,

they said, had upset the wage level. He had ruined the whole structure of business. The result must be, as they saw it, to encourage workers everywhere to demand similar wages, and there can be no doubt that it did have some such effect. The one ray of hope on the horizon was the verdict of those who gave their 'calm business judgment,' that such tactics would soon utterly ruin Ford.

But the tactics did not ruin Ford. They made him what he is to-day. Soon Ford's rivals in the automobile business, and later the wiser heads of other great industries, began to see what Ford was actually doing, and that his ever-growing success was no miracle at all but a direct result of the tactics which he had employed. So they began to follow Ford, and the era of mass production was on.

Mass production, it turned out, was not a mystifying process. What had made it seem mystifying was its very simplicity. Ford used research, but other successful big businesses had long been doing that. Ford introduced every possible improvement in machinery, but so had many others. He looked for as large a market as he could get, but that surely was not a new idea. The one new and revolutionary idea of Ford seemed to be his discovery that he could not sell more cars than the public could buy, and hence he devoted himself and his business not merely to the manufacture and selling of motor cars but to the manufacture and distribution of buying power.

Business, from the beginnings of machine production, had been increasing the world's wealth, and

this increase of wealth had been enlarging the world's buying power. Business, therefore, was creating a market for itself, but it was not doing so systematically. It thought of the market, rather, as something beyond its control; and when it thought of adjusting production and consumption, it thought of reducing production to existing buying power, utterly ignoring the fact that such a reduction would merely result through unemployment in a further reduction of buying power and, if carried to its logical conclusion, must destroy machine industry altogether.

Big Business, even before Ford's time, was constantly discovering ways of producing more and more, and engaged in strenuous research for methods which would enable it to produce more and more. Also, it eagerly sought new markets; and it stopped at nothing, it seemed, not even war, to procure them. It adopted all sorts of schemes for high-pressure selling of things which people lacked the power to buy, and by making prices as high as possible, and wages as low as possible, business made its selling as difficult as possible.

Mass production is a much simpler process. However involved its mechanism may be, its objectives are never in doubt; and it employs actual fact-finding, not the traditions of some previous social order, to achieve them. It understands, to start with, that its success depends upon answering some widespread human want, and employs fact-finding, rather than mere hunches, to discover what the masses want. It understands, moreover, that while the needs of the masses may be unlimited, their buying power is

limited, and employs fact-finding again to bring prices within their buying power. But it does not stop with that. With more mass buying power, still more needs might be supplied and still more profitable mass production markets found; hence it employs fact-finding to discover how to create and distribute more and more buying power.

This is production for use once more. This is an economic system, and the story of what it is doing to human life constitutes no dismal science.

III

MASS PRODUCTION AND THE CONSUMER'S DOLLAR

MONEY is not a thing in itself. Money is a symbol of something else, and has no existence as money excepting in its relation to that other thing. That other thing is wealth, and wealth is but a term for things which supply human wants. One might collect all the money in the world and, if the wealth of the world by any chance should vanish, he would have no money, for that which had been a symbol of wealth would automatically become a symbol of nothing at all.

How much money there is in any society depends not upon how many certificates called dollars are in existence, but upon how efficiently those dollars are serving human needs. This, of course, depends upon how advanced the machinery of production and distribution is, but it depends equally upon whether the money is being distributed so that those who need things are able to buy. The essential difference between the old system of production and the incoming system of mass production, then, may be stated in terms of the consumer's dollar. Under the old system, business sought to sell to those who happened to have dollars. Under the new system, business seeks to supply human needs and to see,

therefore, that all would-be consumers are adequately supplied with dollars.

To take that dollar away from the consumer is still the object of business. But not with the old notion of what such a transaction means. It is now understood what dollars are for. Dollars are of no use to anyone excepting as they are taken away. Money, it has long been known, is only a medium of exchange; and if it is not used for what it is good for, it ceases to be money.

While this has long been known, however, it has not long been recognized as a practical economic principle. The reasons are obvious, for business which was always concerned with taking away the consumer's dollar has never before recognized the necessity of giving it back. Getting it back was supposed to be the consumer's individual responsibility, and the masses of consumers were never quite equal to the task. For fear they might not get another dollar, they hung on, as a rule, to the one which they had, only spending it as dire necessity compelled. And the business men and economists, not perceiving the business necessity of providing consumers with buying power, took it for granted that this was the thing for the masses to do. They thought it was natural that the masses should put up with their old standard of living, even when new processes were making a higher standard of living possible, without considering that if business failed to find a market for the greater volume of goods which it was now producing business itself would be sure to suffer. So

they encouraged thrift. They encouraged non-buying when more buying was a business necessity. Only when the great industrial mechanism had been built up, and competition became so severe that a systematic drive for the consumer's dollar was absolutely necessary, did business begin to adjust itself to the real laws of money.

The adjustment, however, has only begun. It is true, as we have pointed out, that mass production has definitely set out to create and distribute mass buying power. This means that it has discovered the business necessity for high wages, low prices, a shorter workday, with more leisure, more money and a higher and ever higher standard of living for all. But this was only the beginning of the social revolution which is now in progress; for a clear view of the consumer's dollar discloses a social force at work which promises not only to solve our most knotty business problems, but to solve some of the social problems which have been the despair of moralists and statesmen and which many a social philosopher has given up as insoluble.

There is, for example, the problem of waste and inefficiency in government; the problem of social dishonesty; the problem of graft and racketeering; even, to a large extent, the problem of crime.

These are large words, and the problems I speak of seem to be almost as old as human life. Always it has been sought to solve them through moral teachings, or through effecting some change in human nature through which man would agree to live less selfishly.

Always, however, it was believed, even by the teachers themselves, that the wealth which everybody seemed depraved enough to covet could be attained only by taking it away from others.

The religious and educational institutions, moreover, while they often inveighed against such covetousness, seemed always to become entangled with the institutions which had coveted and taken wealth from others. Even wealth for good causes, even wealth for education and religion, even wealth for the political campaigns of reformers had to come from those who had it; and those who had it had obtained it in ways which the moralists did not like to inspect. Business, in those days, did not even claim to be service. It was and claimed to be purely acquisitive. Whether it was even honest, or not, depended upon what standards of honesty one employed.

There was a widespread theory that selfishness was sinful, and widespread adoration of saints who had renounced the world and dedicated themselves to poverty. There was, however, a general understanding that 'business is business'; and whatever doctrines one absorbed on Sunday, in the actual workaday world it was assumed that everyone would look out for himself.

Only if people 'went too far' was great moral indignation aroused. Even then it might be a hard task to arouse it; but occasionally governments became so corrupt that it became possible to fan the community into anger. That politicians would be selfish was expected. That whatever they did would be done

with an eye first to their own political advantage seemed to surprise no one. Practical business men, in fact, after having experience with utterly inefficient theorists in politics, rather preferred to deal with practical politicians, even if some of their actions would not always bear the light of day. Time and again, however, when corruption had reached unendurable limits, there was an emotional wave of reform. That was the only way, it was supposed (human nature being what it was), by which politics might conceivably be purified.

A real study of the consumer's dollar will change all this. Graft must go, not because of any moral indignation about it, but because business is certain, in the near future, to find out what business is. The consumer's dollar, it must soon be learned, pays for everything. It not only pays for all the things which business sells, but it pays for all the wages and salaries which business pays out and for all the profits which business takes in. It pays, absolutely, for every item of waste and inefficiency in business, both public and private; and *every business is so completely dependent upon the mass consumer's dollar, that every business man, when he discovers the situation, must soon be fighting to preserve that dollar as earnestly and as constantly as he can be depended upon to fight for the preservation of his own business.*

It has already been discovered that the dollar of the average consumer is mortgaged for sixty-five per cent of its value before the average business man has any chance to deal with it at all. That is, the average American worker pays out sixty-five per cent of his

income for food and rent. People with large incomes, of course, if they have any sense, will not devote so large a part of their income to food and housing, while those who are living close to the poverty line may have to spend nearly all of theirs. But sixty-five per cent is the average; and this means that the average consumer has but thirty-five cents of every dollar in his possession available for all the other necessities of life — for education, recreation, medical care and for the purchase of all the things which the average business man has to sell.

Before business began to study the consumer's dollar, each business man was inclined to think of his business as his own private affair, and to think of everybody else's business as *his* private affair. Even public affairs did not usually concern him much, excepting as they might raise his own taxes or put him at the mercy of some competitor. As a citizen he might theoretically object to special privileges; but, as a business man, he was not at all averse to special privileges being handed out to him. Whatever his theories of citizenship might be, moreover, he felt that he could not give much time to public affairs without neglecting his own business; and if he did pay much attention to them, he did so out of the goodness of his heart. The result was that his own business got regular, dependable, systematic attention, while public business received such sporadic notice as might be given to it when the community was aroused by some particularly criminal development, or some dramatic climax to a regime of graft.

But that time is passing. It is passing because the nature of the consumer's dollar is being discovered. The consumer's dollar, it is being noticed, is not static. It expands and contracts. When it is large, a great deal of business can be carried on. When it is small, business generally, including almost everybody's business, is likely to be bad.

The consumer's dollar, however, doesn't grow on bushes. It comes mostly from wages and salaries, to some degree from dividends, profits, rents, royalties and interest. There are many wealthy people, of course, but they hardly count as consumers; for what the wealthy actually consume, all told, amounts to a very small part of our modern business. Rockefeller and Ford buy about all they think they ought to, anyway. If Ford wants a new suit, he gets it, without stopping to figure up whether he has had a good year or not; and if Rockefeller wants an electric refrigerator, he gets that. That isn't the way with the average consumer — the consumer upon whom modern business depends. It doesn't matter how much he wants anything — he has to look at his dollar before he gets it. If that dollar is in good shape, the deal goes through. If it isn't, there's likely to be difficulty, and the garment and refrigerator industries will suffer.

But what keeps that dollar in good shape? In the days before business got to studying the facts, it was supposed that the dollar could be kept intact by not spending it. But business men now know better. In the first place, sixty-five cents of it must be spent anyway, for people are not going to get along, if they

can help it, without food and shelter. And then, if the remaining thirty-five cents isn't spent for other things, those who are employed in producing and distributing the other things will find their jobs gone, and with their jobs gone, their dollar will soon be gone. Whatever may be said of other dollars, *saving the consumer's dollar wears it out in no time.* One might as well talk of saving his breath. The only normal way in which one can save the breath he breathes is to exhale it as rapidly as he inhales it — that is, spend it as fast as he takes it in. That is the way the heart saves its blood, or the stomach its food — not by hanging on to it, but by letting it function.

There are other things, however, besides non-buying which cause the consumer's dollar to shrink. The chief of these is the buying of less than the dollar might be made to buy, that is, paying unnecessarily high prices • for anything which is bought. Thirty-five cents, it must be remembered, must cover almost all the buying anyway; and if one pays too much for one article, he must go without some other. Business becomes bad, then, with those who are producing and trying to sell the other things; and there is unemployment and a shrinking of the dollar again, which reacts as badly upon the business which charged too much as it does upon any other.

Now, what causes high prices? There can be only one answer. It is failure to follow methods by which prices can be made as low as possible. This is bad business, any way you look at it. First, such high prices limit sales and make it impossible to adopt the

great economies of mass production. Secondly, they leave the consumer too poor to buy other things which he might otherwise have bought, and unable, therefore, to give the employment which he might have given.

In a word, high prices are caused by waste. Waste in the processes of production and distribution is the great enemy of the consumer's dollar. Everything which the consumer buys, if he gets the fullest possible value for his money, gives maximum employment to other consumers, makes business as prosperous as business can be and enlarges the consumer's dollar. *Every time, however, that the consumer pays more than the most scientific methods of production and distribution make it necessary for him to pay, there must be less buying than there might have been, with consequent less employment and a further shrinkage of the consumer's dollar.*

Now, then, it isn't a question of moral indignation if the business man decides to war on waste. He must so decide very soon; in fact, he is so deciding, but there is no more moral indignation about it than there used to be when he decided to attend faithfully to his own affairs. Waste has now become his affair — waste in every process of production and distribution — whether that waste is in the business which he nominally controls, whether it is in the business of his city, state or nation, or in medical practice, in education, in housing, banking, transportation, public franchises or other things which he might once have considered none of his business at all.

I am not claiming that every business man sees this clearly yet. But the real leaders of business see it, and

those who do see it most clearly are inevitably becoming business leaders.

It is a partial consciousness of these facts, at last, which has caused what is known as the 'New Competition' and induced so many businesses in America to quit quarrelling with each other and make, if they can, a concerted effort to get their share of the consumer's dollar. The trade associations, although they may not know it, are really organizing in response to this new discovery. Their members used to compete bitterly with each other, and do what they could to destroy each other. Now they have discovered, not how to let each other alone, but how to co-operate, how to pool their knowledge, how to instruct and help each other so that all may do a bigger and better business than would otherwise be possible.

This co-ordination, of course, must go still further. The New Competition must give way to a still newer competition, in which business in general will get together to protect the consumer's dollar. To be sure, it will aim to take this dollar, and to take it as rapidly as possible; but as the nature of the consumer's dollar becomes understood, this process of taking away his dollar will be seen to be the process, not of impoverishing, but of enriching him. For money, it will be understood, is not wealth. It is but a symbol of wealth. Money which is not functioning is, at best, a symbol of wealth which is not being used. The Dollar Going Out, however, is a symbol of Wealth Coming In. *The purpose of business is to get wealth to people — to produce and to distribute to all humanity the things which*

humanity, with its new-found power, can now be organized to make only if it can be organized to buy and use them.

And how will this affect inefficiency and graft in government? The plain answer is that business, when it once perceives the true nature of the consumer's dollar, simply cannot tolerate any such thing. Waste in government destroys the market which efficient business must have. The count against it now is not that it raises taxes, but that it doesn't give back value received, and the consumer upon whom all business depends is rendered unable to buy the things he might otherwise buy.

Such graft has been tolerated in the past, partly because government work seemed to provide jobs. A study of the consumer's dollar, however, reveals that work which does not produce maximum wealth for the consumer, causes rather than eliminates unemployment; for it prevents the consumer from giving a full dollar's worth of employment for every dollar which he spends. If government work were generally as efficient as so-called private industry, real business would have no objection to the consumer paying for it. If the consumer gets value received for his money, his dollar is not destroyed. It is non-buying — his failure to use his dollar or his using it inefficiently — which impairs his buying power. The business man, therefore, need not worry about money being spent for public works, providing the works in question consist of the making of things which the public really wants and there is no waste effort involved in making them.

If there is graft, of course, there is waste, for graft is the taking of money without giving its equivalent in service. And if there is inefficiency, there is waste, for that involves the payment of money without obtaining maximum results. The greatest waste of all, however, is unemployment; for with graft and inefficiency rampant, some minimum of wealth at least is brought into existence, whereas unemployment is total waste in that it produces no wealth whatever.

All this waste comes out of the consumer's dollar. That is perhaps the most important statement in this book, for when that truth is once understood, it gives the business man a new approach to all his problems. Instead of thinking of government expenditures in terms of their *cost*, and of the necessary taxes involved, he must now think of them clearly in terms of their returns — their returns to the consumer. What will such an outlay do to his dollar? Particularly, how will it affect that thirty-five cents with which most of his shopping must necessarily be done? If the work is needed, if there is man-power available to carry it on, and if it can be positively assured that there will be no graft or inefficiency connected with the process, then the consumer's dollar will not be impaired. In fact, if there is man-power available for needed work and the work is not carried on, the worst sort of waste — unemployment — must result, and the consumer's dollar will fall far short of its possibilities.

But can business men be positively assured that there will be no graft and that there will be efficient management in public undertakings? Yes — with

this new understanding on their part of what these things actually mean. Heretofore, they have not prevented it because they did not consider it their business. When they went into politics, as a rule, they either went in to get some special favours, or having reached the conclusion that special privileges were morally wrong, they entered in a spirit of public devotion (until they got tired or until they concluded that they had no more time to spare) upon some campaign to get things done more righteously.

If their own executives were inefficient, however, or if their business was being taken away from them by their competitors, they gave the matter first and constant attention. It was not a case then of such time as they might have to spare. It was a case of prime business necessity — much as political honesty and efficiency will be just as soon as it is clearly seen how dishonesty and inefficiency affect the consumer's dollar.

Heretofore, now and then, business men have got together and called for a 'business administration.' Sometimes they elected their candidates. More often they failed. In either case, there was no business administration, for no one had any clear idea of what a business administration would be. The purpose of business, however, is now becoming clear. It is to get things to the consumer — to fill as many of his wants as possible with the least possible strain upon his dollar. That understanding will not only result in business going into politics, and securing a genuine business administration, but — what is perhaps more

important — securing a business administration of business too,

Heretofore, as an illustration, producers have been content to be producers; and if they found difficulty in distributing their products, about the most they have thought of doing was to set up a retailing business for themselves. The fact that the average article of merchandise usually sold over the average retail counter at three or four and sometimes eight or ten times the cost of production did not seem to be the average manufacturer's business.

Now he must certainly see that it is his business. It is preposterous that it shall cost three or four times as much to sell a product as it costs to make it; and even if a producer brings down his own selling costs, he has not by any means solved the problem, so long as the bulk of our merchandizing is done in this grossly inefficient way. For such inefficiency eats up the consumer's dollar and leaves him with too little money available to buy even those things which are distributed efficiently.

It must soon become one of the first objectives of all modern business to eliminate these enormous wastes of retailing. That they can be eliminated no modern mind will doubt, after the experience which we have had in eliminating the wastes of production; but they cannot be eliminated while confusion still reigns as to what the real purpose of business is. While that confusion exists, it will be possible to carry on propaganda against the chain stores, or against any other forward step in the field of distribution, on the ground

that they deprive somebody of his right to employ more wasteful methods. When the real meaning of the consumer's dollar becomes clear, however, all such propaganda will be immediately recognized as dangerously wrong. The only right one has in business rests upon his ability to get things to people at a lower and lower cost, coupled with his ability so to distribute buying power that the consumer's dollar will be left not only unimpaired but unthreatened.

This power is discovered in mass production and mass distribution. When they become the rule, as they must, instead of the exception, consumers will not only be able to buy the things they want, but the fear that their buying power may be one day interrupted through unemployment will then have passed away. So long as business did not understand its own objective, this could never be; and even those who had money with which to buy were justifiably afraid to spend it, and, by non-spending, they brought on the disaster of unemployment which they feared. With business thoroughly understanding its objectives, this fear will pass, for even among the wildest attacks upon business men, they have never been accused of negligence or inattention to what they understood to be their own best interests.

I am not speaking, of course, of any far-off time, when business men shall be thoroughly awakened to their social responsibilities. The awakening which I speak of is already happening. It has been happening since 1921, and the signs of the awakening are now abundant. Never before did great business

leaders, thinking strictly in terms of business prosperity, engage in agitation to keep wages up. Never before has Big Business worried over the plight of the farmers; and never before has it been stated in so many business gatherings that business, for business reasons, must find a way to abolish unemployment.

Not all business men, to be sure, are yet awake. Not even a majority. But it is the successful leaders of business, not its disgruntled failures, who are doing their utmost to arouse the rank and file. It is Henry Ford, for instance, not some Senate radical, who has announced the abolition of poverty as our necessary business goal. Many financiers, to be sure, object, for the structure of our financial system does not readily lend itself to such a revolutionary task. Financial systems, however, do not determine the course of business evolution. They follow it. Our financial system is what it is because, with the coming of machine industry, business has need of such a system; and it will be something very different in the near future when the needs of mass production are once clearly understood.

Wall Street is not yet organized to conserve the consumer's dollar, but Wall Street must become so organized, or the power of Wall Street will pass away. Low-cost production demands low-cost financing; and just as high-cost production and high-cost distribution have already proved themselves unprofitable, all financial practices which do not tend to benefit the consumer and enable his dollar to go

farther and ever farther, must soon prove to be unprofitable.

This is not theorizing. It is a mathematical certainty. Mass production, having been discovered, cannot be abandoned. Human society, having learned how to supply all human needs abundantly, cannot unlearn the method; and business, having once discovered that the way of the greatest total profits is the way of the greatest human service, is constitutionally incapacitated to forget it. If human nature were unselfish, of course, this might not be true. In that case, business men might become disinterested in their own welfare and equally disinterested in the welfare of everybody else. Fortunately, however, human selfishness is dependable. So long as people suppose that they can serve themselves best through neglecting the masses, the interests of the masses will be almost certainly neglected. It just happens, actually, that mass production — production for the masses — is far more profitable; and mass production necessitates mass distribution and mass finance. The consumer's dollar has been discovered; and unless that dollar is defended and protected on every front, nobody's dollar is safe.

IV

MASS PRODUCTION AND CREDIT

To the average conservative banker the term 'mass credit' seems to have no meaning. He may think of himself as a credit expert too; and he may admit — for he can scarcely deny it — that we are living in an age of mass production. He may even see that mass production demands that the masses shall be able to buy more things; but it does not occur to him, apparently, to help the masses to do any such thing. He is much more likely to act his traditional Ben Franklin role and advise them to save, as their sturdy forefathers saved, until eventually they accumulate more cash.

But where, one may ask, will the masses get this cash?

From their wages, of course.

But where will they get wages?

From their employment, the banker must answer, for there is no other great source of income for the masses of any industrial society.

But where will they get employment if the factories which have been employing them are not able to sell their products and are forced to discharge their employees?

Now, one should not blame the average banker too severely if he is unable to answer this question, any

more than one should blame a veterinary surgeon if he is unable to cure a sick automobile. The conservative banker simply has not studied mass credit. It has not been any part of his training to study the masses at all. He learned his banking from another age — an age in which it was absolutely necessary, if there was ever to be a machine civilization, that the people generally should consume much less than they were producing, and that the resulting surplus be employed in the financing of more production.

This social function of banking, to be sure, may not have been clear either to bankers or depositors. People were induced to save, and to put their money in the bank, so that it might draw interest for themselves; and bankers loaned these savings to business men, not with any thought of building a new social order, but because new machine methods promised dividends for the capital invested.

The bankers were the trusted administrators of the people's savings, and it was their business to see that these savings were adequately secured. But what constituted adequate security? That was a question which was naturally hard to answer, considering how the loans were being used. They were being used, as we now see, to erect a new civilization; but no one knew this at the time, and it was quite out of the question to offer shares in the new civilization as security for the actual loan of cold, hard, old-civilization cash. So the bankers answered the question by deciding that proper security is that security which by long experience has proved to be safe.

This seemingly fundamental principle of conservative banking contains a note of irony, for in times of great social change, long experience is the very thing upon which we can *not* rely. A stage-coach may have been profitable for ever so long, but its profits will surely cease when the railroad is put through. If we permit ourselves to be guided by long experience, rather than by actual events, we might lend money to the railroad and accept stage-coach holdings as security, but all that we would ever get out of such a transaction would be more experience.

Many have blamed the recklessness of bankers for the financial difficulties of recent times, and undoubtedly reckless bankers have played a sad and disastrous role. But it is the conservative banker, the one who most conscientiously follows the 'best traditions of banking,' who is likely to fail most conspicuously in his attempts to solve these latter-day problems of finance. In 1930 and 1931, for instance, when Mr. Ford and other leading industrialists were pointing out the necessity of maintaining and advancing wages so that industry would not perish for lack of buying, many of our largest and in many ways most capable bankers were declaring that wages must be reduced. To the layman reading these utterly contradictory pronouncements, it must have seemed that one group or the other must be fools. But such was not the case. The bankers were quite as learned and quite as logical as the industrialists; but because they were conservative bankers, because they were compelled to think in terms of banking experience rather than in terms of

present-day industrial events, their leadership was as disastrous as the leadership of demagogues. Like learned and logical veterinaries, they applied their liniments. They were the best liniments, perhaps, that long experience with horses had yet developed; but they had neglected to notice that the machine age had arrived and that a motor car is not a horse.

The traditions of banking were not developed in the machine civilization. They were developed in the days when it was necessary to create a machine civilization out of an agricultural civilization. It is necessary to discard those traditions now only because the machine civilization has been created.

There is nothing mystifying in this social change if we trace its course by actual events instead of trying to argue about it in loyalty to some preconceived conclusion. In Russia to-day, for instance, the standard of living is necessarily very low. This is not due to misgovernment nor to Communism, nor to any of the things to which we might wish to attribute it, but to the fact that Russia is building up a machine civilization with the scanty resources of an agricultural civilization. Readers will not accuse me, I trust, of having leanings toward Communism. I believe most profoundly in capitalism, and if Russia could have borrowed sufficient capital to finance this tremendous undertaking, it would not be necessary for her masses to go without necessities, so that her five-year plan and her ten-year plan might be carried out. But Russia could not borrow. If she were to have modern mills and mines, if she were to become equipped to produce

a high standard of living, she would have to raise the capital from her own people; and the only way that the Russian people could raise this capital was through depriving themselves, or through being deprived, of almost everything excepting the absolute necessities of life. If these plans were to be carried out, the Russian people must sell much wheat which they might wish to consume, and live most frugally on black bread. They must export huge quantities of lumber to capitalist countries, because capitalist countries had money enough to buy it, although the Russian masses were putting up with terrible housing conditions and needed this lumber far more desperately then did the people who would eventually make use of it. Russia, in fact, had to sell everything which she could possibly do without, and for which she could possibly find a market, and then buy in return, not things which her destitute masses might eagerly wish to consume, but machinery and factories and technical assistance, by means of which, eventually, the Russian masses might produce comforts and luxuries for themselves. If the Russian industrial programme should succeed, however, the deprivation which caused it to succeed must stop. Machinery is not an end. It is a means to an end. The end is the satisfaction of human wants.

Machine industry in America arrived by a somewhat different route; but it arrived, nevertheless, through the deprivation of the masses, and through their learning to live frugally while they were building up great industrial enterprises. To be sure, there was no five-year plan or ten-year plan or fifty-year plan.

Each individual, in fact, was expected to do his own planning, but the exigencies of economic law could not be escaped. We could not have factories unless we could raise the capital, and we raised the necessary capital through putting our money in the banks. The banks then loaned it to business men, who used it to buy machinery and to pay wages, in enterprises designed to give some sort of human service — perhaps to produce some necessity of life by more efficient methods than it had ever been produced before, and for which, therefore, a ready market could be found, perhaps to produce some comforts and luxuries which people had never been able to enjoy before. Quite as likely the money would be used, not to produce anything for direct consumption by individuals, but to produce something needed by other business enterprises in the equipment of other factories and a still further development of the machine civilization.

Eventually, by this process, America made the grade from an agricultural to an industrial society. Farming went on, of course, but farmers no longer got their whole living directly from the farms which they tilled, but more and more through raising things to sell to the industrial population, and using the money to buy things which industry had discovered such efficient methods of producing that it was no longer practical to try to make them on the farm. Larger and larger industrial units were developed, employing greater and greater sums of capital. Every improvement, every new invention had to be capitalized. Wages, for instance, had to be paid,

and business enterprises had to raise the wherewithal to pay them long before they could make any profits for themselves. Obviously, if people generally spent their money as fast as they got it — if they used it all up in riotous living instead of putting some part of it in the bank — there would not be any surplus money available for the financing of further enterprises. Bankers, then, were eminently sensible when they advocated thrift.

But presently one of the strangest events of human history happened. It was so stange, so out of line with anything that people had ever dreamed of, that few, if any, were able to look the fact in the face. By this financing of production and by the discovery and application of more and more efficient methods which it made possible, industry was eventually perfected to a point which made it absolutely necessary for the masses to spend their money freely and to unlearn their previous habits of thrift. Saving was as necessary as ever; but a new way of saving had now been developed, and it was such an efficient way of saving that the old way was no longer practical. The new way, in fact, demanded that the old way be abandoned.

The great business need now was to keep the machine going, and it could be kept going only if its products were sold. They could be sold, however, only if they were bought, and the machine was so productive that it was necessary for the masses generally to buy and buy abundantly. The masses were willing. There was not the slightest doubt of that. All they lacked was buying power. They had, to be sure, more cash

coming in than the masses of any civilization had ever had before. But they did not have enough. They were in the same fix now that would-be producers were in a generation and two generations before. They needed credit. It was, although the bankers did not know it, the greatest credit crisis of the times.

If the capitalists of America had only understood capitalism, they might have met this new emergency by an adequate financing of consumption until wages could be raised and employment stabilized in harmony with the increased productivity of the industrial mechanism. But these capitalists had not studied capitalism. They had studied only its first stages. At a time when more buying was the need of the hour, they were still calling upon the masses to refrain from buying goods, and to invest their savings in still more production; and when industries languished for want of customers, they advised reducing wages, a process which must result in a further falling off of sales.

Fortunately, there were other influences at work. Advertising, for instance, had become a fine art, and even business men who advised thrift as a general principle did their best to lure the public away from all such ideals. Mass production, also, had increased wages and added billions of dollars to the nation's buying power; and billions of dollars of credit was extended to consumers by an astonishing extension of the instalment system.

From the average conservative banker's point of

view, this instalment system was quite unsound. It must result, they said, in millions of workers spending more than their total income and thus 'mortgaging their future.' This was interesting; for the banks were dealing largely with business men who were planning to build factories, buy machinery and hire workers, although they did not at the time have a sufficient income to enable them to do so, but who did so, with the bank's most hearty co-operation, by the simple process of mortgaging the future of these contemplated enterprises.

The instalment system, makeshift though it may have been, proved to be very profitable. It resulted in the sale of billions of dollars' worth of goods annually which could not otherwise have been sold, and in several years, at least, of prosperity which America could not otherwise have had. Millions of workers undoubtedly purchased millions of things which they could not afford to purchase, judging the transactions by all the former standards of thrift; but because these millions did buy these things, millions were kept employed in making them. These instalment purchases not only provided them with things which they wanted, but provided them with employment and with the means to pay for these and many other things.

This lesson, however, seems to have been lost upon the average conservative financier. At any rate, there was no systematic effort to extend credit to the masses. There was a tremendous effort, in fact, to induce the masses to buy less goods and to invest their savings in

stocks. The effort succeeded; and the prosperity which had been produced so largely because millions of people had been buying things which they seemingly could not afford to buy was destroyed very largely because millions of people now bought securities which it seemed that they *could* afford to buy.

This may seem mysterious, but it is not. We must remember that the average traditionally-minded financier had not studied capitalism as a process, but had familiarized himself, rather, with one particular phase of the process — the phase in which the direct financing of production was most vitally necessary. When he urged the masses to be thrifty and to live within their incomes, it was with no suggestion that they should spend their lives in poverty. It was with the idea, rather, that they should better themselves by investing their savings and drawing either interest or dividends, instead of having to depend for ever upon the wages which they might receive from week to week. Many of these financiers had once been wage-workers themselves; and working for wages, they knew by *experience*, did not bring in much money. That the time would ever come when business could no longer prosper unless wage-workers did have lots of money seems never to have occurred to them. But such a time had to come and it came. It was necessary now, not only that wage-workers have lots of money but that they should spend it directly for things which they wanted to use and enjoy, instead of investing it in enterprise for the making of things.

Electric refrigeration, for instance, had proved to

be a profitable business. The pioneers in this field had become successful and were enlarging their plants, and many new concerns, egged on by bankers, had entered the field. Practically all the wealthy people of America had already equipped their houses with modern refrigeration, and people of more limited means were doing the same. If all these new companies were to succeed, however, or if the business was to justify the investment of such an amount of capital as was now being proposed, the masses must begin to install modern refrigeration; and if the masses were to buy these new refrigerators, they simply could not buy shares in all these promising new companies.

The stock market, remember, was booming. It was breaking all records. Fortunes were being made, apparently, in a day. Everybody might not be speculating, but nearly everybody was acquainted with somebody who was getting rich quickly, without having to work. Consider the case, then, of the family with two hundred dollars and a dilapidated ice-box, contemplating the purchase of an electric refrigerator. Consider several million such cases.

They are wage-working families. They would much prefer to be capitalist families. But they are sensible, sane folks, and they know that they are dependent for their very living upon their jobs. They wouldn't think of quitting work and becoming gamblers; but this two hundred dollars is theirs — is it not? — and even if they should lose it, it will not be long, they think, before they can save another two hundred dollars and buy that refrigerator. But they do not

intend to lose it. They will be very careful as to what stocks they buy. They will get the advice of a good banker. Of course, he will not advise them to buy on margin. But, if he runs true to form, he will advise them to invest the two hundred dollars, instead of spending it for some luxury like electric refrigeration, when two hundred dollars is all that they have. And so, instead of buying something which they might use and enjoy, they become two hundred dollar capitalists. They still have their dilapidated ice-box, say, but they own a two hundred dollar interest in some electric refrigeration company.

Now, if there were only one such family, this might be a far-sighted thing to do. But there were several million; and when the millions bought stocks instead of buying goods, two things had to happen. First, stocks went up. With such a great new demand for them, they soared as they had never soared before. And since the time to buy stocks, apparently, is when they are going up, more and more people bought stocks, and stocks continued to rise. Of course they bought on margin, whatever advice to the contrary they might have received. When people can get rich in a week, why wait years?

The second inevitable result was that plants manufacturing electric refrigerators and other things had plenty of capital for expansion. They expanded, but the sales of electric refrigerators and other things did not expand in proportion. In many cases they shrunk, for too many millions of people had decided to deprive themselves temporarily of things which they wanted,

so that they might have money enough eventually to buy everything imaginable.

And when sales shrunk, profits shrunk, and employees had to be dismissed. And when employees were dismissed, they had to quit buying, not merely things which they had been planning to buy but the things which they had been in the habit of buying regularly. The result of that, inevitably, was that the manufacturers of these things had to dismiss employees. There was widespread unemployment even before the crash of the stock market. With the crash, and with the realization that business, after all, cannot sell more than the people buy, there was such a retrenchment that unemployment became acute. I am not contending, of course, that this was the only cause of the business depression of 1930-31. But it is obvious that mass production demands mass buying of goods; and that if the masses of wage-earners gamble in stocks instead of buying the things which they want, they gamble not merely with their savings but with their jobs. It is a game, moreover, in which they are certain to lose.

Now it doesn't follow that saving isn't wise. It is not only wise but necessary. But when we once see the whole business process, instead of becoming absorbed in some temporary aspect of it, we might see that there are times when the best way to save money is to spend it; and that capitalizing production when we should be capitalizing consumption not only deprives us of comforts and luxuries but upsets the whole social order and defeats the whole purpose of saving.

I have already shown how mass production, for business reasons, insists upon enlarging the masses' buying power, through making wages higher and higher and prices lower and lower. But this is not enough, at least not until mass production becomes general. Wage scales, for instance, cannot be revised daily; and while it is necessary to raise wages as higher productivity is achieved, it is hardly to be expected that employers will always maintain the proper balance. It is absurd to talk of limiting production to the existing state of the market, as so many financiers are constantly suggesting; for even those employers who intend to do so cannot keep from discovering better methods which inevitably increase production, and from applying these methods when they are found. This thing, therefore, which is called over-production is natural and inescapable. Production cannot be halted so that buying may catch up, first, because modern production is based upon fact-finding and fact-finding cannot be altered; and secondly, because, when production slows down, there is less employment, and buying necessarily slows down.

While it is human nature, however, for the business man to increase production, raising wages does not come quite so natural to him. Here, then, is the great need for financial leadership and guidance — not a new financial system, but a perfection of financial practice so that it will meet the needs of the times. Modern merchants, with nation-wide organizations, cannot trust all customers individually after the

manner of the old-fashioned country store. But just as it was once necesssary for the old-fashioned storekeeper to extend credit to the sick and unfortunate, and to tide them over to better times when they might be able to pay their bills, it has now become necessary for an organized, nation-wide financial system to see to it that some temporary industrial dislocation does not result in such a lessening of buying that the whole industrial system is eventually upset.

It will be asked, of course, upon what security could consumer credit be issued upon a large enough scale to do any good. The answer is: the best security in the world — the security of orderly business progress. In the early days of capitalism, manufacturers had great difficulty in obtaining capital; for by long experience, money could be safely lent in large amounts only when secured by large holdings of land. But that was because machine industry was new. Eventually it was recognized that a good industrial idea in the hands of good industrial executives justified the lending of funds which were almost beyond the imagination of the ancient financiers.

The time has now come when business progress, and even business safety, depend principally upon the orderly maintenance of a high and ever higher standard of living, that is, upon adequate buying by the masses; and these times demand credit for the masses as surely as the times ever demanded adequate credit for business enterprise. And as the times are making these new demands, signs are not wanting that the masses are entitled to be trusted. The en-

tirely unexpected success of instalment buying is just one illustration. Born of the desperate necessity of business to sell more things, even though it was supposed to be unwise for the buyers to buy them, the buyers in the main met their instalments, and the credit extended to them was not abused. They were able to do this, however, only because the credit *was* extended. It was this which permitted them, not only to buy what they wanted, but to keep industry going and thus to keep themselves employed.

Perhaps an even better illustration is the almost phenomenal rise of the credit unions in America, and their phenomenal stability at the time of the great financial crash when so many great banks succumbed. These credit unions were motivated at first mainly by the desire of workers to rid themselves of the necessity of going to loan sharks, when sickness, unemployment or other emergencies made it necessary for them to negotiate small loans. Each member of each union paid dues, often not more than twenty-five cents a week, and thus contributed to a fund which the organization loaned, apparently without security, to members who needed loans. The loans, however were secured. They were secured by the character of the average workers of America in the industries or other social groups in which the unions were organized, and by the character of the American industrial civilization. That civilization has a job for everybody if too many people do not go without the things they need. Heretofore, however, we have seen this truth only in a one-sided way. We have noticed that people

could not supply their wants because they were unemployed. We neglected to notice that they were unemployed because they were not supplying their wants. Those were the days in which our financial thinking began, and usually ended, with the producer. Now we have discovered the consumer. When that discovery gets into the thinking of our financiers, credit for the masses will become a fact. Financiers then will no longer suggest that production be limited to consumption but will see production wholly in terms of supplying human needs. And they will no longer suggest that wages be lowered; they will withhold credit, rather, from employers who either from failure to understand what wages are, or through failure to adopt methods which would enable them to pay high wages, persist in keeping wages dangerously low.

V

MASS PRODUCTION AND UNEMPLOYMENT

EPIDEMICS of unemployment are due to bad thinking, particularly upon the part of business men, and are as preventable as yellow fever and smallpox. Unemployment can be conquered; but it can be conquered only in the way that these plagues were conquered — by breaking from traditional notions, or superstitions, and finding out exactly what the trouble is.

There is the notion, for instance, that employment comes from employers. It is on a par with the notion that milk comes from milkmen, or that water comes from faucets and money comes from banks.

These notions are all true, but inadequate. It is similarly true, but similarly inadequate, to declare that yellow fever happened because of our failure to observe God's law. We assumed that we knew the law and tried to exterminate witches. When we found out what the law actually was, we went to exterminating mosquitoes and solved the problem.

Employers, like faucets and banks and milkmen, are important factors in this machine civilization. We couldn't get along without them, and it is to everybody's interest that they shall do effectively whatever they are designed to do. But employers do not originate employment. Employment is originated

by human wants. It is only because people want things that employers can organize employment; and only if people buy things can this organized employment be continued.

Equally confusing is the supposition that what the unemployed want is work. The unemployed, if we would only stop to think of it, are people. They are human beings, and what they want is what we human beings want. If we can get that through working, well and good; and if we can get it in sufficient measure without too much distasteful drudgery, we may be willing and even eager to work, and many of us may find our work a joy. But we do not want work for work's sake. What we want is results.

Every little while, in the midst of every unemployment crisis, some disillusioned soul arises to state that people are unemployed because they do not *want* to work. Said disillusioned soul has experimented, and he knows. He has hired some one from the bread line, perhaps, out of the goodness of his heart, for half the wages which the unemployed one had been accustomed to getting, and has expected him to be on duty ten or twelve hours a day. The recipient of this bounty, however, is not a bit thankful. He does what he does grudgingly, and often leaves undone almost everything which he possibly can. The chances are, in fact, that this employee is almost as mistaken as his employer. But not quite; for he knew all the time that work for work's sake was not exactly what he wanted, while his employer is just finding it out.

There are workers, no doubt, who do work simply

from force of habit and, in the eyes of some, are therefore accounted industrious. But these should be numbered among the wrecks, instead of among the successes, of our industrial system. They remind one of the mine mule which, after twenty years of service on a windlass underground, was humanely turned out to pasture to enjoy a 'well-earned rest,' and to do whatever it is a mule wants to do. But this mule was so inured to discipline that he had forgotten what a mule wants to do. He had forgotten how to rest. Every morning at seven, instead, he faithfully took his position beside an old stump in the pasture and industriously wobbled in painful circles about that stump, until the whistle blew at night. Doubtless many human imaginations have similarly been wrecked by toil. We should be glad, however, instead of being shocked, to find that their number is very small.

The superstition that labour is a virtue and leisure a vice hangs heavy over our thinking to-day. 'Satan,' we are told, 'finds work for idle hands to do.' Even child labour is defended on the ground that it keeps children out of mischief; and many heavy-minded moralists view the approaching six-hour day and the five-day week with alarm. Business men themselves are likely to add to this confusion by emphasizing the unwillingness of the unemployed to accept jobs upon any terms, as to wages and hours, which shortsighted employers would like to force upon them.

The workers themselves, perhaps, are not more enlightened; but being human beings, fortunately,

they prefer leisure to toil, and they would rather have wages so high that they will not be forced to work incessantly for a mere living. *The human nature of the workers, therefore, tends to protect even these shortsighted employers from their own shortsightedness; for if workers would work for next to nothing, they would certainly be able to buy next to nothing; and their employers, being able to sell next to nothing, would very soon cease to be employers.*

If this were only understood, there would be no unemployment problem. It could not be understood, however, until the advent of mass production. It was known, of course, that good business depended upon a good market; but the market was supposed to be an arbitrary force altogether beyond human control.

It remained for mass production to discover that the market was composed of people for whom it could do something. Mass production, in fact, could *make* markets, while the most that the old form of production could hope to do was to *find* them. Markets could be made in two ways. First, by putting as low a price as possible upon everything produced, and then by giving as high wages as possible to everybody employed.

In doing this, mass production not only made markets for itself but markets for other organizations which did not know enough to set low prices on their products. People who bought mass production products had more money left with which to buy things which were not made by mass production, and the proprietors of these latter establishments reasoned

for a while that it wasn't necessary for them to go into mass production too; or at least that it would not be necessary for them to charge low prices.

But only for a while. As the successes of mass production were demonstrated, the concerns, which did not go in understandingly for mass production methods, began to fall behind. Sometimes they made the mistake of simply adopting large-scale production, without making prices lower or without introducing the economies which would enable them to make prices lower. Sometimes great mergers were formed, not for the purpose of building up a larger market through giving better values for less money, but to take advantage of the larger markets which had been built up by mass production.

So unemployment returned, and those who had not followed mass production understandingly began once more to advance the ancient reasons for it. Some of them said that the standard of living had been too high, and that the masses should now be reconciled to living more simply. In other words, they proposed to cure unemployment through buying fewer things which people are employed to make.

The people, by this logic, might give up riding in automobiles, throwing some four million workers out of work in America alone; and the four million, then without wages, must necessarily give up buying most of the things which they had customarily been buying, and throw more millions out of work. Nevertheless, such a proposal would be perfectly logical if what people want is toil.

Eventually, by such a process, practically all the factories and business organizations must close down; but instead of being really out of work, everyone would suddenly find himself compelled to work harder than ever. All that we would be out of would be results. For we should all be looking desperately for food: and since we could no longer look to business organizations to supply our wants, we should be forced to get our food and other necessities in one of two ways: either by taking them forcibly from others or by squatting on the land, as our ancestors did, and feeding and clothing ourselves as best we could. Either course would provide plenty of work for all concerned, but the results would be anything but satisfactory.

Others — supposedly leading business men among them — advanced the same idea in rather different words. They said that the trouble was 'over-production,' and that business must now unite upon some plan to limit production to the market demands. In other words, the people, because of unemployment, are buying less than before; therefore we should increase unemployment so that they must buy even less than now. Only some fundamental superstition can account for such a proposal as that.

Perhaps the commonest cry of the traditional thinkers was that mass production, through making it possible for one man to do as much work as ten, perhaps, had customarily been doing, was forcing the masses out of work. Once again, they imagined that what the masses wanted was work for work's sake, and they proposed to keep the masses working

by arranging things so that the labour of each worker would be less effective.

Even well-intentioned, humanitarian employers sometimes succumbed to this kind of thinking. To keep their whole force employed, they said, was now their object; and consequently they often postponed the introduction of better methods in their factories which they thought must result in the dismissal of men. By failure to adopt these better methods, of course, they were unable to make their prices as low as they might have made them. Fewer people, therefore, were able to buy their products, and those who did buy them had less money left than they would otherwise have had with which to purchase other things and thus give employment to workers in other industries. The result was that the humanitarian employer had to send off men eventually; whereas, if he had introduced the better methods, he would not only have built up his own business but would have built up business and employment generally.

Two other proposals for the solution of the unemployment problem are the result of somewhat better reasoning; but the reasoning is still so often tinged with superstition that the proposals, if enacted, might easily result in bitter disappointment. One is unemployment insurance. The other is the shortening of the workday for the purpose of dividing such jobs as there are among those who are looking for work. Before I discuss them, I think I should confess to two personal prejudices.

As a business man, I have seen such good results

flowing from the shortening of the workday, that it was fairly easy for me to become prejudiced in its favour; and as a student of European conditions, I have seen such disastrous results flowing from the so-called 'dole' to the unemployed, that I developed a pronounced prejudice against the whole idea of the political government undertaking unemployment insurance. But prejudice is not fact-finding; and the prejudices of a person who believes in fact-finding are no safer guides than are any other prejudices.

I have been compelled to admit, then, after substituting research for opinion, that the shorter workday, while increasingly necessary for good business, cannot by itself solve the unemployment problem. On the other hand, I have been forced to adopt a radically different attitude toward unemployment insurance.

We say carelessly in times of widespread unemployment that 'work is scarce'; and it seems plausible, therefore, to think of rationing the work much as, if food were scarce, we would ration the food. In this, however, our minds are likely to stumble over terms, for what people want is not work but the results of work. If, on the other hand, we think of work as *things to be done so that we may get the results desired*, it is misleading to say that work is scarce; for in such periods, obviously, there is no end of things to be done, the trouble being simply that we are not organized to do them. The real question, then, is: Will this dividing up of the jobs which have not yet been interrupted hasten the organization of the things that need

to be done, so that there shall be profitable employment for everybody?

This has nothing to do, it must be kept in mind, with the wisdom or non-wisdom of so dividing up the jobs in an emergency. The step may be very wise, from the standpoint of keeping one's organization intact, or it may be imperative as a matter of plain humanity. But we are considering now the effect upon unemployment. Would a general adoption of the four-hour day, for instance, by providing a job for everybody, help materially to bring back good times?

There is no certainty that it would. It might even have an opposite effect. There is only one thing that can make good times good for everybody, and that is a wealth-producing mechanism which is producing and distributing to the masses the things which the masses want. In so far as a shorter workday will help industry do that, it will help solve the problem which we all want solved. If it will not do that, it leaves the problem much as it was before or even makes it worse.

We are rather familiar by this time with the general business necessity for a shorter workday. Mass production, which is the most effective form of production, cannot live unless the masses can and do buy in adequate quantities. The masses cannot buy adequately unless they are provided with adequate buying power, and will not buy adequately unless they have adequate leisure in which to play the part of consumers. Mass production, therefore, for necessary

business reasons, constantly puts wages up, puts prices down and provides more and more leisure for its employees. But *how* does it do this? It does it in the only way that it can be done — by increasing production. It does it by eliminating the wastes involved in former methods, by discovering better and better ways of getting goods to consumers, and by so reducing the costs of production and distribution that prices may be reduced and a larger number of consumers, therefore, enabled to secure the things they want.

Would an arbitrary reduction of hours, for the purpose of dividing up the work, have this result? Would it increase the general efficiency of the machine? Would it cut the costs of production? Would it offer further opportunities to reduce prices, and would it result in such an increased volume of buying that there would be more profitable employment for all?

Much as I favour the shorter workday, I am reluctantly compelled to admit that such halving of the workday, unless accompanied by such an increase in production that wages could be raised, would necessitate their being reduced, and would thus so reduce the buying power of the masses that there would be still less employment to be divided up.

I am aware, of course, that the formerly unemployed, now blessed with half a day's pay, would spend that half; and while those who were formerly employed on full time would spend much less than before, the total of *dollars* spent in buying might perceptibly increase. But would more things be bought? That would depend chiefly upon whether or

not prices were lowered, and that would depend chiefly upon whether production costs were lowered.

Employing more men to do the work, which fewer men are now doing, would not, in itself, surely, lessen the cost of production. There is every reason to believe that it would increase this cost and, by increasing prices to the customer, result in less buying, which would still further restrict production.

Some, I know, will not agree with me in this, and some may be in doubt and think that the best way to prove the contention would be to try it out. But such an appeal to eventualities is not quite so simple as it seems, for if such a reduction of the workday should result in less buying, the situation could not be easily corrected. Regardless of what produces less buying, it is clear that less buying always produces less employment, less income to the masses, therefore still less buying and less and less employment. Before we try experiments on a nation-wide scale, it is well to make sure first that they do not land us in a vicious circle.

The *cure* for unemployment, obviously, does not lie in sharing the work which we are now doing, but in organizing the production and distribution of more wealth. There are two ways in which this can be done; but they both involve the use of the most economical methods of production and the distribution and selling of the product at the lowest possible price.

One way is through the organization of new industries. The possibilities in this direction may be grasped by contemplating the automobile industry, now directly or indirectly giving work to four million or

more Americans who might be unemployed if this industry had not been developed.

We commonly speak of 'technological unemployment' (that is, unemployment caused by improved machinery and improved processes) as though it were something to dread, but *it is technological unemployment which makes all better employment possible.* The automobile industry could not have happened before it did. It could not have been developed if there had been no available man-power, and man-power was available for its development because the discovery of better methods had released man from the necessity of spending all his time and energy in getting a bare living. He could now do new things; and one of the things that he did do, with his new-found time and energy, was to build up this highly desirable new method of transportation. He was able to do it, of course, only because he had good leadership. Ford led the way. He proved that men released from the old drudgery did not have to be left unemployed but could be employed by the millions supplying wants to which they could never have given attention before. Every new industry has proved this. They become possible only as better methods do put people out of work. Technological unemployment, then, is not a curse but an opportunity. The curse lies in our bad thinking. It lies in the fact that, with so many demonstrations before us, we do not see our opportunity. Because, for ages, man had to spend all his time and energies in getting a bare subsistence, we think that, when he does not have to do so, there is nothing

left for him to do. As a matter of fact, his opportunities are limited only by his wants. There are plenty of things which man wants done, and therefore there are plenty of opportunities to employ man-power. The only thing that is lacking is enough sound business thinking to provide the leadership, and the actual organization of this employment.

When we survey the field of man's wants, however, we do not have to wait to organize new industries. Man doubtless wants television and fool-proof flying machines and thousands of things which he can hardly describe to himself as yet. It may be a long time, certainly, before we can fill his wants in these respects, even if technological unemployment has released an ample supply of labour. Years and years of research may be necessary in these fields before we can get round to the large-scale hiring of men. But, regardless of new industries, there are limitless opportunities in the reorganization of familiar industries so that they will supply the wants of the masses instead of catering to relatively few. All that is needed is the application of the technique of mass production.

At the very height of unemployment in America, for instance, while no one wanted work for work's sake, millions were eager to own good homes. The business of producing houses, however, was not at all good, although the up-to-date automobile industry stood up amazingly. Was this because the masses cared so much more for automobiles than they did for homes? There is nothing to prove that it was. It was apparent to everyone that automobiles were produced by mass

production and were being sold at the lowest price which the adoption of the very latest machine methods made it possible to charge; whereas houses were still produced by much the same methods which had been employed for centuries, and were so costly that relatively few were able to own one which really gave satisfaction.

The same might be said of a thousand other things which people wanted but which, because of their price, they could not buy. Business offices, of necessity, were supplied with typewriters, but schools and homes generally were not. This was not because people preferred the painful, old longhand methods, but because typewriters generally cost from fifty dollars up and had not yet appealed to the market which could have been reached with a twenty-five dollar machine, providing it were of as good value and as serviceable in the typewriter field as a Ford or Chevrolet in the realm of the automobile.

The trouble, it must be remembered, was not that the typewriter industry was making too much profit. Its profits would have been enormously greater than they were if it had been producing high-quality, low-cost typewriters for the masses; but because it did not engage in such mass production, it was not giving one-fifth as much value in material and work, per dollar of price, as were the manufacturers of Fords and Chevrolets.

The same was true of the household furniture industry. It was possible to get good furniture at high prices and cheap furniture at low prices, but

it was not possible for the masses to get the kind of furniture they wanted at the prices which they could afford to pay. Mere large-scale production could not give them that. It would require a thorough application of the principles of mass production — *production for the masses* — with the central thought of getting to the masses the best possible values at the lowest possible price, and providing the masses with the greatest possible buying power and, therefore, the power to give the most employment.

One of the greatest expenses of the masses, and one of the great drains upon the consumer's dollar, has long been the cost of household repairs; but this simple service was not organized in any scientific, mass production way. If anything went wrong with one's automobile, one could make an immediate inexpensive repair with a replacement part, or one could notify a garage and have it corrected; but if things went wrong in one's house, one might have to deal with a dozen little businesses, each doing business in a limited and most expensive way, and the total cost for all the going and coming and other unnecessary labour involved was likely so to wreck the consumer's dollar that he could not give employment by buying other things he wanted eagerly to buy.

It is not necessary to continue the list of services which business was not rendering because of its failure to organize the labour of those who were no longer needed in their former employment to do other things which needed to be done. It is enough to say that there was large-scale unemployment, not

because better methods in industry had made man-power available, but because business did not utilize the man-power so released, in spite of the demonstration that business success was now unlikely in any other way. In a word, the business depression was due, not to mass production, but to the fact that, in a mass production age, seventy-five per cent of even American business was still attempting to function according to an obsolete theory of what business is.

It was said that there was over-production; but everybody knew better. What had happened was simply that a way had been discovered to produce more than business, by following its old methods, could sell. Due to such mass production as there was, prices had not increased during the previous period of prosperity; but due to our failure to understand the principles of mass production, prices in general had not been lowered as rapidly as the cost of production had been lowered, and there came a time, therefore, when the masses could not buy the things which they had been employed in making.

The lowering of production costs, instead of causing business to see the necessity of cutting prices to the limit, and thus passing the advantages of the new methods on to the consumer, caused business to see an opportunity to get a larger immediate profit on the things it had to sell. That chance for greater immediate profits attracted speculation; and all America, for a season, went into a mad dream of getting rich without giving any service in return. The inevitable, naturally, happened. Consumption was not financed to keep

pace with production, and production had to come down to the level of consumption. The paper profits, therefore, vanished. Because American business did not see the true meaning of mass production, it lost the greater total profits which it might have made, and the American people lost the power to employ each other.

Unemployment, however, is not a mere mistake which we can charge to profit and loss, telling ourselves that it must not happen again. It is rather like war. It is a desperate emergency out of which anything may happen, even the violent overthrow of the institutions which make progress possible. It is a conflagration which, when once started, may consume the good with the bad. For the unemployed are human beings who cannot wait for long processes of readjustment. Staying alive has suddenly become the imminent need, and such considerations as human progress and social stability are relegated to second place. It is because of this situation that the nations of Europe have adopted unemployment insurance, and not with any illusion that such state aid will really solve the problems involved.

And it is because of this same fact that America, if faced with continued and widespread unemployment, will act in the same way, regardless of how business men may protest or how economists may view with alarm. America will do this, once given the conditions under which it must be done, even though it may be generally admitted that the 'dole' in Europe has largely proved itself a failure. One clutches at

straws when drowning, no matter who proves that straws are not worth clutching; and unless business itself makes definite provision for the care of the unemployed, the unemployed will see to it that some social agency does. It is foolish to talk of Americans being immune from Socialist or Communist or revolutionary propaganda. If they have not been affected by it, it is only because conditions in America have not been favourable to its spread. But Americans by the millions will not readily lie down and die. In the face of widespread and continued unemployment, no masses on earth will be less docile.

The ideal solution, of course, would be for the business leaders of America to get together and publicly accept the responsibility for unemployment, pledging themselves that hereafter, whatever else happens, they will guarantee to organize employment for all who are willing to work. That, I believe, will be done in time, but it is perhaps futile to speak of it now. It is surely not Utopian to say that the persons most competent to organize employment anywhere should be the employers, and if they cannot do it, it is hard to see how mayors and governors and congressmen can. But the bulk of our business is still in the hands of traditional thinkers, and these traditional thinkers do not yet think of business as involving this responsibility.

What, then, of unemployment insurance? Business men, generally, are likely to oppose it; but, if the situation is particularly desperate, this opposition will be futile. It was this which caused me, and may

cause many other business men, to take a different view of the whole problem. Opposing the inevitable is not a programme which can appeal to any business man.

A number of American industries have successfully introduced unemployment insurance. Some of these have found it working so successfully that they consider it an asset, rather than an expense, to the business. That is not saying that all businesses could do the same, but it gives a ray of hope. Many others could do this, although if all who could do it were to install such a system immediately, it would not end unemployment. Unemployment, as we said at the beginning, is due to bad thinking, especially bad business thinking. It is due to the failure of business men to run business successfully, and to understand that profits come from organizing the community's man-power to make something which masses of people want and to get it to the masses at a price which the masses can and will readily pay.

It is unsuccessful business, then, which fails to give employment. If employment is not provided, however, the state can and undoubtedly will provide for the unemployed, and it will tax business in general to procure the necessary revenue. This may seem unfair, but there is no way by which unemployment can be made to seem fair. It is not only unfair to the unemployed, but it is unfair to clear-thinking business men — that is, to those who are constantly creating employment — to have their business constantly menaced by unemployment which is constantly being created by those who will not think.

It seems to me, then, that wise business men, instead of wasting their energy in a die-hard campaign against the 'dole,' will face the facts, accept some sort of state unemployment insurance as inevitable, and bend their efforts toward securing legislation designed to do the greatest amount of good and the least amount of harm. My suggestion is that they work for an Unemployment Insurance Act which will give employers the option of taking out state insurance or of developing an insurance system in their own establishments which will grant benefits equal in every way to those granted by the state.

The first result of such legislation would doubtless be that many businesses, probably a majority, would not have the initiative and clear vision necessary for the inauguration of a successful unemployment insurance system of their own and would become insured by the state; but the better, more successful and more far-sighted employers would undertake to insure their own employees against unemployment. In both groups, the cost of unemployment would be high; but among the state-insured an individual employer could do little to bring down the cost, while an employer who accepted personal responsibility for the care of his unemployed would make it a first matter of business to prevent unemployment within his organization. He would make war on waste — to save insurance costs; and if he adopted the best methods of eliminating waste, he would be able so to reduce prices that the increased demand would enable him to re-employ his force. Or he would

devote himself to finding new things to be done and organizing his available man-power, as rapidly as it is released from other work, to do those things successfully.

Under state insurance, employers would have no such incentive, for even those who did organize new employment would still have to pay for the unemployment caused by those who did not. The tendency, then, we may be sure, would be for employers, as fast as they woke up to the real situation, to discard the state insurance and undertake the responsibility themselves.

And that is about all that is needed for a solution of the unemployment problem. When all employers wake up and accept their responsibility, the problem will be solved. And those who do not wake up in such a situation will soon cease to be employers.

State insurance, then, with its subsidy for employment, would gradually fade out of the picture. It might remain on the statute books, but it would do no harm, for industry would at last be in the hands of employers who have learned how to prevent unemployment and have accepted their responsibility for doing so.

Traditional thinkers may shrink from such a solution. They may sincerely wish that unemployment might be abolished, but they do not want to pay the price. For the price is heavy; it consists of *changing our minds* and being willing to act according to things as they are.

Under the ancient formula business had no social

responsibility. In times of prosperity employers employed, and when hard times came, they ceased to give employment. The idea that it was the responsibility of business to create good times did not occur, either to the traditional business man or to his traditional critic. The business man, however, was rising to power, and he liked that. Power without responsibility seemed to be his aim; and it became the aim of many to see that he did not get it. Monopoly became a dread word. That business, particularly Big Business, should have its own way was a thought which caused millions to shudder.

Now it is time for all of us to change our minds. Not because business men have become good, but because it has been discovered that business can succeed only as it creates success for everybody. The greatest total profits can now come only from the greatest total service. There must not only be jobs for everybody but actual wealth-producing jobs — jobs that shall not merely distribute existing wealth, but successfully distribute the ever-increasing volume of wealth which better machinery and better methods constantly make possible.

If business once organizes to do this, the old bugaboos must vanish. No one need worry then about the greater and greater power which it may attain. 'More power to business' will be the universal prayer: but not more power to business men who have not yet learned what business actually is.

VI

MASS PRODUCTION AND THE SECOND INDUSTRIAL REVOLUTION

No one needs to be reminded that times are changing, whatever disagreement there may be as to the character of the change which is taking place. To the majority, probably, the change has no discernible character. They do not see *a* change, but many changes, and the changes which they observe do not seem to have any particular relation to each other.

What has mass production, for instance, to do with a belief in hell? Mass production, to be sure, was coming in at about the same time that the general belief in eternal punishment was going out; but one cannot argue from this that the emergence of one of these ideas must have crowded the other out. Personally, I have reached the conclusion that there *is* a vital relationship between these two seemingly irrelevant happenings, and I shall state my reasons in another chapter. Just now I want to guard my readers from assuming that there *must* be a direct cause-and-effect relationship between any two events simply because they happen to occur in succession.

We are compelled to admit first of all that the world we have been living in has been changing on almost every front. Not only have our ways of doing

business changed, but our home and family life has changed, our religious concepts and our moral standards have changed. Our very tastes in literature and art have changed. We are not only reading new books but new kinds of books; and we are standing in awe, not merely before magnificent buildings which we never saw before, but before buildings the like of which no one ever saw before.

We commonly speak of the great change which has come over the younger generation, ignoring the fact that grandmothers have changed quite as much as their granddaughters have. We speak of the modernist clergyman as a new type of religious leader, forgetting that the fundamentalist, broadcasting by radio, or arriving at his appointments by aeroplane, is quite as new a type. The fact is that all of us have changed. We've had to. Some of us may sigh for the old times, but none of us can live in them. We may even hitch up the old horse for an old-fashioned sleigh ride, but we cannot have an old-fashioned sleigh ride on highways that are full of automobiles. What we shall have is likely to be a perilous new adventure.

Most of the changes which have given us the greatest shock seem to date from the period of the World War, and many have been accustomed to blame the war for all the changes that have taken place. Their position is hardly tenable. The war did not bring about the automobile. It may have hastened the development of the aeroplane, but the aeroplane came first. That the war had much to do, even, with the new attitude toward sex is a thesis very hard to

prove. It was not responsible for Freud or for psychoanalysis, or for the teachings of Charles Darwin who died many years before the war broke out, although the teachings of Freud and of Darwin have had much to do with the new intellectual and moral and religious concepts of to-day.

Has there been any fundamental change in human development by which all these other changes may be explained? I am convinced that there has; but I am a business man, not a philosopher, and I want my observations to be treated only as the observations of a layman, for I make no pretence of having made a systematic study of history or anthropology or sociology. Most of my life, in fact, has been spent in retail stores, and in studying retail distribution. My latest book was devoted strictly to those studies, and contained nothing whatever about the abolition of poverty or the new attitude toward morals and religion and world peace. But one cannot study anything thoroughly without discovering something of its relation to other things; and if I learned about living from business, instead of from a more conventional and academic approach, the things I learned, if important, must be taken into account even by those whose field of research has been much wider than my own.

It was one of the great disappointments of my life that, at twenty-one, after passing my entrance examinations to Harvard, I was unable to enter, and was compelled by my father's illness to continue in business instead. I compensated, however, as best I could, by

studying the problems which came before me daily; always trying to discover, if I could, the underlying facts, and never being quite content to meet them merely in the way in which they were customarily met. In other words, I was not satisfied with 'learning the ropes' of business. I was curious to know the why of every rope, and I constantly wondered if some other rope might not serve the purpose better, or even if it might not be served by something other than a rope. I even went so far in time as to try to find out what business is for; and when I discovered that, it made me curious about a lot of things which had not at first seemed to be within the business realm at all.

The purpose of business, I discovered, was to serve people, not merely to support the business man concerned in it. I was not an idealist. I wanted profits. I even had a strong preference for becoming rich. Nevertheless, this discovery of what business really is did strange things to me. It made me want to serve. It made me look for my profits thereafter as a measure of the service that I could give. And this attitude, in turn, compelled me to observe the whole problem of human relations in a way in which I had never observed it before.

I became interested in the masses, and in what they wanted, and in how they ever came to want it. People were selfish, I reflected, and yet they were not selfish. Everyone seemed to be looking out for somebody not himself — usually for some relatives. How did it ever come about, I wondered, that people

generally were as interested in their blood relations as they were in themselves? Then I began to see the family as an institution, and to wonder what the world was like before there were families which seemed for ever to be making selfish folks unselfish, at least as far as a few loved ones were concerned.

I never did find out how the institution of the family ever came into existence, or who invented it, or exactly what human life was like before there were families. But I did discover the purpose of the family. I discovered that it was an economic institution, that its primary purpose was to serve its members, to make it possible to bring the babies to maturity, and meanwhile to 'bring them up' so that they would be something more than foraging animals.

And what a difference the family made! Eventually, because of this institution, human beings developed co-operation and loyalty and what we know as human love, and they also developed arts and crafts and education, and language and literature and romance, even morals and philosophy and religion.

The problem of how business came into the world likewise fascinated me. It started, I learned, with barter between families. It had a low beginning apparently. It had no moral code. It wasn't even honest. Whatever tender feelings one had, or whatever conscience one had, was pretty well limited to one's own relations. Outsiders didn't matter. Each family was independent and got its living out of the piece of land on which it squatted. If it could get

the best of a neighbouring family by trade or pillage, why not?

Only experience could answer that question. If it was advantageous to trade one's family surplus in one line for some other family's surplus on some other line, it might be advantageous to do it again and again; but the process could not be repeated indefinitely unless there was some code of honesty involved. So people learned to trade generally with near-by families, and to develop an intercourse which led to small-community life, reserving their cheating and robbing for more distant families or 'aliens.'

But trade was advantageous and it expanded. In time it became necessary to enforce some code even between these distant and utterly alien communities. So political states came into being, and the theory and practice of imperialism. Wars resulted, of course, when rival powers clashed, and they were greater wars than the world had ever known before. The peace resulted too — peace *within* the borders of each successful state — and larger areas of peace than the world had known before. The state also was an economic institution, and its purpose was to serve the people, even though the man at its head was likely not to know it. One of its greatest results, was patriotism, which caused selfish human beings, without any change whatever in the laws governing human nature, to become unselfish in ways in which they had never been unselfish before. It caused them sometimes, even, to leave their own families practically unprotected, and to go out willingly to die for their country.

'In one particularly interesting era of history, only a century and a half ago, people suddenly began to change again. All sorts of new ideas got abroad. New economic ideas. New political ideas. New social and moral ideas, new ways even of looking upon love and marriage. There was a war at this time, also — a most peculiar war. It was called the French Revolution, and it became fashionable to blame that war for all the changes that one did not happen to like. Nevertheless, there was a new thrill in the air, even in England where the government was not overthrown, and in all the countries which were adopting machine production.

We know now that this great change was not caused by the French Revolution, but that the French Revolution was just a part of it. It was caused by the coming of the machine, by the building of factories, by the advent of a new economic institution. We are acccustomed now to speak of the change as the Industrial Revolution.

This new factory system could not live unless it could expand, and it could not expand unless it could hire workers. It was, however, a more efficient and a more profitable way of producing the things which people wanted than the system which was in vogue; and whenever anything like that comes into the human picture, it seems almost certain that the system in vogue will eventually give way.

The masses, under the system in vogue, were attached to the estates of the great ruling families. They had families of their own, and their condition was not

exactly that of slaves. They had no right to leave these great estates, however, but existed from generation to generation as dependents and serfs. Everybody was accustomed to the arrangement, and the masses themselves where they were well treated, did not rebel. They were thoroughly drilled, in fact, to an acceptance of their lot and looked upon the feudal lords as their protectors. If there was to be a change, a lot of traditional thinking would have to be undermined.

It was. 'Liberty, Equality and Fraternity' now became the slogan. Not 'Factory Production'; very few would have been inspired by that. But it was Factory Production which demanded that feudalism must go, and human life obediently reached out for democracy. It might be a feudal lord, to be sure, who did the reaching at times; and it might be an army of serfs who captured him and carried him to jail for his attack upon the institution which kept them in serfdom. But the new factory system, nevertheless, just had to free the serfs whether they were in any mood to be freed or not, and the serfs were eventually freed. The rites were attended certainly by all sorts of strange excesses; and the revolution, when it was over, did not result in Liberty, Equality and Fraternity. But it did result in the factory system, and in strange, new ways of looking at all sorts of things which did not seem to be connected with the factory system at all.

The factory system brought no heaven upon earth. It brought, in fact, several different varieties of hell.

It transferred the serfs from their wretched position in a world which everybody understood and threw them into a wretched new position in a world which nobody understood. The masses gained a lot of new rights, but they lost the right to live, for staying alive now depended upon finding employment and, under the new conditions, there were frequent long and bitter periods of unemployment. If the world had been told in advance just what the factory system was like, and just wherein it differed from the system with which the world had been acquainted, a lot of the resulting abuses might have been avoided. But nobody knew what the factory system was like. No world had ever operated under such a system before; and what people tried to do with the factory system they tried to do with minds which had been moulded by feudalism.

Nevertheless, the factory system muddled along. It expanded because it had to expand. Factories could make things faster and in greater quantities than things could be made before, and these things were made to sell. If they weren't sold, in fact, the factories would be compelled to close and the owners of the factories would probably be forced into bankruptcy.

So things were sold on a scale the world had never known before, and that meant that more people had more things than ever before. In other words, the standard of living, in spite of all the abuses of capitalism, was raised from decade to decade and from generation to generation. The capitalists may have had no such intention. They may have been thinking only

of what they themselves could get. But it was necessary nevertheless, that they get more goods to more people constantly, whether the people showed any disposition to buy those goods or not.

If they had understood this principle, world history would have taken a far different course from what it did. But one cannot blame them for not understanding it, when such an understanding never dawned even upon the economists of the period, who devoted their lives to a study of the new economic system.

But the capitalists did not have to be told to get busy selling goods. They recognized that necessity, and they employed every means at hand to help them sell. Whether they employed fraud or not, or to what degree they employed it, depended usually not upon how good they were, but upon what the law allowed. Good men, obviously, could not permit bad men to undersell them, if they expected to remain in business at all. So the pace was set by the bad, and followed by the good, it being generally understood that exploitation pays.

It did not pay, of course, to cheat one's immediate neighbours. Besides, the law did not allow it. But capitalism, in its desperate necessity to sell more and more goods, got to looking for markets and for raw materials everywhere, and world trade became a great factor in the affairs of all the capitalist countries. But there was no world government and no world law. Exploiting weaker nations became the rule, and the stronger nations clashed with each other in their scramble to exploit the weak.

No wonder there was war. Peace, it was soon discovered, could be maintained only by a balance of power between the larger competitors, and that balance of power was frequently upset. Eventually the whole impossible situation exploded in the greatest war of human history. The World War did not cause the world change which we have lately been noting. It was, rather, one of the phenomena of that change, just as the French Revolution was a phenomenon of the First Industrial Revolution.

The First Industrial Revolution is simply a name for the period in which the factory system started. By the Second Industrial Revolution I mean the period in which it has been reaching its maturity. The period, perhaps, cannot be sharply marked, but its character, nevertheless, can be defined. This is the dawn of industrial consciousness. Business does not yet understand itself, but it is beginning to do so. In so far as it acts upon certain principles which have recently been discovered, it is successful; and in so far as it fails to act upon those principles, it fails. These principles are the principles of mass production: in other words, production for the masses.

We cannot distinguish between the old and the new capitalism by saying that one gives service whereas the other did not. Business has always given service to someone; and it has given some sort of service, often, even to those whom it robbed and cheated and exploited. It is the discovery that it pays to give service, and that it pays best to give the greatest possible service to the greatest possible number, which is now not only revolutionizing business but revolutionizing the

whole world in which we live. Just as the institution of the family developed most of the human qualities which we have come to hold most precious, and just as the institution of the state developed patriotism and a wider human consciousness, this new order of business is developing a more inclusive loyalty, a sense of the oneness of all humanity, and is already making human selfishness function unselfishly for the common good on a world-wide scale.

World peace is no longer a dream to be realized in that far-off future when human nature shall no longer be bound by the laws which govern it. Nor is it a precarious advantage to be temporarily gained from diplomatic bargaining. World peace is the logical destiny of the Second Industrial Revolution, and not a cold, negative, hands-off peace, either, but a peace sustained and made permanent by all-round human understanding and experience with enlightened selfishness.

But how did selfish capitalism, with thought only for the immediate profits it might obtain, ever come to make such a discovery as this?

That is an all-important question. If it cannot be answered, then the whole meaning of the Second Industrial Revolution will escape us. Philosophers knew thousands of years ago that peace was better than war. Great religious leaders also enjoined the world against hatred and greed and lust. That we should love our neighbours is no new idea by any means. Nor, even, is it a new practice. The members of the old patriarchal family, when the family was the going economic institution, did learn to love and to be loyal to each other. The citizens of the state likewise learned to be loyal to the state, and to give

their lives, if necessary, for this larger human group. What is new is the discovery that the machinery of modern business does make the whole world one, that we are 'all members one of another,' that no individual and no group can be independent of others, but that we are mutually dependent and must, if we are to give expression to our very will to live, go in with all our heart for mutual service. And this was discovered, not because business men were good (it seems, even, on looking back, that business men were pretty bad), but because it was the truth, and because business, whether business men realized it or not, could be successful only as it tried to find the truth.

Power machinery, which gave rise to the factory system, was a discovery of science. It was a creature of fact-finding. It either worked or it didn't work; and if it didn't work, it didn't do any good whatever to get down beside it and pray. One got down beside it, instead, and found out what was the matter with it, if one could.

That, in itself, developed a new attitude toward wealth production. Before the era of power machinery people customarily looked to the land for the production of the things they needed, and if the land didn't work for lack of rain, they customarily did get down and pray. Then it rained — sometimes; often enough, at least, to sustain the practice. The practice, however, was of no use in industry. Fact-finding was the only industrial principle which got results.

People generally, to be sure, did not become scientists. Even those who looked for facts when a

machine broke down did not necessarily look for facts when a man broke down, or when the market broke down. In such events, it was customary to curse the man and to pray with all possible optimism for better times. This attitude, in fact, has not been entirely abandoned yet. In the main, however, the practice of fact-finding grew, and the practice of magic waned. If fact-finding had not been more successful than magic, I hardly think this would have been so.

The drift from magic to science was discouragingly slow, as the scientists saw it, but it was discouragingly fast from the standpoint of those who were dealing in magic. At any rate, there was such a drift, and in the course of a century or so, fact-finding not only had a place in all industrial establishments but was securing a toe-hold in the life of the average man — and this too in spite of many powerful influences against it. Even in school (and this is more or less true still) students were not encouraged to find the answers to problems. They were generally told the answers and given to understand that any other answer was sinful. To be sure, science had proved that the earth is round, and the schools informed the children that the earth is round; but they did not encourage a questioning attitude in the matter, and the net result upon the growth of the child's mind was much the same as if he had been told that the earth was flat.

In industry, however, it was more and more necessary to find correct answers, and the practice of fact-finding gradually enroached upon the realm of in-

herited opinions. Even workers who discovered that a machine was not as good as it might be, and demonstrated some way by which it could be improved, were often rewarded instead of scolded for their impudence. In the end, some employers (and they turned out to be the most successful ones) completely abandoned the whole idea of running business by fixed opinion and insisted that it be managed according to the facts instead.

That is how mass production happened. That is how it happened to be discovered that exploitation does not pay. That is why the most successful employers began to raise wages, and to make prices as low as possible, although the practices were contrary to all the traditions of business and to all existing economic theory. And that is why it has now become evident that business, to be successful, must serve the masses, and not merely the masses within its own boundaries, but throughout the whole buying world.

A business revolution cannot be confined entirely to business. A business revolution is a revolution in basic human relations; and all human living is therefore, of necessity, affected. As in the First Industrial Revolution, then, human life is once again changing on every front. If human life is changing now, however, more than it has changed at any other period in human history, the fact need not confuse us, for the basic change is a change from tradition to fact-finding; and no matter what our objectives may be, we are now coming to understand that we cannot reach them excepting as we face and follow the facts.

We may be sure that human nature is not changing. It has been charged against science by those who did not grasp its technique that 'it gives us nothing to cling to,' but those who do grasp its technique know better. It does give us something substantial to cling to. It is those who believe in miracles whose minds are for ever at sea. Scientists may not have found all the facts, and they may not be able as yet to interpret those which they have found; but they have a fixed faith which the believer in miracles cannot have, that all the facts, discovered and to be discovered, will prove to be in harnomy with unchangeable natural law. To know the law, then, becomes their great objective; and they cannot swerve from this objective because they cannot doubt that there is a law.

Primitive man, when he observed a change in the weather, believed that God had changed. An earthquake was an exhibition of divine rage, and even a big wind an indication that the Ruler of the Universe was out of sorts. That there was any unchangeable law governing natural phenomena, a law which human beings might discover and upon whose workings they might depend, was beyond his comprehension. Modern man, however, by analysing the facts of lightning, has discovered something about its nature; and because he knows how electricity acts, he has made it serve him in a thousand ways.

Human nature, we may now be equally certain, is unchangeable. It is what it is and under no circumstances will it ever act contrary to the law which governs it. There is every indication that it is selfish.

If so, we may be reasonably certain that it will not become angelic. If it were susceptible to such changes, in fact, we could not hope to do anything with it. It is because it is what it is, and because of the possibility of our finding out what its laws are, that we can have any such hope. If the laws of electricity were susceptible to change, we could not depend upon our electric appliances; and if human nature were likely to change, we could not hope to build a dependable human society.

Under certain conditions, however, human nature acts in one way; and under other conditions, it acts very differently. Everybody wants to live; and if conditions are such, or are supposed to be such, that we can live only by fighting or exploiting other human beings, it seems certain that we will engage in war and exploitation. If, on the other hand, it is apparent that we cannot live excepting as we engage in some form of co-operation, human beings may be depended upon to co-operate.

Heretofore, whenever we have longed to create a better world, we have thought it necessary first to change human nature; but no matter how many movements we started, or how many people subscribed to them, the world we longed for never happened. All Western civilization, in fact, was induced to subscribe religiously to the principle of universal love, but universal love did not happen; and even if we did love others, it furnished no guarantee that we would treat them decently. We might even put them to death by slow torture, in the hope of saving their souls from

the fiends which caused them to disagree with opinions and conclusions which we considered sacred.

The great meaning of the Second Industrial Revolution is that it inaugurates intelligently selfish, actual, factual co-operation, not in accordance with some theory of what man should be, but in accordance with what man really is.

Business men want profits; and it is mass production which yields the greatest total profits. Workers want the highest possible wages, and this most profitable, because most economical, method of production not only pays the highest wages but finds it necessary for selfish business reasons to do so. The whole world wants peace, and this new organization of industry makes world peace necessary. People generally want rest from drudgery, and mass production eliminates drudgery. But they also want security, and mass production cannot be permanently successful unless it regulates both wages and employment so that the masses will be economically secure. They want leisure — it is human nature that they should want it, and it is socially necessary that they have it; but only mass production can provide this leisure, and it remains for mass production to discover the business necessity for doing so.

It may be said in objection that the First Industrial Revolution did not carry out its promises, and that it is rather naive, to say the least, to hold such an optimistic attitude toward the Second. One might say as much, however, regarding the first automobile or the first aeroplane. Actually, the First and Second

Industrial Revolutions are not two revolutions but one revolution, and it is only necessary to make the distinction because the term 'the industrial revolution' has become attached to the initial stages of the greatest change in human history. It *is* naive to be optimistic. But it is equally naive to be pessimistic. Industry has no use for either attitude. Machine industry is based on science and can advance only along the line of discovered facts.

There were terrible excesses connected with the introduction of machine industry. Man did not know, and could not then know, how he would have to act when, instead of being organized in little agricultural communities, he would find it necessary to make his living by the operation of machines which, in their very nature, could not supply him directly with the things he needed to eat and wear. Since machine industry rendered the old social order impossible, dreamers naturally dreamed of a new social order; but they did not dream of a machine order and did not think it necessary to discover the laws of the machine. Business men, on the other hand, did not do much dreaming. Competition, they found, was too keen to permit them to do anything of the sort. In the interest of more profits, however, they did discover more and more business facts; and it is from those business facts that a social order is now emerging which is in many ways beyond man's wildest dreams.

In the First Industrial Revolution, business men, greedy for profits, seemed to stop at nothing to obtain them. They hired men as cheaply as they could get

them, and men with families to support were compelled to work for next to nothing, and hence to provide those families with next to nothing. Next they hired women, because they would work more cheaply yet. Then little children. One recoils at the bare mention of the social degradation of the early stages of industrialism, the filth and squalor of the slums, the dangerous machinery in mines and factories, the accidents, disease and general despair — and then the smug excuses of employers that this was all God's will, and that they could not pay higher wages without losing the market to their competitors.

Some charged all this to industrialism. Others charged it to cursed human greed. But both indictments were rather futile. The process of finding more profitable ways of doing things could not be stopped; and each new opportunity for profits always found somebody reaching out for it. When the state tried to regulate business, business bribed and corrupted the state. Workers organized unions; but union leaders, too, were often bribed, and although the unions played a large part in enforcing a higher standard of living, and therefore eventually more and better business, industrial societies seemed to be for ever in the throes of social war. Various factions fought for their rights, but for all practical purposes, might seemed to be right, and no social problems were solved until fact-finding was substituted for fighting and it was discovered that the trouble lay neither with human nature nor with the nature of machinery but with our business and our human ignorance.

VII

MASS PRODUCTION AND THE FAMILY

IT is impossible to observe the advance of the machine civilization without coming face to face with the question of what is happening to the institution of the family. It is not for me to answer that question. I wish simply to point out that it cannot be answered by debate. It is clearly a matter for fact-finding; and mere emotional reactions for or against change are not likely to bring us to any satisfactory solutions.

Obviously, the home is not what it used to be. But it never was. The structure of the family has changed from age to age, and the code imposed upon its members has varied as economic conditions have varied. This is not to take issue with those who insist that the family is a *holy* institution. It is simply to point out that it is not a *dead* institution, and living things change.

That the family has adjusted itself from time to time to economic changes is an incontrovertible fact; and that it will adjust itself to further economic changes may be expected. For the family, whatever else it may have been, has always been an economic institution.

The classical economists, to be sure, had little or nothing to say about the economics of the family.

This may seem strange, considering that the family, at this time and for thousands of years before, was the dominant institution of the world. It was the institution under which the great majority of human beings obtained their living; and it not only had a definite and understandable system of economics, but one which was humanly most interesting. But the classical economists seem to have overlooked the dominant economic system of the world and to have given their attention exclusively to the institution of trade. Trade certainly needed to be studied. Although it was not so old an institution as the family, and not so important, it was an ever greater and greater force in human affairs; but this attempt to study it as something apart from human affairs must have resulted, as it did, in a very 'dismal science.'

The study of the machine civilization from such an approach must likewise be dismal. Many are attempting it, but their studies either begin and end with tables of car loadings and of brokers' loans, or in a series of wails concerning 'modern materialism' as opposed to the alleged spirituality of pre-industrial times.

If we observe economics as an ever-changing technique in the matter of getting a living, we find it a most exciting study. We will then not only notice the economic practices of the family but perceive the relation between these practices and a lot of human ideals which we may never have associated with economics before.

Superficial observers of the machine civilization,

for instance, may note that people have more things now than ever before, but that they are still unhappy. Because they have more things, they may then argue, they have become more materialistic; and if they could only become content with few things, as the ancients were, they might acquire calmness and strength and everything else, for that matter, with which it is possible for the human mind to endow its imaginary heroes.

If, on the other hand, we are trying to observe the ever-changing processes by which human beings have organized and are still organizing to obtain a living, the patriarchal family will not loom up to us as a symbol of resignation to poverty. It will loom instead as a marvellous invention — a means by which the standard of living was not only raised beyond anything that man could have hoped for before, but which made life so relatively secure that man was able to develop a spiritual life which he could not possibly have had before.

From the standpoint of the machine civilization, to be sure, the people of the patriarchal order were poor; but from the standpoint of anything which had gone before, they were immensely rich. The family historically was as wealthy as it could be. It went in, not for poverty, but for luxury, and employed every available means to get it. It even made a virtue of work, and of diligence, not because strenuosity produced a pleasanter sensation than repose, but because work brought results and, if enough work were done under organized direction, people would then

have an opportunity to rest with some sense of security.

Many, to be sure, did become sluggards, but it was not the sluggards who succeeded under the economic regime of the family. The modern 'go-getter,' in fact, will find most of his 'pep' slogans duplicated in the Proverbs of ancient Israel or in the Chinese classics. The family succeeded, not because it had achieved all that there was to be achieved, but because it was an up-and-coming institution.

Its greatest achievement was that it made it possible to bring babies to maturity, and to bring them up with an understanding of how this had become possible. Some may take issue with that statement. Some may say that the greatest achievement of the family was that it taught love and reverence and the principles of co-operation. But that is only saying the same thing in a different way; for if the family had failed to bring its babies to maturity, the race would never have known of these principles. It is not at all certain, in fact, that there would still be a human race, if it were not for what the institution of the family did to help it conquer its environment.

The fundamental economic principle of the family was co-operation. Individual animals might get a living of a sort through individually finding fruits and berries, and individually killing and eating other animals. But land could not be tilled, and the art of agriculture could not be developed, through any such free-lance methods. Human beings had to get together to do that. They had to co-ordinate their

efforts. They had to make all sorts of experiments, and all sorts of failures; and when they found a method which actually worked, they had to make a note of it, so that the organization could follow that formula thereafter and not have to waste so much time and effort in discovering it anew each time.

No doubt there were people in the early days of the family who did not think the game was worth the candle. Conceding that the family organization brought more things to people than people had ever been able to enjoy before, was it not restricting their freedom and destroying their ancient ideals? There may even have been movements to return to the good old times when anybody who wanted to do so could start a little business with his own teeth and claws. If so, however, they died out, and they died out because the family system was more successful.

The family was composed of producers and consumers. All were producers, of course, and all were consumers; but it was as *consumers* that they laid out their programme of production. If the members of the family wanted a lot of things, they organized as well as they knew how to produce those things. If upon occasion, however, they produced more food than they could consume, they did not act at all as the classical economists declared that human beings must act. They might curtail production along those particular lines certainly, but it never occurred to them that they must simultaneously curtail consumption. Before the advent of trade, at least, if a family produced more than it could consume, it

consumed as much as it wanted to consume anyway.

The institution of trade grew out of the institution of the family, but it did not follow the economic principles of the family. That is quite understandable. Trade was new. It had to find its way. Such education as there was in the world consisted of education in the traditions of the family, but the best educated patriarch was not prepared to see how these traditions could be applied to the family and to people outside the family too.

Each member of the family was educated and disciplined to work, not according to his own personal whims, but in accordance with the family's main objectives. He might be as selfish as people ever were; but he was trained to see that he could become successful only if the whole family was successful, and to co-ordinate his own selfish efforts with the selfish efforts of all the others in the achievement of the common good. By such training, family loyalty, family reverence and family love were engendered.

Trade was something else again. Trade came about because families found themselves with certain surpluses in certain lines, while they were short, perhaps, of other things which they wanted to have. By trading these surpluses for the surpluses of other families, the problem seemed to be solved. It was, in a way, but the practice that was then started revolutionized the whole world, and the institution of the family could never be exactly what it was before.

Trade was so profitable that it expanded; but people whose lives were thoroughly organized to serve their

own families did not organize their lives to serve consumers. The family itself, so long as it had no dealings with the outside world, was organized definitely to serve consumers; but when a family attempted to sell its products to other families, it thought not at all of the consumer's interests but of the interests of the family which had the goods to sell.

Nor can the families be blamed for this. The members of the family thought first of their own family's interests because the family had taught them to do so. If human nature had been different than it was, perhaps, all the families in the world might have met in council and debated (1) Shall we now establish the institution of trade? and (2) Under what constitution and by-laws shall all the families in the world proceed to have dealings with all the other families in the world? But human nature and human history do not act that way. Families with surpluses simply tried to better their situation by trading with other families; and each very naturally 'let the buyer beware.'

Trade, for many centuries, was but an incident in family life and did not disturb it very much. Based on the principle of trying to get the best of each other, trading often led actually to fighting, and the world of trade became known as an ugly and cruel world, and only within the orderly arrangement of the home (which was based upon a very different principle) could one look for peace and serenity.

As families extended their tradings with near-by families, they generally found an orderly way to do

it, and they developed a small community life. But this, instead of ending trade wars, led to bigger wars than ever — wars with other communities which had been similarly organized. Nevertheless, trade, because it was profitable, expanded more and more; and the need for order along the far-flung trade routes called political states into being, with the result that, while there might be still larger areas of order than before, there were still larger wars — wars with other states.

All the time, it must be remembered, most of the people of earth were getting most of their living under the economic arrangement of the family; but they were getting enough of their living from an institution which was organized on diametrically opposite principles, so that it was constantly necessary for men to abandon their families and march out under state banners to kill unknown family men of other states.

This brings us down to very recent history; for, while trade has now become world-wide, and everybody is more or less dependent upon it, the majority of the earth's population is still probably getting most of its living, not by virtue of trade, but under the old economic system of the family. If all commercial intercourse should come to a sudden end to-day, all the world's population would not necessarily starve to death immediately. Most of the people in the United States would doubtless perish, for the family here is not equipped to wrest a living from the soil by its own unaided efforts; but in parts of Asia the institu-

tion of the family is still running so true to its original form that many might possibly survive.

Such a prospect, indeed, can hardly appear pleasing, even to the most pronounced critics of modern machine civilization. This civilization has not been peaceful. It has been disturbing in many ways and it has undoubtedly weakened the economic supremacy of the family and set the whole world to living a large part of its life, not according to the law of co-operation, but according to a dog-eat-dog, survival-of-the-fittest programme.

Many idealists who have shrunk from this reality have tried to introduce another system. They have tried to run their businesses, for instance, on what they have called a spirit of co-operation; and by profit-sharing and other devices, they have tried to imagine that they and their employees 'are just one happy family.' Try as they might, however, they have not succeeded in turning a business into a family; for the family was a community of producers and consumers, who produced what they consumed and consumed what they produced. Businesses deal with the outside world; and when even the best regulated of families dealt with the world outside that family, it did not and could not deal with it by the same principles and with the same motives that made the family what it was.

Only with the coming of mass production, in fact, could the economic principles upon which the family was organized be applied to trade. Only then could the principle of bargaining be supplanted by the rule of service. For mass production *is* production for the

masses. It demands, not merely large-scale co-operation in production, with hundreds of thousands of workers perhaps all engaged under scientific management in turning out a single product, but it demands more and more co-ordination between production and consumption.

Under mass production, the economic laws which the classical economists thought they had discovered simply do not apply. Producers are no longer limited to finding markets, but are compelled to concentrate upon the more human task of discovering human needs, and of organizing production and distribution in strict accordance with those needs. Just as the family did not stop producing because it could not sell its goods, mass production does not stop because the masses have no buying power. Mass production gets its goods to those who need them by *manufacturing* and *distributing* buying power.

Mass production, it must be remembered, is not a social theory resulting from some idealistic determination as to how things should be done. Mass production is already the dominant system of business and has resulted from discovering how things must be done if the greatest total profits are to be obtained. First thought must be given to the consumer, and the masses must become large-scale consumers. Bargaining in the old sense is a thing of the past, for producers can no longer think of how much they can get from consumers but of how much they can serve the consumer for the least possible tax upon the consumer's dollar. Mass production likewise cannot afford to

hire its employees on the old bargaining basis; it must pay its employees as much as it can, and finds out how it may pay them more so that they will be able to buy more of the increasing production. It cannot live in the way that business once managed to live, by exploiting anyone, nor by taking such business as it may take from its competitors. It must find its success now in enriching everyone, and in constantly finding new ways of enriching them.

What this will do to the organization and prestige of the family is a matter to which sociologists may well direct their studies. Undoubtedly, since the head of the family is no longer in control of the economic process through which the family may get its living, he must be relieved of many of the ancient responsibilities, and therefore of many of the ancient prerogatives of the patriarch. Women, for instance, can no longer be his subjects; and even children are likely to discover that their economic well-being now comes not from the organization of the family but from the organization of industry, and they may look more and more for individual guidance, not to their fathers but to the truths which science is discovering. In one sense, however, mass production represents the historical triumph of the family — the triumph of the principle of organizing for common service over the principles upon which business tried to act and which the classical economists supposed were economic laws.

VIII

MASS PRODUCTION AND POLITICS

POLITICAL government is government by opinion. Successful business management is government by the facts.

Politicians must be guided by opinions. Engineers and business men must be guided by the facts. But these, unfortunately, may be quite as confusing to engineers and business men as they are to the politicians.

They may conclude, for instance, that a 'business administration' can be obtained by electing engineers and business men to office. But engineers and business men *in office* are not engineers and business men: they are political office-holders, and if they intend to retain their offices, they must act like political office-holders. They must bow to public opinion, no matter how far from the facts public opinion may be. What is more, they are so unused to such bowing, that they may not do it either as gracefully or as effectively as the professional politicians do it.

This seems to be the fundamental reason why so many business men, and so many scientists who have been accustomed to fact-finding methods, become disgusted with politics and decide to let politics alone. But politics does not let them alone. Politics decide

many of their most important questions. Politics make tariffs. Politics declare war. Politics enact all sorts of laws to curb business enterprise, not necessarily because the politicians want such laws passed, but because they want to keep their own political cliques in office.

Because of all this, I have known many business men to declare that they can no longer believe in democracy. But this is a rather naive reaction, for autocracy is government by opinion quite as much as is democracy. Autocrats, even if they understand the principles of good government, are not free to follow them. They have to guard, not against mere political reverses, but against revolution; and they have to guess how to do that, instead of finding out. Political government not only *is* government by opinion, but it *must* be. No measurement, at least, has yet been discovered to secure exact government by fact in politics.

Mazzini defined democracy as 'the progress of all through all under the leadership of the wisest and best.' I know of no better definition, and no better political ideal. Nevertheless, I can find nothing in the structure of politics which gives any assurance that the people will choose the best and wisest leadership.

In the structure of business, however, the wisest and best leadership is actually being chosen by the people.

That will seem to many to be a most amazing statement. For business, they will say, is not governed by opinion; the public does not elect its business

leaders. Business leaders get to their positions of leadership, they will tell us, by virtue of their own initiative and courage, and their ability to discover the real principles of business, instead of pandering to ignorance and prejudice.

But this is not quite true. The masses of America have elected Henry Ford. They have elected General Motors. They have elected the General Electric Company, and Woolworth's, and all the other great industrial and business leaders of the day. They have not voted for them, to be sure, with paper ballots, and they have not instituted any system by which the masses shall assemble in solemn plebiscite, to guess about what their needs are likely to be, and to choose from a list of highly ballyhooed unknowns the men or the firms with which they pledge themselves to do business for the next year, or the next four years, as the case may be. No, this election of business leadership is constant. The polls are open every day, and voters vote when they feel like voting. They do not vote with ballots, but with dollars and quarters and dimes. They do not vote, moreover, upon what candidates *promise* that they will do in the future if they are given the authority to do it. They vote, in all cases, upon what the candidates *have* done, and they confer leadership upon a candidate only if what he has done has proved satisfactory.

One of the most interesting of these matter-of-fact elections (to be distinguished from the matter-of-opinion elections on the political field) was the election of Henry Ford, not merely as the maker and

distributor of motor cars but as the person who would have most to say, in the end, as to how American industry should henceforth be organized and managed.

When the polls opened in this 'election,' the American public had never heard of Ford. There were several candidates for high positions in the automobile industry; but it wasn't much of an industry and it was an industry in which the public wasn't particularly interested anyway. The industry was manufacturing new toys for wealthy people; and if the American public had held a matter-of-opinion election on the subject, it might easily have voted for some candidate who would promise to keep automobile owners from driving their cars on the public highways, where they were sure to scare horses and perhaps run down the common people.

Had they heard of Ford, and had he tried to outline his programme to them, they would certainly have done something to stop him, for his plans were as far as could be from all their fixed opinions.

In the first place, the American public was set against the idea of one man accumulating very much money. Farmers and working-men particularly were certain that no one could accumulate as much as a million dollars honestly, and that, even if it were accumulated honestly, it necessarily left a million dollars less for other people to get.

But here was Ford, planning a business which was eventually to make him, not merely a millionaire, but a billionaire, at the very time that the American public was insisting, in its state legislatures and in its

national congress, upon curbing the trusts and making it impossible for Big Business to get the best of little businesses. He had a scheme, moreover, for mass production — for producing millions and millions of these machines which were scaring horses and adding new terrors to walking and driving on the streets. He also had a programme which would necessitate the expenditure of hundreds of millions of dollars for better roads, when almost every farmer in the country considered the road tax a terrible burden as it was.

Unquestionably, in any matter-of-opinion campaign, Ford would never have been granted authority to do what he did. Incidentally, if he had been granted authority to do it, and had tried to do it under this authority, he couldn't possible have done it. But it was all a matter of fact, not of opinion or of right, and Mr. Ford threw his hat into the matter-of-fact ring. It was necessary to appeal to the people; but it was not necessary to ask them to vote on any question which they could not possibly comprehend, nor to take a stand on anything but their own self-interest as tested by actual results.

It was necessary for each candidate to make a car which the people would vote for, not with matter-of-opinion votes, but with matter-of-fact dollars. No one was compelled to vote if he wasn't interested. And just because one candidate got a working majority, that would not necessarily keep another from getting a working minority. In this matter-of-fact voting, there was exact, scientific, matter-of-fact proportional representation.

In politics, if a Republican was elected, the Democrat was not only rejected, but those who voted for the Democrat had to be served by the Republican whether they liked the service or not. In business, the minority could go on being served in the way they chose to be served by the simple process of continuing to cast their dollars that way. The way of the most buying simply became the dominant way of doing business. If a minority leader copied it, he automatically became a majority leader.

In this campaign for motor car supremacy, it was evident that everybody couldn't vote. Everybody might want an automobile, but very few could buy one, and only the dollars spent in actual buying counted. This, it may appear at first was most undemocratic, for in politics every voter could vote on everything, whether he knew anything about it or not. The current issue might be the tariff; and it was doubtful, sometimes, whether the majority of the voters knew what a tariff was. But this was no bar. A voter might believe that the tariff was a building in Washington, and he might not care in the least whether it was high or low; but he could vote, nevertheless, for a high tariff because the candidate who favoured it was an Elk, or because he lived up-state, or because his opponent wore whiskers while he preferred men with a clean shave. It was not only his right, he was told, to vote on all these issues, but it was his duty as a sovereign citizen; and how he made up his mind was nobody's business.

As a rule, of course, the average voter was intelligent

enough to know that he did not know enough to qualify him to decide such intricate questions. It was his opinion, however, that his party leaders knew enough to do so, and that they were much better men generally than the leaders of the other party. He did not know these party leaders, to be sure, but he had heard about them from speakers whom the party leaders had sent out for him to hear, or read about them in literature which the party leaders had sent out for him to read.

Those voters who did not belong to parties had another formula. If times were good, they voted for the party which happened to be in power. If they were bad, they voted for the opposition. If times were very bad, large numbers of them voted for the most radical opposition. They could not always explain the relation between the hard times and the administration's policies, but they showed, at least, how they *felt* about it.

In the matter of industrial leadership while those who could not buy automobiles had nothing to say about who should be leader in that special field, everybody nevertheless did some voting. Everybody bought something, and how they bought determined how manufacturing and selling should be carried on.

Undoubtedly, they had their prejudices. They wanted to get as much as they could for their money. There were movements, to be sure, from time to time, to persuade them against doing this, but these movements were not noticeably successful.

Sometimes an appeal was made to the public not

to buy foreign goods. It was argued that European manufacturers paid low wages, and buying their products helped to keep wages low. But that campaign never got very far. The people were so selfish, as a rule, that they picked out what they considered the best values. Perhaps they noticed, also, that employers who wanted them to pay high prices were likely to be keeping wages as low as they could.

There were also campaigns by labour unions to induce people to buy goods having the union label, and thus patronize industries which paid high wages and recognized the rights of working-men. Even the unions, in those days, believed that high wages must lead to higher prices, and abandoned this belief and the campaigning which was based upon it, only when it became apparent that higher prices so impaired the buying power of the working-man that his seemingly higher wages were of no more use to him than his lower wages had been, and were therefore not higher at all. At any rate, all attempts to induce people generally to pay more than they had to pay for things did not progress very well.

Small town 'independent' merchants often tried to rouse their communities against what they called the pernicious and unpatriotic practice of buying at chain stores. There were other campaigns against mail order houses. But it was the agitators, not the chain stores nor the mail order houses, who almost invariably lost. In the commercial and industrial field, people generally voted with their dollars, not according to some abstract economic principle which

they did not understand, but according to their own selfish interests and the hard fact that they wanted a lot of things and had only a little money with which to get them.

In the great campaign for automobile supremacy most of the candidates were of the opinion that they could get more dollars by appealing to the sort of person who had the largest number of dollars to spend. One firm, then, put out a $5,000 car; another, one for $4,000; another, a car for $3,500. Mr. Ford offered a car on an entirely different theory. He would not appeal, he decided, to the sort of person who had the most money, but to the greatest number of people who had money enough to buy a car at the lowest price for which a serviceable car could be manufactured and sold.

Many were declaring at the time that wealth was concentrating in the hands of a few. Mr. Ford, possibly, did not know whether it was or not. But if it were, it would not follow that the few would buy many cars. Every millionaire might buy one, or possibly two or three, but even then, there wouldn't be much of an automobile business. On the other hand, if he could sell cars to everybody who would like a car, and at a price which they were able to pay, he might build up a bigger business, and get more profits in the end, than those who had their eyes on the millionaire trade could possibly get.

It was the opinion of the trade that no car which was of any use could be made and sold for $1,000 or less. It might be made at such a cost, it was admitted;

but Ford, the wise ones said, had forgotten how much it costs to *sell* a car. Apparently, he had not; he had simply noticed how much it costs to sell a *high-priced* car. Because he made the price one which great numbers of people could pay, his cars almost sold themselves, and he had more orders than he could fill. The $1,000 figure, it turned out, instead of being ridiculously low, was unsatisfactorily high to Mr. Ford. He dropped it immediately and constantly, while he constantly improved the product, with results which the whole world knows.

He gave the world a new system of transportation. He made more money than any manufacturer had ever made before, and paid more and higher wages than had ever been paid. By making convenient, luxurious and fast travel available to the masses, he changed their whole way of living. He caused the people to spend billions upon billions of dollars for automobiles and roads to run them on, and to have more money *after* they had spent it than they had before, for he built up an industry in which 4,000,000 men were engaged under scientific direction and according to efficient fact-finding methods, in the creation of *new wealth.* He changed human society in more ways than it could possibly have been changed by any kind of political administration, and yet he did it not merely with the approval of the masses, who had been traditionally prejudiced against wealth, but with their day to day co-operation.

Ford brought power to the masses as rapidly as they were able to use it. He gave them far more power

than political democracy had ever been able to bring them, for while political power might enable them to *stop* all sorts of things, motor power enabled them to *do* all sorts of things. It enabled them to go where they wanted to go, to see the country, to buy and sell in better markets, to get a broader viewpoint and lose some of their prejudices, and, best of all, to aspire to still greater things. When one reflects upon what any political administration has done since the first of the century, or what any political party has done, and then contrasts it with what the mass production and mass buying of automobiles has done, he may get some perspective of the true relation of political and industrial management.

But mass production, he must remember, could only happen from mass buying. *The people have been ruling* in the industries which they did not own, even where they have not always succeeded in ruling in the government which they did own. For in government they expressed their opinions on matters which they could not possibly understand; and if the government was extravagant or even ridden with graft, they might either not know it, or be reminded that it was giving so many people 'work' that the result on the whole might not be bad.

But people who are given work, under mismanagement and graft, *do not create new wealth*, and the result to the public is only an additional burden. On the other hand, people engaged in doing things which the masses want to have done, and engaged in doing them in the most scientific and effective way in which

they can be done, are helping the masses and enabling them to live a freer and fuller life. But the most scientific and effective way, we have discovered, is the way of mass production, which means the way of the lowest possible prices, the way of largest possible buying and of highest possible buying power.

By voting for what they want, the masses may or may not achieve political democracy. When they buy what they want, however, upon terms which are most advantageous to themselves, they are not merely electing their industrial government but constantly participating in it, and keeping it in tune with their own new needs. In the best sense of the word, then, mass production is democratic, for, to paraphrase Mazzini, it is government of all the users of things by all the users of things under the leadership of the wisest and best actual fact-finding system.

If this were the sole contribution of modern industry to better government, the gain must be immediately recognized. Even if our political government does not always truly represent us, our industrial government must, as soon as business in general comes to understand that service to the consumer is the most successful business principle. And since our wealth and well-being are determined by the administration of *things*, so much more than they are by the administration of statutes, it might be argued that we can afford to forget politics and simply tend to business, in full assurance that social progress will result.

Such reasoning, however, is faulty. If we really tend to business, in fact, we cannot forget politics,

for the first necessity of business is to guard and protect the consumer's dollar — the dollar which must do all the buying from which all our business, all our manufacturing, all our employment, and all our wages, salaries and profits must come. Business, consequently, when it becomes fully conscious of business principles, cannot tolerate anything which decreases that dollar's buying power. The reason we have had corrupt politics heretofore is because it has been tolerated, and chiefly because business men have been so absorbed in what they considered their own businesses, that they have found one excuse and another for leaving politics to politicians. When they once thoroughly grasp the true principles of business, however, and the business need of protecting the consumer's dollar, they can no more think of doing this than they could think of leaving burglary to burglars and racketeering to racketeers.

The first effect of successful mass production, of course, must be to make the constitutional government stable, for voters are so prone to vote as they feel that they are unlikely to overthrow any reasonably good government, or even any good current political administration, at any time when they are feeling prosperous. Since business demands stable government, however, and is utterly prostrated by political revolutions, business men in the past have been inclined to support existing governments, even if ineffective, and even to tolerate their known inefficiency and waste — a course which has driven many earnest reformers to despair. That condition, how-

ever, must change when the underlying principles of mass production are once thoroughly understood. Business men will continue to oppose political revolutions, but not in the negative way in which they have opposed them in the past. They will concern themselves, rather, with the facts of revolutions, knowing that they never happen unless something wrong is happening to the consumer's dollar, and they will direct their energies to correcting that wrong.

A house may be so dirty as to be almost uninhabitable, and it is perfectly natural, human nature being what it is, that sentimental conservatives should insist on putting up with it and that emotional radicals should favour burning it down. Fact-finders, however, need not take sides. They may take both sides, in fact, by cleaning the house.

IX

MASS PRODUCTION AND SOCIALISM AND COMMUNISM

THE only objection I have to the theories of socialism and of communism is that they are wrong. Many of my friends, however, object to them simply because they are 'hateful.'

Wrong theories may be corrected by the simple process of finding out what is wrong with them. What to do about hateful theories, indeed, I do not know, for hating a theory, whether it is right or wrong, seems to have no effect whatever upon the theory. We may hate the theory that the world is round, or that man evolved from lower forms of animal life, or that the laws of the universe cannot be suspended to permit miracles to happen in the place of natural phenomena. We may even fight these theories. We may pass laws against them. We may imprison and kill all those who dare to advocate them; but unless we find something wrong with the theories, the ultimate result seems to be that we, not the theories, become worn out.

The only way to get rid of a wrong theory is to understand it. But this requires fact-finding, and those who are trembling in the throes of hatred are in a poor position to find and to recognize the facts.

That socialism and communism are the result of

class-thinking will be accepted, I believe by both friends and enemies. It might seem, then, that those who oppose socialism and communism might begin by opposing *class-thinking*, but this is not likely to be the case. For those who oppose socialism and communism most violently are the victims of class-thinking quite as much as the socialists and communists are. What they seem to want is not the abolition of class-thinking, but the abolition of working-class thinking by the working-class, and the retention of privileged class-thinking by the privileged classes. As a matter of fact, if the masses of workers in any civilization were to abandon class-thinking, and substitute actual fact-finding in its place, they would do away with classes and with special privileges of every kind much more quickly than the most ruthless dictatorship of the proletariat ever could.

For they would not waste their time then warring on profits. They would unite, instead, in such a war upon waste that everybody everywhere would achieve permanent economic security, with the expenditure of so little time and effort, that private accumulations would lose their historic meaning, and people would be no more interested in piling up personal fortunes than they are now interested in drawing water from their faucets and putting it into pails to keep around the house.

If water were scarce, of course, that is what we would all be doing. If we had no water system and had to depend for our water supply upon the springs which each one of us individually could find, or if

the system we had installed only spurted a little water occasionally, a large measure of our thought and labour would necessarily go into the individual saving of water for individual protection, and many fools among us would doubtless erect great tanks and cisterns in our front yards, not for convenience but to demonstrate to everyone just what superior persons we are.

That is the way the world has regularly acted in the matter of its food-shelter-and-clothing supply. It was only natural, then, that the unsupplied should concentrate their thinking upon a more equitable distribution of these necessities. And it was only natural, on the other hand, that the well supplied should hate to have the unsupplied entertaining any such dangerous ideas.

That, in a nutshell, illustrates most of the argument during the past fifty years between the proponents of socialism and the defenders of capitalism. In this controversy, the proponents of socialism had an incorrect theory, while most of the capitalists had no theory whatever. If it was a mere matter of debate, the socialists generally tore their opponents' logic all to pieces.

It was not, however, a mere matter of debate. In America, at least, capitalism advanced in spite of its poor arguments, or its lack of arguments. When agitators agitated for a 'just' distribution of wealth, defenders of the existing order declared that system was eminently just, although millions even of little children might be suffering desperately because their

fathers were denied the opportunity to earn a decent living.

When socialists advocated 'co-operation instead of competition', the defenders of capitalism actually tried to prove that 'the survival of the fittest' was the first law of nature and that it was all natural and proper, therefore, that we should all be engaged in a desperate struggle against each other. Those fittest to compete, they said, would survive, and those who were so lacking in the ability to look out for themselves that they could not survive without the help of an organized society would very properly be snuffed out of existence. And then, to reduce their own arguments to the ultimate absurdity, they were likely to follow up this stupid and inhuman pronouncement by declaring that socialism was opposed to religion, and to call even upon the followers of Jesus to have nothing to do with this dream of human co-operation and to rise to the defence of this free-for-all fight of everybody against everybody in which only the strongest and most pugnacious could hope to survive at all.

When one looks back upon the arguments which were customarily advanced for socialism and for capitalism, it is little wonder that those workers whose minds were inclined to be logical so often became socialists. But life is bigger than logic, and the great majority of American workers, even while they might admit that the socialists had the best of the argument, did not espouse socialism. When times were particularly hard and unemployment widespread, the socialist

vote grew, but when times got better, the socialist vote dwindled.

And times did get better under capitalisn. That was a fact which the socialists could not laugh off. Capitalism was stupid. It blundered. It did wrong things often; and when it did right things, it gave wrong reasons for doing them. It had no social philosophy, no conscious social aim. It was utterly unaware of itself, and could therefore give no convincing apology for its existence. But it raised the standard of living of the masses, because it could not help doing so; and the masses, who were more interested in living than they were in theories about life, did not therefore rise in rebellion against it.

'If I had a son in college,' I declared many years ago, 'and he did not become a socialist before he was twenty-one, I would disinherit him. But if he remained a socialist,' I added, 'after having an opportunity to study the real nature of our economic and social development, I would likewise disinherit him.'

It is hardly necessary to-day, however, to swallow the socialist theory in order to avoid swallowing the mess of stupid and often contradictory theories which once passed as the philosophy of capitalism. For modern industrialism has become, to some degree, at least, aware of itself. It is discovering its purpose, and it is discovering the principle upon which it must operate if that purpose is to be achieved.

This purpose is positively not the survival of the strongest, not of the most quarrelsome. It is, in fact, the very purpose which has inspired the socialists

and the communists: the creation of a new and better world, and the substitution of peace and plenty through all-round co-operation in place of the poverty and bitterness of the old struggle for existence.

The socialists sought to achieve this end through legislation — either through seizing the mills and mines and business establishments by political force, or by curbing and discouraging them through taxation until their owners would be willing to turn them over to a working class government for a reasonable financial compensation. The communists have sought the same end through setting up a dictatorship of the proletariat and the stripping of all but the wage-workers of political or economic power. It is easy to see why either programme is hateful, in the eyes not only of the holders of special privilege, but of the masses who have looked forward hopefully to the time when they might become property-owners and somewhat privileged persons themselves. It is more to the point, however, to discover what is actually wrong with such a dream.

It is not necessary to fall back on the generalization that industries cannot be managed by political governments. There are many industries, such as the postal systems, which are generally so managed, and which develop considerable efficiency. On the other hand, there are no instances at hand in which even the best-managed industries under government control have raised the standard of living of the masses in the completely revolutionary way that modern

mass production, under scientific instead of under political management, has done.

Governments may establish low rates for the services which they give — and make up the deficit through taxation. When our so-called private industries give low-cost service, however, they must do so through discovering better methods of production and distribution. As a matter of fact, of course, none of our great modern industries is private. All are serving the masses, and have no other justification for existence. Mr. Ford and his son may own all the stock of the Ford Motor Company, but the Ford Motor Company does not and could not rest upon such a flimsy thing as a mere legal title. Governments themselves, which issue and defend such titles, have no rights *per se*. Governments derive their rights from the people governed, just as industries, fundamentally, derive their rights from the people served. To oppose socialism or government ownership because they place the rights of the masses of human beings above the rights of private property-owners is really to argue in favour of socialism or government ownership. The only real argument against so-called public management of industry is that it is less public, in this age of science, than is scientific management.

Political management, whether autocratic or democratic, is necessarily management by opinion. Industrial management is necessarily management by the facts. It is true that industrial management seeks profits, and political management may ignore profits, making up its deficits by taxation. Such a system may

seem to result in making certain services free; and if wealth is being unjustly distributed in the economic field — that is, if the rich are becoming rich through levying taxes on the poor — it is eminently right that the political government should serve the poor by levying taxes upon the rich.

Now, that was the way in which the rich once became rich, and it was the way, even under capitalism, in which the people, rich and poor, still supposed that riches were to be acquired. Karl Marx, who was an unusually keen observer, analysed the social set-up keenly; and though capitalists were angry at many of his findings, they could not dispute them. Labour, he said, is a commodity, and that was their opinion too; but the capitalists were *acting* upon the opinion, whereas he was merely making the observation. He said that wages would be highest when labour was most in demand; and since there were generally more workers than jobs, wages would generally tend toward a mere subsistence level. Wages, he opined, were part of the expense of production. If wages were high, prices must be high; and if prices were higher than a competitor's prices because wages were higher than the competitor was paying, the man who paid the higher wages must soon go out of business. To all of which the average capitalist heartily subscribed.

It is saying nothing against Karl Marx to say that he did not and could not foresee the modern era of mass production. He could not understand Henry Ford, for the simple reason that Henry Ford had not yet happened. He reasoned, instead, that things must

in time become unendurable; and that, in the most highly developed industrial countries, the political government, not bound to follow the principles which kept the capitalists for ever grinding down the workers, would of necessity take over the industries and there would be an era of 'state socialism,' to be followed in time by a complete industrial democracy or communism.

Everything considered, this was not such a bad guess, for if capitalism was what the capitalists themselves assumed that it was, some such emergency must have arisen in every highly developed industrial country. As a matter of fact, it was in a country which had hardly been touched by machine production in which communism actually made its bow; and it was in America, in which capitalism reached its highest development, that neither socialism nor communism could secure a hearing excepting during short periods of business depression.

While capitalism was operating on opinions, instead of upon facts, Marx's opinions were about as sensible as anybody's. Only as business discards opinions, however, and proceeds to act upon fact-finding, is it most successful; and where business is successful, Marxian doctrines make no headway.

There are, at the most, but a handful of communists in the United States, that is, of communists who have any clear concept of the principles of communism. These communists at times, however, may get a considerable following, and those who do not understand may think that communism is growing. What

is growing at such times, actually, is unemployment. All that is happening is that larger and larger groups are losing their buying power. The communist leaders may not be great tacticians, but they are sensible enough, at least, to understand this; and they do not fritter away these opportunities by appealing to the intelligence of the unemployed, but to their misery. The capitalist system, they cry, has failed; and it *has* failed, as far as these particular hearers are concerned. It has left them out of its benefits. The communists, as these wretches see it, are considering their problem, while 'capitalism' is not: and so, in their desperation, they become 'communists' — until business, for some reason or other, picks up.

Unfortunately, many business leaders in such a situation do exactly what the communist leaders want them to do. Instead of tackling the problem of unemployment, they tackle the doctrines of communism, and try to persuade the hungry that the system which is not giving first attention to their hunger is, when we study it out carefully enough, the very best system that we can possibly hope to have. And when this line of argument does not seem to register effectively upon hungry stomachs, the business men begin to join movements 'to stamp out communism.'

Communism feeds on all such movements. Incidentally, all sorts of racketeers now step into the picture and begin to graft upon such business men. Such business men, of course, are traditional thinkers, and it easy to persuade them that any variation from

traditional thinking is 'communistic.' These racketeers, then, supported by the contributions of business men, launch upon nation-wide heresy hunts. They fill the country with 'black lists' which often include the names of the leading humanitarians and the leading scholars of the day. Nothing in particular happens, of course, excepting that the racketeers get a living and the deluded business men pay for it, and the communist leaders are given a lot of free advertising, which, if they were better tacticians than they are, they might turn to considerable advantage.

If these business leaders only knew it, they could make America absolutely immune to communist propaganda. It would not be necessary to deport or imprison or even censor a single communist. All that they would have to do would be to tackle the problem of unemployment—which happens to be a problem which business can solve and which the communists cannot. It is not a problem, to be sure, which can be solved in a day; but if American business would once *promise* to solve it, if it would once let the whole world know that it recognized the problem as one which business must solve at any cost, that in itself would fasten the attention of both workers and unemployed upon the business programme, and distract it from the agitators and demagogues who now get a hearing only because business has not yet publicly accepted its responsibility.

These so-called communists, after all, do not want communism. What they really want is exactly what business men want them to have, and what

they must have if business is to be successful. They want a higher standard of living. They want economic security. They want a friendly society in which they will not have to ask anyone else for the privilege of earning a living, but in which the job of getting a living will be so simplified that anybody can do it, and most of our human energies can be devoted to achieving a more abundant life.

When people are getting these things, they are utterly immune from communist agitation. In fact, even where they are not getting them, but where they find themselves a little better off year by year, and a little nearer to this hoped-for goal, all talk of overthrowing the system which is bringing this about seems so utterly irrational as to be amusing instead of dangerous. But these things are not merely natural desires which all human beings share; they are necessities of our industrial system. For that system is built upon fact-finding — upon the discovery of better and better ways of doing whatever we are doing and of how to do things which we have not been able to do before. All this means a constant increase in production, which demands a constant increase in consumption — in other words, the higher and higher standard of living which everybody naturally wants.

The real fallacy of socialism and communism is that they are not based upon human nature as it actually is, nor upon human society as it actually functions. They are based, rather, upon human longings for justice, and upon a concept of society

which is no longer tenable. Human nature, to be sure, is social. It is co-operative in character, and no strictly human achievements, such as language and industry and art, can happen as the result of any isolated individual effort. But human nature, as we have all learned to our sorrow at times, is not co-operative in the sense that socialists have visualized co-operation. It is disillusioningly slow, at least, to co-operate for justice, while quick to respond to immediate self-interest.

The victims of injustice readily cry for justice; but let these victims once become beneficiaries of injustice, and their interest in justice seems to wane. When slaves became slave drivers, it did not mitigate the abuses of slavery. When workers became capitalists, their fellow workers no longer seemed to be their fellows. Even when hot-headed socialists have been elected to offices of responsibility, the tendency always was toward a cooling of their heads.

If human nature were different from what it is, social justice might conceivably be achieved. But human nature, however it may complain against injustice, seems to be dominantly selfish. At any rate human beings are evidently interested in something much more than they are interested in justice, or in the equitable distribution of this world's goods.

This seems too bad — to those who are not willing to face the facts. To fact-finders certainly, the fact may hold great promise. For if the desire for justice had been the dominant human motive, instead of the impulse toward a larger and larger life, we might

have had justice long ago — justice, but stagnation. The equitable distribution of goods in Cæsar's time would still have left the world in poverty; but the world would not have known that it was in poverty because the standard of living of the masses would have been better than it ever was before. In all probabilty, a world which thought and felt chiefly in terms of equitable distribution would have been contented with any political arrangement which brought it about, and human society might have been ever so placid and idyllic, but stagnant just the same.

But selfishness triumphed. Some people grabbed more than their share of wealth, and indulged in luxury. They robbed the poor in doing so, but they made the poor conscious of being poor. They filled the world with hate, perhaps, but they also filled it with longings for more comforts and more luxuries; and when a way was discovered to produce wealth by machinery, more and more people selfishly attempted to get rich by exploiting the masses, quite forgetting their ancient grievances against exploitation.

With all our progress, then, we seemed humanly to be in as bad a fix as ever; and the idea of running all this machinery by an orderly process of government, which would insure equitable distribution, made a strong appeal to many cultured minds. But it was the same old idea — the idea of distributing such wealth as was being made. The real reason that the idea did not gain more headway than it did

was that selfish people, in their eagerness for more wealth, abandoned old methods and discovered methods by which more wealth could be produced and distributed. The result was that, although this new wealth was not distributed equitably, the masses now reached a higher standard of living than they could have reached if wealth had been distributed equitably at any previous period of history.

Eventually the great discovery was made that this wonderful machinery, if it were to bring constant and continual profits to those who wanted them, must raise the standard of living of the masses, and raise it higher and higher as more efficient methods of production were discovered. For the masses constituted the only market to which such large-scale production could look; and mass production began its career of making prices lower and lower, wages higher and higher, and giving better and better service to everybody.

This was selfishness of the first order; but it was satisfying human needs more fully than any unselfish system of social justice could possibly have done. Of course, mass production is in its first stages as yet. It has only begun its revolutionary work by enlisting human selfishness for the widest possible human service. It is achieving social justice, but it cannot stop with the achievement. It will abolish unemployment because it must. It will give higher and higher wages because it selfishly must. And it will necessarily organize the whole world in co-operative endeavour, for the utmost possible service to all human beings

everywhere, without having to wait in the least for any great change in human nature. And the result must be a more complete and more dynamic expression of the social character of human life than the socialists and communists have ever dreamed of.

X

MASS PRODUCTION AND THE TARIFF

I HAVE never been a free trader, nor a dyed-in-the-wool protectionist. I have always been an opportunist, as far as the tariff is concerned; and I mean by that that I have tried to study specific tariff proposals in terms, not of some far-off, idealistic programme, but of the best interests of my country at the time.

I have accepted it as a fact, moreover, that human nature is selfish; and it would never occur to me to urge Americans to neglect their own business interests and to consider the tariff question in terms of what, in the long run, might be best for the whole world.

If a nation can become more prosperous by shutting out all foreign competition, it seems to me a waste of time to argue against her doing so. People, to be sure, do not always act according to their own best interests; but in business matters, as a rule, we may depend upon their acting according to what they *conceive* to be their best business interests. I have no criticism whatever to make of the Golden Rule; but until people can be persuaded that its gold is negotiable, it will never figure very largely in any tariff debate.

Mass production, naturally, has put the tariff question in a new light. When such men as Henry Ford ridiculed the high protective tariff, whereas the

business leaders of the present generation so generally seemed to regard it as a Sacred Principle, many doubtless attributed it to the idiosyncrasies of Mr. Ford. They thought he was a man of queer ideas. They compared him, perhaps, with some scion of royalty who becomes a communist, or with some bishop who espouses atheism. They could not see that Mr. Ford was speaking for business interests as clearly as the members of the Old Guard had ever spoken; but that business, as Mr. Ford was doing it, was a very different thing from business as it had been done.

Business as it had been done needed protection. Business as Mr. Ford was doing it did not. But Mr. Ford's way proved eventually to be the more profitable way, and mass production principles were, little by little, adopted by other businesses. Those which adopted them most thoroughly soon became dominant but the new way furnished its own protection and made a protective tariff unnecessary. In President Hoover's administration, America observed the strange political spectacle of big, successful businesses generally lining up in opposition to a higher tariff — and failing to win their point.

The Republican Party, traditionally, was the party of Big Business. It had become the party of Big Business, mainly, through its protective tariff policy. The Democratic Party, usually, favoured a lower tariff, arguing that Big Business, by keeping out foreign competition, was for ever raising prices at home, and therefore taxing the consumers of America

to pile up huge fortunes for the manufacturers. The Republicans answered that foreign goods could be sold at low prices in America because foreign labour was underpaid; and if the tariff were lowered, American employers would have to meet this competition by paying low wages too.

The Republicans usually won out at the polls. Just how much this argument had to do with the victory, no one, of course, knows. The average voter, perhaps, did not know just what a tariff was. He wanted high wages and he wanted low prices; but it was generally assumed that he couldn't have both. All sides seemed to take it for granted that only if he paid low wages could the manufacturer sell goods at a low price.

But mass production gave high wages and low prices at the same time. Under mass production methods, one just naturally went with the other. This was all strange and unheard of; but the employer who adopted the principles and discovered that they worked soon found that he did not need any tariff to protect him against low-wage European industries. High wages, he discovered, compelled better management; this better management eliminated waste, enormously reduced his overhead expenses, made continual improvements in methods necessary, and resulted in such increased production that the actual labour costs, per unit of product, were constantly going lower, enabling him not only to meet and beat competition at home, *but to undersell in Europe the products of European low-wage industries.*

If mass production had meant a mere change in

factory technique, human history at this juncture must have been very different from what it actually was. If that were all that it meant, American employers, at least, would have adopted it immediately. For American employers were noted for their progressiveness when it came to adopting new machinery. It had become a habit in America, for labour in America had historically been much scarcer and therefore more high-priced than labour in Europe, and American employers early learned the advantages of adopting labour-saving machinery. American employers, in fact, when they were confronted with the competition of mass production, did go in quite generally for improved methods. Many, in fact, adopted large-scale production, in the belief that they were going in for mass production.

But they did not adopt genuine mass production, which is *production for the masses*. That is, the great majority did not. That would have required a complete abandonment of several long-intrenched traditions. If they paid higher wages, they did it grudgingly, for they still believed that higher wages meant higher labour costs. If they charged lower prices, moreover, they did so to meet some particularly annoying competition, and did not concentrate on the problem of finding out how low their prices might profitably be made regardless of competition. They wished that something might happen to enable them to keep prices up; and they had had an extensive education by this time in what the protective tariff could do in this direction.

Whenever the tariff came up for revision, then, American manufacturers had traditionally flocked to Washington, or sent their lobbyists there, to secure as high a tariff as possible on the particular things they had to sell. From the Civil War to the World War, the great leaders of American manufacturing had done this; and after the World War, even after mass production had demonstrated its principles, the traditionally minded business men of America did the traditional thing. They clamoured for a higher and ever higher tariff on the things they had to sell.

The crying need of Europe at this time was for the resumption of international trade. America had become the great creditor nation of the world; and it was to the American market that European manufacturers looked most eagerly. The cry went up from everywhere that Europe could not pay her huge debts to America in gold, and that she must pay them in goods, and the American tariff became a sore spot in almost all European thinking. America, however, not only retained her tariff wall, which continued to shut out much of European competition, but her great mass production industries, which had achieved the seeming miracle of reducing labour costs by paying higher wages, were underselling European industries in Europe.

The European countries, therefore, began to adopt retaliative tariffs, often aimed directly to shut out American *high-wage* competition. This, it was admitted, was no answer to their economic problems. The step was taken, generally, in desperation — more to

compel America to reduce her tariff than with any hope that the step in itself would bring about prosperity at home. But America did not respond. When Mr. Hoover was elected President, however, many Europeans breathed more easily. Mr. Hoover, they knew, had an international view; and he was an economist, not a mere political patriot.

But under the Hoover administration, the tariff went up once more. Mr. Hoover himself had cautioned against this. He had called Congress together in fulfilment of a campaign promise to secure farm relief, and he specifically asked that there be no general tariff revision but that Congress confine itself only to such items as might specifically give to American farmers a protection equal to that already enjoyed by American industries. But the caution was unheeded. The unsuccessful industries of America now clamoured for a higher tariff, while the greatest and most conspicuously successful industries opposed any such step. Congress enacted a tariff higher than ever.

For the first time in American political history, the leading economists and the most successful business leaders were in general agreement against this tariff bill. More than a thousand American economists petitioned the President to veto it. The President, however, signed it, and it became a law.

Europe was bitterly disappointed; but Americans, even those who most urgently opposed the bill, could understand. This was a Republican congress, and to the Republican party the idea of the protective

tariff was a most sacred tradition. Successful business, to be sure, opposed any increased tariff now, and the Republican Party was supposed to be the party of successful business. Congress acted, however, not according to the advice of successful business, but according to the traditions of successful business and according to the demands of the great majority of American business men who still held to those traditions and who, because they held to the traditions of success, were no longer successful.

This was the Tariff of the Unsuccessful Business Men, allied with the unsuccessful farmers. It was the tariff of those who had failed to grasp the principles of mass production. It was the tariff of those who based their thinking upon truths which were no longer true, who assumed that low wages still mean lower labour costs and that pauper labour, if permitted to bring its product to market, will crowd the products of well-paid labour out.

Science had now discovered a new truth; but political parties cannot be expected to react overnight to every new discovery. Political parties develop, rather, around old truths that have long since been discovered; and it may easily be that, by the time the party had developed, the truth about which it has developed has been supplanted by another truth.

I am not discussing, at any rate, the correctness or incorrectness of the theory of the protective tariff, or the historic role it has played in American prosperity. I am simply pointing out that the mass production discovered that it did not need and could not use

any such protection, while traditional business did not make any such discovery. Traditional business, in fact, needs all the protection it can get from every source, and more. Even then, it cannot succeed; for while it may thus meet and beat the old forms of competition, it cannot hold its own against the inroads of mass production.

If one is to grasp the exact relationship of mass production and the tariff, it is necessary to note one other thing. Although the heads of the great mass-production industries now advised against increasing the tariff, they did not organize politically to prevent such an increase. They did not, in self-protection, need to do any such thing. While a higher tariff, as they saw it, would injure business generally, it would not put their mass production industries at the mercy of any competitors. There was no call, then, for desperate opposition. In case the nations of the world continued to raise higher and higher tariff walls against each other, these huge mass production industries knew what to do. In fact, they were already doing it. They were locating factories in the European countries whose tariffs were so high that they could not profitably continue to manufacture in America and export to those countries.

Mr. Ford, once again, was the most conspicuous leader in this movement. He not only built factories throughout Europe, but he introduced the same low-price, high-wage principle by which he had so conspiciously succeeded here. Mass production, it may be said, not only did not need high tariffs but it did

not depend for its success upon political governments abolishing them. The Ford business now increased in spite of the world-wide business depression which was due in part to these international tariff wars. The number of Ford employees actually increased, but not the number employed in America.

Times were hard throughout the world. It was essential to every business that every possible economy be employed, particularly such a business as the manufacture of motor cars, for there was widespread unemployment and the masses had nothing, it seemed, to spend for luxuries. If there were any saving to be effected through paying low wages, we may be sure that Mr. Ford would now take advantage of it. Instead, he raised wages in his American plants to a seven-dollar in place of a six-dollar minimum, and arranged at once to pay workers in all his European enterprises a wage which would represent buying power equal to the wages he was paying in Detroit. He did this because it was good business to do it. The great business necessity of the times was a wider distribution of buying power.

Buying power could not be increased either by raising tariffs or by lowering them. It could be increased, in the first place, only if the production of wealth were increased; that is, if better methods were employed whereby production costs might be diminished. If business is to dispose profitably of this increased production, however, more buying power must be distributed, particularly through higher wages, so that the masses may be able to buy it.

The coming of Ford was not welcomed by the traditionally-minded business men of Europe. They looked upon his intrusion as a calamity, in much the same way that American business had once looked upon his 'upsetting the wage balance' when he first introduced his five-dollar minimum wage. On the other hand, the going of so much Ford industry to Europe was not welcomed by American business men now. While they had come to see, by this time, that the Ford policies had greatly helped business throughout America, they could not see anything but harm to American business in his decision to carry on such a large part of his future enterprises in foreign lands.

The very persons, in fact, who still believed that they must protect themselves by high tariffs against the products of low-wage European industries, saw nothing but disaster in this movement by which, inevitably, wages generally in Europe must be raised.

In the meantime, however, European nations began to find themselves suffering from the 'protection' which they had now built up. Not a single European nation could stand as much of this sort of protection as America had been able to stand. For, industrially and commercially, the United States was not like any European nation but was more to be compared with Europe as a whole; and the result of the many nations' tariffs was to strangle European industry, much as industry would have been instantly strangled in America if, instead of one national tariff, each American state had set up high tariffs preventing

trade with other states. Agitation began, therefore, for an 'Economic United States of Europe.' The different countries, often, hated each other and feared each other, and there was little in the psychology of the situation to foster European union. But economic necessity has a way of making itself felt, even when sentiment and tradition and public opinion seem to be pulling in the opposite direction. In spite of everything, therefore, this movement grew.

In all the countries there was a bitter feeling against America, and a bitter resentment against the introduction of American methods in Europe. Of necessity however, American methods were more and more employed — at least, methods which were supposed to be American methods. Obsolescent machinery was scrapped. Systems of factory co-ordination were installed. Production charts were drawn up, and all sorts of efforts were made to catch the 'mysterious' American technique. But these efforts were often disappointing. They might result in large-scale production, and even in low-cost production, but not in mass production. The only way that mass production can be achieved is to produce for the masses at a price which the masses can pay, and see to it that the masses have sufficient buying power to meet this price.

Two things interfered with the adoption of this genuine mass production. Traditional thinking, in the first place, inhibited employers generally from paying high wages. No matter how much they studied Ford's success, they persisted in assuming that wages

must come out of profits, instead of recognizing the mass production fact that higher wages come out of higher production. They were not slower than Americans have been to recognize this truth. Ford had made his great demonstration right under American eyes; but it was a decade or more before any considerable part of American business woke up to the significance of the demonstration, and the majority of American business men do not comprehend it yet.

In the second place, even if this principle had been grasped, the average European manufacturer could not sell to large masses anyway. The protective tariffs made this impossible; but the people of each nation were so afraid of the economic domination of some neighbour nation that it seemed impossible to remove these tariffs. Economic necessity, however, remained on the job. To reorganize their industries as they had to be reorganized, employers had to have large capital; but large capital was not available generally to industries which, in the very nature of their situation, could not reach a large market. To say nothing about Europe competing successfully with America now, it seemed necessary that Europe must tear down her internal tariff barriers if European business was not to break down entirely.

If one tried to judge the trend of the times by public opinion, one must surely have reached the conclusion that such an economic union in Europe would be impossible. If one studied the forces of economic necessity, however, one could not help seeing that such

a union was inevitable and that it would probably be brought about within a very few years.

And when this union was effected, one might be sure, Europe would be able to compete successfully with America. It would not follow, of course, that she *would* so compete; but she could then take up mass production, which she could not do so long as Europe was divided by high tariff walls into little isolated economic groups. Whether she would actually achieve mass production or not, however, would depend mainly upon how definitely her producers attended to the task of creating and distributing buying power.

But that she would eventually do this was also, for a different reason, inevitable. It was inevitable for the same reason that mass production had become inevitable in America. In America it was inevitable because it was started and tried and proved to be more successful than traditional production, and because, wherever it was tried, prices went down, wages went up and total profits increased because the masses could buy not only more mass production products but more of everything that business had to sell.

And mass production, even in Europe's darkest hour, was already being tried in Europe. Mr. Ford himself for one, was trying it. He was raising wages. He was distributing buying power — not through giving away his money but through organizing the production of more wealth. Tariffs, for which he had no use, had forced him to take this step. In no country, since the advent of mass production, had these tariffs done

what they were designed to do. But they did have interesting results.

They were designed to fence prosperity in; but in the smaller countries they had effectively fenced it out. In America, they were designed to prevent the competition of low-wage industries, on the theory that low wages meant low labour costs. Under mass production, however, higher wages resulted in lower labour costs; and these high-wage industries, instead of enjoying the 'protection' which was given them, were exporting mass production factories to Europe and building up European industry so that it could effectively compete with ours.

The result upon America, incidentally, must be one which no traditionally-minded business man could be expected to grasp. For this building up of European competition, instead of proving disastrous to American business, must prove eventually to be of great benefit. At first, no doubt, there was some business loss to America in so many American industries deciding to build in Europe instead of distributing their whole pay-rolls here. But the tariffs, designed often to retaliate against the American tariff, had so curtailed exports that they could not have continued their expansion in America anyway; and by distributing buying power in Europe, these industries were now creating a market for all sorts of American products which, without this market, must have remained unsold.

The European tariffs, to be sure, might still make it impossible for Europe to buy many of the things

which Americans had to sell. Hence this increased buying power in Europe might not result in much increase in American exporting. But the same forces which worked first to break down the tariff walls in Europe must eventually work to break down the walls between Europe and the United States. There is nothing in the state of public opinion which warrants any such conclusion. This is not a prophecy based upon the election returns. It is a deduction, rather, from economic necessity. Mass production is the most successful form of production, and therefore must dominate; but mass production, so far from needing protection against old-style, low-wage production, demands that the masses everywhere have more buying power and therefore wants its competitors to adopt the most successful low-cost methods too. Nor will this lead to over-production as long as there are twelve hundred millions of people living with almost no buying power as yet, and millions in almost every country with too little buying power for the best interests of the world.

As I have said before, I have never been a free trader, and I have not intentionally advanced any argument against the theory and practice of protection, as it has historically operated in the United States. But that theory and practice, whatever advantages there may have been in it, was the theory and practice of a passing time. We have entered a world of mass production. Mass production cannot stop at national boundaries. It must produce and distribute more and more wealth, and more and more

buying power; and it must favour the production and distribution of more wealth and buying power in every part of the world. Mass production demands the prosperity of all; not merely of workers and consumers and of other businesses at home, but the prosperity and consequent buying power of other nations as well.

XI

MASS PRODUCTION AND WORLD PEACE

FOR thousands of years, suffering humanity has longed for peace and entered into war. The year 1914 was no exception. If that year was different from other years in which war clouds had burst, it was in the greater determination of the various peoples of Europe *not* to fight each other. Anti-war propaganda had now circled the globe. Both capital and labour had become international. A World Court had been opened at The Hague. Great international labour conventions cheered the orations of French and German and Russian delegates, as they declared that the aroused workers of the world would no longer be duped into killing each other wholesale because their masters may have fallen out and were willing to sacrifice the common people by the million in the pursuit of their own private gain.

And many great business leaders, instead of being annoyed by such outbreaks, were rather pleased. They did not necessarily agree with the reasoning. If workers imagined that war would help the great capitalists, they were simply mistaken, but it was something, as these capitalists saw it, to have the workers realizing that war was not and could not be of any advantage to labour; and they gave the inter-

national socialist movement some credit for preserving peace.

Never before was there such widespread feeling against war, or such an opportunity to give expression to it. Transportation and communication had so advanced, and literacy had become so general, that it was impossible now to represent all foreigners as barbarians, while it was easier than ever to see through the hypocrisy of those who made flamboyant appeals to patriotism for the sake of getting a political following.

Anti-war literature was extremely popular, while literature favouring war was now practically unknown. Of course there was much nationalist literature — many books pleading for more patriotism and more attention to the nation's defence. But these books did not advocate war. The old claim that war brought out the highest virtues of courage, honour, self-sacrifice, or that it was nature's way of achieving the survival of the fittest, could not now be sustained. The public was quite well aware, by 1914, that war tends also to bring out all that is savage in man, and that it selects the fittest youths, not the unfit, to go forth to die, or to become physically or mentally unfit.

Economists, moreover, now knew that war does not pay, and that victory may be quite as expensive as defeat. One book, by Norman Angell, picturing war as 'The Great Illusion,' received a world-wide discussion and was circulated enthusiastically by both capitalists and socialists.

Another argument against war was found in the

very destructiveness of modern war machinery. It was pointed out that fighting would not be glorious in any war which might now occur, for man would not be pitted against man in even combat, but masses would simply be ground to death in huge slaughtering machines.

If feeling and argument could preserve world peace, the peace of the world would seem to have been secure in 1914. With that object lesson behind us, one should hesitate to-day before making any optimistic forecasts concerning the peace of the world. It is true that there are still greater peace movements to-day. It is true that we have a League of Nations, which we did not have before, and a more practical and effective World Court. It is true also that we have the memory of a war so devastating, and of an aftermath so disillusioning, that a solemn treaty to 'outlaw' war was forced by public acclamation upon almost all the governments of the world. In view of what happened in 1914, certainly, there is no reason to believe that any or all of these movements can finally safeguard the peace of the world.

Fortunately, however, we do not have to depend upon these movements. The writer believes that all of them have educational value, and that they have added much to the machinery of peaceful diplomacy; but if his hope for world peace were based upon parliamentary and diplomatic procedure, he would have to confess to very little optimism. Peace, however, fundamentally depends upon something else.

Peace within the family depended fundamentally

upon how well the family solved its economic problems. All that the family was later able to teach about love and brotherhood hinged upon what it was first able to do in the matter of securing a living for all its members, the old and the young, the weak as well as the strong.

Peace within the state had the same economic basis. A state might seem ever so powerful, and yet, if its citizens and its subjects could not get a living, it fell; and even the fear that its overthrow would lead to even greater disaster was never enough to keep such a state from falling.

Now we are in the machine civilization; and world peace within that civilization depends, not upon how earnestly world peace may be desired, nor even upon what the world decides to do politically, but upon how the machine actually provides for the economic necessities of the world.

We cannot be sure, unfortunately, that there will not be another war. It is certain, however, that the economic system which has always heretofore been dominant made war inevitable, and that the system which is now becoming dominant makes for peace. War was always bad for business, but that did not prevent its coming, any more than the fact that typhoid is bad for those who are spreading it could prevent the plague. Whether we have another world war or not depends definitely upon business; but not upon whether business favours war or peace — for there can be no question now as to what business wants — but upon how soon the business leaders of

the world will substitute fact finding for their traditional thinking.

The great business leaders have already made the substitution, and as they have done so, they have not only been making peace but making profits. Those who are still thinking traditionally, however, are not making profits, or are finding their profits more precarious year after year. Human nature being what it is, then, we may be sure that business will eventually take the profit-making course, and that will be the true peace-making course.

After all, there is nothing mysterious about war, even if it has seemed to come when nobody seemed to want it. People fight, not because they want to, but because they are on different sides. When they fully realize that they are on the same side, they stop fighting.

The formula by which war might be abolished was discovered ages ago. It was known as the Golden Rule. It consisted of doing unto others as we would have them do to us, or of loving others as we love ourselves. There was nothing wrong with the formula. Everybody must admit that, if generally applied, it would have abolished war; and in so far as it was applied, it did abolish war.

We make a mistake if we think it was not applied at all. Everybody, almost, applied it more or less, and everybody generally still applies it more or less.

It was quite generally applied, for instance, within the ancient institution of the family. Not universally,

for there were families whose members did not stick together through thick and thin. The rule, generally, was that people should think as much of their family's interests as they did of their own individual interests, so they not only worked for their families but they gave up their own lives, on occasion, to protect their families.

When people did this, they were not considered prodigies of goodness. It was looked upon as the natural thing to do. If people did not customarily do it, in fact, the institution of the family could not have survived; and without the institution of the family, the individual would have had a very hard time. He sacrificed himself for the family, in the long run, because the family was worth sacrificing for. It required no fundamental unselfishness on his part; all it required was enlightened selfishness. And this eventually became so established in tradition that almost everybody who felt that his family was being attacked or insulted resented it quite as instinctively, it seemed, as if he himself had been attacked or insulted. In other words, he adopted and applied the Golden Rule, as far as his own immediate family was concerned. He did unto the other members generally as he wanted them to do unto him, and he learned to love them much in the same way that he loved himself. Of course, there were bickerings and disagreements and petty quarrels; but wherever the institution of the family was the dominant institution, and one had to choose between living in the family and facing a world of enemies all alone, these quarrels

were seldom very serious. Not until individuals could find refuge in some other social institutions, such as the State, or bandit crews, were people likely to turn against their own families, and even then they didn't do it very often.

Of course, the family is not holding together in that way to-day, but that is because it doesn't have to. Individuals can live outside their families now, and they can prosper without any special co-operation on the part of their biological kin. But they do not and cannot prosper if they turn against their own side; they must co-operate with those upon whose co-operation their individual welfare depends. They must act toward these persons essentially in the spirit of the Golden Rule, regardless of whether their common aim be good or evil. They may join a criminal gang; but to survive, they must be true to the gang and be ready, if necessary, to lay down their lives for it.

It is neither difficult nor unnatural to apply the Golden Rule. The difficulty lies entirely in the existing social set-up. One could not love his family before there were families. He could not love his country before there were countries to be loved. After the demands of trade made it necessary for people to organize in states, it became possible without any change whatever in human nature, for ordinary human beings so to identify their own interests with the interests of the state, that they would, if necessary, die for it.

The problem of world peace, then, is not a problem of changing human nature so that people will no

longer act as human beings act. It is a problem rather of changing human organization so that people will act naturally toward all other people as they naturally do act toward those whom they recognize as their own. It is much more than a problem of creating a world state; for states, while they may succeed in stirring their citizens to great bursts of patriotism at times, are likely themselves to be the victims of conflicting interests. The state never could command the constant, everyday loyalty on the part of the average citizen which the institution of the family commanded from all its members. The state, both in war and peace, has been the prey of self-seekers and grafters and those with axes to grind. Whether a government could retain its power or not has often depended, not upon how good or how bad the government was, but upon whether or not its people were prosperous; and the state was never in a position which would enable it to control prosperity.

The state, it must be remembered, was not organized to produce and distribute wealth to all its citizens, as the family produced and distributed wealth among its various members. Socialists have set up the theory that this should be the function of the state; but no socialist will claim that it was. States left production where they found it — under the direction of families for the benefit of their own members — and addressed themselves principally to the problems of trade; and trade, as everybody visualized it, while it was more and more necessary from everybody's standpoint, was not a process by which families were trying to enrich

each other but a process by which people were trying to get the best of each other.

So long as business, then, continued to be such a process, political states had to be organized for war. The fact that war was eventually discovered to be unprofitable could not change this. Business had to go on, and the profitable way of doing business, as everybody supposed, was to get the best of someone else.

In 1914, practically everybody wanted peace and practically everybody had become convinced that war was cruel, wasteful, inglorious and stupid. But practically everybody went to war just the same, for forces beyond their control swept them into it.

What was this force? First, it was trade. Secondly, the traditional opinion of what trade had to be — the fixed notion that trade was a process of making profits out of somebody else. No nation could get along without trade; and the business interests of every nation were trying to get the best of the business interests of every other nation. Each business interest, to be sure, was likewise trying to get the best of other interests within the same nation; but each nation had its laws to keep such rivalry from getting out of bounds. However, there was no world law. And even if there had been, there was no world police force, and no world army and navy, no world sanctions, to see that the law of the world should be enforced. Not only was there no such thing but no wish for such a thing: the very idea was generally abhorrent. Much of the world was in fact crying out against the

tyrànny of empires, and the idea that the whole world should be hereafter subject to the political decrees of one central body went against almost everybody's love of liberty.

Occasionally some theorist might argue for such an arrangement, but even if war were the only alternative he could not gain many converts. Even after the World War, and after its cost and its futility had become apparent, such an enlightened and peace-loving country as the United States refused to join the League of Nations for fear that it theoretically might attempt to enroach upon national sovereignty. One does not have to agree with this decision to recognize the force behind it, and to lose faith in a world political government as an effective guarantee of world peace.

Since 1914, moreover, the whole situation has changed; not because political government has demonstrated any special genius, but because business has discovered certain facts about itself.

It has been discovered that trade is more successful when no attempt is made to get the best of anybody else; and it has been discovered that it is most successful when it utilizes all the resources of science so that it may bring the utmost possible benefits to everybody.

Upon that discovery, there is something more than a hope for world peace. World peace has now become not only a practical possibility, but the logical outcome of successful business methods. True, there may be another world war before business generally will discover the principles upon which business

success now depends: hence work for world peace must principally consist of helping the world to grasp and to apply these truths.

It is not necessary, however, to theorize, or to try to persuade the world to give up methods of doing business which promise great financial rewards, and adopt some method which will assure world peace. All that is necessary is to follow the methods which have proved to be most profitable. These are the methods of mass production and mass distribution, the fact-finding methods, the system which perceives that business cannot sell more than consumers can buy, and which directs first attention, therefore, to the consumer's interests, the system which not merely finds markets, but creates markets by manufacturing and distributing buying power, and thus translates the selfish human desire to conserve prosperity into an effective human determination to preserve peace.

Mass production makes peace with everybody, even with its competitors. When success is based upon producing wealth for others (instead of taking it from others), the more who succeed the greater will everybody's opportunities be. Mass production actually seeks the success of its competitors, for success, it knows, can come only from the use of better methods and the use of better methods increases buying power and adds to the general prosperity. In the international field, therefore, it demands the success of other nations, so that their people shall become much better customers than the people of a commercially defeated nation could possibly be.

Mass production, in a word, includes the whole world through serving the whole world. It does not, and it cannot, leave anybody out of its benefits. It destroys antagonism on the part of consumers by making prices as low as possible, and on the part of workers by making wages as high as possible; and it undermines the whole incentive to war by making world exchange as profitable to everybody as it can possibly be. It is destructive only of the fears and hatreds and traditions which keep human beings from co-operating. It does not change human nature, but it is giving selfish human nature an opportunity, which could never be clearly seen before, to express its selfishness in profitable co-operation.

XII

MASS PRODUCTION AND EDUCATION

MASS production demands the education of the masses. That is a large order. Doubtless it will be many years before it can be filled, for the education which is needed is not one which our educational institutions are at present equipped to give, and it will necessitate the teaching of many things which the teachers do not yet know.

In the first place, the masses must learn how to behave like human beings in a mass production world. No one yet knows how to do that. All of us have learned something about how to behave in a family civilization, in an agricultural civilization, and in different kinds of class civilizations; but the machine civilization into which we are all moving, a civilization which is rapidly erasing so many of the old relationships of life and bringing the whole world into one social body, remains to be explored. This civilization is founded upon production for the masses, but unless the masses play a conscious part in it, production for the masses cannot go on.

It is necessary, for illustration, that unemployment be abolished and that the masses everywhere be freed from the fear of losing their jobs and hence their economic security. But how will working-men behave

if they are freed from this fear? Plainly, we do not know. We can only theorize about it, for it is a condition which has never existed since the beginning of industrialism. To be sure, the serfs were not afraid of losing their jobs, slaves were not afraid of being thrown out of work, and the members of the old patriarchal families felt economically secure as long as the family was enjoying prosperity, whether they individually were good, efficient workers or not. The masses of industrial workers to-day, however, are neither slaves nor serfs nor members of agrarian clans. In the main they work because they have to work; and they work faithfully, among other reasons, because, if they do not work faithfully, there is always the possibility that some more faithful worker will be substituted in their place.

Would they work as faithfully if they were suddenly informed that they could not be discharged, and that the worst that could happen to them economically would be their transfer to some other job or to some other industry? Would there not be a tendency for them to lie down on the job, to take things easy, and thus to destroy the very system which makes it imperative to abolish unemployment?

Obviously, there would be such a tendency unless the masses were thoroughly educated to understand the situation. But there is little, if any, such education to-day. It is not being given in the home, for the average home, no matter how well equipped to teach the traditional virtues, is not equipped to interpret to its children the social relationships of the world in which

those children must soon begin to do their part, and the social responsibilities which come from those relationships.

To suggest that the principles of mass production should be taught in the primary and elementary schools will strike most readers as fantastic. The average school-teacher knows little or nothing about those principles, and is not required to understand anything about them, although they are the principles upon which human society is now being constructed, and principles which must be grasped if these children are to learn how to behave like human beings in this mass production world.

The schools do their best to teach patriotism — loyalty to the political state. We could not maintain our status as a nation if they did not do so. Merely teaching children to be loyal in some abstract sense would never meet the requirement. They must be made to understand, even in their immaturity, that they have special obligations toward their own country. The children, incidentally, do not object. They like it. Loyalty comes natural to them, when it is once made plain that they have a country and a flag, and that this human group which we call the nation is really *their* group. If they had never heard of such an institution as a country, however, they could not be loyal to it. They might be ever so good children. They might be loyal to their fathers and mothers. They might be loyal to every human group of which they felt themselves a part. But the nation in distress would have no meaning for them. A call

to sacrifice for their country's sake must then go unheeded. They might be herded by force, to be sure, into military formation, and they might be employed as cannon fodder to achieve some political end, but they could not become good citizens or good soldiers, because of a fatal flaw in their education. Under such circumstances America, as we know it, could not exist.

But what are the schools doing to interpret the machine civilization — the new grouping of human life which cannot leave anybody out and which renders even the old patriotism inadequate to cope with social problems now? To say that they are doing nothing is not quite true. Inevitably, business and industrial changes are being reflected to some extent in our educational programmes. There are sporadic movements here and there to make education more practical, and to train more of our young people for business leadership. It has become generally understood that more fact-finders are needed, and the old classical curriculum is giving way to more and more emphasis upon scientific research. But the situation is all confusion. There is rather a general recognition that we have begun to live in a machine civilization but the problem of how to live in a machine civilization is hardly yet being discussed. The question of how to behave like human beings is getting considerable attention; but not the problem of how to behave like human beings in the specific social set-up in which those human beings will have to live.

But mass education must come. Mass production

demands it. There must not only be these new relationships of life, but there must be an understanding of them. In this machine civilization, the masses must be taken into full citizenship. They must achieve, not mere literacy, but culture; and it must be a culture based upon fact-finding instead of upon the class traditions of the past.

The masses will presently come into wealth and leisure. Without wealth and leisure little culture is possible, but until the days of the machine, the only possible wealth and leisure, and, therefore, the only possible culture, were the wealth and leisure and culture of special privilege. These could not be based upon fact-finding. They were frequently more secure, indeed, if the facts were well concealed and the fiction of the divine right of rulers to rule were emphasized instead.

In the old class societies, it was not necessary that the masses be educated. It was not even advisable. It was far better that they be merely trained. Had they understood how they were being exploited, they might easily have done away with such exploitation; but since they did not know how to create wealth and leisure for all, any revolution which they might have inaugurated must still have resulted in poverty and unremitting toil for all. Since many must live crude, uncultured lives, it may seem just that all should do so; but the price of such justice must not be forgotten. Under such conditions, humanity could not have developed art and culture and scholarship. It required leisure, at a period when only a very few could

possibly have had leisure, to develop the very things we now care for most. This leisure, however, was based upon cruelty and injustice to the masses; and it could be sustained only if the masses were trained to submit to cruelty and injustice. Such training, socially necessary as it may have been, must not be confused with education. *Education consists of the drawing out of human capacities. Training may consist only of curbing them.*

Training is still necessary, but something more than training is needed now. Children must be trained not to run in front of motor cars, regardless of what they may think of their individual right to do so. They must be trained to eat the things that will not injure them, in spite of individual preferences for something else. Adults must similarly be trained. They must be trained to regard the traffic regulations, to respect the property of others, to obey the law, to meet their obligations and to live generally in such a way that others may live also. But all this training, while necessary to social stability, is not education. It is all negative. It consists of information as to what we must not do. It does not draw out and develop the hitherto undeveloped capacity of human life. At best, it leaves human life largely where it was before. It does not and it cannot bring progress.

The bees and the ants have a marvellous civilization. Their systems seem to work to-day as well as they did a thousand generations ago. But there has been no improvement. Their lives, apparently, are no larger than they ever were. They are doing the same old

things in the same old way. I do not know, of course, what arguments they may have, but the conservatives are evidently in power. One cannot help admiring such a perfect social mechanism. On the other hand, there is something to be said for human life whose civilizations are for ever breaking down, whose habits won't stay put. Humans, apparently, never become perfectly trained. They will not admit their limitations. They fail and fail and try again; and when they get what they go after, they are filled with discontent and forthwith go after something different. Plainly, they don't know what they want, but they want it terribly. It is the search for this something beyond experience which draws them out — which constitutes their education.

Education, therefore, is something more than fact-finding. Education involves thinking — dealing with the facts which are found. Millions doubtless saw apples fall before Newton observed the phenomenon. But the millions didn't do anything about it. Newton proceeded to think about the fact which he had found and his thinking enlarged the boundaries of human life. Einstein, by the same process, has again enlarged those boundaries. Not every fact-finder, by any means, does this. And not every thinker. Fact-finders who think traditionally will simply arrange the facts as far as possible into the traditional patterns; and all facts which do not fit into the traditional patterns are simply thrown away. These are the people who 'learn the ropes,' and who imagine that they are keeping up to date by the process of discover-

ing what is and isn't done. There are many thinkers, on the other hand, who weave weird intellectual patterns, and even construct Utopias which human beings, because they are what they are, can never use. They may be quite ingenious thinkers too, the only trouble being that their thinking does not deal with facts.

What is needed now, in this new world of mass production, is not mere thinking and not mere fact-finding, but thinking along fact-finding lines.

Mere thinking, by itself, may lead anywhere. Sometimes it leads to the insane asylum. And mere fact-finding, by itself, may lead to nothing more than more tables of statistics and the erection of more filing cabinets in which to bury them. Only fact-finding plus straight thinking will serve the present need. The time has come, in fact, when the masses must learn *how* to think.

Mass production, it must be remembered, is not a system to be installed, with such and such appropriations for upkeep. It is a social revolution. It is production for the masses, for the first time in human history, and this is a form of production which, because of its constantly increasing capacity, must, if understood and operated scientifically, abolish poverty and drudgery and the fear of unemployment and all the discipline which has historically been founded upon these things.

To operate this social mechanism scientifically, however, requires more than a formula in the possession of a few great executives. It requires a new atti-

tude toward society, on the part of business men and of workers alike. It does not require any change in human nature, but it does require a new understanding of what human nature is. It requires, for one thing, such a social concept as man has never had before. It requires a sense of change and of evolution to replace the old notion of a world standing still, in which the right and wrong of everything was long ago established and goodness consisted of following the formulas which were handed down.

Merely the operation of this mechanism of mass production, then, requires a new education. But that is only a part of the problem. How shall the masses use the wealth and leisure and security which mass production will bring to them? To use it according to the old standards will never do at all, for all that would then result at best would be wealth and leisure and security, which might easily prove more boresome in the end than hustling to stay alive.

It must be apparent that a great new education is necessary, and for the first time in human history, the masses can be educated. In an opinion-governed world, in a society based upon special privilege, the luxury of thinking has to be reserved for a very few.

For one thing, opinioned men who think are almost certain to reach wrong conclusions. Those who don't think, to be sure, are equally likely to reach wrong conclusions; but in a world governed by opinion, they had one advantage. Those who did not think could at least all reach the same conclusion, and concerted action was therefore possible. All could go to the

same church. All could recognize the same king. All could and generally did obey the same orders, and society, therefore, held together.

What to do when there were two opinions competing for popular acceptance was always a problem. This led to fierce debate, but since fact-finding was not yet in vogue, there was no way of ending the debate except by appealing to authority. and the only way the authorities could put an end to a debate was through putting an end to at least one of the debaters. The debater then who displeased the authorities most was hanged or burned or cut to pieces, as the case might be, and the integrity of society was once more preserved.

We of to-day may look upon such practices with horror. But it is hard to see how they could have been avoided in a world governed by opinion. Orthodoxy has more to commend it than heretics are likely to concede. It is true that we owe all intellectual advance to our heretics, but we owe our social stability, in all previous periods of history, to those whose principal business it was to stamp out heresy. The opinion of the dissenter, to be sure, might be a vast improvement upon the opinion of the tribunal which decreed his death. Nevertheless, in a world governed by opinion, everybody could not dissent from everybody else and act according to some opinion of his own. Not until the age of science, not until the technique of fact-finding had actually been developed, was it ever socially possible to permit the masses to think.

It is little wonder, then, that so few people do any real thinking as yet. The same forces, however, which once made thinking impossible are now making it necessary — the forces of social evolution. In a world governed by authority, it was necessary that we reverence authority; and the divine right of those who could get themselves obeyed was not quite such an absurd fiction as it sometimes seems. In a world governed by fact-finding, certainly, it is necessary that we learn to reverence the facts; and although we may make many errors, a genuine reverence for facts will keep us thinking in harmony with the world in which we live, instead of chasing the vagaries which our minds must surely chase if there is no standard by which we may check up upon our thoughts.

Henry Ford put a bookful of wisdom into a single sentence when he said: 'We may ordain a man to be a bishop, but we cannot ordain one to become an electrician; to become an electrician, it is necessary to learn how electricity acts.' This mass production world has arrived. Inevitably, we must live in it, and, inevitably, we must all participate in its material advantages — more wealth, more leisure, less soul-deadening toil. But how about the larger human life which this new world makes possible? That is a problem for each of us to do his share in solving. In order to solve it, we must find out how mass production works. We must discover that it involves a complete human revolution — an entirely new attitude toward life, and an attitude which cannot be discovered except by finding and dealing with the facts.

I do not pretend to know how far this charge will go — to what extent practices which were once considered sinful may now be taken up constructively, nor to what extent things once considered honourable will now appear as morally repugnant. But I do know that there must be a change on every human front, and that the change will be guided, neither by orthodox tradition nor by mere emotional rebellion against social discipline, but by finding and dealing with the facts. There is little, if anything, in our traditions which will help us solve these problems; and just as it was once necessary for man to curb his animal instincts and learn to follow human codes, it will now become necessary for man to set aside his traditional drives and discover how to behave like a human being in this new fact-finding world.

No one will claim that our existing educational institutions are equipped to meet this new human need. They have, to be sure, inaugurated many changes. They are teaching business. They are co-operating to a larger and larger extent with modern industry and, through modern research methods, they are learning many new facts, not merely in the physical sciences but in psychology and sociology. But one must be very optimistic indeed to believe that the schools, either elementary or advanced, are actually initiating their students into the meaning of modern life or equipping them to play a significant human role in this mass production world.

Many worthy educators, in fact, resent the encroachment of commercialism upon our educational insti-

tutions. They cannot forget that many millionaires (who became millionaires because in a world still governed by opinion, their business opinions were better than the opinions of their competitors) have endowed colleges and other institutions for the purpose, apparently, of getting their opinions perpetuated; and they cannot forget that there is little academic freedom in such institutions, and that there is not likely to de until some excellent funerals take place. One can understand these fears, and perceive their justification, but they do not apply to the conditions of to-day. Modern business, at least, is based upon fact-finding; and the modern successful business leader knows that disagreeable facts are as necessary in his business as are the other kind. He does not, therefore, want 'yes men,' either in his business organization or in the schools; and if he is a director of a college or university which is faced with any problem, he may generally be depended upon to bring, not his traditional opinion, but his technique as a fact-finder to the solution of the problem. This, surely, is in line with the greatest possible academic freedom, unless one believes that his academic freedom should include freedom to ignore the facts.

It is not commercialism, then, but traditional thinking, which is most severely handicapping our educational efforts. This is fortunate, for it is possible, even if difficult, to abandon traditions, while it is utterly impossible to escape from the necessity for food, shelter and clothing, which are now provided through industry and commerce.

In the days when the family was the world's economic institution, the needs of the family dominated such education as there was. The masses, to be sure, were kept illiterate, but they were, at least, initiated into the mysteries of how society held together and how the work of the world was being done. The bulk of this work was done in the home, and when a boy had mastered what the home had to teach him, he had learned how to behave like a human being in the world in which he was sure to live. He learned both the principles and the technique. The modern home is expected by the thoughtless to do as much for the modern child, but only by the thoughtless. The work of the world is no longer done in the home, and the average home has scarcely heard of the system by which it is being done.

As trade developed, and a class society superseded the old clan society, it became necessary to educate the classes to dominate, and to train the masses to accept their domination; and, everything considered, the job was done quite thoroughly. A few were permitted to think, and to decide what others should think, and he who read the books which contained these thoughts was called 'well read.' There were not many such books, and they could all be mastered in a lifetime, if one had a lifetime free to devote to them.

Then the age of science dawned and, eventually, the invention of power machinery. This necessitated the breaking down of the old class order, but it did not and could not mean that its traditions should be suddenly uprooted. Men achieved wealth and leisure

in a new way now, and would not permit the traditional class system to keep them from getting it; but after they got it, they longed for the special distinctions which went with wealth and leisure under the old class order. The capitalists tried to ape the feudal lords whom they had overthrown. They couldn't quite do it, but there was nothing to prevent them, they thought, from sending their sons and daughters to institutions where they could acquire culture and education. Those who could afford to, then, went to college and learned Latin and Greek, and studied the precepts and principles of civilizations in which they were certain not to live, and which did not apply very well to the things which they would find it necessary to do.

This new system needed multitudes of workers. It needed not merely skilful artisans, but men who could be trained to work in altogether new ways. It also needed foremen and managers and record keepers. It was finally decided to make 'education' universal. Everybody, at least, might learn readin', 'ritin' and 'rithmetic. But this was 'book learning' and book learning, if one had enough of it, traditionally meant distinction. So high schools for the masses came, and colleges for all who could make the grade. When attempts were made to substitute more practical education instead, the masses themselves were likely to complain. They knew nothing about mass education and did not want it. Education traditionally meant distinction, and each family wanted its own children to become specially distinguished.

Incidentally, it was no longer possible for anyone to become well read. There were too many books now for anybody to master. Science had dug up more knowledge than anyone could get into his head, and the need of the times, moreover, was not for men who had a mass of unassorted knowledge in their heads, but for men who could organize things so that each could use his special knowledge in some social and socially constructive task.

Trade and technical schools could hardly fill the bill. Trade schools might train their students in the ways in which specific things were customarily done; but by the time those students had graduated, it was found, fact-finders in the factories had discovered better ways, and this 'practical education' was as unpractical often as Latin and Greek. Especially when mass production came, it became apparent that thinkers were needed, instead of persons trained to do anything in any specific way.

Superficial observers, of course, said that mass production methods required no brains at all. They said that only robots were now needed, since all the skilled work was now being done by machines and that men were reduced to the monotonous repetition of the few motions necessary in tending a machine. They failed to note that it requires thinkers to construct such machines; and that, as the process develops, the machine tender is supplanted by another machine and that dull, monotonous tasks are fast being eliminated from human life. An old-style industrial plant might employ five thousand operators and five en-

gineers, while a modern plant may produce the same output with five hundred operators and fifty engineers. The completely automatic factory — that is, automatic except for the highly professional and humanly fascinating work of superintending and improving it — is almost here. It waits only the development of more skill, more engineering, and the liberation of the masses from their status as burden bearers and underlings to that of intelligent, conscious, creative minds co-operating in the control of their economic mechanism.

One of the first half-conscious reactions to this new situation is seen in the great mass movement toward our colleges and universities. But traditional education, it is obvious, is not what people really want. It cannot answer their need, either intellectually or morally, for it cannot interpret this new machine civilization, and it cannot therefore make its responsibilities clear.

The time has come when all our educational institutions, from the primary schools up, must concentrate on the great social task of teaching the masses not what to think but how to think, and thus to find out how to behave like human beings in this machine age. This teaching, of course, should begin in the home; but it can begin in the home only when parents are sufficiently educated to begin it. I do not minimize the task. Even to get it started will require every contribution that every sincere educator can make, and all the help that every fact-finding business leader can give them. But the task is glorious. Its

accomplishment will mean not merely the completion of the machine civilization upon the fundamental principle of service to the masses, but the preparation of the masses to live in it.

XIII

MASS PRODUCTION AND RELIGION

THIS machine age is frequently referred to as an age of waning faith. Religion, it is often said, is losing ground. The old beliefs no longer hold, and things which were once held so sacred as to be almost unmentionable are now subjects of ruthless investigation or even of light discussion.

In fifty years, for instance, America has been transformed from an orthodox, church-going population, in which the dogma of eternal punishment for the masses was quite generally accepted, into a relatively light-hearted, pleasure-seeking people who generally spend their Sundays motoring and to whom the very word 'hell' usually has a comic connotation. Many are so alarmed at this that they compare modern America with Rome and with Babylon, and seem almost to be praying for its immediate fall. The churches of America, however, instead of joining in this cry, seem on the whole to be sounding a much more gladsome note. It cannot be said that they are frivolous. They are discussing serious social problems, and they are working earnestly for a better world. But they are not preaching hell and damnation for the masses, and offering to the chosen few an escape from the wrath to come. There is relatively little insistence

now, in the very strongholds of theology, upon a literal acceptance of the ancient texts. The modern seminaries do not teach aspiring clergymen that Genesis is the one true guide to geology and biology and astronomy. They want reasonably intelligent recruits for the modern ministry, and they know they could not get them if they were to take any such stand as that. The change that has come over America seems to have affected the churches and the religious leaders of America quite as much as it has affected the rest of the population.

But does it mean any waning of religion? If religion consists in holding rigorously to certain theories, regardless of the facts, we must answer Yes. But that theory of religion is not held as extensively as it was fifty years ago; and when one considers the history of religious movements, one wonders how it ever came to be held at all.

The great periods of religious advance were surely not the periods in which the ancient concepts were most rigorously held; they were the periods in which the ancient concepts were most rapidly replaced by concepts which fitted more nearly into the needs of the times. The advance of Christianity was most decidedly a decline of orthodoxy; for if everyone had stuck to the teachings which he received at his mother's knee, he would surely have rejected the new teachings. All missionary movements have been revolutionary and intentionally so; it has been their object to supplant prevailing notions with ideas which would suit the situation better. The mission-

aries many have supposed, of course, while they were engaging in this re-education of whole peoples, that they themselves had come into possession of all the truth there was, and of all there ever would be, and that the formulas which they were now handing down could never be amended or improved. But that is merely an observation as to what many people who have come upon great new living truths are likely to suppose. Whatever they thought about the nature of their particular creed, it must still have been obvious that it could make no progress in the world excepting as old beliefs were given up.

The fact, then, that the people of the machine era are giving up their ancient theories about God or immortality, cannot in itself indicate any religious deterioration. It would indicate merely a deterioration of orthodoxy, a deterioration which is one of the essential factors of any religious advance.

Just what is happening as a result of this change is still a matter of opinion, as we have not yet got to making it entirely a matter of fact. The value, for instance, of a general belief in eternal punishment has not been the subject, so far as I know, of any exhaustive and impartial inquiry. There are indications that it makes a people rather sombre, even if it doesn't make them behave; but whether or not it inhibits them from whole-hearted co-operation in making this world better is a matter upon which we have few if any data.

As to why much of the old belief was given up, and given up at this particular time, I have just a

bare suggestion. I think it was due to machine production. Before the days of capitalism, the world was divided largely into small communities which had relatively little intercourse with one another. Under such circumstances, people might acquire an intense love for the members of their own little communities, but love of humanity, particularly for the great, alien masses, would be most unlikely. They could not love outsiders, or recognize responsibilities toward them, for the simple reason that they visualized them as outsiders. Their only relation to them was a relation of fear and dread; and each little group would have felt much more at ease (or supposed it would) if all alien groups were destroyed.

Each group had its god. How big any god was depended upon the extent to which actual human relations had been developed. When two groups fought for supremacy, their gods fought. When two or more groups amalgamated for mutual protection, and thus enlarged the social set-up, their gods merged. When trade expanded to such an extent that every part of the whole known world came into some sort of communication with every other part, the idea of one almighty god was born.

Some historians claim that the increasing commercial intercourse in the days of the Roman Empire, and the necessary migrations of great masses of workers from one part of the Empire to another, were responsible for the rise of Christianity. The old gods were local, it is pointed out, and had to be carried around, while the god who was now offered to the masses

was one who could be depended upon to be present anywhere, no matter if one lost his baggage *en route*. I am not qualified to express any opinion as to that. It is obvious, however, that worship everywhere has been conditioned by the worshipper's concept of his human relations. Even in the late war, while it may have been theoretically conceded that the same god was presiding over all the world, one group of Christians visualized a god who had the special interests of Germany at heart, while the others pictured a god who was definitely lined up with the cause of the Allies.

Even the theoretical acceptance of one god, then, has not meant actual and practical acceptance of the idea. This is not strange; for, while looking at the matter from one point of view, human relations seemed to be all-inclusive, yet one's actual life was always largely taken up with a very limited set of human relations. The theoretical monotheist, then, had little difficulty in imagining that the god of the whole universe was specially and peculiarly concerned with his immediate affairs and would, upon occasion, suspend natural law itself to help him out of his personal difficulties.

Even in modern times, when the concept of God as a mere local deity had become well-nigh impossible, hundreds of separate denominations sprang up, all professing to worship the same god and all actually accepting the same Holy Writ, but each devoutly believing that God was to some degree at least displeased with the sort of worship he was receiving

from all the other denominations, while peculiarly attentive to the worship given by the sect with which one, probably by the accident of birth, happened to be affiliated. This narrow denominationalism, to be sure, faded out in time; but it is worth noting that it faded out first in the larger industrial communities, where people were forced to learn how to live with other people whose traditional standards might be vastly different from their own, and last in the more remote hill countries where one could visualize the little group of homogeneous neighbours as the sum total of his human relations.

The word 'god,' in other words, has usually served as a symbol of one's personal universe — that is, his actual social set-up; and all who are not visualized as being in that social set-up are assumed to be 'cut off from God' and in the realm of outer darkness. When the family god was all the god which one knew anything about, one worshipped his family god and, figuratively, let the rest of the world go to hell. Essentially the same may be said of the worshippers of tribal gods, or national gods, or of any god who is worshipped by anyone who cannot sense his vital relationship to all humanity.

In the days when the masses of the earth lived in small communities, and these communities were either independent of each other, or so nearly so that their mutual dependence was not recognized, the masses generally were in outer darkness, or hell, as far as the average person's religious concept was concerned. While the coming of capitalism and

machine industry, however, these communities were brought together so vitally that this local notion became harder and harder to maintain. It was not immediately superseded, certainly, and for very understandable reasons, by any passionate devotion to all humanity, symbolized by the worship of one universal deity.

The idea of one God, the Father of all, had become fixed in the creeds, but the *feeling* which such a concept might be supposed to arouse was by no means common. Actual conditions, in fact, seemed to generate a very different feeling. While capitalism destroyed provincialism to a great extent, it substituted a sense of individualism. Instead of becoming devoted to a larger community, then, the tendency was for people to become less devoted to their mere geographical community and more devoted to their personal ambitions. It seemed to many that Almighty God had been dethroned by the Almighty Dollar; but the concept which was actually dethroned was not the concept of a God who had brought the whole human family into loving unity, but of a God who was particularly partial to the worshipper's one little group.

Under the ministrations of capitalism, moreover, the masses were in all kinds of hell. They were in the hell of poverty, and it was a hell from which the masses had no promise of escape. Individuals here and there might escape (capitalism held out that promise), and so many individuals did escape that the masses put up with capitalism. The old fixed class lines were

broken. All workers, no matter how poor, did not have to remain in the working class. If one demonstrated peculiar ability, or had a peculiar run of luck, he might climb out of his class and into a position where the miserable workers would be working for him. But all the workers could not do this: capitalism could not promise anything like that. The masses of them, it seemed, must still be eternally doomed to poverty. Human life, as it was now visualized, was an individual struggle, and the only goal that one could hope for was the survival of the fittest. With such a concept of his actual human relations, it was still quite easy for the average American to believe in eternal torment and eternal failure for the masses of mankind.

It was not at all necessary for him to believe that those who succeeded in this world would succeed in the next. He might believe the exact opposite. He might set up a defence mechanism for his own failure, and attribute it to his worshipping God instead of Mammon. It might please him to believe that the successful in this world's struggle would be punished for ever and ever; and if the churches had only been able to capitalize this attitude, they might have maintained a more enthusiastic following.

But the religious institutions could not do this. Money was needed to sustain these institutions, and it was the successful, not the unsuccessful, who had the money. Large masses, presently, were alienated from the church, as leading capitalists contributed to its support. Agitators claimed that the churches had sold out to Mammon; and the churches generally,

it must be said, contributed something to this indictment. When labour troubles arose, the churches said much about property rights and the sin of covetousness, but little about the iniquities of low wages, long workdays or unemployment.

Capitalism, indeed, while it ruthlesly broke up the old social order, did not evolve in the direction of individualism or of the extermination of the weak. What it actually did was to set up new human relationships — and man was left to grope blindly for some way to express life in accordance wth this new and unfamiliar set-up.

Instead of accepting the philosophy of the survival of the fittest, it became quite the fashion for successful capitalists to go in for charity, and to contribute what they could to achieve the survival of those who, by all these capitalistic measurements, had shown themselves to be unfit. Ruthless advocates of individualism, they still developed a sense of social responsibility. Not understanding the nature of the new social set-up, they were not able to discharge this responsibility intelligently, and so followed the traditions of charity instead; nevertheless, they endowed hospitals and colleges and libraries, which incalculably enlarged the scope of human relations and were intended to develop anything but an individualistic attitude.

Moreover, no matter how they preached individualism, they would have none of it in their own business organizations. In their factories and offices, all individual ambitions had to be subordinated to the company plan; and the employee who was inter-

ested only in his own personal success was either discharged or passed by in favour of one who had learned how to co-operate and how to develop a spirit of co-operation.

With the coming of scientific management, even the owner's own opinions of how an industry should be run had to give way to some impersonal social plan. The owner was compelled to abandon his personal dictation of the business, according to his own whims and fancies, because, if he did not, he would be almost sure to lose his business to some competitor who did. This substitution of fact for opinion in the guidance of industry had many results, but its most important social result in America was such an increase in efficiency that the standard of living of the masses was greatly heightened, even before the advent of mass production.

There were not many scientists yet in America, and not many who could be said to hold a scientific attitude. Nevertheless, there was a wider and wider sensing of the fact that success follows scientific research, rather than pleas to some special providence, and there was an increasing abandonment either of church attendance or of the old churchgoing attitude. More important yet, perhaps, there was a growing realization of the fact that the masses of workers were not naturally doomed to eternal poverty, but, even though they remained workers, might aspire to a very comfortable and somewhat luxurious life.

It was while this transition was occurring in America that the traditional belief in eternal hell gave

way. Personally, I believe that the theological amendment was due to the economic change far more than to any debates among the theologians. Some theologians had long since rejected such a belief, and some sects had been organized which stated positively that there was no eternal hell. But these sects were small and uninfluential, and they did not become large when the masses came to hold their point of view. The masses who still continued to attend church generally stuck to their traditional denominations, and often formally repeated the traditional creeds which asserted the old-time belief in hell. But the old-time belief actually faded. Less and less was it a factor in the religious life of America, or in the character of the American people.

Negatively this showed itself, no doubt, by the reaching out of many toward long-prohibited sins, and also by an absorption in material things, instead of in contemplation of spiritual joys hereafter. But there were other and more positive results. More attention being paid to this world, more religious enthusiasm went in improving its conditions. The churches themselves developed a social gospel and emphasized it, sometimes, more than they emphasized eternal-life assurance.

There was no sudden right-about-face. The churches did not meet in any general conclave and decide to abandon their traditional other-worldliness. Actual attempts to change the wording of the ancient creeds, in fact, met with little favour. Nevertheless, the religion of personal escape from hell, or of personal

reward for virtue in the sweet by and by, was given less and less emphasis, and the 'religion of service' was given more and more.

The churches did not split on this issue. Neither faction, if they could be called factions, seemed to understand that it was an issue. The old-timers believed in social service, and believed that the redeemed would engage in it, while the new-timers, as a rule, did not take direct issue with the old-time formulas of personal redemption. Some of the most interesting social revolutions, however, occur in periods in which the forces which cause them are not at all clear, and the issues, therefore, not sharply drawn.

What was really happening was that human relations were changing. The change was in the economic field, and few, if any, supposed that a mere economic change would necessitate any change in one's religious outlook. But just as the economic institution of the family had once established family relationships, and religion had once developed an appreciation of those relationships, religion now had the task of discovering and dealing with the relationships which the new economic change was setting up.

Many, I know, will not concede that religion is a matter of human relationships at all. Naturally, I cannot argue the point. I am simply forced to confess that I am not interested, and am incapable of becoming interested, in any religion which is apart from and independent of the life which human beings must live.

Once, when invited to address a gathering of the

Federal Council of the Churches, in New York City, I felt no little embarrassment. I surely could not assume to tell these religious leaders what religion was; and to get a Christian definition of religion, I pored over the New Testament until I found a statement of Jesus which seemed to be basic but which, I confess, I could not understand.

An ancient Jewish concept seemed to be that religion consisted of keeping a number of commandments, most of which began with 'Thou shalt not.' This concept, I knew, was not uniquely Jewish, for I had met numbers of churchmen who seemed to measure their religion by the number of things they didn't do. It was not the concept of any religious leader; it was the concept, rather, of institutionalism, of traditional thinkers of every age and of every school.

In this Testament, however, He whom so many call 'Master' emphasized an altogether different note. He proclaimed a religion of life and love. Not quarrelling with the 'Thou shalt nots,' He seemed to me to teach that they did not in themselves constitute religion, but that they were worth while only as they hung upon the principle of love. He gave two great commandments, each beginning, 'Thou shalt love'; and 'on these two commandments,' He said, 'hang all the law and the prophets.'

One of those commandments, I confessed, I could not understand. It was: 'Thou shalt love the Lord, thy God, with all thy heart, and with all thy mind, and with all thy strength.' I did not object to it. I believed in God. It had seemed to me to be impossible

to contemplate a universe of eternal law without becoming aware of an eternal power whose law cannot pass away; but the contemplation of this power had never inspired me with that warm, personal, passionate interest which I would call love, and I would have turned away cold if the Teacher had stopped right there.

But He did not. He gave a second commandment: 'Thou shalt love thy neighbour as thyself.' This was interesting; and to me, the most interesting thing about it was the statement that it was 'like unto' the first. In the mind of Jesus, apparently, the two commandments were identical.

I could understand that second commandment, and I had no difficulty after all in talking with these Christian leaders. This commandment, in fact, embodies all the religion which I am able to comprehend. To me, then, religion is service; and if it is service to God, it is only that service which manifests itself in service to our fellow men.

But that's business. That's modern, scientific production and distribution. It is not unselfishness, for it implies self-love. There wouldn't be much point in loving our neighbours as we love ourselves if we were utterly lacking in love for ourselves. All that is needed, apparently, is understanding, enlightenment, an appreciation of what our human relationships actually are. That, however, will require something more than mottoes and slogans and sacred texts. It will require questioning, fact-finding, social and spiritual research.

Religion, apparently, was other-worldly when there seemed to be no hope that this life could be made worth while. Heaven simply had to be located in some other world when, by no stretch of the imagination, could we build it here. The best we could do once was to build sanctuaries, places of refuge from one another; and there were always some aliens who were so utterly alien that they might even violate these sanctuaries. Why they were so alien, we could not know. We assumed that it was due to their natural depravity; and as a matter of fact, they were so depraved as to make the same assumption with regard to us.

Wherever two warring groups discovered that they had great interests in common, however, it was always possible to stop the war. But in that case, they did not let each other alone. They co-operated; and out of this co-operation great new human values sprang. Eventually came machine industry and the discovery that the machine could work most successfully only if it gave maximum service to all concerned.

This discovery compels us to see the whole world in an entirely new light. For this machine of mass production serves everybody. It can play no favourites. It compels even an international, instead of a narrowly national outlook. It cannot tolerate poverty anywhere. Man's very weakness — his very selfishness — now causes him to insist upon the masses having the right and the power to buy what they want to buy. This in itself may not be religion, but it must lead to a great new religious awakening, and a religious

experience such as humanity has never had an opportunity to know before.

Just how the churches and religious institutions will function in this awakening, it is, of course, impossible to say. That will depend entirely upon how aware they are of the changes which are actually occurring. If they do not understand the changes, obviously they will be unable to interpret them; but human life must surely find its way to such an understanding, and those who lead us into the ways of understanding will be our real religious teachers, whatever religious institutionalism may do or fail to do.

Let me give a homely illustration of what I mean by spiritual fact-finding as distinguished from the traditional methods of teaching spiritual truths.

Let us take the case, first, of a traditionally religious merchant who is earnestly trying to do something for the spiritual welfare of his employees. Being traditionally minded, he does not see any business necessity for paying high wages; and if he pays high wages, he does so because he considers it his Christian duty. He wants profits, certainly, or else he wouldn't be in business; and since he thinks that these wages come out of profits, he is, subconsciously at least, always looking for some way by which he may discharge his full Christian duty without making wages any higher than he has to make them. His employees, he discovers, do not go in strongly for church attendance and do go regularly to the moving picture shows. These pictures, he thinks, are not elevating; and he

wonders again (his desire for more profits helping him unconsciously to bring up the question) whether it is wise and right for him to enable them to spend so much money foolishly. Would it not be better to appropriate some fund, he wonders, for welfare work? He may, for instance, install a reading room, where his employees may be uplifted by good but unattractive literature. He may even hire some whole-souled moralist to supervise their hours of rest and recreation. If he has any common sense at all, of course, he will not go very far in this direction, for his employees will naturally resent being regulated by his private whims; nevertheless, many business men, moved by a most unselfish desire to be good to their employees, do make them constantly uncomfortable at a great cost to the business and with no appreciable returns in spiritual improvement.

Now take the case of a hard-headed fact-finder, who wants profits quite as much as the other merchant, and who isn't thinking particularly of discharging any Christian duty. He knows, however, that it is good business to pay high wages, and he is always trying to find some way to make them higher. He knows that they can't be higher, of course, unless they sell more goods, and he is constantly seeking ways of attracting customers. The goods, then, must be the best values that he can offer and, to secure a sufficiently large number of sales, they must be at the lowest possible price.

There is no misunderstanding such a man; no feeling that he is going to raise one's pay because one attends

prayer-meeting regularly, nor cut it because one goes to the movies or smokes cigarettes. His store is just a machine for selling goods, and any saleswoman who can help it sell more goods is sure of her job, and of the highest wages which the old hard-head finds he is able to pay. He is no more concerned, apparently, with the religious life of his employees than he is with the religious life of some surgeon he may employ to perform an operation. He will not employ one who is intemperate; not because of any moral prejudice, however, but because he knows that neither surgery nor salesmanship mix well with intoxication. Nor will he employ a yes-man, or a yes-woman, if he can help it. Good merchandising he knows, requires good thinking; and employees who refuse to think, or even refuse to correct the boss when they find him thinking badly, are not of much use to a modern business organization.

From the old traditional, religious point of view, such a man may seem to be a monster. But I am assuming that he understands modern mass production and mass distribution, and let us see how his hard-headedness works out. Assume, for instance, that he is instructing a new saleswoman.

'In the first place,' he tells her, 'I want you to treat every customer as you would treat your own father or mother, if one of them came to your counter to make a purchase. You know, to begin with, that they haven't much money, and that it is to their interest to make what they do have go as far as possible. So help them find exactly what they want, and don't let them go

away instead with something which will not prove satisfactory.

'If you have two things of equal value to sell, but at different prices, give any of your customers the same good friendly tip that you would give your parents. If you treat them that way, they will come again. And if you haven't got exactly what they want, and you know where they can get it, send them there.'

'To some other store?' the amazed saleswoman may ask. 'Surely,' the merchant who thoroughly understands mass production will answer. 'To sell goods that the customer does not want, or to sell goods that cost more than they should cost — to sell them just because they happen to be in stock — is bad business. If they are sold, they will be replaced by more of the same bad goods, but customers who have bought them will be shopping elsewhere and the new goods will be left on the shelves.'

This hard-headed, selfish merchant knows that even he may make mistakes, but if he does make mistakes, he doesn't want those mistakes incorporated into his business. Either he or the person who does his buying for him may buy something occasionally which the public does not want, or at a price which does not permit him to sell it at a profit without charging more than his customers will readily pay. If charming salespersons, however, dispose of these goods at the price asked, the mistake will not be detected; and the sooner any mistake is detected, the better it is for any business.

It was not through any social idealism, I assure my readers, that I came to advocate this principle of 'Parent Service.' I advocate it as a business principle only because it works. It makes profits. It corrects mistakes. It eliminates falsehood and sham and misunderstanding and gets everybody pulling together to give the buying public the best service which can possibly be given.

Does it not also have a genuine religious significance? What is the actual effect spiritually upon the employee who learns that business is not a matter of smart selling, but of supplying human wants, and that successful business consists of finding ways of supplying them more abundantly?

In such a business organization, for one thing, fear is eliminated. Doubtless love does not take its place immediately, but there is a development of sane cooperation. Employees cannot view such a management with suspicion — at least, they do not continue to do so — and the management no longer looks upon the employees either as old retainers to be pampered and coddled so long as they remain sufficiently servile, or as so many wild horses to be tamed and broken to follow orders unquestioningly.

Here, then, is a complete new basis of human association, and to me it has profound religious significance — if I am right, that is, in assuming that religion has to do, primarily, with human relations. At any rate, it has a profound human significance; and religious leaders who are at all interested in human life cannot afford to overlook it.

Merely to say that we have hit upon an age of scepticism, and to assume that such an age can have no worth-while religious expression, is simply to confess religious bankruptcy. If we find out why people have become sceptical, however — especially if we discover why an attitude of constant questioning is now necessary — the discovery may illuminate our religious thinking.

Blind obedience to authority has heretofore been necessary, whether the authority in question was right or wrong. It was necessary because human society could not hold together without it. Society could not progress, to be sure, if such obedience were carried too far; but neither could it progress if it could not hold together. Without this attitude of unquestioning obedience, even rebellions against constituted authority could not succeed. Social stability in the past, therefore, was largely a matter of military discipline, and social progress largely a matter of military revolution; not, however, a revolution against authority, but revolution against some particular authority, and the substitution of some other authority which, in turn, must be unquestioningly obeyed.

In these revolutions, the established religious institutions almost unfailingly allied themselves with the established authorities, against the authorities which were trying to get themselves established. They looked upon each new uprising as iniquitous and irreligious; but when the new movements became established, the institutions of religion supported them against all future uprisings. Many have indicted the institu-

tions of religion for this, and have proved to their own satisfaction that their attitude was not logical. When we study the facts of history, however, and observe how vitally important to the world respect for constituted authority has always been, we may reach a different verdict.

If there was ever to be a human society, it had to get itself started. It seems to have started with the institution of the family; and when the family was the only social institution, children had to obey their parents, not because these parents were wise or right, but because they were their parents. Obedience was more important, seemingly, than justice or wisdom, for justice and wisdom could wait, whereas, if obedience to parents were not established, human society couldn't exist.

It was the emergence of other social institutions which clipped the absolute power of parents; and these other institutions emerged because people were no longer totally dependent for continued existence upon the institution of the family. These institutions could succeed, however, only as they developed not mere acquiescence, but a devoted following. Lords, kings, states, even leaders of rebellion, demanded unquestioning obedience on the part of their followers; not because they were right, but because, without such loyal acceptance of authority, there could be no social order.

Human organization, then, naturally adopted the military pattern. Orders were to be obeyed, not because they were right, but because they were orders.

Rulers who found their plans obstructed by equally powerful rulers might, to be sure, get together and try to avoid hostilities. But as far as the masses were concerned, there could be no compromise with orders.

'Theirs not to reason why, theirs but to do and die!' This applied not only to men in military service, but to children in the home, to students in school and in Sunday school, to serfs on estates, and, in the early days, to employees and subordinates even in business institutions, if they hoped to remain on the pay-roll. The rise of democracy, to be sure, did much to undermine this old concept of authority, but it did not dispel it, and the officiousness of office-holders was limited often only by their ability to get their orders obeyed. In religious circles, Protestantism rebelled against the absolutism of the hierarchy, only of necessity to set up the absolutism of a sacred text. Voices were raised, from time to time, of course, against the recognition of any supreme authority — even God — but there seems to have been a social principle at work making it impossible for such ideas to dominate. If there was to be any social stability, in any period before the present, everybody could not think for himself, and without social stability, there could be no social progress.

In a word, the only social organizations which had yet been achieved were class organizations. In theory, democracy might be an expression of mass thinking, but in practice it could not be, for the masses were economically dominated by the classes, and continued to be so dominated until the advent of mass production.

Under democracy, to be sure, everybody might have a vote, but one had to obey the dictates of capitalists or their representatives, if he hoped to get or hold a job. Votes were desirable, but jobs were necessary; and when the desirable opposes the necessary, it is always the desirable which gives way.

The theory of socialism, to be sure, promised to do away with class organization. Under socialism, it was argued, the masses might seize and hold the industries of the world; and representatives of the masses, *if they knew how to run those industries and were above temptation*, would run them in the interests of the toiling masses. Mass production began with no such theories. It began with facts, only to discover very shortly that it could not be successful unless it not only served the masses faithfully but learned, through constant fact-finding, how to give better and better service day by day.

Mass production did not discover how to distribute wealth equitably, either so that everybody should have exactly the same amount or that each person should be paid exactly according to his social worth. It did not solve the problem of whether a dentist is worth more than a plumber, or a garment worker more than a garage mechanic. It did discover, however, that it must produce an increasing volume of wealth, and that it must distribute this wealth to the masses, since, in the very nature of the situation, no amount that could possibly be distributed to the classes would be enough to permit mass production to go on. It discovered, therefore, how to distribute buying

power, so that the masses, hitherto condemned to poverty, would be able to have their wants supplied, and how to distribute leisure, with its opportunities, never open to the masses before, not only to enjoy material abundance, but to develop intellectual, social and spiritual culture.

It goes without saying, of course, that all these things have not yet been brought to the masses, for the system of mass production has only just begun. But the way has been discovered, and the business necessity for following that way has been discovered; and *it is the way of human liberation.*

That is the great meaning of these wonderful times. Because mass production, developed from fact-finding is more successful than traditional production, it already dominates the market and therefore must supplant the old traditional methods by which human beings have been striving to keep alive. In doing this, however, without making any change in human nature, it revolutionizes all human relations, and compels those who would be great among us to become the servants of all.

It has also discovered the way of service; and the way is no longer the way, merely, of devotion to an ideal or of abject obedience either to a leader or to some sacred text. It is the way of fact-finding. It is the way of truth. Only as it finds the truth can human life be liberated, and only by eternal questioning can the truth be found. It is this which renders the military form of organization obsolete, whether in industry or in school or in Sunday school. We can no longer

follow leaders blindly, and we can no longer preserve our social stability through the regimentation of our thoughts. It was the class system of society which made such tactics necessary — the system by which each group could achieve its desired objectives only by shutting the masses out. Those were the days of poverty. These are the days of abundance. In these days, even business success depends upon our letting the masses in.

What the religious institutions will do about this, I do not pretend to know. I know only that the religious institutions of the future will be those most thoroughly dedicated to spiritual fact-finding, and not to the preservation of any formula. No longer, at any rate, may we fear that churches will betray the masses by lining up, as they have historically done, with the dominant economic order. For the dominant economic order now is the order of mass production — the system whose success depends upon the utmost possible service to all society, particularly to those who have hitherto been disinherited.

The churches of the past, rallying round the creeds of the past, often depended for their material existence upon alliances with the economic masters of the past; and the masters of business based upon opinion could do nothing but advance opinions as to what the church should do. This frequently left the churches in a most embarrassing predicament; for it did not follow that a man whose opinions were good in matters with which he had had large experience was fit to express decisive opinions in other matters with which he had

no more experience than others. But he did not know it, and those who sought his advice did not know it. So he shaped the policy of educational and social and even religious institutions, without any qualifications for the job whatever.

That error, we may be confident, is not likely to be repeated, even if business leaders are still called into counsel in these non-commercial affairs. For the new leaders of business have gained their leadership, not through the excellence of their guesses, but because they have been trained to find and to follow the facts.

If religion *is* service, then; if it is a matter of human relations; if it is the way of the more and more abundant life for all humanity, we are at the beginning of the greatest and most inclusive religious movement of human history. For our problems are no longer the problems of scarcity and of poverty — problems which could be met only by shutting the alien masses out. They are problems, rather, of abundance, of surplus, of what we have been calling over-production — the discovery that our ability to serve has completely outrun our plans for service and that we must of necessity evolve new plans looking to a more abundant life for all.

As to the religious expression of this emerging social order, we whose minds are necessarily steeped in the traditions of a passing order will doubtless reach many and perhaps diverse conclusions. Of one thing, however, we may be sure: it will not be a part-time religion, or a religion which will necessitate any withdrawal from

life. In the days of man's disunity, in the days when he was not only compelled to devote almost all his energies to the problem of food, shelter and clothing, but when it seemed that he must always be protecting himself against the maraudings of other human groups, about the only opportunity he had for religious expression lay in his being able to withdraw to some inviolate sanctuary, or in his having one day out of seven in which to cease his labours and meditate as best he could upon holy things. But now that science is abolishing the cruel struggle for existence, now that the well-being of others has become a selfish necessity for each of us, now that we have discovered that we must wage co-operation with the same intensity with which we have customarily waged war, our religion will and must be a seven-day religion — a religion not of escape from, but of constant, creative participation in human life.

XIV

MASS PRODUCTION AND MECHANIZATION

ONE of the most mischievous superstitions in connection with the coming of industrial civilization is the assumption that the greater and greater use of machinery tends to standardize or to mechanize human life.

The notion is utterly contrary to the facts, but this does not keep certain highly intellectual persons, and even some eminent scholars, from entertaining it. They believe in robots to-day quite as childishly as they once believed in Santa Claus, and quite as naively as the eminent intellectuals of the Middle Ages believed in witches and demons. Fortunately, they are not keeping us from inventing new machinery; they are simply keeping us from appreciating it, and from using it as effectively and as happily as we might be using it.

These croakers remind me of a certain type of mother who, in her love for her children, has come to love their childishness, and is therefore dismayed at the discovery that they are growing up. The youngsters are learning new words, new phrases, are even beginning to read books and evince a taste for literature, all of which so encroaches on their baby talk that the doting parent is utterly distracted. Such a mother,

to, be sure, cannot quite keep her children from becoming men and women, but she can and does create no end of mischief. She can keep them, sometimes, from wanting to grow. She can keep them from appreciating the new developments and the new responsibilities of life.

It is much the same with these intellectual kill-joys. They cannot keep the machine civilization from advancing, and they often wistfully admit that they cannot: but they can and do sour the lives of those who take them seriously.

Why curse the sunrise because it obscures the stars? True, the sunrise does obscure the stars; and the machine civilization compels us to see things which were out of sight before, and to observe many of the old familiar things in an entirely new light. But why be sour about it? Why be partisan at all? Why take issue between childhood and youth — as to whether it is better to be six, or sixteen, or sixty years old?

The only real issue is whether we favour life or stagnation. The fun of being human consists of *not* stopping. Our very bodies consist of the cells which our bodies create and use and throw away, creating new cells to take their place; and human life is human because it is for ever throwing off its yesterdays and making to-morrows.

Now for the facts, instead of the fancies, regarding the standardization of human life through the general adoption of machine processes. In what ways, if any, are we now losing our individuality and being compelled to live just like everybody else?

In the first place, must we all eat the same kind of food now, or do we have a larger variety of foods to choose from to satisfy our individual tastes? That question answers itself. Before the machine age, especially before the age of world-wide trade, practically everyone was limited in his diet to the foods which could be grown in his immediate vicinity and to the foods which *were* grown in his immediate vicinity. Now, we are not only picking and choosing daily from foods grown everywhere, but we are growing in our own neighbourhoods vegetables and fruits which did not grow there in the good old days; and we are even inventing vegetables and fruits which never grew on earth before. Due to modern methods of mechanization, we have fresh fish in the desert, ice cream in the tropics and bananas and coco-nuts in our northern winters. In fact, it is likely to be after a breakfast of newly invented grapefruit, Brazilian-grown coffee and his current choice of a dozen or more cereals, after a lunch in a French or Italian or German restaurant, as his whim may dictate, and after a dinner of Chinese chow mein with all its Oriental fixings, that the American intellectual is likely to rise and state that there is no longer any variety in life.

How about housing? Ignoring the question for the moment as to whether the house of the average family is better or worse than it used to be, what about one's choice as to the kind of house that one shall live in? Formerly, there was almost no choice for the average person. True he might build the house himself; but when it was finished, it was almost an exact replica of

the house which his neighbour had built for himself, for the average man had a very small income and whatever kind of house he preferred, the one he built was the one he could afford to build, and the only kind he could afford to build was the very kind which his neighbour was also building. If he lived in one place, he had to build a mud hut; in another, he had to build a log cabin; in still another, a shanty out of boards.

Such habitations may seem quaint to visitors from other realms; and they rather resent it when a population, suddenly blessed with greater buying-power, considers its own wishes in the matter of more comfortable houses and refuses to devote itself to the business of appearing quaint to tourists. Like it or not, however, a higher buying-power is invariably accompanied by attempts to get away from the old uncomfortable restrictions. Its first manifestations may very well be manifestations of poor taste; for one has to have experience with any force before he is able to use it gracefully. But the tendency is obvious. The machine civilization, instead of standardizing us in the matter of housing, is rapidly liberating us to choose the kind of housing that we individually prefer. Once again, the man who has been parroting this groundless superstition that machinery is causing us all to live alike, may be pondering at the time whether to lease a city apartment or a house in the suburbs, or whether perhaps to build a beautiful little house according to his own sweet dreams, with an acre or two of lawn and flowers, so far out, to be sure, that he may

have to journey to his work but, due to modern mechanization, thoroughly equipped with hot and cold water and electric cooking and refrigeration.

Not only in food and shelter but in clothing have we entered upon days when people are more and more able to consult their individual tastes. It is true we follow styles, but we do not follow them for long, monotonous periods; and as better and more economical methods of producing and distributing wearing apparel are discovered, we find ourselves able to purchase a larger and more varied wardrobe. We may not have as many different robes as the ancient grandees had, but there were few grandees at most, in the old days, and the wardrobes of the masses were extremely limited both as to comfort and appearance. To-day, due to machine production, millions can have all the clothes they care for, and, due to mass production, it is only a question of a few years when the masses will find themselves in equal luck. Fine raiment, then, will doubtless lose some of its ancient distinction. It will no longer be accepted as evidence that the wearer is a nobleman, and there will not be the motive which has functioned through the ages to induce us to try to dress like some one we are not. We will try, rather, to dress like ourselves, and to cultivate our individual tastes. In clothing, as in food and shelter, the standardization of production and distribution is liberating mankind from forces which once operated to standardize human life.

It is sometimes said that our American cities are becoming standardized because, wherever we go, we

see the same signs, and the same familiar fronts of Woolworth, Grant or Penney, of A. & P. groceries of United Cigars or Thom McAn shoes. But these chain stores are selling more things, and more varieties of things, to the modern masses than the masses were ever able to buy in any other period of human history. The chain store is the advance guard of mass distribution, and mass distribution is the liberation of the masses from the ancient sameness which limited buying power imposed upon them.

It might be well, incidentally, to linger upon that phrase 'wherever we go.' That is a complete admission by the croaker about the standardization of life. For the masses are 'going' to-day, as never before. They are going to more places, and they are going, largely, for the sheer fun of it. Less than half a century ago, travel of any kind was a novelty. Even a buggy ride was a treat, and a railroad journey of a few hundred miles was a great event in the average person's life. But mass production brought the automobile to the masses. It has widened everybody's horizon, physically and socially. It has brought the culture of the city to the knowledge of the countryman and made the city dweller acquainted with the great wide open spaces; and it has simultaneously so increased the average man's buying power that, instead of having to deprive himself of other luxuries in order to enjoy a motor car, he has been able to enjoy hundreds of things which he could never have bought in a horse and wagon civilization.

Above all, mass production has given man time in

which to live. He now works, perhaps, eight hours a day, and five days a week. Whether his workday will become even shorter must soon depend entirely upon whether he wants it to be. For mass production has just begun; and if the present standards of living were high enough to suit the masses, mass production methods would soon make it possible to produce and distribute what we are now producing and distributing in a fraction of the time which we are now devoting to the task. It seems more likely, however, that man will want more and better things, even if he has to work five days a week to get them. I think the masses will want incalculably better houses than they are living in to-day. I think they will want safe and comfortable aeroplanes. I think they will want television, so that they can see and converse intimately with anyone in any part of the world. I think they will want diseases eliminated generally as thoroughly as we have eliminated a few. I think they will want the danger and the pain removed from childbirth. I think they will want expert education for every child, based not upon memorizing a conventional set of formulas, but upon the scientific study of every child by qualified experts, to discover his peculiar capacities and to direct him into the fullest expression of whatever talents he may have.

If man wants these and a thousand other things, he can have them. I do not mean, of course, that any man can have them. It all depends upon how the buying power is distributed; and unless some of these things are made available to the masses, no one

individually could possibly become rich enough to buy them all — world-wide television, for instance, or a world free from disease. In the very nature of such things, they must be made available to everybody if they are to become available to anybody. The masses, if they want them, can have all of these things and more, but only, of course, through mass production — through making and distributing the things which go to make up our present standard of living, in the most efficient and waste-eliminating way, and applying the man-power so released to the supplying of other wants which are not yet being supplied.

Incidentally, of course, we shall have to distribute buying power, so that the masses may be able to buy what the masses are engaged in making. But such a distribution of buying power (through low prices and high wages) is an essential principle of mass production. If that principle were universally followed (as it soon must be, for mass production is already so successful that it is crowding out other forms of production) it is obvious that the industrial machine will not slow down until it has produced not merely food, shelter and clothing for all, but the kind of world in which the masses want to live.

And since we are not all alike to start with, this will necessarily be a world in which we can be different. We are alike, however, in certain respects. We unanimously want food, shelter and clothing, and we are even willing to sacrifice our individuality, if necessary, to get them. Throughout all history, in fact, this is exactly what the masses have been doing. They had

to live, and in order to live at all, they had to devote about all their time and energy to the problem of staying alive. They worked individually, and they produced so little at best by these individual methods, that each had to copy the conventional way of doing almost everything, rather than risk new ways which might result in failure and starvation. Each had to work ceaselessly, moreover, from dawn to dark throughout his whole life, doing things, for the most part, in the way they had always been done in order to live, it seemed, as people had always lived.

Mass production — the massing of the world's knowledge for the service of the masses — must change all that. First, it must solve the elemental problem of food, shelter and clothing, so that the job of staying alive, while quite as important as ever, need be no more burdensome than is the task of getting our drinking water now. After that, it must simplify the task of securing for all, with the least possible tax upon everybody's time and energy, those physical comforts and luxuries which almost everybody has learned to want, and which, if not secured, are likely still to keep man struggling merely for the acquisition of things.

Then, and only then, can man be truly free. He may conceivably be free to loaf; only, having found his freedom through co-operative effort, it seems certain that he will still employ this co-operative effort to make his world more liveable in a thousand ways. In any case, the determining factor will be human need; for mass production, by its very nature, *must*

confine itself to the production and distribution of things that people want, whether those things happen to be ships and shoes and sealing wax, or health and long life and a better education.

It is our failure to co-operate which reduces life to a dead level — our failure adequately to use the principles of mass production, by which alone the machine may become the efficient servant of us all. In our traditional thinking, we have tried to make goods without distributing the buying power by which alone they may be sold; and then we have tried to manufacture jobs to overcome the disadvantages which we have created — jobs for high-pressure salesmen, for instance, to compel people to buy what they do not want or to pay unnecessarily high prices for what they do. We have built up organization after organization, scheme after scheme, racket after racket, each for the purpose of selling things rendered unavailable for sale by the very high prices which such a system of distribution necessitates. We have even been talking lately about the 'rights' of independent storekeepers who find themselves being undersold by the multiple shops, as though it could be anybody's right to render the process of distribution more costly than it needs to be; and we have sighed for the days when everybody, as we imagine, was free to go ahead and do whatever he felt like doing, regardless of how it might fit in with what anybody else was doing.

Actually, of course, there never were such days. Until human beings learned some sort of co-oper-

ation and some sort of group loyalty, they simply were not human beings. The essential difference between this mass production age and other ages is that mass production, in its very nature, must include everybody in its group; and must aim, therefore, to liberate everybody, not, of course, from the laws governing human nature, but for the larger and larger human life which organization for this larger loyalty makes possible.

Mass production liberates life from its traditional formulas. It liberates life from the supine acceptance of mere authority and initiates it into the courageous search for facts. It liberates life from local prejudices and from narrow nationalism, as well as from class prejudices and class traditions, and therefore liberates it from the necessity of social and international war. It liberates human life, moreover, from soul-deadening toil and the still more soul-deadening poverty which so fastens everybody's thought upon mere economic security that life itself becomes one humdrum monotony.

Mass production undoubtedly means mechanization; but it means the mastery of mechanization by human life, instead of the mastery of human life by traditions which keep us from using the machines which we have built.

XV

MASS PRODUCTION AND BEAUTY

WHEN a shopkeeper writes about beauty, he is treading on dangerous ground. There is a widespread assumption, at any rate, and the assumption is fostered by many genuine artists, that art and 'commercialism' are deadly enemies, or at least not on speaking terms. The idea seems to be that art is art and trade is trade and never the twain shall meet.

Humbly, therefore, I admit that I do not know what beauty is. Nevertheless, I think it has to do with human life; and a shopkeeper nowadays must be interested in anything which has to do with that.

I am inclined to agree with my artist friends, in fact, that the pursuit of beauty is the greatest thing in human life. Perhaps we shall never find ultimate beauty; perhaps we shall ever be on the trail, but that nowise invalidates the search. We shall never learn the the full *truth*, either, about anything; but the search for truth is intellectual development, and the search for beauty is the development of—but here I pause, for the word I want to use doesn't seem to have been invented yet. I do not mean mere æsthetic development—at least, not what the term æsthetic development means to me. I doubtless mean spiritual development, but possibly not what that term may mean to my

readers. I mean the development, not merely of *comprehension* but of *appreciation* of truth. It includes the development of imagination, but of imagination working with reality instead of opposing it — an imagination which can see the truth in things false, which can see nobility in things sordid, which can see beyond what is being done to what is being attempted, and even beyond that to what might have been attempted except for limitations which the imagination may surmount.

But these are mere words. Some may give me credit for meaning to say something; but I am a shopkeeper, not an artist, and I am constantly constrained not to talk about such things — not even to let it be known that a shopkeeper may upon occasion dream about them.

My reason for bringing up the subject at all is a remark which I hear from time to time to the effect that this machine civilization is making an ugly world — a world, presumably, in which the quest of beauty is being abandoned.

Whenever I have asked for a bill of particulars, I have failed to get it. The charge, I take it, is supposed to be inspired; and if one is sceptical about it, it must be because he is a shopkeeper and hasn't an artistic soul. My reverence for beauty, however, does not lead me to assume that artists cannot make mistakes; and when they make a remark like this, I wonder if it is not their orthodoxy, instead of their art, which is really speaking. In other words, their traditional thinking.

The history of art, surely, is not a subject too sacred

to investigate. And at no time, as far as I have ever been able to find out, did artists ever assume to manufacture beauty in the abstract. They engaged instead in making *things* in which, as they hoped, beauty might be expressed.

Pictures are things. Statues are things. Cathedrals are things. Moreover, they are things which people wanted, or the artists would not have engaged in making them; and the manufacture and distribution of things that people want is certainly within the purview of a study of mass production.

I grant that they did not make these pictures and statues and cathedrals in factories. I am told, however, that they made them individually, 'right out of their own heads,' and I most emphatically deny that. No one ever made a cathedral alone. No one ever made a statue alone. No one ever made even a picture alone. A Navajo Indian, drawing a marvellous pattern in the sand, without the use of a single tool, is not a complete exception. For the knowledge that this can be done was taught to him. It was his tribe, not he alone, which developed the technique. Even the pattern which he draws is a *Navajo* pattern. Every line runs rigidly thus and so according to the best Navajo standards. It is art, undoubtedly, not commercialism; for a mind preoccupied with selling pictures would not draw them in the sand for the winds to blow away. But the picture means something. It is picture-writing, and picture-writing was developed in answer to the human need for symbols by which ideas might be communicated.

Man's search for beauty has historically kept pace with his search for the things which man had to have. Man had to have something in which to carry water, and he eventually discovered how to fashion such a thing in clay. From that gross, utilitarian beginning he developed the art of pottery.

Man could not cut stone until he found something to cut it with; then sculptors took these tools and made goddesses. They did not, it appears, invent these goddesses either; they made goddesses which had already been invented to supply the need of human beings to account for things and to express the way they felt about them.

Man also had to have houses, and he had to invent tools and building technique. Then he proceeded to build adorable houses for the gods whom he adored. Art, to be art, had to keep pace with life. It had to find its harmonics. It developed in all countries where a sufficient number of human beings lived, and where the struggle for mere existence was not so intense as to consume about all the human energy which could be applied to it.

Not only was artistic technique conditioned by what people wanted, but man's notion of beauty seemed to be similarly conditioned. In countries where food was perennially scarce, and the masses were likely to be very thin, the statues which represented beauty to them were likely to be very fat. Fatness, also, was a sign of wealth and social position, and every young woman who could get fat did so. In countries more developed economically, fatness lost its meaning. It

didn't prove anything, or else it suggested that the fat one was abnormally engrossed with eating. Thinness then become beautiful. In America, the most opulent civilization of human history, thousands of women have actually undermined their health through semi-starvation, in their efforts to prove that they are beautiful according to the particular notion of beauty which happened to be current at the time. A generation or two before, women similarly tried to look like wasps, instead of like human beings, and did violence to their internal organs by tightly lacing their waists.

Did such practices express beauty? Few will now say that they did — but why? There is only one answer that suggests itself to me; it is that, by and large, *these practices did not work.* A woman, to be sure, might get the husband she desired through such a ruse. But she could not get the health she desired, not the freedom she desired, nor the efficiency in motherhood which she desired. Without pretending to say what beauty is, I venture to suggest that the line of beauty must in the long run harmonize with the line which, by all-round human experience, proves to pay best. Art and trade do meet. Beauty and the new scientific commercialism are not enemies but different aspects of the same human picture. The time has now come, in fact, when tradesmen should be artists, and when artists should be discovering the harmonies in this new world of trade.

That which serves its purpose well becomes beautiful to us, if its purpose is in harmony with our purpose. We say that there is no accounting for tastes, but there is.

The Greek arch was beautiful, and it was accepted for ages as beautiful, because it was able to sustain the weight it was required to sustain. If it had not done the work it was designed to do, we can depend upon it that the world would never have called it beautiful. But the Greek arch was a way of building in stone. Its proportions depended upon the character of stone and had to be in harmony with that character. Architects, unfortunately, did not always remember this; and when they were first asked to design buildings to be built of steel, they tried to duplicate the lines which experience in masonry had discovered to be beautiful.

The buildings which resulted were eyesores, but people did not seem to know it at the time. The trouble with them, from the business point of view, was that they cost too much. That was the trouble with them from the architectural point of view also, but the architects did not know that at the time. Steel was conceded to be an economical way of building high buildings, while building steel buildings to look as though they were built of stone was not so economical. Fortunately for architecture, economy eventually won out, not against beauty but against this fixed tradition of beauty, and buildings began to be built according to simple engineering calculations. These buildings at first were not beautiful, perhaps, any more than the first clay cups with which man carried water were beautiful, but they constituted something to start with in the great new art of building in steel. Few will now deny that the modern sky-

scrapers of Manhattan have a beauty all their own; for when architects, instead of remaining slaves to ancient forms, eventually began to look for the harmonies of the steel age, architecture once more became a living art.

I am not contending that the radiator is necessarily more beautiful than the fireplace. It would be strange if it were, considering that the fireplace represents centuries of development while steam and hot-water systems are new discoveries. But making radiators look like fireplaces will not be the answer. The task for the artist, it seems to me, to discover the harmonies in a world which is rapidly being liberated from slavery to climate, instead of mooning about the æsthetic superiority of heating systems which no longer satisfy the human desire for heat.

Some of the first automobiles carried whipstocks, not that anyone supposed that the driver would ever need a whip, but because a wagon without a place for a whip did not look quite right to the designers. Automobiles never became beautiful until designers got away from such traditional thinking and tried to make their machines look like motor-driven, instead of like horse-drawn vehicles.

To assume that there is no place for the artist in this mass production civilization is to assume that art is a body of formulas and not a living force. As for art and commercialism being enemies, they always have co-operated and they always must co-operate, wherever human ingenuity is being employed to supply human wants. Handicraft and the particular forms which it

developed may be passing, but humancraft has taken its place. The artist cannot escape from life and, if art is a living force, he will not try to. Mass production, in its very nature, must serve the masses in the most efficient and the most abundant, and therefore in the simplest, way in which the masses can be served. That is the way of lowest cost in production and distribution, and of lowest prices to consumers. That method does not allow for useless ornamentation — for the cluttering up of things with forms which no longer have a meaning. Things that serve their purpose more simply can reach a wider market, and can therefore be manufactured and distributed more profitably. But that *is* the 'thing of beauty' — the pursuit of which is the most interesting and worth while in human experience. This pursuit, moreover, need no longer be confined to the little coterie of artists who, in the past, have had to carry the banner of beauty, while the masses were condemned to soul-deadening poverty and toil. The flicker of genius in everybody's life has some chance for expression now. For mass production will make mere living a simple task, and to satisfy life's larger wants must then become the common goal.

I do not pretend to know what all these larger wants shall prove to be. We may be certain however, that when the masses are freed from the struggle for existence, they will furnish an environment in which true art can thrive. I cannot, then, look back to any 'Golden Age' of art. To me the Golden Age lies just ahead. I do not mean that artists must engage in

mass production, or that they must limit their work to some dead level of mediocrity in the futile hope of appealing to everybody's taste. As always, I assume, many will strive for popularity, while others will venture into new fields, and their work will be appreciated by relatively few contemporaries, such artists appealing rather to the verdict of posterity. But artists will not be hampered, as historically they have been hampered, by the necessity of submitting their work to the narrow and almost necessarily biased judgment of some economically dominant class. The liberation of the masses, it must be remembered, is the inevitable goal of mass production, and it must not be confused with any merely benevolent endeavour to see that the toiling classes are well fed, well clothed and well kept. Taming the masses is not and cannot be any part of the mass production programme. The masses must be freed, rather, to venture into realms of human living from which they have necessarily been debarred before. In this emancipation of the very soul of man it seems to me that one must sense the beginning of a new and finer (although as yet incomprehensible) Art.

XVI

MASS PRODUCTION AND THE PROFIT MOTIVE

PHILOSOPHERS, moralists and builders of Utopias are likely to curse the profit motive as the source of all our social ills. Even business men are likely to suppose that we may find some better motive, such as 'service' or 'welfare' or 'co-operation.' I find it difficult to concur. I am in favour, surely, of service and welfare and co-operation: but I cannot help thinking of how little we would have of service and welfare and co-operation if they did not pay.

In the pursuit of profits, I must admit, business has often committed every known crime. It has outraged justice. It has been unspeakably cruel. It has ravaged and robbed whole communities. It has corrupted governments, it has fomented wars, and it has reduced men, women and children to bitter slavery. But we get nowhere, it seems to me, by blaming motives, or by attempting to substitute other motives for the motives which actually move us. The sex motive has similarly brought us to all sorts of human grief; but if the problem can be solved only by the elimination of sex from human life, and the substitution of some entirely different motive, our plight, it would seem to me, is utterly hopeless.

Undoubtedly we need a new *expression* of the profit

motive. We already have that in mass production, which has discovered that the greatest total profits can be found through giving the greatest possible service to the greatest possible number of people. If mass production did not pay, however, we would not have it. Mass production developed from the use of machinery; and if machines had not been profitable, we would never have developed them.

There is something, at least, which can be said for the profit motive, in contrast with such motives as public spirit, patriotism and social idealism. The profit motive, whatever may be said against it, has proved dependable, steady, always on the job. It doesn't have to be nursed and coddled by propaganda. It isn't necessary to resort to music and pageantry to bring it into play; and those who once devote themselves to making profits do not have to be urged constantly to keep the goal in sight. They may, to be sure, do many things that are unprofitable; and they may, at times, yield to impulses of generosity and of unselfish service; but we may depend upon it that they will not be constantly beset by temptations to enter into this and that strange venture because it offers them an opportunity to lose money.

Such a dependable motive power as this is surely worth considering. If it can be attached to a machine well designed to serve the common welfare, the common welfare would seem to be assured, whereas if the common welfare is dependent upon keeping idealism at white heat, there is no such assurance.

Under mass production, however, the profit motive

not only can be attached to the common welfare, but it cannot escape being so attached. Under mass production, attaching it to any other aim spells loss. There can be no profit in mass production unless the masses are also profiting thereby. There is no necessity then, for any new motive in human life. The substitution of any new motive, in fact, if such a thing were possible, would be of very doubtful value. It would be like the substitution of a new set of laws governing electricity. We can depend upon our electric appliances working now, because they are built in accordance with unchangeable law. If the law governing electricity were subject to change, electric appliances based upon the current law might suddenly cease to be of any use whatever.

Undoubtedly the profit motive as it has operated throughout human history has been responsible for no end of human misery. It has caused the strong to exploit the weak, and caused the few to live in ease and luxury at the expense of the suffering and almost starving masses. If there had been no profit motive in human nature, it seems quite probable that there would have been no wars, no human slavery, no privileged classes to exploit the masses, no tyranny of man over man. Those who think, however, that the world would therefore be one big happy family should think again; for without the profit motive, there would never have been such a thing as a human family, and the ideal of world brotherhood could never have been conceived. It required the actual experience of brotherhood to give birth to the idea

of world brotherhood; and it was the actual institution of the family which gave us that experience. The family, however, became our institution because it was profitable, because human beings were desperately determined to live, because they could not live unless they had a steady income and because the family gave promise of such an income.

Some families succeeded better than others, and this aroused envy and covetousness. Envy and covetousness, undoubtedly, are sins; but sin undoubtedly is just plain error; and until people achieve understanding, they are fairly certain to remain in error. It would be well for us to remember, also, that while this greater success of some aroused a desire to sin in others, it also did something else. It set an actual standard of success which did not exist before. It gave the unsuccessful a mark to shoot at. It demonstrated to the masses that a higher standard of living than the masses had ever had was at least humanly possible. Without such a demonstration and the human ambition which was generated by it, it is hard to see how the standard of living of the masses would ever have been perceptibly raised.

Human beings, strangely, seem to be the only beings extant who have raised their standard of living generally. In these days, when the ambition to 'keep up with the Joneses' excites our ridicule, and when we see so many people struggling to get expensive things, not because they want them but because their neighbours have them, there is danger of our losing sight of one very real and worth-while truth. If people buy

things which they can't enjoy because the Joneses have them, they also buy things which they do enjoy because the Joneses have demonstrated them. They may hire a uniformed flunkey because the Joneses have one, but they may likewise have some child cured of infantile paralysis because the Joneses' child was cured. Modern surgery, modern dentistry, modern sanitation, to say nothing of modern machine industry, would have been impossible if some people had not become rich enough, by fair means or foul, to live in such luxury as to make others discontented with their lot.

We might have had peace on earth without the profit motive, but we could never have had peace and prosperity too. We might conceivably have had communism, but we could not have had mass progress. We might even have learned to love our neighbours as ourselves; but if our self-love is not dynamic, the altruism which equals it could hardly be dynamic.

There is not much point in speculating, however, upon what human nature might have been. If we are to get anywhere with it, we must take it as it is; and human nature always has operated on the profit motive, often even at the expense of human ideals. We have usually wanted peace, when we stopped to think about it, but we have wanted profits consistently, whether we stopped to think or not. We have been capable at times of great sacrifices, which shows that we have wanted something, after all, besides our own personal aggrandizement, but there always seemed to be a war between our selfishness and our unselfishness; and since our selfishness was constant and

our unselfishness sporadic, it seemed that selfishness was always winning.

The time has come, however, when the greatest total profits can be secured only through supplying the masses with the best values. So there is no war now between selfishness and unselfishness; the only war is between the traditional notion of where self-interest lies and the newly discovered truths of profit-making.

The time has come, therefore, when we can have not only peace on earth, but a dynamic peace. Not a peace based upon things as they are, but a peace in which all intelligently selfish human beings shall be selfishly concerned in bettering the condition of all humanity.

There is a limit, doubtless, to the number of material things that human beings care to accumulate. That limit, in fact, seems actually to have been reached by many modern men of wealth; and their tendency is not to go on accumulating, but to adopt a simple standard of living which gives them more personal freedom and more opportunities to enjoy and to appreciate life. Such men have no desire to 'keep up with the Joneses,' and no particular desire, on the other hand, to keep the Joneses from adopting any standard of living which appeals to them. As mass production brings economic security and a high standard of living to the masses, we may expect eventually that there will be some such general liberation from 'the tyranny of things.'

When people everywhere can have all the good

clothes that they want, it is not to be expected that they shall care to spend a large part of their precious time in changing their clothes, as grandees so often did in the days when fine raiment was a sign of aristocracy. Likewise, when they can have as good houses as they want, they may discover that they do not want perfectly meaningless mansions and palaces; and when they are all privileged to travel extensively, they may not wish to travel all the time. Even with mass production, of course, such a time is still far distant; and for decades to come there should be work enough for everybody, under the most scientific management, to provide things for the masses which the masses eagerly want but which only a small percentage of the masses as yet enjoy.

Conceivably, nevertheless, the masses under mass production may turn from a mere surfeit of things to seek a simpler life, and when that time comes, it may seem that the profit motive is no longer operating in human affairs. But we do not have to worry about that. It will not mean a change in human nature. It will mean its liberation, rather, to go on to other achievements. It will mean a change only in the kind of profits human nature wants.

XVII

MASS PRODUCTION AND PERSONAL ADJUSTMENT

HUMAN life changes from day to day and from generation to generation; and human life must go on changing unless there is some fundamental change in the nature of human nature.

If human nature should change, human life might go on indefinitely, without making any noticeable changes; but so long as it is the nature of human nature to aspire to a larger and ever larger life, human beings must constantly be different from anything which human beings ever were before.

There have been many attempts in the past to change human beings through effecting some change in human nature, but these attempts have uniformly failed. It is as though we had tried to make electricity more useful than it was through altering the nature of electricity. Only when we got down to observing the actual facts of electricity were we ever able to make it useful. Pleading with the lightning not to strike our dwelling once seemed perfectly logical, and doubtless such prayers did have some effect upon the lives and future actions of the persons who prayed. But they had no effect, so far as we have ever been able to find out, upon the lightning. Only when we discovered something of the nature of lightning, and

devised lightning rods, did lightning seem to be much impressed by our wishes in the matter. . .

It may have seemed at the time that the person who prayed to the god of lightning not to strike him was reverent, while the person who undertook to direct the lightning was irreverent; but we can see now that they were equally reverent, only that one reverenced the current traditions while the other reverenced the facts. Each was governed by the same human nature, but they were very different types of people.

In such a situation, it would be almost futile to argue as to which constituted the more desirable type — the man who sought to control natural forces by traditional methods or the one who sought to control them by science. For their motives were the same, and human nature, being what it was and wanting what it wanted, would inevitably tend to take the direction which, by actual demonstration, brought the better results. I have never been able to discover any 'war' between religion and science, or even between superstition and science. All that I have been able to observe is a war between people — a war based upon their difference of opinion as to the best method of getting what they wanted to get, and becoming what they wanted to become. In this war, indeed, the real scientist has seemed to take no part whatever. He has simply gone ahead with his work, trying to find out how things happen to happen, and then trying to make them happen; and when he made things happen that people wanted to have happen, and his critics were unable to counter with

equally convincing achievements, human life edged over toward the scientific technique.

Because human nature is what it is, there is always the necessity for personal adjustment. For human nature, we have discovered, is social in character, and cannot submit to the unfettered control of individual animal instincts. It demands a larger expression. It demands a social expression—in language, in law, in organized enterprise, in the constant creation of a social environment in which a larger life may be achieved. Because we are human, we cannot be indifferent toward the conduct of others; we must adjust ourselves to our human environment or adjust our human environment to ourselves.

Our first thought, naturally, is to adjust the whole human environment to our own personal whims. But most of us get over that in time; the others are taken to asylums. Even in our intolerance, we find it impossible to be entirely individualistic. We must gather other intolerant folks about us, people with similar prejudices and similar notions of what may or may not be tolerated. Then, if we have power enough, we may enforce our standards of conduct upon the community in which we live.

Even in doing this, however, we must usually compromise. We must adjust our objectives, in some measure, to the common objectives. We may not tolerate democracy. We may be openly defiant of the rule of the people; nevertheless, to be successful tyrants, we must cater to the wishes of the populace in many ways. We cannot impose rules upon them which they

will not follow; we cannot control a community while imposing conditions which force it to break from our control.

Not many of us care, of course, to be absolute tyrants — that is, after we have grown up. In early childhood, seemingly, we have no other ambition. Young babies do not care for anyone else's welfare but their own; but human education changes this, not because it changes human nature, but because it gradually forces the child to take others into consideration in every programme of self-expression.

This process of taking others into consideration, however, is a process which cannot well stop anywhere. After a child has learned how to be a two-year-old, no matter how beautifully and satisfactorily he has learned his lesson he has to learn how to quit being a two-year-old and how to become something else. Until he 'grows up,' he comes to perceive, he will have to keep adjusting himself to his environment. After he grows up, he sometimes fancies, he can go his own way, but he can't.

The sooner any child learns this, the better; but learning even that is not enough. Bees and ants, it seems, are thoroughly equipped to live in bee and ant society. But those societies apparently do not change, while human society changes constantly. If it were not for this, the problem of personal adjustment might be fairly simple.

John Tanner, in Shaw's *Man and Superman* remarks: 'The reasonable man is for ever trying to adjust himself to society. The unreasonable man is

always trying to adjust society to himself. Therefore, all progress depends upon the unreasonable man.' Whether we are willing to subscribe to this observation or not, it is certain that personal adjustment *to society as it is* does not solve our human problem. It is quite as necessary to adjust ourselves to society as it is becoming and as human life really wants it to become.

This, surely, is no easy task. It is a task which requires for its fulfilment all that we can possibly learn about human life. It requires not merely good intentions and indomitable determination, but it requires the application of science in place of mere established opinion along many lines. It requires the use of psychology and sociology, particularly, although in the very nature of human society, not many of us can become psychologists and sociologists. Even in the matter of personal adjustment, the purely personal approach will never do.

There is a vast difference, in the first place, between what we want and what we think we want. A child may want sleep and want it so poignantly that it keeps itself and everybody else awake, for nervous excitement in the meantime may have induced it to think it wants the moon. The problem, however, is not how to get the moon for the child, nor even how to curb the child's ambition so that it will not want things. The problem is one of finding out exactly how the child's real wants may be supplied. It is a difficult and complicated problem at best; but it may be solved without either suppressing the child or seriously disturbing the moon.

Heretofore, the problem of personal adjustment has been tackled by the individual from the standpoint of what the individual thinks he wants; and the individual has been suppressed by the community according to the standard which the community thinks is best. But the community's opinion is no more infallible than the individual's opinion. A standard, in fact, to which a large community can subscribe is likely to be a mediocre standard, and to turn out mediocre individuals has often seemed to be the social aim. Mankind, therefore, has gained the reputation of imprisoning its liberators and crucifying its saviours; and many philosophers have cynically observed that they do it because it is the law of human nature that they should.

But this is not the law of human nature. It is simply the way in which human nature acts in a world governed by opinion. Human nature wants what it wants, not what it thinks it wants; and as it tends to get what it wants through science, and fails to get what it wants through government by opinion, it does discard the rule of opinion and inaugurate the rule of fact.

This has always been true, but the special importance historically of the present era lies in the greater community to which government by fact is now necessarily being applied. The family became the accepted way of life, not because the majority before the family era was convinced that its current way of life was wrong but because the family brought results. It worked. It worked so well in the matter of supplying human

wants that people discarded their old ways and began to live in families.

The same is true of the machine system. Machine production supplanted family production, because people wanted things and machine production could produce more things. If people should ever discover that they don't want things, and that they were in error in supposing that they ever did, not only machine production but all kinds of production will stop. But that just isn't anything to worry about; for since people cannot live without things, we may be sure that people do want things, and that they will try to adjust their lives to that system of production which supplies things most abundantly.

It is in their system of production and distribution, however, that their real relation to others is discovered, and the environment to which they must adjust themselves is determined. It was in the family that brothers discovered that they were brothers, and most of the values which have given meaning to human life were found. In mass production, now, because it is the most successful system of production yet devised, we are discovering how everybody is related to everybody, and we will surely discover great new meanings to life. But this means that we must learn to adjust ourselves, not merely to a method of production, but to a process which, because it is based upon fact-finding, must constantly change as new facts are discovered, and which, therefore, must constantly create new social environments to which we must always be adjusting ourselves.

There is surely no rest for the weary in such a prospect. Not only business men but all of us who have been looking for society to 'settle down' are doomed to disillusionment. No imaginable standard of conduct, and no imaginable pattern of life, will be adequate for a social order which will not stand still. As a matter of fact, of course, social orders never have stood still. Even the family changed its constitution from age to age. But things moved slowly enough in the old days so that each succeeding generation could imagine that they did not move at all; or that there was some pattern, at least, which might be considered perfect and beyond which it would never be necessary to advance. The result was that those who were sufficiently comfortable tried to keep everything just about where it was, while those who were uncomfortable imagined a Utopia and tried to push society into that. Neither party ever succeeded, but not until the age of science was it ever apparent just why neither could succeed.

In the meantime, our educational effort was largely devoted either to adjusting the individual to society as it was, or to making him good according to some fixed standard of goodness. We sent children to school, not to learn what they could find out, but to have their characters and their minds moulded so that their opinions would be correct, according to the dominant notion of what correct opinions were. What to teach them became the great problem — not how to help them learn what life was like, or what it was likely to become, or how to adjust themselves to

live successfully in harmony with its changing social character.

The system of mass production and mass distribution necessitates that all this shall be changed. It necessitates an entirely different approach to the individual problem of personal adjustment to society. And since the machine society is founded on fact-finding, it necessitates that the process of personal adjustments to it shall be founded on fact-finding too.

This approach, in itself, must revolutionize all human relationships and the whole process of human education concerning them. Even parents must look upon their children in a very different way. Instead of being governed by what they imagine they would like to have their children be, they must get busy discovering exactly what they are. And instead of thinking of society with their traditional valuations, they must do their best to find out the character of the social order which is coming into existence.

This process must continue in school. The system of giving marks for good or poor scholastic performance is, I am glad to note, already under severe fire. The degree to which a child's mind agrees with the teacher's mind is surely no index of its educational progress, nor is its ability to absorb and repeat the formulas set forth in any textbooks. One's fitness for life can no longer be determined by the books that one has read, valuable and necessary as books may be. Yesterday's wisdom can no longer be our guide. We must continue to use it, of course; but to learn when to use it, and when to discard it, in the working

out of human problems which remain to be solved, must now become an accepted aim of education.'

I hesitate to give individual advice, but I do want to raise an objection to the sort of individual advice which is commonly given — the exhortation, for instance, which is so freely peddled out by so-called successful men, that youth should set its goal and stick to it. Some millions of American children have doubtless determined to be President, but it hasn't done them or American politics any good. There is no reason why we should have very many Presidents anyway, and about the most unfortunate selection we could make would be one who was determined to be President at any cost. Some of our worst failures are the constant readers of 'success literature.' I pity the unfortunate who has been miseducated to believe that success consists in 'fighting his way to the top' or in seizing power which he is not equipped to use. Success consists in the most successful possible adjustment between what a man actually is and the social order in which he will necessarily have to live, so that he will be able to make the greatest possible contribution to that order. The way to prepare for such success is not to imagine that one has powers which one has not, not to aspire to positions which once symbolized success, but through finding out what human life actually is, and one's actual equipment to participate in it.

It is quite possible, I think, that the three R's may soon cease to be the backbone of our elementary educational efforts. It is quite possible, it seems to me,

that they will be supplanted by the sciences of hygiene, psychology and sociology. Adults, I know, are generally unacquainted with these sciences now, and is quite possible that adults are too old to learn. We may have to leave them to their habits of life, habits which tend to physical, mental and social deterioration so that human progress seems impossible often without an abundance of funerals. But children want to live. To co-operate with them in a genuine search for physical well-being seems to me to be an intelligent beginning. But they are equally anxious to grow mentally and emotionally, and psychological fact-finding would, I think, appeal to them much more than the compulsory learning of platitudes which neither they nor their teachers can possibly understand.

Children, moreover, are not merely interested in, but fascinated by, life. They are so fascinated by it, in fact, that they refuse to believe that it is the dull drab thing which adults represent it to be; and they construct imaginative worlds which suit their purposes much better. Their worlds are not static. They are worlds that are changed from time to time, by forces which grown-ups do not understand, and worlds to which children may adjust themselves without having to suppress their imaginations entirely. If we were to admit the truth, we might have to confess to the children that their world of imagination comes nearer to being real than does our world of cut-and-dried opinion. They, at least, imagine a world which isn't standing still, and in which the stick-in-the-mud grown-ups do not know all the rules; and we try to sell

them in its place a world based upon marks in school in which they can be rated as 'perfect' only when they are in one hundred per cent agreement with the textbooks.

How to live in a machine civilization is the problem before every human being now, and successful personal adjustment to that civilization is the lifelong problem of every child. None of us knows the rules, and even if we find them, it does not mean that any problem is therefore permanently settled.

Everything that we learn merely brings us to more things which must be learned, and everything that we do, to more things that must be done. In such a world, life is a never-ending adventure, and requires the conservation of all that is adventurous; but it is an adventure in co-operation, not merely with the other members of the family, or with immediate associates, but with the adventurous powers which exist in everybody, everywhere. It requires co-operation even with generations which have long since passed away; it requires co-operation in the interest of generations which are yet to come, and with the very forces of nature herself which, under science, are now being brought under human control.

In such a world, everybody is related to everybody, as truly as the different members of the family were ever related to each other; but these relations do not impose restrictions, and satisfactory adjustment cannot therefore be achieved through the negative process of self-suppression. They bring liberation, rather, and all the things to which the human soul — human nature being what it is — aspires.

XVIII

MASS PRODUCTION AND ADVERTISING

MANY have supposed that mass production would tend to eliminate competition and therefore greatly reduce, and perhaps almost destroy, the huge business of modern advertising. The facts have not borne out the supposition. As mass production has increased, the business advertising has increased; and whether or not the mass producers have achieved a monopoly, they have seen the necessity of increasing, rather than diminishing their advertising appropriations.

Mass production is, however, changing the character of advertising, and is exploding many of the myths around which the advertising business was once quite generally organized.

The notion, for instance, that advertising is 'ballyhoo' was fostered by many of the early advertising agencies. Business men who wished to be modest were urged to scream their wares on the theory that, whether they liked it or not, the man who made the most noise was the one who would get a hearing.

The late P. T. Barnum served as the patron saint of this school of advertising. 'There's a sucker born every minute' served as its golden text. The theory was that few would spend fifty cents to see a circus unless they could feel, regardless of what their common sense

might tell them, that it was the Greatest Show on Earth; and that the ballyhoo which gave them this feeling was not a downright fraud but just a humane anæsthetic accompanying the otherwise too painful operation of extracting that fifty cents.

Exaggeration was the keynote of such advertising. There seemed to be little point in a merchant's announcing a ten per cent cut in prices if his rival across the way was announcing a fifty per cent reduction. Even 'one hundred per cent reductions' were not unknown in these announcements; but the advertisers were dealing with psychology, not arithmetic, and did not consider themselves obliged thereby actually to give away their stocks.

In the patent medicine era, ballyhoo achieved the height of the ridiculous, and the Barnum theory seemed to be conclusively proved. Respectable periodicals, which assumed to be the intellectual mentors of the nation, brazenly announced concoctions guaranteed to cure all the diseases to which the flesh of man or beast was heir. It is not at all probable that human nature in those days was more vicious that it is to-day, but people generally supposed that business was the process by which some people took away wealth from others; and with that basic misunderstanding it was hard for anyone to draw the line between decent and indecent practices.

One might have a remedy for sale which he actually believed to be good for coughs. But it would never do to advertise it as simply good for coughs, when some competitor was proffering a sure cure, not merely for

coughs and colds, but for consumption, catarrh and possibly for corns and cancer and anything else which happened to begin with 'c'. It might be discovered by anyone who wanted to know that both preparations were mainly composed of bad whisky anyway, and that repeat orders did not come from any cures effected but from physical cravings which the liquor had induced. But business was not operating on facts in those days; it was operating mainly on a theory of competition, and the most conscienceless liar was likely to set the pace. Conscientious editors might hate to run such advertisements, but when conscienceless editors would gladly run them, what could the editor who had a conscience do about it? Usually, it seemed, he could do nothing, except perhaps to explain to his pastor that he was forced by competition to do a lot of things which he abhorred doing.

Strangely, the days in which the Press of America was most utterly prostituted to such vicious ballyhoo are often referred to by those who should know better as 'the great days of American journalism.' There is no dearth of those who bewail the passing of the times when 'fearless' editors so freely expressed their personal convictions in their editorials, and contrast them sadly with the present when the newspapers and magazines are supposed to be 'mere commercial institutions.'

The modern newspaper, it is often charged, is 'subsidized' by Big Business; and the newspaper often has a difficult time trying to prove that it is not. For actually the charge is true, although its implications

are as false as can be. The person who makes this charge usually looks upon Big Business and special privilege as almost synonymous terms. That is because he is thinking traditionally and, instead of finding out what the modern mass production industries actually are, jumps to the conclusion that the newspapers in which they advertise extensively are not free to gather and record the news.

As a matter of fact, these mass production industries are the very negation of special privilege, as anyone might discover for himself if he would make the effort. It is not they, but the unsuccessful, old-fashioned businesses, which are continually clamouring for special tariff concessions, opposing humane labour legislation or trying to intimidate their employees at election time. Mass production industries are fact-finders. Their success is based upon fact-finding. They do not ask or want acquiescence, even on the part of their own employees, and are trying to eliminate the yes-man as rapidly as they can. These industries want to know the truth, and a newspaper which attempts to hide or distort the truth thereby belittles its value to them.

There are, of course, many big businesses which have not yet fully arrived at this understanding of business needs, but the tendency is definitely and demonstrably in this direction. Big Business, in America at least, instead of exercising a censorship over the Press, is more and more demanding that the newspapers tell the truth, no matter how inconvenient or disagreeable the truth may sometimes seem

to be, just as it is demanding that untruthful advertising be excluded because it causes distrust of even the truthful advertising.

It is true that great newspapers are subsidized. They must be subsidized in one way or another. To attain a large circulation, they must be sold to readers for a mere fraction of what it costs to gather the news and print it, often for less than the cost of the white paper which is used. If this deficit is not made up through advertising, it must be met in some other way. In America it is met by advertising. In France and some other countries it is met by subsidies from political or other special interests or by the owner of the periodical, who must be a very rich man, and one who is willing to pay out huge amounts annually for the sake of having a personal organ expressing his ambitions and his special political and social theories.

It is futile to deny this subsidy, or to claim that it does not constitute an economic pressure which the newspaper must recognize. Those who pay for a paper are bound to control its policy; and if a paper is a personal indulgence, something in the nature of a private yacht, it is bound to be a very different sort of paper than if it is being subsidized by business in general. In one case, it will be free to indulge in any propaganda which suits the will of its personal owner; and if the owner happens to be a high-minded, public-spirited superman, it may become an excellent journal. In the other case, what the paper will be free to do will depend upon the needs of busi-

ness and whether business is best served by propaganda or by facts.

As it actually works out, the great French journals are unquestionably freer than are the newspapers of America to indulge in private crusades; but they are not so free to publish news which might jeopardize such crusades. In America, the largest and most successful journals are more free to print all the news from everywhere than are the newspapers of any country with which I am acquainted.

This is all contrary to the theories of the theorists. With the power interests, for instance, buying full-page advertisements in the New York dailies, it might be supposed that these papers would suppress the news of the Congressional investigations of those interests, or at least of the attacks made upon them by minority political groups. As a matter of fact, however, all such news is regularly printed, the advertisers understand that it will be printed, and modern business seems to have abandoned all efforts to keep such news from being printed.

This is nothing short of amazing to those who have figured it out with apparent logic that a periodical controlled by its advertisers must be subservient to special interests. The mystery vanishes, however, when one remembers that modern business is not a special interest. Modern business is the effort to get to the public the things which the public wants, and it has discovered that the way to do this most successfully is the way of fact-finding. Within this business system are many men of many minds — minds so

different that they could not possibly agree upon any platform of opinion — but they can agree, and they are more and more agreeing, to let fact-finding take its course. There is no unselfishness in this. If it were possible, to be sure, some special interest might like to make the great newspapers particularly subservient to themselves, but none would have any use for a paper which was specially subservient to some other interest. Such a publication, they know, would have little value as an advertising medium; and since they spend huge sums for advertising, they want to know that the space they pay for has business-pulling power.

I do not wish to idealize the American newspapers and magazines. I am speaking rather of a development than of a thoroughly achieved reform. For every reliable newspaper or magazine, one may point to some other publication whose standards still hark back to the patent medicine age. But these, even when they attain huge circulations, are not considered valuable advertising mediums. The most valuable periodical is the one which is so thoroughly subsidized by business in general that no special advertiser, no matter how rich and powerful, will be allowed an inch of space in which to make the slightest misrepresentation.

Advertising, to be sure, has not yet become a science. But as mass production with its search for facts, has been developing, advertising has surely taken on a new character. The ancient ballyhoo has been largely relegated now to the publications which even their

own readers do not read very seriously. More and more it is becoming recognized that only strictly truthful advertising pays. It may still be true that a sucker is born every minute; but it is the wise customers — those who return again and again because they have learned where to get their money's worth — who build up a business, and modern business is making a real effort to educate the masses into wise buying.

It is still supposed by some business men that successful advertising costs a lot of money, and it is still supposed by some theorists of business that concerns which spend millions annually for advertising must necessarily make up for it by charging higher prices for their goods. To consider advertising in terms of its cost, however, is misleading. Advertising is the articulation of business. It is the way by which a business makes itself known. Actually, good advertising costs nothing, for the alternative is not to save the money which might be expended in advertising, but to remain unknown and therefore unable to do a profitable business. The intelligent, large-scale, truthful advertiser is able to sell and therefore able to buy in such large quantities, and thus effect such savings and such a reduction in overhead expenses, that he is able to make prices to the consumer even lower than if he had not advertised. One might as well speak of the cost of a child's learning to talk. Undoubtedly learning words requires a certain expenditure of energy, but the child who does not spend the energy required does not and cannot hope to save it for

some more desirable end. Like the business man who does not advertise, he will simply remain dumb.

Advertising, always necessary to business, is doubly necessary to the mass production industries. When business was confined to small communities, or to a limited number of patrons who could be reached by personal representatives, advertising as we now know it was uncalled for; but when the main objective of business is to serve the masses of humanity everywhere with the greatest possible service which fact-finding methods can disclose, it is necessary that the masses be taken into the fullest confidence. Advertising then will become much more than an appeal for patronage. It will become an appeal for understanding and for consumer co-operation. It becomes news of first importance — news as to how the business is managed, and why — news regarding wages paid and the plans on foot for making them still higher, news concerning the economies effected and the new services which are thus made possible, and the most accurate, comprehensive news of matters which business once sought to keep a business secret — the full story of how the business is financed and where the money really goes.

Under mass production all these things are not merely matters of public interest, but it is necessary for the greatest success that the public shall be interested. The business which is not constantly telling its story to the public inevitably gets out of touch with the public and becomes unable to serve

the public well. Courageous, truthful advertising is the answer.

There are things, to be sure, in many industries, which the owners will not wish to advertise, and the concern which does not advertise may keep such things from being known. But that will answer no problem. It can result only in keeping up the bad practices which will inevitably lead to failure. Large-scale advertising makes it necessary to correct such errors, for it compels the advertiser to make good on every claim.

Yes, it costs money to make this intimate and constant appeal to a larger and ever larger public, and the business which does it must equip itself to serve a larger and ever larger public. That is, it must adopt fact-finding, mass production methods. Mass production, then, not only makes large-scale advertising necessary, but large-scale advertising makes mass production necessary. In other words, instead of adding to the price of the articles advertised, it makes it necessary to produce and distribute those articles at the lowest price which better methods and larger sales make possible.

Fortunately, the average American housewife does not need to be told this. She has already learned to buy the highly advertised items of merchandise. It is her more theoretical husband who is likely to come home with some non-advertised substitute instead. In the argument which follows, the theorist may seem to win, for it may be difficult to see at first how those who spend millions for advertising can give

better values than those who do not indulge in any such 'expense.' Facts, however, have a way of overriding theories; and the better values made possible by mass production and mass distribution, often initiated and always assisted by mass advertising, continue to dominate the market.

XIX

MASS PRODUCTION AND HEALTH

To suggest that physicians must adopt the principles of mass production is to take such great chances of being misunderstood that no one — excepting possibly the comic artists — may benefit from the suggestion. Nevertheless, I am taking the chance.

Let me hasten to add, however, that I do not favour the bringing in of patients on conveyor belts, before long lines of surgeons with uplifted instruments, each understanding nothing about the operation as a whole but each trained to make one particular cut in each particular body at the precise moment that it comes within his reach. Nor do I claim that much could be accomplished, either for the public health or for the economic betterment of the medical profession by the installation of mass production methods in the manufacture of pills.

Mass production is not a mere detail of factory technique. It is a universal principle. It consists of the organization of human knowledge, under the most scientific direction, to supply the needs of the masses by the most satisfactory and most economical method in which they can be supplied.

The greatest, or at least the most basic, of all human needs is health. Physicians all recognize this.

They need no one to arouse their interest in the project, and they are committed, in the very nature of their calling, to the use of scientific methods in diagnosis and treatment. It would be the rankest presumption for me, a mere business man, to undertake to criticize the science of healing. I know, of course, that doctors make mistakes; but they are employing fact-finding methods to correct those mistakes, and that is the best assurance which can possibly be given that the mistakes will be discovered and corrected.

A business man may, however, criticize the *business* of healing. The healing business is still badly organized. It is suffering, in fact, from the very things from which all unsuccessful businesses have been suffering since the advent of mass production disclosed the fact that a business to be successful must organize to give the greatest possible service to the masses at the lowest possible price.

Fortunately, many leading physicians already recognize this. The Committee on the Cost of Medical Care, with headquarters in Washington, cites figures indicating that the total annual loss through illness in the United States, including the loss of future net earnings on account of premature deaths, amounts to more than $15,000,000,000, while the total amount of physicians' fees is only $750,000,000. No one, of course, assumes that all this vast sum could immediately be saved, no matter how efficiently the medical profession were organized. But the figures indicate that there are ample economic opportunities for the healing business if it were organized to produce health

for the masses as efficiently, say, as the automobile business is organized to produce transportation for the masses.

At present, however, with all this urgent need for health, the total income of the average physician is so low, and his chances of increasing it so precarious, that many are claiming that the profession is overcrowded.

There can be no question as to the masses wanting health; and they would gladly pay many billions of dollars to get it. They are paying billions as it is; but they are not paying, as a rule, for what they want but for what they most decidedly do not want. They are paying, not for health, but for sickness.

The high cost of medical care being what it is, millions do not call a doctor until they have to, and then they need so much attention from a business which is not organized on a mass production basis that the high cost of medical care is what it is.

While the cost of medical care is far too high, however, the income of our physicians is far too low.

By no possibility can the economic aspects of this or any other profession be ignored. Our doctors have surely shown themselves to be public-spirited, self-sacrificing, charitable; but they must live if they are to practise and, unless there is money in it, the medical profession cannot make much progress.

There is not much money to be had, actually, in working along the traditional lines of the medical profession. The economic opportunities for physicians lie, not in giving extraordinary service to those who

can pay large fees, but in eliminating the economic waster of sickness. The masses cannot pay high prices for anything. Doctors' bills, however, are doubly burdensome, for they usually come in periods when one's income has stopped.

The medical profession, then, is peculiarly concerned with the maintenance of general prosperity. Doctors might have more work if everybody else were ill; but if everybody else were ill and consequently out of work the doctors, with plenty of work, would have to work for nothing. They could not collect their bills, at least, until people got back to work; and even when they got back to work, there would be so many other bills to pay that the doctors might easily be overlooked. Every doctor knows this. Most of them have learned it from experience. If there is to be a large income for the healing business, then, it must be looked for, not from those impoverished by illness but from those who are able to pay.

This is where the principles of mass production come in. For only a few are able to pay high fees; and what the masses are able to pay depends upon how well buying-power is being distributed. They cannot pay $5,000 for automobiles and they could not pay $500 unless the car in question was a thoroughly good car. But they can and will pay $500 for good cars; and because they can and will pay that much, it is possible to offer them a car for that money, and a much better car than could be offered for $5,000 if the masses were not buying cars.

They can and will pay a certain amount for medical

care, if it is first-class medical care — better care, say, than the average wealthy person can secure for many times the money to-day. They can't pay even this, of course, if they are sick, any more than they could have bought automobiles if they had been unemployed. But the automobile business organized employment. It organized to create wealth which wasn't being created and to distribute that wealth through distributing buying power. The process paid hugely. The medical profession, if it follows the same principles has an equally good opportunity.

It must, of course, distribute bill-paying power, at the same time that it is making those bills as low as the scientific organization of healing can make them, and learning to give better values in actual health production than it can now give for its high fees.

And this can be done. It is exactly what mass production does, wherever it is applied, and the mass production of health need be no exception. It cannot be done, however, so long as health production is carried on by individual craftsmen, or general practitioners, or by individual specialists who are not organized to produce healthy bodies but are independently in business to produce good heart-action, good throat conditions or good digestion, as the case may be.

This, to be sure, is the age of the specialist, and the days of the general practitioner are numbered. But there is this to be said for the general practitioner. When one took one's body to him to be repaired, he might not be able to repair it, but he at least knew what

his patient wanted. He knew that his patient wanted a body that could work; and if the whole body didn't work, he kept on tinkering, no matter how thoroughly he may have fixed up certain parts. To-day, however, one may have to shop indefinitely among specialists; and he may have a dozen separate bills to pay for repairs which, no matter how skilfully made, still leave his body quite as useless as it was when the alterations began.

The obvious answer to this human need is group medicine, but such an organization of group medicine as has hardly yet been contemplated. It must, moreover, be low-cost group medicine — health production at the lowest possible cost. As every doctor knows, however, curing the sick is much more costly than preventing sickness; so the mass production of health will give first attention to keeping patients well.

If all the health production forces in every community were organized into such a health-conserving service, three things would surely happen. Those who were shopping for health would, in the first place, be certain of better advice and more scientific attention than any general practitioner or any number of specialists acting independently could give them. Secondly, great masses could afford, and could easily be persuaded to take advantage of, such service; and thirdly, these masses would be so much better off financially by virtue of being kept in good working condition, that they would be able to support a far more elaborate and efficient system of health production than it would at first be possible to organize.

Incidentally, with health production organized on any such modern business basis, there would be little need for the constant propaganda, so necessary at present, to keep the public from consulting quacks, from dosing itself with patent medicines, from joining weird health cults or from following the diagnosis and advice of anyone it happens to meet, instead of consulting the medical profession. As a matter of fact, it is difficult to consult the medical profession to-day, even if one has money to spare. About all that the average patient can do is to consult some doctor, or some specialist, who, because he is trying to conduct a little business of his own, cannot immediately place before the patient all the advantages which medical science has to offer. Critical cases, to be sure, may be sent to hospitals; but year-round health service, excepting to the degree that individual doctors are trained to give it, is a difficult thing to find, even at high prices, and it is not available at all at prices which the masses can now afford to pay.

It is often said, to be sure, that people generally are so perverse by nature that they will almost surely neglect their health. There is no proof of this. When anything, however—no matter how valuable it may be—costs very much, people of limited means are forced to go without it if they can. This is a general economic principle by no means confined to the buying and selling of health. Wherever the masses have no money to buy good clothes, they neglect their personal appearance; and when travel is costly, they suppress

their desire to see the world and become provincial-minded folk.

Those who do buy costly things, moreover, even though they be ever so valuable, cannot spend their money in other ways and cannot contribute as they might to the general prosperity. The high cost of medical care, therefore, does not mean hard times merely for the families which pay the bills. It means hard times for doctors, too, because it keeps so many people from consulting doctors when they should; and it causes unemployment and depression in all the industries manufacturing things which those who are spending their money on doctors' bills want but have to go without.

There are health centres already, I am glad to note, in most of our principal cities, in which practitioners in many lines are combining to treat the sick at more reasonable prices than the masses have had to pay for such excellent service before. But this, it should be quite clear, is not enough. What is needed is an even greater combination to keep people well. In every city, and even in the rural districts, the medical profession must organize with this in mind.

I think it altogether probable, when the health experts are once organized for the mass production of health, that they may find it poor business to charge, not merely high fees, but any fee at all, for surgical operations and the emergency attention needed by the very ill. For it is health that people want, not operations. To induce them to pay for it regularly might, of course, necessitate considerable re-education;

but after all, it is a selling job not obviously beyond the possibilities of salesmanship. The great necessity is that the health business shall have high-grade, low-cost health to sell.

Health, however, is not an individual matter, and cannot be dispensed by individual practitioners. Even to spread the principles of personal hygiene is not enough. The successful administration of health is sorely needed — and not mere political administration but a scientific administration, organized on the fact-finding principles with which the medical profession has become so well acquainted — not merely for the expensive treatment of helpless persons who cannot afford the expense, but for the production and *sale* of health to the masses who, if they get it, can then well afford to pay for it.

If the masses pay for sickness, it must be remembered, they exchange their wealth for something which they do not want, and are necessarily in a position in which they can neither produce more wealth nor buy those things which give wealth-producing employment to others. If, on the other hand, they pay for health, and get it, they may not only go on producing, but they may also go on buying and thus contributing to general prosperity. With such an understanding of actual conditions, the healing business cannot long defer a much-needed scientific reorganization looking to the highly profitable mass production of health.

Most unselfishly to-day, doctors who realize the social character of health, lift their voices for better public sanitation, more room and more playgrounds

for children, better housing and better industrial conditions, and for all sorts of reforms by which their own medical practice may be reduced. This unselfishness, however, is opposed by ignorant selfishness, and their campaigns are ineffective; and the physicians are compelled to go on treating patients whom they cannot help because they cannot change their patients' unhealthful environment. With the whole profession concentrating upon the facts of the situation, however, instead of upon its sentiments, we may reasonably hope for a great and sudden change. When they make it plain that sickness is not mere personal hard luck, and that it is economically ruinous to labour and capital, to taxpayers and to consumers, and to the medical profession itself, they will open the way for enlightened selfishness to act in an enlightened way for social betterment. Doubtless it will be a long time before disease can generally be conquered, but the organization of the healing business on actual fact-finding and fact-recognizing lines will bring us incalculably nearer the goal.

XX

MASS PRODUCTION AND HOUSING

WHEN one suggests the mass production of houses, a dreary picture will inevitably enter many minds of street after street of dwellings all alike — such deadly monotony and uniformity that, even if they are well-built homes, with every modern convenience, the spiritual effect must be depressing.

It is well to remember then that there are such dreary sections in almost all our cities, and that they are *not the products of mass production.* They are not even well built and serviceable. While mass production is production for the masses, and inevitably pays first attention to what the masses really want, these barracks and hives for the poor, and the scarcely less uninspiring rows of more expensive uniformity for those not quite so poor, have been built as a rule by get-rich-quick promoters with an eye to giving the least possible service for the highest obtainable price.

Mass production is the culmination of machine production, but these houses are not even produced by machinery. Almost invariably they are hand-made. While mass production is continually discovering less and less costly methods of production, the cost of home-building under these traditional methods is more than in former years. Employees in this indus-

try, get higher wages than they used to get; but since they are doing things in much the same way that they used to be done, the output per man has not increased. The only way it could be increased under such conditions, in fact, would be through speeding up, and that is a method of increasing production which has long since ceased to work. If every worker were to work to the limit of his strength, and methods were not improved, not much could be gained, for such a course would inevitably tend to fatigue and breakdown; but even if this were not so, it would be bad policy to try to force employees to work like that. When employers organize to get all they can out of their workers, the workers inevitably organize to get all they can out of their employers; and when employers are for ever trying to make them work as hard as they can, they are for ever looking for ways and means of taking things as easy as they can. Only when industry is organized to eliminate unnecessary effort can it be most successful. Only then, in fact, can continuous employment be assured. Work is notoriously unsteady in the building trades.

Anything which tends to 'make the job last' tends to make it the last job; for such a course compels high prices, restricts purchasing and makes it difficult for the consumer to order more work done. On the other hand, anything which tends to get a job done in the simplest and most effective way in which it can be done conserves the consumer's dollar and makes it possible for him to satisfy more wants and thus to provide still more employment.

But what is 'the job'? In the building industry, traditionally, the job has seemed to be the building of a house, and the industry, it has been supposed, knew how to build houses. In the mass production industries, the job has been the supplying of some human want; and the mass production industries are organized on the theory that no one yet knows how those wants can best be supplied. The mass production industries are, therefore, finding out, while the home builders, apparently, have considered the question as having been settled so long ago that it isn't necessary to analyse the actual conditions in modern America to find out what the would-be householder really wants.

This is not wholly true, of course, for builders have noticed that people want bathrooms and furnaces and electric lights; and they stand ready to provide houses with such improvements, if buyers are willing to pay extra for them. But people do not want to pay extra. They want houses with these modern conveniences for the price of houses in which they used to live and which had nothing of the sort. To the building industry, this may seem to be an utterly unreasonable demand, and so nothing is done about it. To the mass production industries, it may also have seemed to be an unreasonable demand, but something is done about it. The purpose of industry is not to satisfy human reasons but to satisfy human wants. Explanations as to why we cannot have our wants supplied may be perfectly satisfactory to our intellects, but such explanations will not make us buy; and unless

we do buy, business cannot sell. The automobile industry has prospered by finding out how to sell cars meeting all modern demands for a fraction of the price of the earlier and clumsier models.

The building industry has not even asked itself the question: Where do the people to whom we are trying to sell houses really want to live? And where, in fact, are they going to live, whether they prefer it as a locality or not? These would seem to be the important questions, for it would seem difficult to sell a man a house in Philadelphia if he was about to move to Chicago; but the building industry pays little attention to that. There was a time, they know, when people customarily settled down wherever they built their homes; and the home-providing industry seems not to have noticed that that time has passed away. The masses are on the move to-day. It is impossible for a large percentage of them ever to settle down for life in one particular spot. They either have to go, or it is highly advisable that they should go, where they can get good jobs, and modern industry is in a state of flux. It is constantly centralizing and decentralizing, calling multitudes hither and thither, and making it impossible for them to establish homes in the old traditional way.

I am not speaking of a 'floating population' nor of fly-by-night factories which locate here and there for the purpose, chiefly, of selling stock to gullible home-town boosters. Industrialism is not nomadic. It is established firmly in the community which it serves; but this community is no longer a fixed, geographical

centre. It may be nation-wide or even world-wide in its character, and its citizens are increasingly under the necessity of living, not with reference merely to some particular municipality, but with reference to their position in the nation or in the world.

When they buy a house, however, they are compelled to think in terms of residence in one particular spot. If their means are limited, such a home may easily become a millstone about their necks. Pittsburg, for example, might decline, not because the steel industry is declining but because it is expanding and finds that it can serve the world more effectively by building up in Birmingham. If such a thing should happen, thousands of Pittsburg house owners would lose their homes through no fault of their own or, by refusing to move when their jobs do, would actually become 'floaters.'

It is only natural, of course, that people should think of home in terms of some particular spot, for when agriculture was our way of life it was necessary to settle down, geographically, and grow up with the community, if we hoped to make our social position secure. But industry is now our way of life; and if we do not move when industrial opportunity calls us, we detach ourselves from the community in which we really live and move and have our being, and, by hanging on to the formula of 'home,' actually deprive ourselves of its spiritual reality.

There are many towns in America which boast about the large percentage of their population who own their own homes. It may be nothing to brag

about. It may simply mean that workers have stuck when they could have bettered themselves by going elsewhere, because their savings were tied up in a house and lot which they could not bring with them and could not sell for anything near the amount which they had invested. When a large industry dies or moves, it is likely to depopulate a town so that people may be able to buy houses there for very little money, and they may imagine that they are buying homes. But this cannot make them homes. To become homes, they must be houses in which families can live without sacrificing their economic security, and economic security now rests in industry instead of in geographical locality.

The business of housing, however, seems to get its tips, not from actual industrial evolution but from the real estate business — the business of selling locations to masses who cannot locate. And if large numbers refuse to become static in a moving world, it is assumed that they do not want homes. I see no evidence to support this. It seems to me that human beings yearn as much as ever for the things which home once provided but which a mere house and lot cannot. They want stability in their lives. They want a sense of belonging to the community and being a part of it — a feeling which mere residence can no longer give. If the housing industry would only analyse this need, and determine to fill it by modern mass production methods, the housing industry would take on new life.

No mere local real estate promoter could, of course,

do this. It would require a nation-wide building business, interested not in gluing families to some particular spot but in serving them to the best of its ability. It would not care where its customers lived; but it would keep in touch with industrial development and be ready with good housing at the lowest possible price in the places to which industry would constantly be drawing them. Such a concern would probably not try to sell locations. It would sell equities, rather, in any city in which a customer was working, with the provision that, if he wished to move to some other city, he could exchange his equity for its equivalent in the latter place.

If industry were to desert any particular community, of course, there would be a great loss involved in the depreciation of houses there. But this loss should and could be equalized, perhaps, by insurance, instead of falling, as it does to-day, upon those who have made the mistake of investing in a permanent location when what they really wanted was a permanent home. In the larger communities, of course, while industries are constantly dwindling or moving out, other industries are constantly expanding or moving in. But the hapless home-owner of to-day is not usually in a position to take advantage of this. He is likely to be a machinist or an electrician, and it is unreasonable to expect him to be a business man as well; and it is unlikely that he will be able to sell his home on fair terms to himself, even in a city where the market, if sales are not forced, may be fairly good. The housing business should attend to the business of providing

homes, and should accept its business responsibilities, instead of making money, as it so often tries to do to-day, out of the desperation of families who have to move and abandon their properties immediately.

With housing organized on a nation-wide scale, and with first attention given to the actual human needs involved, there is no reason to suppose that the building industry could not improve its technical methods quite as successfully as other mass production industries. To preserve the ancient methods, or even the conventional forms, would be no part of its programme. Anything which could be done better by machinery than with the old-fashioned tools of handicraft would be done in factories, and machines would constantly be designed to do them better yet. The finished product might look no more like the houses of to-day than the modern automobile looks like a horse and wagon, or the radio like the town crier of another century. But they would be, first, quite as much more serviceable; and secondly, they would become more and more beautiful as the industry advanced.

For man wants beauty. The masses heretofore have had little opportunity to achieve it; but where conditions have provided men with wealth and leisure they have demonstrated their preference for beautiful things. Mass production is now providing wealth and leisure for the masses, and since mass production is production *for* the masses, it must give attention to their aspiration toward the beautiful. Old-fashioned production did not do this because it did not have to. It built beautiful mansions, but it

built them for the classes; when it built for the masses, it built rude huts and slums.

We may be sure then, that the housing industry under mass production methods will avoid monotony and uniformity, but it will strive for harmony. Large-scale planning will make such harmony possible. A beautiful house, like a beautiful garment, may become ugly if it does not harmonize with its environment; but harmony, when it is achieved, does not destroy individuality but heightens it. The artist and the architect, we may be sure, will hold an important position in the counsels of the mass production housing industry; but they will be artists and architects who know that beauty is achieved, neither through sticking unthinkingly to no longer meaningful forms, nor through anarchistic self-expression by which a number of houses to-day, each a sincere attempt to achieve beauty by itself, may so swear at each other and at the surrounding landscape as to make the general ensemble a hopeless eyesore.

Just what a thoroughly serviceable and beautiful home should cost when the technique of mass production shall have been discovered and applied, is of course a matter of speculation. That $10,000-houses could be built and sold profitably for $1000 would seem to the conventional builder to be a silly statement. He will say that the material alone must cost much more than that, that transportation may cost as much again and that the labour involved would cost several times as much. Nevertheless, one can buy an incalculably better car to-day for $500

than he could buy for $5000 a few years ago. Only when traditional thinking is abandoned, and industry sets out to meet the needs of the masses at prices which the masses can and will pay, can we ever know how abundantly those needs may be supplied.

It is certain that millions of people would order houses built, if they could get them for such a figure and could readily exchange them, if they had to move, for equally good houses in the place to which industrial opportunity was calling them. No member of the building trades, then, would be out of employment, excepting those who might refuse to engage in building unless building were carried on by the old conventional formulas. Industry cannot stick, however, to the old conventional formulas. If it does, it creates no new wealth, and the old conventional standard of living is the most that we can hope for; and under the old conventional standard of living, the masses could not live in decent homes and could not give much profitable employment either to builders or to producers in other lines.

Only mass production can solve the housing problem, and only mass production can solve the problems of the housing industry. For only under mass production — production for the masses — do the problems of producer and consumer become the same.

XXI

MASS PRODUCTION AND AGRICULTURE

AGRICULTURE, as we are constantly reminded, is not an *industry* so much as it is a *way of life.* This is an important point. Unless it is taken into consideration, any programme of farm relief will almost certainly land us in confusion.

But industry also is a way of life. It is a different way of life. It is a much more profitable way of life, at least as far as material results are concerned, although many still devoutly believe that the agricultural way of living is spiritually much better.

The trouble with most of the programmes for farm relief is that they try to preserve the old way of life and, at the same time, achieve the new prosperity. This simply can't be done. If the old way is preserved, the best that we can hope for are the old results. The ox cart was one way of transportation. The automobile is another. As far as speed and comfort are concerned, the motor car is highly preferable, but there may be many sentimental reasons why one does not wish to give up the old ox team. It is foolish to argue that sentiment cannot be considered. Sentiment can be and is considered in the solution of many human problems. What we cannot hope for, however, is to make the ox team keep up with the automobile.

Even if, by some miracle, we could get the hitherto deliberate beasts to pull us sixty miles an hour, the results would still be unsatisfactory.

If an ox team should get stuck in the mud, a motor car might pull it out. It would not follow, however, that the best way to haul loads is to hitch a motor car in front of every ox team. Such a method, in fact, is not the best method of driving oxen. It neither gets the job done as efficiently as it might be done nor preserves the ancient way of doing it. All it preserves, at most, is the semblance of the ox cart system; and it preserves that only in the minds of those who refuse to look at the whole set-up.

This confusion of the old way and the new is not only widespread to-day: it has become chronic in American agriculture. Much machinery has been brought to the farm: but it has been brought there, as a rule, not to pull the loads which machinery might pull, but to pull the machinery which once pulled loads but which, in a machine civilization, can not pull successfully. But the new arrangement is not pulling successfully either; hence all sorts of programmes are being launched to get the government to pull the machine which is pulling the ox which isn't pulling the load.

To rid ourselves of this confusion it is necessary only that we note the exact difference between the agricultural and the industrial way of life. If we prefer the old way to the new, there are still some places on earth where the old way might be followed. Not many Americans could follow it, however, and

fewer still would care to, for the old way of agriculture, at best, could not produce much wealth. It could and did, however, produce a degree of *independence* which is utterly impossible in industry.

The American farmer still seems to idealize this independence. If he had it, he might not think so highly of it, for he would necessarily have to get along without a lot of things which he has learned to like. He could not, for instance, have any farm machinery excepting such implements as he might be able to make on his own farm. Of course he could not have telephones or newspapers or radios, electric light and power, automobiles, railroads, or even anything to eat or wear which he and his family could not produce out of raw materials on the farm. All such things are the product of large numbers of people getting together, pooling their knowledge and co-operating in such a way that they become dependent upon one another. Independence and wealth are mutually exclusive. If we hope to get one, we must give up the other; and all efforts to achieve independence are necessarily in the direction of hard labour and a low standard of living.

Mass production, which is the most successful form of industry, is the extreme opposite of independence. It means complete dependence upon the masses — complete interdependence, and therefore the highest possible standard of living for everybody. It means achieving wealth through distributing it. It involves paying the highest possible wages and selling the product at the lowest possible price. If it doesn't mean

loving others as we love ourselves, it at least means thinking of others first, in our own self-interest, and serving ourselves best through serving others best.

It doesn't mean unselfishness. It means simply the discovery of better and more successful methods of getting what we want — that is, if we want prosperity. If we want independence, of course, and do not care for prosperity, mass production will not help us in the least. The point is that we cannot have individual independence and prosperity too, and no machinery has ever been invented which can help us get them both.

Farmers, however, can have a *sense* of independence, if they are determined enough. They can get that by traditional thinking — by refusing to look realities squarely in the face. Remembering that agriculture is a way of life, they may assume that because they are farmers it will not be necessary for them to learn any other way. They may be 'progressive,' after a fashion. They may buy modern machinery. They may combine to limit production and to keep prices up. But all this, at best, can amount to mere temporary relief. If they wish to succeed in this world of mass production, they must abandon not only ancient devices but ancient viewpoints, and apply the principle by which success is now attained. These are the principles of mass production.

I do not mean to criticize the farmers for trying to hang on to the notion of independence in a world in which actual independence has become so impracticable. Thousands of business men, with far less

excuse for doing so, are making the same attempt. They are attacking the chain stores for 'taking away their independence,' and are appealing to the public and to the government to bring it back. This is in spite of the fact that merchants never were and never could be independent, while farmers, once upon a time, could be and were.

Trade, from its very beginning, required two parties. Farming needed only one. A farm family might produce the necessities of life and consume them, without consulting any outside interests; but a commercial firm, in the very nature of its position, had to deal with the outside world in order to make a living for itself.

Even to-day the farmer has a constant suggestion of this independence, particularly if he is running an old-fashioned farm with land devoted to many different crops and keeps a few cows and hogs and chickens and sheep. He cannot, to be sure, make money on such a farm, and he could not for very long make a living on it if it were walled off from the rest of the world and all communication with it stopped. But he could go on living for weeks and months, perhaps for years, a thing which the human groups who compose our greatest and most powerful business corporations could not do if they were suddenly isolated from the rest of society. The employers and employees of the United States Steel Corporation or of General Motors, if left to their own devices, could not take care of each other for a single week, because they are not equipped to provide themselves directly

with the elemental necessities of life. They must deal with farmers before they can live at all. It is only natural, then, that farmers should think of their 'independence,' while quite absurd that business men should apply the term to themselves.

Farmers are independent, however, only to the degree that they abstain from business. The moment they think of selling their products, they begin to leave the old way of life and begin to take on the new. While agriculture, then, is one way of life, and business another, the *business of agriculture* is not the agricultural but the business way.

We can get nowhere, surely, in the solution of the farm problem, if we do not know what we are talking about when we speak of farming. Do we mean the system by which a family can wrest a bare living from the soil? Or do we mean a system of producing and distributing food successfully? These are two very different things. One involves staying out of the machine civilization and becoming independent of it. The other necessitates coming into it, and discovering and applying the principles of mass production, which are the principles by which success is possible in the machine civilization.

In both the old way and the new, it is well to remember, co-operation will be essential. In the one case, however, the co-operation will be limited to the members of a very small group, consisting of the farmer and his family. There must be a family. Individuals, surely, cannot think of isolating themselves from the rest of humanity and achieving indi-

vidual independence, letting the babies, if there are any, shift for themselves. The babies cannot do that. The sick cannot do it. The very old cannot do it. There must be some sort of organization by which everybody will work first in the interest of the whole group, or the race would come to an end. The real difference, then, between the old way of life and the new is in the size of the economic group. The old-fashioned group was very small and, even if every member worked hard and there was the finest co-operative spirit, only a bare living could be achieved. Mass production constantly widens the group, and seeks to include everybody, not because of unselfishness but because selling to everybody, and seeing to it that everybody is amply able to buy, is so much more profitable than any other way of doing business.

To-day, absurdly, agriculture is faced with the problem of over-production, which proves, at any rate, that the farmers have abandoned the old way of life. Independent little groups would never have such a problem, for even if they raised more than all the members could eat, no one would think of worrying about it. The only thing that worried them was their having less than they wanted. It is not necessary to suggest, then, that farmers should abandon the old way of life, but only that they must abandon the old way of thinking.

American farmers, for instance, have been producing millions of bushels of wheat and millions of bales of cotton more than they could sell, and have been

compelled to offer them for sale at less than the cost of production. They have appealed to the government to guarantee a profitable sale for all this produce, and the government has, at times, sunk millions of dollars into buying farm products which it did not want and could not sell without driving the price still lower and leaving the farmers still more desperate than before.

In the meantime, desperate efforts were made to organize 'co-operative marketing,' partly with the intent of doing away with a needlessly expensive system of middlemen, but chiefly for the purpose of securing for the farmers a higher price than they were able to get through unrestrained competition. All these movements were understandable, for it was obvious that farmers could not go on indefinitely selling their product below the cost of production, but none of them found or could find a solution. The solution is too simple. It consists of operating, in an industrial world, upon industrial principles, and in a world of mass production upon the principles of mass production.

If the automobile industry had found itself producing more cars than it could dispose of above the cost of production, we cannot imagine the Government's buying millions of cars, which it did not need and could not sell, so that the industry might go on producing still more millions of cars and thus keep all its employees 'profitably' employed. Unemployment, to be sure, could not solve any problem, as the mass production industries must inevitably find out; but

neither can continuous employment in the production of things which cannot be profitably sold.

Mass production, however, does not try to limit production to the market. Above all, it does not attempt to peg prices. If it cannot sell profitably at the prevailing price, it *lowers* the price, achieves a wider market and finds out how to sell profitably at this lower price. It can do this only by conquering wastes in production and distribution; and when everything possible is done to simplify the flow of goods from producer to consumer, the price becomes so low and the market so wide that, instead of unemployment, it is necessary to employ more people than before.

Only when farming is organized to fill the needs of consumers at the lowest possible price with which they can be filled can farming succeed in a mass production world. That, of course, will entail large-scale production. It will necessitate looking upon farming as an industry, instead of a mere homestead where whoever happens to belong to the family may join with the others in scratching a living from the soil. It must be governed by fact-finding, instead of by tradition, and must adopt not merely modern machinery but modern, scientific management in production, distribution and finance. It must not merely adopt modern formulas, but must adopt the technique of improving constantly upon these formulas, never being content to continue doing things in the way they have been done.

Modern industry, moreover, cannot confine itself

to the manufacture of one specific commodity when the market for that commodity has been destroyed or rendered unprofitable by any cause, or when such production is neccessarily seasonal in character and competitors have found a way to supply the market as a mere side line of some continuous, profitable, year-round business organization.

No worker could be successful, surely, if his only occupation consisted of shovelling snow. Conceivably, he might be an excellent snow shoveller, but he would find himself outdistanced at the end of the fiscal year by those who had kept fairly busy at other occupations during the weeks and months when snow shovellers were not in demand. Such a man, in fact, could not afford to shovel snow at any wages which a snow shoveller could hope to get; for such wages surely would not be enough to keep him through the year, and he would be forced to apply either to the government or to private charity for snow shoveller's relief.

But how about wheat growers? No modern business organization, surely, can hope to confine itself to wheat growing, and still hope to sell its wheat very profitably. The enterprise requires considerable capital and, in harvest time, a considerable force of employees. But it is seasonal. The capital, equipment, and labour involved can be concentrated upon the job of wheat growing for but a few weeks during the whole year; and even in good years, one is taking a desperate chance if he hopes to make an annual profit from these few weeks of maximum activity.

Obviously this is an industrial problem and requires

an industrial solution. Years ago the majority of our industries were seasonal; and so long as they were competing with similarly seasonal industries, they managed to get along. Those were the days, however, of low wages, small profits and a low standard of living generally. When some employers discovered how to stabilize their organizations, how to regularize employment, how to develop by-products and how to keep their factories running full-head throughout the year, would-be competitors who did not adopt such methods soon found themselves hopelessly outdistanced and unable to realize any returns upon the capital which they had invested.

Many services, it must be kept in mind, are necessarily seasonal. One cannot run a summer resort in winter. If the proprietor of a summer resort, however, can utilize his organization and capital in the running of some winter resort when his summer business has necessarily ceased, he has a distinct advantage over any competitor who is dependent upon a two-month season for a twelve-month income.

The question is: Can agricultural work be stabilized so that producers of wheat (or any other crop) can not only produce these things in the most efficient and most economical way, but so that the capital and the labour employed in their production can be employed with equal efficiency in the production of other things when they are not needed in the production of wheat?

And the answer is Yes — in these days of mass production. This is one of the most important, although one of the least understood, developments

of modern times, and not only holds out enormous opportunities for American agriculture but promises to play a conspicuous part in the building of world peace and world prosperity.

To bring up the price of wheat so that wheat-growing under the old system might again become profitable is hopeless. There is no way by which the price of wheat can be advanced excepting through limiting the crop; and whenever there is any sign of advancing prices, it is impossible to limit the crop. Even if America were the only wheat growing country, limiting the crop would still be extremely difficult; but with Russia, the Argentine, Canada, the United States and other countries all growing wheat and all eager to export great surpluses, the only way in which the crop could be limited is through prices becoming so low as to discourage wheat growers entirely.

If profits cannot be made out of low prices, then, they cannot be made at all. But profits can be made out of low prices if wheat growing, instead of being a one-product seasonal industry, can become the by-product of successful, well-organized, year-round, industrial enterprise. And this can happen. In some small degree, in fact, it is already happening. Modern industry, because of the development of electric instead of steam power, is decentralizing. It is no longer necessary for great employers to gather all their employees under one roof or in one particular spot. Various parts and various materials of one industrial product may now be manufactured in small branch factories throughout the country, wherever

conditions are favourable for such manufacturing; and it is already being discovered that conditions are favourable for such manufacturing, *or that they can easily be made favourable*, in distinctly agricultural communities.

The great deterrent to such development heretofore was the difficulty of maintaining regular year-round employment in the small industrial branches located in the rural sections; but by the co-ordination of agriculture and industry, regularization is now becoming possible. Farms and industries need not necessarily be under the same management, but they must plan their operations with reference to each other. The bulk of the indoor factory work will necessarily be done in winter, while the bulk of the outdoor farm work is necessarily done in summer. The farms moreover, will tend to supply the industries with all products which can be grown most advantageously in the vicinity; and the industries, through their research departments, will seek to find new uses for everything which the farms are able to produce, or for things which they have been producing but have customarily thrown away as worthless.

Both farms and industries, then, can pay high wages, and will find it most profitable to pay the highest wages. But the farmer will not have to pay wages out of his own past savings; he will be paying them, rather, out of the greater savings which these new methods and this new co-ordination of industry and agriculture will be effecting. He may be a small farmer or a large, but he will not strive for an im-

possible independence from the world in which he is living, but for the fullest possible co-ordination with and the greatest possible service to that world. If his holdings are small, he will doubtless have to unite with other small holders, so that each may have the benefit of up-to-date machinery and large-scale systematic planning, and so that the land held and the labour employed may be utilized to the utmost advantage. He will doubtless find it necessary to engage in co-operative marketing, not however for the purpose of raising prices to the impossible point where inefficiency can be made to pay, but so that all may get the greatest total profits through giving the greatest possible service at the lowest possible price.

When industry and agriculture effect such co-operation, the American farmer will not have to worry about the price of wheat. He may or he may not consider wheat worth growing, but it will be possible, at least, for him to sell wheat in the world market without facing bankruptcy. For wheat will not represent his total investment. He will be working profitably the whole year round, either in some form of agriculture which is profitable, or in some well-paid industrial occupation. He will not grow wheat, then, because that is all there is for him to do; and if there is general over-production, he will not add to it and stake his very existence upon the result. The greater part of his year, at least, will have been spent in making money; and any wheat which he may have produced in addition may be sold for anything which

the market offers, and he will have that much more money anyway.

When it is discovered, however, that industrial countries can produce wheat or other crops at lower prices than agricultural countries can, the agricultural countries will have to do something about it. The inevitable result must be to force industrialism upon these other nations, if for no other reason than to avert the inevitable social upheavals which would follow from inability to sell their agricultural surpluses.

The immediate result, of course, would be to curtail production for the world market in those countries which could not sell their surpluses, which would tend to raise the price in the world market once more. But a far more beneficial result, both to America and to the whole world, would come from the development of machine industry and mass production methods in the agricultural countries, and the consequent raising of their standard of living toward the American level.

World progress, world prosperity, and world peace itself depend upon more buying, as more effective methods of industry make more production possible — that is, upon a higher and ever higher standard of living for the masses, both industrial and agricultural workers, everywhere. The old way of life — the way by which little groups could till the soil for their own immediate keep — could and did go on for ages; and while it was always desirable, it was never necessary that the masses who lived by such methods should rise above the line of abject poverty. But that

old way of life is not only undesirable but impossible now. It is not only necessary, then, to adopt mass production methods, but by adopting them, to compel their adoption generally.

The business problem, the farm problem, the world problem are all one problem, and they can be solved only by facing the facts of success in this machine age, instead of following the formulas and traditions of another day. The solution of the farm problem after all is simple: it is our inability or our unwillingness to state the problem squarely which makes the solution seem so difficult.

XXII

MASS PRODUCTION AND EXCESSES AND PERILS

WHEN mass production brought the automobile to the masses, it answered an age-old longing of the human soul to conquer its environment and break from the historic limitations of time and space. It also brought the traffic problem, and it endowed fools and criminals with hitherto unheard-of power. The motor car, in fact, proved too much for even the intelligent and the decent to use intelligently and decently; and at the height of automobile achievement in America, we found ourselves killing upwards of thirty thousand persons yearly in automobile 'accidents,' while the list of minor casualties read like that of a major war.

Some thoughtful persons pondered the situation only to conclude that the motor car, with all its advantages, was not worth such a cost. The slower and simpler ways, they said, were better. But fortunately or unfortunately, this had no effect upon the situation. After one had reached such a conclusion, in fact, he was likely to turn in his old car for a faster and more powerful model.

The fact is that we can't abolish the motor car. It is here because we learned how to bring it here, and it is a lesson which we cannot unlearn. We have eaten

of the fruit of the tree of knowledge, and it has done something to us which cannot be undone. We now have power which we cannot abdicate. We must learn to use this power, either to our own advantage or our own destruction.

What is true of the automobile is true of machine production as a whole. New machine technique applied to old patterns of thought is capable of destroying all human civilization in war. Machinery is our servant and it is ready to do whatever we want it to do. We want world peace, for instance, and mass production is showing us how to achieve world peace. If we insist on thinking traditionally, however, we may find ourselves engaged, not in mass production, but in mass destruction.

Mass production can, if we insist, equip us all with aeroplanes and poison gas. If these aeroplanes are made so safe that even a child can run one, they may become so dangerous that the race cannot survive. True, if we employ mass production understandingly, we shall have no more war; for mass production, employed understandingly, makes friends, not enemies, and it is impossible to have war without enemies. But mass production, like the automobile, will not wait for us to become educated. It will keep on showing us how to do things more efficiently; and if, because of our traditional thinking, we do evil things, the result may be a greater total of evil than we would have reaped if our methods had not been so efficient.

We never meant to kill thirty thousand Americans annually with our motor cars. We did it largely

because we did not see the necessity for making our highways safe for pedestrians as well as motorists; and, although we saw its obvious advantages, we thought it would be a very costly thing to do. That is, we did not understand mass production. Had we understood it, we would have known that it adds to our wealth to do things which we want to have done; and that, if we have enough man-power and enough scientific management to spare for such jobs, we cannot afford *not* to do them.

Safe highways are worth more than highways which are too narrow for cars to pass other cars in safety, or highways upon which pedestrians have to walk because they are not provided with adequate paths. To be sure, it might have required billions of dollars of capital to build such highways and such paths for pedestrians everywhere. But we had the billions of dollars which were either uninvested, or invested in the making of things which the people generally did not want nearly as much as they wanted to know that their children, when they were out of the house, were safe from motor cars.

But this surplus capital was not employed in making our highways safe, nor in any other enterprise which would have added similarly to the common wealth. Millions of able-bodied, willing workers, therefore, and thousands of capable engineers and scientific managers were left unemployed. Our highways, therefore, remained unsafe, and we went on killing thousands and injuring hundreds of thousands. In the meantime, assuming that a working-man under

scientific management creates ten dollars' worth of wealth a day, America lost fifteen billion dollars' worth of wealth in a single year — that is, wealth which its five million unemployed should have been producing but were not permitted to produce.

Even that does not wholly tell the loss which we sustained because, in our traditional thinking, we did not use mass production understandingly. Because these men were unemployed, they could not buy the things they had customarily been buying; and millions who were customarily employed in the making of those things were reduced, at best, to part-time employment, and other billions of dollars were added to our loss.

Mass production, we must admit, brings its peculiar evils, for no such widespread unemployment would have been possible before the industrial era. The cure, to be sure, does not lie in abolishing mass production. If it did, the situation would be hopeless, for mass production cannot be abolished. Nevertheless, we must recognize the intolerable situation. Mass production, it seems, has placed great reservoirs of capital under the control of persons who do not yet know enough to use it for the production of more wealth, but actually permit widespread unemployment, with its billions of dollars of losses annually.

No patriarch in the old days could possible have fallen into such an error. If there was work which needed to be done, and men to do it, it would never have occurred to him that he could not afford to let them work. Of course, he knew nothing of finance.

All he knew was how the different members of his little social order were related to each other. Many of our great modern capitalists too often, although highly educated in the traditions of finance, are quite unaware of the way in which the people of *their* social order are related.

Leading American bankers, reviewing the long-drawn-out business depression in 1930-31, actually advocated a reduction of *wages and prices*, it never seeming to occur to them that a reduction of wages *is* an automatic increase of prices. One might as well advocate more light *and* darkness, or call for a piece of string which shall be short at one end and long at the other.

Others advocated 'limiting production,' which meant the dismissal of more men, as a means of curing unemployment. The men who talked this way were not fools. They had reached their financial position through their very real ability; and they were men whom business men had rightfully come to trust. For they understood the technique of financing single industries as others did not understand it; and they had a wealth of information as to what business practices had worked and what ones had failed. They were not even blind to Ford's success; they were called into counsel frequently by other mass production industries, and their knowledge was often extremely valuable. The writer would be the last to suggest that these men should be pulled down from their positions of responsibility and that men with better social theories but untrained in finance

should take their place. Nevertheless, it must be listed among the real perils of this mass production age that so many men who do not know what money is for should be in charge of its finances.

Evolution, however, is more dependable than revolution. The automobile industry could not have succeeded as it did if it had started off by abolishing the horse. The aeroplane came, not entirely through the Wright Brothers, but through the patient research, year after year, by scientists who were not thinking about aviation at all. They were thinking of internal combustion, and of how to devise a motor which could be fuelled with gasoline. The men on that job may have considered flying a silly fancy, and may not intentionally have contributed a thing towards bringing it about. If was necessary to aviation, certainly, that they should build a light, high-power engine, which the Wright Brothers could apply to their particular aims. Similarly, it was necessary for mass production, if it was ever to liberate humanity, that financiers should first discover how to finance great projects, even though many of the projects seemed to be in the direction of human slavery.

It is a real peril of this mass production age, indeed, that many expert financiers should finance great and necessary enterprises, and then, through failure to understand the real purpose of these enterprises, almost wreck the enterprises themselves. A dozen large factories say, under separate management, are in competition, each trying to supply all America with practically the same service. Each company looks

critically upon all the others, and each may be aware of how much better the country could be served if the whole twelve organizations could be brought under one unified control. They could then standardize their product and make free use of every improvement which any of the organizations had discovered. They could also divide the territory and save shipping costs and selling costs and, by unified buying of materials and supplies, effect still more economies. It is one thing to perceive the advantage of effecting a merger, and naturally quite another to effect it; and the financial genius who succeeds in inducing these twelve organizations to give up their independence and adopt a specific programme performs an incalculable service.

Unfortunately, however, he may not consider it incalculable. He may consider it calculable and start to calculate. In ten years, he may calculate, the economies which such a merger may reasonably hope to effect may amount to so much as to justify him and his financial associates in taking a 'rake-off' of, say, thirty million dollars. The several companies will not have to pay this, they think; it will all come out of the new stock issue, and this man is such a recognized and dependable leader in the financial world that the sale of the securities may almost be guaranteed. The chances, are, in fact, that they will be sold immediately, and the merger will be hailed as eminently successful. If each company could make a go of it in competition with all the others, the investing public is easily persuaded that the twelve

under one management can make barrels of money. With good luck, indeed, the merger may make money, and its profits may be greater than the total profits before. But it starts with a terrific handicap. The security-buying public has just presented a financier and his associates with thirty million dollars, and looks to the merger to get it back with dividends, besides demanding that it pay dividends on the money which has been actually invested in the new enterprise. The ten years' profits, therefore, are pretty well mortgaged. Economies may be effected, but they cannot be reflected in a lower price just yet. It is even possible that the price of the improved product may now have to be raised, or that the old prices may have to be sustained without effecting any of the planned improvements. The result then is that mass production hasn't done any good after all. From the public's point of view, it may even have done harm. Better methods of production are adopted, but the price not being reduced, no more goods are sold and no greater production effected. Men, therefore, instead of getting higher wages and shorter hours for increased production, are simply let out to look for another job.

This is a very real evil, for the illustration I have given is a commonplace of modern finance. The remedy, unluckily, cannot be found in prohibiting mergers. So long as there are profits to be had from combination, we may be sure that combinations will continue to form, whether they are always financed intelligently or not.

Nor is the remedy to be found in 'curbing' Wall Street and making mergers either more difficult or less profitable. The trouble with such mergers is that they aren't profitable enough. The loss to the public does not lie in the fact that a Wall Street merger has made thirty million dollars, but in the fact that it was not permitted to make it. Under the circumstances it could not become a true mass production industry. It could not reduce prices and, by thus perhaps doubling its market, double its usefulness to the public; and the public, being unable to buy more than before, could not provide the industry with a larger income than it was receiving before the combination was effected.

Only out of its income, obviously, can any industry pay profits, and its income derives not from the sale of its securities but from the sale of its products. Anything which prevents the greatest total sales of the product prevents greatest total profits. High prices, however, inevitably prevent sales. Intelligent financiering, therefore, like intelligent shop management, will avoid any step which may tend to make prices higher than is absolutely necessary in order to have any margin of profit at all.

Nor is it enough that prices be as low as they can be made by the use of existing methods. It is often necessary to make them lower than the current cost of production warrants, so that the management shall be compelled to reduce the costs of production. Not by cutting wages — for lowering wages not only handicaps management but actually raises prices

and, directly or indirectly, reduces sales — but by a constant search for better methods both in production and distribution.

It is charged against Wall Street financiers that they are 'greedy' and that they make too much money. If this were the real trouble, I cannot think of anything that could be done about it. If financiers were not eager to make money, I should despair of our ever discovering the secrets of how money is really made.

Even Henry Ford would not have achieved what he did if he had had any special aversion to becoming rich. He learned in time, to be sure, and probably always knew, that just being rich is not a worth-while human objective, and that one might as well aim at just being fat. Nevertheless, he went in for profits as avidly as any Wall Street promoter, and he made more money than any of them. Instead of feeling the least aggrieved at his success, the public generally rejoiced. There was no clamour for laws to curb him. People even made the mistake for years of supposing that he must be a most unselfish soul, utterly unlike the rest of us — a sort of glorified Santa Claus.

The real trouble with Wall Street is not its greed or its selfishness, not even the ruthlessness and the cruelty with which some of its transactions are carried through. Those who do the most harm in Wall Street are likely to be the most sentimental and kind-hearted folks, so easily moved to tears at the sight of poverty and misfortune that they have to hire secretaries and other assistants to keep the poor and unfortunate

out of their sight. Moreover, they are likely to be the best of husbands and fathers, and charming and charitable neighbours in the communities in which they live. The only trouble with them is their short-sightedness and their traditional thinking — especially the fact that they still suppose that the greatest profits can be made by methods which prevent industries from giving the greatest possible service to the greatest number of people.

Greed, perhaps, may be defined as short-sighted selfishness, and with that definition we may agree that the real trouble is greed. But it is the short-sightedness, not the selfishness, which needs to be eliminated; and the remedy cannot be found in curbing Wall Street, for the simple reason that short-sightedness cannot be curbed.

Conceivably we might curb the selfishness, leaving the short-sightedness, but nothing could be gained from that. Even if we could perform some feat of magic and turn this selfishness into unselfishness, the result would be horrible. I, at least, can imagine nothing worse than a community of short-sighted altruists, no one with any intelligent notion of what to do, but each impelled nevertheless to meddle with everybody else's affairs.

If the public were wise enough to legislate for Wall Street, and could be depended upon not to interfere with financial operations which would work to the public interest, that might be the way out. But the public is not wise enough. The way of the greatest advantage to the public happens to be the way of more

profits, not less, and the public fancies that the financiers are getting too much. Until the financiers do learn their lesson, it seems to me that we must take note of their short-sightedness as one of the very real dangers of this new machine civilization, and wait as patiently as possible until the lesson can be learned. Fortunately this does not necessitate waiting for ever. For the principles of mass production are being learned even in Wall Street. The most successful chain stores are those in which no element of bad financing has intruded to keep them from giving first attention to the production and distribution of goods at the lowest possible price.

This is true, even of the 'power interests,' which have been most under criticism in the matter of financial methods. A seemingly irreconcilable war, in fact, developed between short-sighted financiers of the power industry, bent upon burdening the industry financially so that financiers' profits would be increased but rates could not be lowered, and equally short-sighted champions of the people who demanded that the industry be put under political administration so that no one would make a profit out of it, and electricity, presumably, might be generated and distributed at cost.

Both sides to this controversy were wrong, and it was fortunate for the American public that neither side achieved its goal. Both sides believed that high rates did work out to the advantage of the owners. Had both sides known that high rates were as bad for the owners as they were for the consuming public,

the controversy could not have happened. Had that fact been known by the power industry, it would even have avoided over-capitalization; and had it been known by the agitators, they would have ceased arguing about 'fair' and 'unfair' rates and would have co-operated with the power interests in every scheme to make the rates as low, and therefore as profitable, as they could be made. As it was, with all the mistakes of over-capitalization, the power interests did go in for the discovery of better and more economical methods of production and distribution. When better generators were invented, they scrapped the old ones immediately, regardless of the capital that was tied up in them; and with the discovery of inter-connecting transmission systems, they scrapped costly but obsolescent properties once more. This conceivably might be done by a political government which found itself in possession of great power plants. But the power interests *had* to do it, and it is more than likely that political governments would conclude that it could not be done. Even if it were a good government and did not run the service in terms of the jobs which it could give out in return for political support, it could hardly help remembering that it was selling power at cost, and it would not be forced to find new ways of bringing down the cost.

In the matter of financing, the power interests were pitiably shortsighted. In the manner of engineering, their vision was superb. Driven by lust for profit, they floated issue after issue of securities based upon faith, hope and optimism; but driven by lust for

profit, they also built up a super-power system throughout America in a single decade which a non-profit administration of the industry would hardly have arrived at in a hundred years.

Such an achievement does not justify the financial extravagance with which it was accompanied. If the financiers had had their way entirely, it is almost certain that they could not have accomplished what they did. For they made it plain generally by their deeds if not by their words that they believed in high rates, and were constantly complaining because they were not permitted to make them higher. If they had been let alone, then, to make their rates as high as they hoped to make them, there is every reason to believe that they would have made them so high as to cut themselves off from much of the profit which actually came to them.

The power industry, it may be said, was saved by its opposition. Rates were kept down, at least, to a figure which made profits possible, in spite of all that the short-sighted financiers of the industry itself could do to prevent it. And in the end *some* power companies began to see that low rates might be more profitable than high. When that lesson is thoroughly learned, the power interests may remain quite as 'greedy' as ever; but their greed will be the public's strongest ally, for all the power and all the cunning which once went into the war against the common good will then be directed, not toward making rates merely 'fair,' but toward making them as low as boundless energy guided by scientific research can make them.

In the meantime, until mass production becomes thoroughly aware of itself, there is a very real danger to our industrial order in the mobilization of some of the forces which are working most earnestly for the common good. The fight for public ownership and control of public utilities, for instance, contains no little menace; not at all because public utilities should not be publicly controlled but because of an almost universal misunderstanding as to how public control in a mass production age is actually achieved.

The advocates of public control, fired by a very genuine social passion, advocate government control — political government control — of industry, even while they are observing, at times, that the public does not control the political government. Their opponents, on the other hand, instead of explaining the situation (which they cannot explain because they do not understand it) argue loudly for 'private' control, as though the management of industry were something about which the public had no say.

As a matter of fact, so-called 'private' industry is frequently much more public than the political government itself, and much more definitely under public control. Ford and General Motors, for instance, are private only in name, and the fact that the Fords own all the stock in one, while the ownership of the other may be spread throughout the country makes no difference whatever. Let either company fail to respond to the public's wishes, and the public would discipline it at once. It wouldn't wait to pass a law; it wouldn't have to wait, as it would have to if an

elected government were in charge. All it would do, and all it would have to do, would be to cease buying the thing which, upon actual test, failed to give complete satisfaction, and such a gesture must be accepted instantly as an absolute command from which the company cannot appeal.

It is possible to bring every industry under just such control, but this cannot be done by any political election, nor by any wholesale declaration of opinion on the part of those who do not know the facts. It can be done only through fact-finding, both on the part of industrial executives and of consumers. This may seem like a slow process, but it is not. When we stop to think of how fact-finding has changed the whole world in a single generation, and of how slowly the world changed when it was necessary to change it by politics and propaganda instead, even our impatience must lead us to adopt the fact-finding method.

The great peril of this mass production age lies in the power which fact-finding places in our hands before we have discovered how to use that power wisely. Futile optimism may ignore this real danger, and futile pessimism may conclude that it necessarily spells our undoing. The wise will do neither, but will try in all humility to find out how the power may be used. It is not enough, even, that we all, do as well as we know how.' The new situation needs new knowledge, and neither the old-time education nor the old-time morality is sufficient for these new responsibilities. They were not sufficient in the past to keep

us out of war, but the time has now come when there must be no more war. They have not been sufficient of late to keep us out of unemployment, but the time has now come when civilization must conquer unemployment, or unemployment will conquer civilization.

XXIII

MASS PRODUCTION AND SOCIAL PLANNING

A NEW world has come into existence. We did not plan it, but we must plan how to live in it; and the plan to be successful must be in harmony with the laws of our being and the laws under which this new world happened.

From time immemorial, man has longed for a better world. Sometimes, he has engaged in trying to fashion one out of his ideals. A world of justice. A world of brotherly love. A world free from care and suffering and poverty and cruelty and hate. But human nature seemed to be perverse. Never, it seemed, would it react dependably to any of these beautiful plans. Idealists, then, from age to age, have turned their thoughts to changing human nature.

But human nature, apparently, remained what it was.

The world man lived in, certainly, did not remain what it was. That was for ever changing; not changing necessarily, however, in the direction of man's ideals, but for ever hitting upon times when man's most sacred notions seemed to lose their force, and the elders shook their heads and wondered what the world was coming to. In the course of time, new ideals were born, new notions, and new plans for

entirely new worlds, which, in turn, failed to materialize. New social orders came, to be sure, but they did not come according to the plans. The only human plans which ever seemed to work were the plans, not for changing either human nature or human society, but for coping with the changes which had taken place.

People did not say: 'Let us quit the old patriarchal way of doing things and set up political states.' No. They began to trade, rather; and when the practice of trading brought problems which the patriarchal system could not solve, they were compelled to work out some other form of government.

Rome did not conquer the world so that she might give it a code of law. Rome conquered the world because, in an age of conquest, she was the most successful conqueror; but having conquered it, she had to govern it, and was therefore compelled to work out a code of law.

In the days of feudalism, no one said: 'Go to, now, let us invent machinery and establish capitalism.' The steam engine was invented because somebody noticed what steam could do, if it were held back by a piston and the piston rod were attached to something which one wanted to push. When there were enough steam engines, eventually, to render the old way of pushing things relatively inefficient, plans had to be made to facilitate the use of this new method. That is why it was necessary to overthrow feudalism.

In America, moreover, we did not plan a constitution and notify England that her rule was over. It

was because England's rule was over that the Fathers planned the Constitution. They had to. There had been a war and the colonies had won. The war did not begin, moreover, with the Declaration of Independence. It began with Lord North's failure to understand the colonies and with his failure, therefore, to govern them. The war had gone on some time before independence was planned.

Even the strange social experiment in Soviet Russia was not the result of social planning on the part of Lenin and Trotsky before the revolution put them into power. Russia has given us the most extraordinary example of social planning in human history, but the plans which have so amazed the world were made after the revolution, not before. Lenin's original plans were all wrong, all unworkable; but Lenin himself discovered this before his enemies did, and was not compelled therefore to give up his leadership.

His plans for seizing power were sound enough; but they had nothing to do with his belief in communism. He could have seized power quite as effectively if his economic theories had been very different. Government in Russia had broken down, and almost any leader who knew what to do could become the government. Lenin got the army to obey him by giving it the only orders which, under the circumstances, it was capable of obeying — orders to quit carrying on a war which such an army could not carry on. There were but a handful of communists in that army. It was composed mostly of peasants whose social ideals were as far from communism as those of the

Czar himself. The one thing they consciously longed for was the private ownership of a bit of land which each peasant could henceforth till in the old traditional way, without having to share the product with anyone outside his family. There was a loyal response, therefore, when the new government ordered these soldiers to go home and possess the land.

It is one thing to seize power, however, and quite another thing to hold it. It was now evident to almost all traditional thinkers that the new government could not last. It had almost no capital and no borrowing power, very little industrial equipment and much less industrial technique. It was in the hands, at any rate for the time being, of a group of visionaries, possessed of impossible economic theories and no political experience, whose actions had already enraged all of Russia's former allies, and alienated about everybody within her borders who was supposed to be anybody at all.

There was just one thing that could be said for this new government, and that was usually overlooked. Under Lenin's leadership, it recognized the predicament which it was in. It did not follow the traditions of government. It not only scrapped the theories of capitalism, but it scrapped the theories of communism too. It faced the facts and began to work out a plan.

It made all sorts of mistakes. No government on earth, it seemed, could have made any worse. But when it made a mistake, and the mistake proved disastrous, it did not incorporate that mistake into

the organization, after the manner of traditional thinkers. Under the most adverse circumstances imaginable, then, this new government held on, and Bolshevism became a world power which, in the minds of many thinking capitalists, actually challenges capitalism.

Many books have been written and many speeches made concerning the way in which capitalism should meet this challenge. Some insist that Bolshevism must be snuffed out. Others suggest that capitalism must take up social planning so that social revolution may be averted. My own attitude is that business must undertake social planning, but neither for the purpose of snuffing out new theories nor of preserving old ones, but because *there has been a social revolution.* The old order has gone and by no possibility can we bring it back. We are living in a new world. It is a world in which mass production has related everybody to everybody; and our plans, therefore, must take everybody into consideration.

I am not moralizing. I am not idealizing. I am not suggesting that business men must rise above temptations, or that they should give more heed to the rights of humanity. I am suggesting simply that they cannot be successful in this new world by planning their business with reference to a world that has passed away. They need not bother with the rights of humanity, but they must bother with its buying power. They may have any ideas they wish as to what people ought to be, but if they are to do any business, they must do it with people as they are.

There has been a greater and more inclusive social revolution in America than has yet taken place in Russia. That may seem like a startling statement, but anyone who examines the facts must see that it is true. There has been a greater change in the standard of living. The masses of Russia, with all their new theories, are still desperately poor. They have made amazing advances in the building of industrial equipment, but it remains to be seen whether they can operate it successfully. They have automobile factories, but the masses have not yet got automobiles. They have co-operative farms, but food is still very hard to get. Even with unemployment abolished, the masses as yet have no luxuries and are compelled to live in quarters which American workers as a rule would consider utterly unfit for human habitation.

I do not mean this as an indictment of the Russian experiment. I am simply stating facts with which the Soviet leaders themselves are well acquainted and which they are doing their best to impress upon the Russian people. The one thing that must be done, they are constantly pointing out, is to master industrial technique as it has been mastered in America's mass production industries.

After all, it is this new technique which actually changes human life. It is this which raises the standard of living. It is this which makes it possible for workers to ride in luxurious motor cars which, but a few years ago, were looked upon as we look to-day upon private yachts — as the exclusive indulgences of society's upper crust. It is this technique which

multiplies the productivity of labour so that not merely the necessities of life, but an increasing volume of comforts and luxuries are possible for all, combined with an increasing leisure which enables the masses to rise above the mere struggle for existence and turn more of their attention to education and to social and spiritual culture.

This technique is nothing which Americans have to learn. Americans understand it. They have made it work; not, to be sure, to the degree to which they might make it work, but enough to produce mass prosperity on a scale which no masses in human history ever enjoyed before, and in many ways beyond the dreams of the old Utopian socialists.

This is the technique of mass production. It is so successful that, *when we are employing it*, it almost automatically solves problems which have hitherto been considered insoluble. The wage problem, for instance. That used to be something for employers and employees to fight about; but with employers perceiving that business success hinges upon their making wages as high as possible, no such fight can possibly take place. Similarly, the problem of the consumer's getting his money's worth. Mass production *consists* in the consumer's getting his money's worth, and of seeing to it also that there are more and more consumers. To be successful, it must take every body into consideration.

Mass production, then, must engage in social planning.

All business has had to plan; but when the masses

had almost no buying power, business men planned their business with reference to the market as it was. If the market was good, they increased production. If the market went wrong, they shut down. This made the market worse, but they didn't know that, and there seemed to be nothing that they could do about it anyway. Business had not yet become the way in which the masses got their living. It was the way merely in which business men got their living; they took chances with the market, and the market was supposed to be beyond anybody's control. Each business was a private matter. Social planning, if undertaken at all, must then have been undertaken by some social agency, particularly by the political government.

With the coming of scientific management, however, business had to do some different planning. Frederic Taylor and the other engineers who followed him pointed out the necesssity of synchronizing the various departments of a factory so that each department, instead of merely making a record for itself, should work with reference to every other department. They called this planning 'industrial co-ordination.' It was, however, only a beginning. It increased production, and lowered production costs; but it was soon discovered that this was not particularly profitable unless more goods were sold. So business undertook to *plan sales*, instead of merely producing goods according to market demands.

The first sales plans, however, were not all that had been hoped for them. By adding to the sales force,

by putting more dominant and more high-salaried experts in charge — in a word, by 'high-pressure salesmanship' — it was soon found that sales could be expanded to meet the increased production. But the process was not always profitable; for while the cost of production might be lower than ever, the cost of *production and distribution* might be higher than before.

Such plans were not social plans, for they did not take society into consideration. They did not result immediately in mass production; for, while they sought to sell to the masses, they did not give the masses more than the masses might have got without all this new high-power management. Another way was eventually found, however, to increase sales and profits too. That was to lower the price and thus to obtain more sales per unit of sales force. This was highly successful, and because it was successful, business could never be the same again.

Successful business then, whether it realized what it was doing or not, did engage in social planning. It was not likely to be called that. It was more likely to be called by the old term — industrial co-ordination. But its production programme was organized with reference to its sales programme, and its sales programme was organized, not with reference to the market as it was, but with reference to the market which could be achieved providing the price were made so low that greater and greater numbers of people would gladly buy.

This was real service to society. By considering first the consumer's dollar, and trying to give the

consumer the greatest values which scientific methods made it possible to give, business became a social force, more responsible to the needs of the masses than any other social agency, even the political government itself, could possibly be.

That is, some business. Successful business. Traditionally-minded business men did not notice what had taken place, and even those who went in most truly for mass production often failed to note the extent of the social change which these new methods brought about. They still spoke of their industries as 'private.' They may even have lauded 'individualism' and have resented all movements which they believed to be 'socialistic.' Actually, however, this new method of business knit human society together more closely and more vitally than political organization of any sort could possibly have done. And it brought social problems which only further social planning on the part of business could solve.

This book has been an effort to indicate the extent of this social change. It has not advocated any particular social order, and not ridden any dreams of an ideal state. It has tried rather to discover what human relations have become by virtue of the change which has taken place, and to show the necessity of dealing with them as they are, not according to theories of what society might be, nor according to the fact of what it was but is no longer.

Business *is* the government of this modern world. It may refuse for a while to function as such. It may refuse to accept its social responsibilities, and may

continue to look to Washington or to God to do the things which only social planning on the part of business management can do.

Business *can* serve the masses. It can *employ* the masses and, if it understands the nature of the new social set-up, it can *sell to the masses all that it employs the masses to create.*

One business, working independently, cannot do this. Twenty-five per cent of business organized in mass production may even fail to erase the unemployment which the other seventy-five per cent creates. But wide-awake and determined business leadership may state the problem clearly; and by a wider application of the technique which has proved so abundantly successful, may inaugurate inter-industrial co-ordination as successfully as any factory has been able to co-ordinate its various departments. This will not be a revolution. It will be a mere recognition, rather, of the revolution which has taken place.

There is no further need for poverty, no further necessity for unemployment; and it is not necessary, even, for us to learn a new industrial technique. All that is necessary is an application of the technique which we have learned. That is the technique of mass production. It is the technique of Successful Living in the Machine Age — the age in which the prosperity of each of us depends so vitally upon the prosperity of all.