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# THE SOCIOLOGY OF CITY LIFE

# THE SOCIOLOGY OF CITY LIFE

BY

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*To*

MY WIFE

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N. C.

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# THE SOCIOLOGY OF CITY LIFE

# THE SOCIOLOGY OF CITY LIFE

## CHAPTER I

## *THE BEGINNINGS OF CITY LIFE*

### THE RISE OF CITY LIFE – THE EMERGENCE OF URBANISM

THE FUNDAMENTAL paradox of city life appears in high relief the moment one begins to examine the rise of urbanism — the type of society that is dominated economically and culturally by city life. The city is one of the most ancient of man's works. It antedates the use of writing; in some cultures it even antedates the use of metals. Babylonia, Egypt, and Crete were widely urbanized more than 5000 years before the beginning of the Christian era. The ancient Mayan culture of Middle America rested on a powerful confederation of city states.

Nevertheless, ancient as the city is, urbanism is of relatively infrequent occurrence upon the human scene. The North American Continent remained predominantly rural, even after the coming of the white man, until the end of the nineteenth century. Europe and Asia Minor, after the great wave of urbanism which culminated in the Roman Empire had hurtled down into decay and destruction, remained essentially non-urban until the commercial and industrial revolutions of the modern period began to set the pace of economic, political, and social life. Except for portions of England and Northwestern Europe, the European Continent as a whole was not truly urbanized until two score years ago and large areas of it remain rural at the present moment.

A historical perspective is therefore essential to the understanding of city life. The spectacular rise of the city's influ-

ence in Europe and in America during the past few-score years so impresses the observer that he forgets the centuries of human experience in which the comparatively few existing cities were tributary to a rural way of life.

This chapter discusses the beginnings of city life from two points of view: *First*, the origin of the city; and *second*, the rise and diffusion of urbanism or the urban type of society. The discussion of the origin of the city includes both the chronological narrative of the rise of the city and an analysis of the functions involved in its rise.

## THE ORIGIN OF CITY LIFE

SUCH facts as are known concerning the origin of city life can be quickly told, for they are very few. Their interpretation can be equally brief, for it rests largely on speculation.

### THE CHRONOLOGICAL NARRATIVE OF THE RISE OF THE CITY

SOMETIME in the Neolithic period, there were introduced into human culture a number of innovations the results of which are still observed in modern society. Animals were domesticated; agriculture was begun; pottery was made; houses or shelters were built. What is more important for the purposes of this discussion, something like permanent communities sprang into being. Indeed it may be said that with the Neolithic village the first step was taken upon the long and devious route that eventually led to the temple-topped hills of Rome and Athens, the spire-shadowed streets of Bruges, and the serried massiveness of Chicago and New York.

#### THE AGES OF STONE

WOOLLEY narrates the discovery of a Neolithic village site in Upper Egypt:

> The Nile here has changed its course, and the old river ran half a mile or more west of the present stream. It was on the west bank of this dried-up bed that we discovered in 1911 a small cemetery of the First Egyptian Dynasty (five thousand years ago), and on the gravel of the desert's edge were clear to see the traces of a village of these far-off days. A few lines of rough stones showed where huts had stood, and within these the hearths

were still marked by smoke-blackened stones and ash; fragments of pottery lay all about, rubbers and mortars of stone, pieces of worked bone and ostrich-shell, flint implements and masses of flint chips struck off when the implements were in the making. The tombs of course yielded far better "finds" . . . but somehow the deserted village site, scanty as were its remains, spoke more vividly of the life lived long ago. Here these people lit their fires and plied their simple crafts. Their huts, mere piled stones roofed in with tent-cloth, maybe, or with reeds and boughs, were the same as one sees used nowadays in the barren valleys of Sinai. I remember an old Bedouin whom I found brewing his morning drink of tamarisk tea on just such a hearth, in just such a rude shelter, one cold spring morning in the tangled wilderness east of Kadesh. The very simplicity of their life makes it dateless, and bridges the gulf of its five thousand years; in their graves these ancient folk strove to achieve perpetuity, but all unwitting, they left a more lively record in the open desert.*

Near this very site a considerable city developed which continued into Christian times. Whether it was a lineal descendant of the Neolithic community is, of course, conjectural.

No such conjecture applies to at least two other ancient cities, however. Troy and Carchemish † both arose on sites that had been occupied since Neolithic times. Carchemish appears to have been continuously occupied from the Neolithic Age right down to modern times, its acropolis mound containing Hittite, Assyrian, Greek, Roman, Byzantine, Armenian, and Arab remains — thus denoting 5000 to 12,000 years of continuous occupation — most of it urban in nature. Both Carchemish and Troy, it may be parenthetically observed, stand on rocky heights with easy access to water.

Such cities as these indicate that, at least in certain areas, there was a steady development from the Neolithic village to the city, but they tell little of the process by which that evolution took place.

Quite another part of the world, namely Western Europe, furnishes a clue to this phase of the record of city life. The richness of the archæological material, and the assiduity of

* Reprinted by permission from C. L. Woolley *Dead Towns and Living Men*, pp. 28-29, published by the Oxford University Press 1920.

† *Ibid.*, pp. 76-78.

hundreds of scholars, make possible a fairly detailed account of the rise of city life in this area. There is no assurance that the history of this region is typical of urban development generally; nor is there any assurance that at many points there was not borrowing from other and older cultures. Nevertheless, since the earliest culture periods of man are not greatly differentiated as between localities and races, it is likely that the story of the rise of city life in Western Europe in prehistoric times is generally representative.

De Morgan's account of an early Neolithic village is similar to that which Woolley has given:

> . . . man was then constructing shelters of interlaced branches daubed with mud and clay. As a rule, these huts were grouped in villages, and were usually protected by natural means or by palisading. These primitive houses were low, circular, and at most 2.5 meters in diameter. In certain cases, one hut would be used for habitation, and another as kitchen. Usually, these villages were situated near running water; for we must not forget that although occupied in cattle-raising and cereal culture, the Mesolithic and Neolithic populations still depended on hunting and fishing for a large part of their subsistence.*

Certain features of the Neolithic community in Western Europe are of particular interest to social history. They are (1) "workshops," (2) "camps," (3) lake-dwellings, and (4) megalithic monuments.

The "workshops" were associated with the most primitive Neolithic villages, such as those described by De Morgan. He calls them "veritable manufacturies catering for foreign trade." Their inhabitants quarried and fashioned stone axes, knives, anvils, and the like, and, in at least one place, the village whose remains are near Grand Pressigny, Saône-et-Loire, France, they produced rough, half-worked nuclei of flint, which were taken in trade by their neighbors and worked up into final form by them. These so-called Pressigny flints appear to have been popular among Neolithic craftsmen, for they have been found scattered for a distance of about two hundred miles, and some even so far away as

* Reprinted by permission from Jacques De Morgan, *Prehistoric Man*, p. 154, published by Kegan Paul Trench, Trübner & Co., Ltd., London 1924.

Switzerland and Italy, four hundred miles to the east.* This Neolithic village must have been an important center of industry and commerce — a sort of Stone-Age Pittsburgh!

The Neolithic "camps" suggest that the men of that period had already begun to emerge from the village type of community. The remains of these "camps" have been found in the west part of France. They are anywhere from two to seventy-five acres in area. Generally they are fortified with rude ramparts, sometimes supplemented by ditches, and contain many remains of Neolithic hearths and dwellings. De Morgan dignifies these "camps" with the name of towns; they certainly must have been communities of considerable size.

Even more impressive, as to size and the degree of social organization which they suggest, are the *palefittes* or lake-dwellings of Switzerland, and the adjacent portions of Germany, France, Italy, and Austria. They were erected on platforms, built over piles driven into the bottoms of lakes at a considerable distance from the shore. Occasionally, a bridge connected the lake-dwelling community with its fields and pastures on the shore, as at Robenhausen, Switzerland, where there was a bridge about 7500 feet from the village to the shore. Some of them were large enough to support a very substantial population. For example, the community at Sutz covered 6 acres, and was connected with the shore by a gangway 100 yards long and 40 feet wide. That at Morges, on Lake Geneva, was only slightly smaller, having an area of 20,000 square yards, or about $4\frac{1}{4}$ acres.† Such communities were probably capable of supporting populations of from 400 to 1300.‡

The lake-dwellings made their appearance towards the

* G. G. MacCurdy, *Human Origins*, New York 1924, Vol. II, pp. 64–66.

† Article: "Lake Dwellings," *Encyclopedia Britannica*, 14th Ed., Vol. XIII, p. 602.

‡ MacCurdy gives 90 square yards as the approximate area of a lake-dwelling house. If this figure is divided into the area of the two communities (Morges = 20,000; Sutz = 29,040), quotients respectively of 222 and 332 are secured. Reducing these by half to allow for causeways, platforms, etc., an estimate of 111 and 166 houses, respectively, is secured. These houses were chiefly 2-room affairs, and probably contained from 4 to 8 inhabitants each — a much smaller rate of room-occupancy than many modern tenements show. If each house contained 4 persons, the communities would contain 444 and 664 inhabitants respectively, if 8, the figures would be raised to 888 and 1328.

end of the Neolithic period and continued down into the Age of Bronze. The latter portion of the Neolithic period witnessed another cultural development of interest to the student of urban sociology. This was the construction of megalithic (literally, " large stone ") monuments, in France, England, and Scandinavia. These structures were of three sorts: dolmens, or stone graves; cromlechs, or stone-circles; and alinements, or parallel lines of stones. The use to which the latter were put is obscure. Probably the cromlechs had some ceremonial significance, and the alinements may have been markers for ceremonial processions, or for race courses. Their size, however, rather than their use is of moment here. The dolmen on the island of Gavr'inis, Morbihan, in Brittany, is 41 feet long and 4.6 feet wide; it is capped by a flagstone 13.1 feet by 9.8 feet, and covered by a tumulus of earth 180 to 197 feet in diameter. The stone circle forming the cromlech at Avebury, in Wiltshire, England, has an average diameter of 1200 feet, and two inner circles each, with an average diameter of 300 feet. It is joined to a related series of structures by a stone-lined avenue nearly a mile in length. The alinement at Carnac, in Brittany, is 1.25 miles long; that at Ménec contains 1169 upright stones, some as tall at 13 feet.*

When it is remembered that remains of these proportions were left by a people who had to work with tools of wood, bone, and stone, it is seen that the megaliths constitute a most impressive series of achievements. More than this, since their construction must have called for the sustained and coordinated efforts of large numbers of persons, they clearly must have been constructed by societies of considerable size, having a relatively high degree of social organization. That is to say, in the vicinity of these structures there must have been people who lived in organized communities of substantial size. They may have lived in groups of villages. Whatever form their communities took, these people must have been tending towards urban life, for they were relatively densely settled and were capable of united action for common purposes.

* G. G. MacCurdy, *op. cit.*, Vol. II, pp. 109–129.

### THE AGES OF METAL

THE Eneolithic and Bronze Ages in Western Europe saw a continuation of the tendencies manifested at the close of the Neolithic period. Certain types of communities (such as the "camps" and the lake-dwellings) continued very much as in the earlier culture period. One type of community, however, had a special development in the Bronze Age. This was the *terramara,* which reached its greatest development in the river valleys of northern Italy. As its name indicates, the *terramara* was a sort of lake-dwelling transplanted upon land. It was built on piles, in much the same manner as the lake-dwellings, on the flood-plains of the Po and other rivers. It thus offered most of the defensive advantages of the lake-dwelling settlements, without being so restricted as to size or location, or so remote from the fields on which its inhabitants depended for their subsistence. Some of these communities covered a large area and achieved a high degree of regularity and symmetry. The *terramara* of Castellazzo di Paroletta, Parma, Italy, covered nearly 50 acres, and conformed to a well-defined plan.* Such a community must have had from 3000 to 5000 inhabitants.† This may be compared with the 2500 inhabitants fixed by the United States Census Bureau as the lower limit of the population of an "urban" community. Boak appears justified in saying: "The character of their villages shows that their builders were a people living under a highly developed and strictly disciplined social organization." ‡

The Iron Age reached Western Europe about 1000 B.C., at a time when there were flourishing city cultures in the Ægean area, in Egypt and Asia Minor. Traders from these areas ranged far afield into Western Europe — partly for the sake of its tin and amber. Accordingly the development that followed was probably to a much greater extent a reflection of neighboring cultures than had been the case in earlier times.

* *Ibid.*, Vol. II, p. 187.

† Assuming that 25 acres were covered with houses, and using the same basis of calculation as was applied to the lake-dwellings.

‡ A. E. R. Boak, *A History of Rome to* A.D. 545 (Rev. Ed.), New York 1929, p. 13.

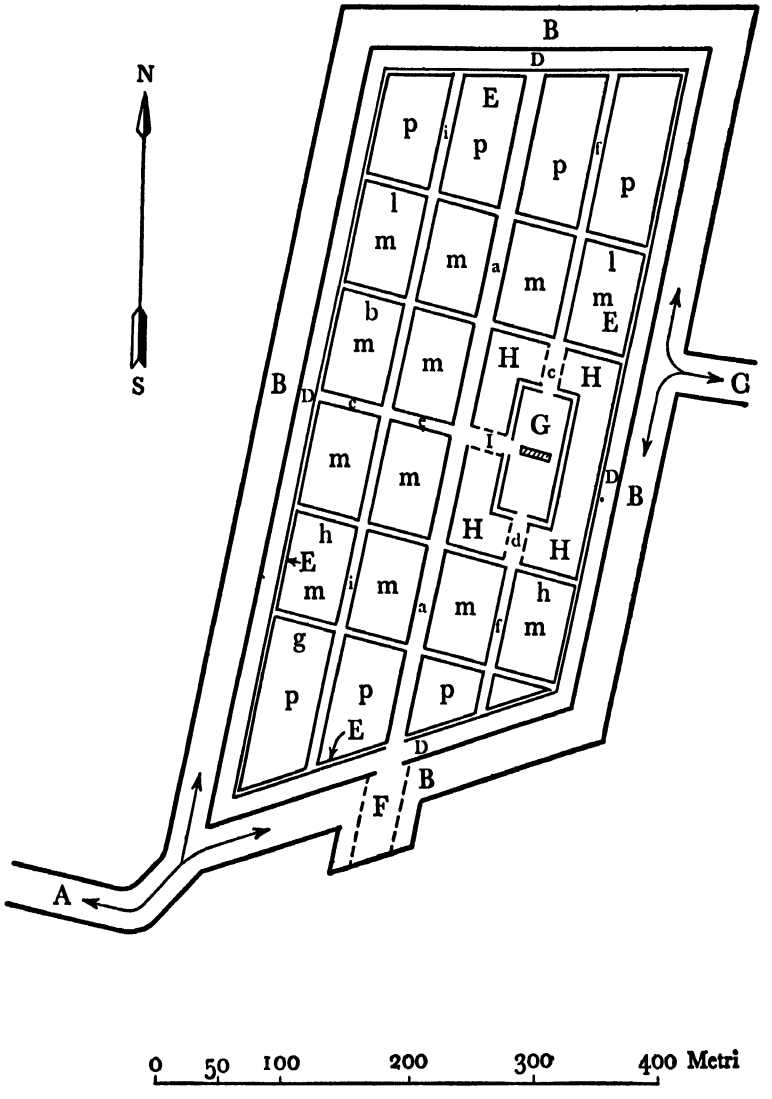



FIG. 1. THE CITY IN EMBRYO: A TERRAMARA OF THE BRONZE AGE

The village was built on land with a wide moat for protection. *A*, canal for the intake of water, 30 meters wide; *B*, ditch for the circulation of water, 30 meters wide; *C*, outlet canal, 30 meters wide; *D*, roadway; *F*, bridge, 60 meters long; *G*, terrace; *a*, central roadway in line with the bridge; *e*, central cross road; *b*, *f*, *g*, *h*, *i*, *l*, other roadways; *c*, *d*, *I*, wooden bridges; *m*, *p*, islets. After Pigorini.

From G. G. MacCurdy, *Human Origins*, D. Appleton & Company.

The Iron Age culture in Western Europe had two phases: The Hallstatt, ending about 500 B.C., and the La Tène, the latter portion of which merged into the era of written history. According to De Morgan, the inhabitants of ancient Gaul were in this second, or La Tène, phase of the Iron Age, when they were conquered by the Romans.

During the first, or Hallstatt, phase, the inhabitants of Western Europe seem to have built fortified "camps" of somewhat the same sort as they had constructed in the Neolithic and Bronze Ages. They were, however, larger, and better fortified, the "camp" at Steinsburg, in Thüringen, having been defended by a concentric series of ramparts, whose outer circumference measured about a half-mile.

In the La Tène phase, settlements that were truly urban made their appearance. Cæsar's *Commentaries* are filled with accounts of the investment of walled *oppida*, some of which seem to have offered very stout resistance to his forces. For example, Alesia, where Vercingetorix made his last stand, held out for some time against a siege conducted by all the forces that Cæsar had available. The populations of the stronghold of the Aduatici and the City of Avaricum numbered 57,000 and 40,000, respectively, when taken by Cæsar. The latter was characterized as "the fairest city of practically all Gaul," so that it can be taken as representative of the greatest urban development achieved by pre-Roman Gaul.*

Professor MacCurdy's account of one of these Gallic *oppida*, Mont Beuvray, near Autun, Saône-et-Loire, France, suggests that its builders were already under the cultural influence — probably through trade and travel — of Roman civilization.

The dwellings, built of wood and dry masonry, were all rectangular in ground plan. The corners of the wall were of cut granite. For the most part, the dwellings were about half underground, the descent being by an inside stairway of several steps. The roofs were, as a rule, thatched, although Roman tile had made its appearance. Many of the dwellings consisted of but a single room. There were, however, elaborate houses

* Cæsar, *Commentaries*, Bk. VII, Chaps. XV and LXVIII; Bk. II, Chap. XXXIII.

containing from several to as many as thirty rooms, surrounding a central rectangular *atrium* in Pompeian fashion.*

These *oppida* mark the culmination of the evolution of urbanism in Western Europe, since the city life of the region fell increasingly under Roman influence from that time. They thus bridge the gap between the prehistoric and the historic city, and bring to a close the review of the various instances of prehistoric urban development. There remains to construct, on the basis of the data presented in this review, some sort of generalized account of the evolution of city life.

### THE FUNCTIONS INVOLVED IN THE RISE OF CITY LIFE

NOT far from the Second Cataract of the Nile there rises sheer above the river a rocky bluff, whose upper surface is now known as Kasr Ibrim. Woolley has found there the remains of five groups of inhabitants: Meroïtic, Egyptian, Roman, Blemmeye, Nubian Christian, and Moslem — and it was fortified by each of them. That is to say, for about 1400 years, this one site was held as a stronghold town. Nor did its warlike history end there. Seven centuries after it had passed into Mohammedan hands, and ceased to be of military significance — was, indeed, virtually deserted — it was occupied by a band of Mameluke mercenaries, fleeing from the murderous treachery of the Khedive Mohammed Ali. They were quickly overtaken and slaughtered by the Khedive's forces, but in their desperation, they, like their Meroïtic predecessors 2100 years before, resorted to the heights of Kasr Ibrim as a place of refuge.†

This fortified site harks back to the beginnings of city life. Another dates from the close of one of the great urban epochs — the break-up of the Roman Empire. In the hills of Calabria, in southern Italy, is to be found a ruined rampart which has the appearance of great antiquity, but which, in point of fact, dates only from the fourth or fifth century. According to Woolley, it probably represents "a place of refuge to which the villagers might betake themselves and

* Reprinted by permission from G. G. MacCurdy, *Human Origins*, Vol. I, pp. 251–252, published by D. Appleton & Company.

† C. L. Woolley, *op. cit.*, pp. 18–27.

their cattle for shelter, perhaps, in those parlous times when Alaric turned southwards after the sack of Rome (A.D. 410), and when the long-drawn war between Goth and Latin gave rein to anarchy in the unguarded hills."*

These two narratives serve to reinforce the generalization implied in much that has gone before: *that the origins of the city are intimately bound up with defence against enemies.* Defence is not, however, the sole social need about which the early city was built. Of almost equal importance were worship and government. Suffusing all of these were other fundamentally important elements, such as population growth, technological progress, and social organization.

### DEFENCE

AT THE beginning of civilization human societies were, in general, of two sorts, the settled and the nomad. The former had occupied those tracts best suited for pasture and cereal culture; they controlled the most desirable springs, wells, and streams; they held as their own the best hunting and fishing grounds. Moreover, they had accumulated wealth, particularly in the form of flocks and herds, which offered a tempting prize to the unsettled nomads. It is not surprising, therefore, that the latter looked upon the former with envious eyes and constantly sought to dislodge them, or at least to raid and despoil them. They did so in Old Testament times, when the Sabeans fell upon Job's oxen and asses, taking them away, and slaying their guardians "with the edge of the sword" (Job I: 14). They do the same today in Asia Minor, where the Kurd nomads periodically raid their settled neighbors. So they must have done throughout the beginnings of civilized life. Moreover, in that time there were constant migrations and every settled people had always to be on the watch for armed bands of strangers, on the lookout for just such fertile acres as they possessed.

### ORGANIZATION FOR DEFENCE

IT IS possible that the earliest fortified sites were places of refuge, to which a group, along with its possessions, might

* *Ibid.*, p. 72.

resort in time of need. The mountain-valley enclosure seems to have been such a sanctuary. As the account of the Neolithic lake-dwellers indicates, however, prehistoric man began very early to live in fortified towns and villages. This is not to be wondered at, for there are many ways in which a compact, relatively thickly-settled community, such as the city, or its embryonic archetype, possesses important advantages for the purposes of defence. It provides a number of defenders, having organization and leadership, and able to be mobilized on short notice against surprise attack. The liability of the primitive community to surprise attack is indicated in the narrative of Ulysses — who is given the suggestive title of "spoiler of walled towns."

> The wind that blew me from the Trojan shore
> Bare me to the Ciconians, who abode
> In Ismarus. I laid the city waste
> And slew its dwellers, carried off their wives
> And all their wealth, and parted them among
> My men, that none might want an equal share
> And then I warned them with all haste to leave — *

### FORTIFICATION

YET, if cities can muster forces in their own defence, enemies can also raise armies for their attack. The defensive force is, however, generally at an advantage, for it is fighting behind fortifications.

Indeed the city is, in a sense, itself a fortification. Its buildings — particularly the more substantially-constructed ones — offer cover which is of invaluable aid in any military operation. The defensive value of ordinary, unfortified buildings was clearly demonstrated as recently as the World War, which saw towns and villages — even hamlets and isolated farms — often utilized as strong points, and firmly held against determined attacks.

There are certain other auxiliary advantages inherent in the lay-out and construction of the average city. It usually possesses some tall, strongly-built structures useful as observation posts and points of vantage for the throwing of missiles. And its system of streets, squares, and courts, its backways and

* Homer's *Odyssey* (Bryant Translation), Book IX.

its short cuts, may be at once of signal aid to a body of defenders, to whom all these are familiar, and sources of delay, confusion, and even grave peril to a force of attackers.

Until relatively recent times, however, few cities were willing to rely upon the protection afforded by their own construction. They added fortifications. "Who can say," asks Poëte, "how much collective living owes to the rampart? * The city's defensive works can be compact, like the city itself, thereby permitting the economizing of both labor and materials. The importance of this consideration is easily recognized, for all fortifications have depended for their efficacy upon their massiveness and solidity, and have accordingly required the use of bulky, heavy materials — earth, stone, brick — in large amounts.

Home † calculates that the wall of Roman London, which was $3\frac{1}{4}$ miles in circumference, involved the following:

23,000 cubic yards of excavation for the foundation
100,000 cubic yards of concrete (including laying of bricks)
1,000,000 bricks for 11 bonding course, averaging $18\times12\times1\frac{3}{4}$ inches
784,000 feet super of coarse dressing of stone for facing (labor only)
34,000 cubic feet of special plinth stone
17,000 feet of superior dressing for plinth
24,000 cubic yards of excavation for the ditch

One cannot examine the massive walls of an ancient city such as Homeric Troy, the remnants of whose wall rises to a height of 20 feet, and is 16 feet thick at the top, without appreciating the heavy outlay of wealth and effort required to quarry the stones, transport them, cut them, and put them into place, and without also appreciating that their builders must have had every motive to keep this circumference down to the narrowest possible limits.

The compactness of the city permits economy not only in the building but also in the manning of its fortifications. A population gathered together within an area of, say, 10

* C. M. Poëte, *Introduction à l'Urbanisme*, Paris 1929, p. 7.
† G. Home, *Roman London*, London 1926, pp. 165–166.

square miles requires a smaller body of defenders than would that same population if it were scattered over an area of 50 or 100 square miles because the ring of its fortifications would be very much narrower.

A third advantage in the city's fortification has to do with the selection of its site. Being relatively compact, it may be

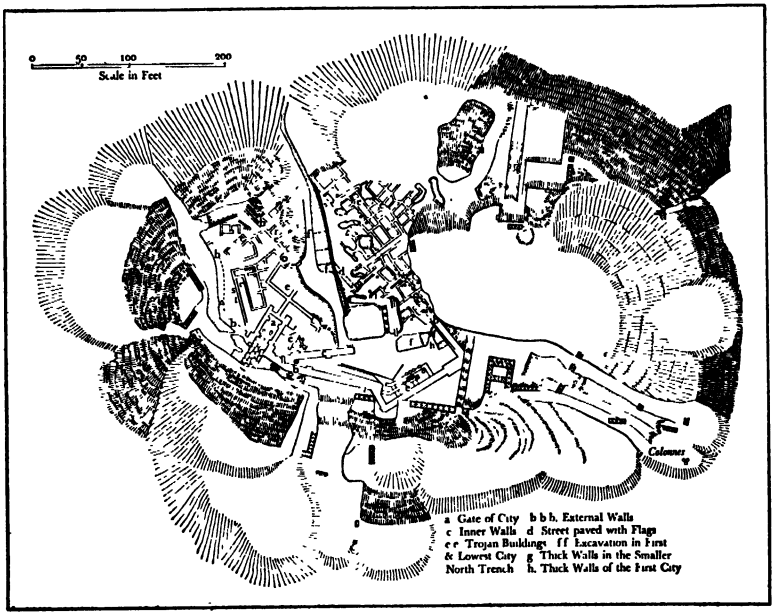



FIG. 2. A STRONGHOLD CITY: ANCIENT TROY

Adapted from the map of Troas in Henry Schliemann, *Ilios, the City and Country of the Trojans.*

located at an easily-defended point, an island, a steep hill, the confluence of two streams. On the other hand, a scattered population must, of necessity, occupy much territory not particularly well-adapted to defence — that may, in fact, be peculiarly open to attack.

## WORSHIP

IN CERTAIN favored localities the beginnings of city life seem not to have been particularly concerned with defence. At least, the earliest known sites give no evidence of defensive

works. Such communities seem to have arisen in Egypt, which, particularly in its southern portions, was relatively immune from attack, and in the earliest, or "Great," Maya cities of Central America. In both these areas, the religious life of the community assumed a dominant position very early, and the city was itself a sort of shrine or its life centered around one. Poëte states that the name of many an ancient Egyptian city signified that it was the "House" — or the Temple — of one or another divinity. A similar development appears to have taken place in Hither Asia, where the Elamite and Sumerian-Akkadian civilizations arose, although in their case there was also constant need for defence against nomads and invading migrants. Poëte says of ancient Susa:

> The god and the prince were the masters of the city. The city had its own god, without prejudice to the other divinities, which might also have their residences. The authority of the god increased at the same time as the city. . . . The prince, at the beginning, was only the representative of the god on earth. His power was that of the god of whose worship he was the custodian. Thus was symbolized the close bond between earth and heaven, by which the city was characterized.*

The institution of the priest-king arose also in Egypt, and in later years gave rise to the deification of the monarch — an idea which eventually made its way into the Roman Empire, to provoke the martyring of many an early Christian.

### TRADE

GRAS † is of the opinion that the origin of the city is rooted in trade. As has been seen, commerce is at least as old as the Neolithic period. The Pressigny flints traveled as far as 400 miles, in an age when most of Europe must have been primeval wilderness. Neolithic Crete (before 3500 B.C.) had a sufficiently-developed commerce for the exchange of articles with Egypt, although separated from it by nearly 500 miles of sea.‡ In fact, the whole Cretan civilization seems

* C. M. Poëte, *op. cit.*, pp. 144–145. The preceding reference is from page 115.

† N. S. B. Gras, *An Introduction to Economic History*, New York 1922, pp. 105 and 121.

‡ E. J. Forsdyke, "Crete," *Encyclopedia Britannica*, 14th Ed., Vol. VI, p. 679.

to have been built largely upon commerce, its ships having maintained intimate contact with the other Ægean islands, with Egypt, Greece, and Asia Minor. Eventually, the Ægean civilization, which grew out of it, established trade connections or founded colonies throughout the entire Mediterranean area, in Sicily, Philistia, Spain, Sardinia, Macedonia. The commercial enterprise of these city-building seafarers, according to Glotz,* caused the Mediterranean to play "for the first time to its full extent, the rôle of civilizer which has developed upon it." It also gave rise to the Phœnician civilization, whose preëminence in trade is proverbial.

Mention has been made of Homeric Troy. This city was preceded by a succession of older settlements, the second of which dates back to the Copper and early Bronze Ages. Among the ruins of this "second city" of Troy have been found, according to Murray,† fragments of white nephrite, a rare stone which occurs nowhere nearer than China. One wonders how many and what sort of transactions of barter, fraud, and theft took place before that bit of stone had completed its travels from China to the shores of the Ægean Sea.

### GOVERNMENT AND ADMINISTRATION

THE building of towns requires coördinated effort, and this implies a form of government. Conversely, a society possessing any but the most simple government is likely to have cities or at least towns, for the administration that it requires.

The ruler — be he priest, prince, or president — must have a residence and a headquarters. Even if he chooses to move from place to place, his clerks and deputies need a fixed location, where they can keep their records, receive their correspondence, and conduct routine business. It is significant that the palaces of the ancient rulers of Egypt and Hither Asia contained vast libraries of archives made up of correspondence, legal decisions, and various routine records. There was required, moreover, a central point in which justice could be dispensed and sentences executed. Schools also had to be maintained.

* G. Glotz, *La Civilisation Égéenne*, Paris 1923, p. 65.
† G. G. A. Murray, *The Rise of the Greek Epic*, Oxford 1907, p. 29.

In early times these various functions were probably combined in the person of the same priest-ruler and his associates, who presided over worship and led in defence. But even had this not been so, some provision was needed for these functions, which must certainly have aided in building up the population and the prestige of the ancient city. Indeed, in France, after the decline of the Roman Empire, such cities as survived chiefly subsisted upon government and administration. Trade languished, and political power passed to the feudal lords. But ecclesiastical and civil administration continued to be exercised from them.

### THE RISE OF THE CITY AND THE GROWTH OF CULTURE

DEFENCE, worship, trade — these all contributed to the motivation of primitive man when he built his villages up into towns and cities. But he required more than a sense of need for such a community. He needed the resources — human, material, political, and technical — with which to give body to his aspirations. Paleolithic man must often have wished for a more adequate habitation for himself and his gods than the rock caverns and transient shelters that he had. But without the cultural advance inaugurated by the Neolithic Age, his wishes were impossible of accomplishment.

The Neolithic Age, in the first instance, and the Age of Metals which succeeded it, brought man up to a level of culture which, for the first time, made possible settled communities of any size. It has been seen that in the Neolithic period came the beginning of agriculture and the domestication of animals — each of them a *sine qua non* of settled community life. The beginnings of pottery-making and of weaving also betoken the establishment of permanent settlements. The devising of improved tools and weapons — of polished stone, and later of metal — enabled man to gain the upper hand over wild animals, and to cope with human enemies, so that he could live in at least a modicum of security. Some degree of social organization was evolved — sufficient to make possible such ambitious works as the megaliths of Brittany and England — so that united action for the building of walls, moats, causeways, and temples was pos-

sible, as well as for armed defence. Finally, and most important, all of these advances permitted population to grow. Only a substantial increase of population would have provided sufficient numbers of men and women to build cities and to dwell in them. Then, as now, city growth was possible only if population growth was rapid and continuous.

The city, then, was in large measure embedded in the advancement and diffusion of culture. It was, in a sense, a product of culture-growth. Once organized, it became in itself an element in culture. This latter point is developed at greater length later in this chapter. It is sufficient here to call attention to the city as a part of culture, and therefore involved in the vicissitudes of culture-change and culture-movement. This basic principle is to be kept in mind throughout this work, for in the final chapters it will be shown that the fate of one great urban society — the Roman — and the possible future of the present one, are related to the fact that culture expansion is one of the basic elements in the origin and growth of city life.

## THE EMERGENCE OF URBANISM

IT IS therefore evident that cities and towns probably arose whenever and wherever men developed sufficient technical knowledge and social organization to live together for defence, worship, and trade. Isolated cities do not, however, constitute an urban civilization. Cities can exist, and have existed, in predominantly rural societies. Only when the city dominates its society can an urban civilization be said to exist, and such civilizations have been relatively few in number. They constitute, indeed, a special form of social organization, which makes them subject to such special discussions as this work.

The account of the emergence of urban society falls into three parts: (1) the nature of urbanism; (2) the points of origin of urbanism; and (3) the diffusion of urbanism.

### THE NATURE OF URBANISM

NO FORMAL definition of the city and of urbanism has been undertaken in this work. In a sense, the entire volume is

devoted to the only sort of definition with any value, a description and an analysis of cities and of urban societies. For the purpose of this immediate discussion, however, it is necessary to give some preliminary clue to the nature of the urban form of society, particularly as distinguished from the isolated town or city. Briefly stated, the distinction is this: *in an urban society, the city dominates the scene.* It is the center of gravity, politically, socially, and culturally. More important than this, the country is to a great extent economically dependent on it, for the greater part of its surplus produce goes to the city, and its whole economy is directed towards supplying the city with one type of goods, and exchanging for them other types of goods originating in the city or in other rural areas, the marketing of whose products the city controls. Again, commerce is highly developed, partly to furnish the city with its supplies and raw materials, partly to provide a market for the commercial and manufacturing activities carried on in it.

The city itself is large, densely settled, and thickly populated, the exact size of its population being relative to the economic and technical development of its time. The best estimates of the population of ancient Rome at the height of its prosperity are between 250,000 and 1,000,000. Lot puts it at 250,000; de la Malle at 261,000; Meyer at 700,000; and Beloch at 800,000.* Today, one does not look for all of the characteristic features of urbanism in a city of less than 100,000, and cities of 1,000,000 or more inhabitants are not uncommon.

Finally in an urban society, cities are found close together — so close together, in fact, that some parts of England and America extending over several hundred square miles are almost continuously urbanized, and are known as *conurbations.*

The contrast between an urban society and one that is purely rural, or capable of supporting only isolated cities, is clear-cut. In such non-urban societies cities are small. For example, some of the most prosperous cities of Roman Gaul shrank to towns of 3000 to 6000 when the urban society of the

* F. Lot, *La Fin du Monde Antique et le Début du Moyen Âge*, Paris 1927, p. 80.

Empire was succeeded by the rural society of the early Middle Ages. Communication is uncertain and slow. Commerce and industry are conducted on a small scale, and trade — except in luxuries — is mostly local. Finally, the city, or town, is more or less subsidiary to the country. Certainly this is the case in economic activity, for the country is almost entirely self-sufficing, even producing many of its manufactured products. Only those areas easily accessible to the city devote any considerable proportion of their efforts to the supplying of the city with food products. (The city may or may not be the administrative, political, or ecclesiastical center of its society. It probably continues to be the *locus* of culture innovations.) But, in any case, the balance of power is in favor of the country, such authority as the city exercises being held chiefly on sufferance or as a special concession to exceptional circumstances.

If the whole record of human history is taken into account, this second or non-urban type of society will be found to be the most common. It dominated the United States until only a few generations ago. It held the center of the stage in Europe from the end of the Roman Empire until the close of the eighteenth century. In certain portions of Europe, such as the Soviet Union and large parts of France, it is still the predominant form of social organization.

When history, as generally considered, is taken into account, however, the urban type of society holds the center of the stage. Not by accident does civilization derive its very name from the city (*civitas*). Most of the civilizations with which human history is most concerned, whether from the point of view of political development or of artistic creation, or of scientific discovery, have been urban. Their careers, though relatively brief, have been brilliant and fruitful.

### THE ORIGIN OF URBANISM AND ITS DIFFUSION

THE earliest urban societies appear to have originated at four points — three of which were in the same general geographical province. They are the Egyptian in the Nile valley, the Sumerian in the Tigris-Euphrates valleys in Hither Asia, the Ægean in Crete, and the Mayan in Central America. As al-

ready indicated, all of them are very ancient. The Egyptian civilization reached its height in the XVIIth Dynasty, extending from 1580 to 1346 B.C. The Sumerian civilization passed its prime about 2600 B.C., under the Dynasty of Sargon. The Ægean civilization was at its best at about the same time as the Egyptian, the sixteenth century B.C. The Mayan cities had their "Great Period" much later, in the fifth and sixth centuries A.D., but it is likely that the Western Hemisphere was peopled at a relatively late date.*

Whether or not the rise of an urban type of civilization in these areas was the logical consequence of geographic and economic forces, or whether it was the spontaneous fruition of a series of more or less fortuitous cultural innovations is a question that cannot be settled here. There would seem, however, to be more than coincidental significance to the fact that: (1) in all four areas there was a mild climate, giving man relative respite from such pressing problems as food, shelter, and warmth, and yet permitting him to have sufficient energy to make cultural progress; (2) in three of them cereal crops were cultivated very early and probably were originally found in a wild state (in Middle America, maize; in Egypt and Hither Asia, wheat and barley,) † (3) in three of them there was relative immunity from outside attack — Egypt, Crete, and the early Maya cities; and (4) in three of them — Egypt, Hither Asia, and Crete — the conditions of climate and soil were such as to favor the development of large, closely-settled communities.

This last point merits further emphasis, for it forms an integral portion of the discussion at the close of this work. In Egypt and Hither Asia the climate was semi-arid, and cultivation was possible only in the river deltas, on the river banks, and near the oases. Even then, it had to be supplemented by irrigation. In Crete the topography was such that arable soil was scanty and poor, rainfall also was not plentiful. The Egyptians and the Sumerians became farmers,

* See M. I. Rostovtsev, *A History of the Ancient World*, Oxford 1926–27, Vol. I, pp. 29, 71, 75. Also H. J. Spinden, *Ancient Civilization of Mexico*, New York 1922, p. 254, and J. E. Thompson, *The Civilization of the Mayas* (Anthropology Leaflet No. 25), Field Museum of Natural History Publication, Chicago 1927, pp. 9–22.

† J. H. Breasted, *Ancient Times*, Boston 1916, p. 38 and footnote.

crowded close together in narrow cultivated strips of land — as are their successors to this day. The Cretans gave up trying to exact more than a bare living from the soil, and took to the sea, in search of the wealth to be gained by trade and by conquest.* In the former societies, it was impossible to build dispersed settlements; † in the latter it was inexpedient to do so. The situation was quite different in Western Europe, where the urban civilization eventually developed in these regions was transplanted. Here both soil and climate favored dispersion of the population over a wide area. It may be, therefore, as Usher suggests, that one of the weaknesses of the Roman Empire, which was an urban society, was the setting-up of a concentrated form of social development in a type of territory that was best served by a dispersed form of settlement. A similar observation might be applied to contemporary European and American urban society.

## THE DIFFUSION OF URBANISM

A NUMBER of influences appear to have been at work in the spread of urbanism from its points of origin. The chief of them seem to relate to climatic, economic, political, and cultural factors.

### CLIMATIC INFLUENCES

THE climatic influences in the diffusion of the urban type of society have been analyzed by Huntington and Williams. They show that there are certain *optima* of temperature, humidity, and variability that promote health and activity in plants, animals, and human beings, and that in the Northern Hemisphere the climatic zones characterized by these *optima* run athwart Western Europe, and Eastern and North-Central United States, missing most of Asia except the Japanese Archipelago. In the Southern Hemisphere, the bulk of the area lying within this zone is covered by water, except for the southern tip of South America and New Zealand. In these regions there are the greatest number of large cities.

* M. I. Rostovtsev, *op. cit.*, pp. 17–21 and 87.

† See A. P. Usher, "The History of Population and Settlement in Eurasia," in *The Geographical Review*, Vol. XX, 1930, p. 129.

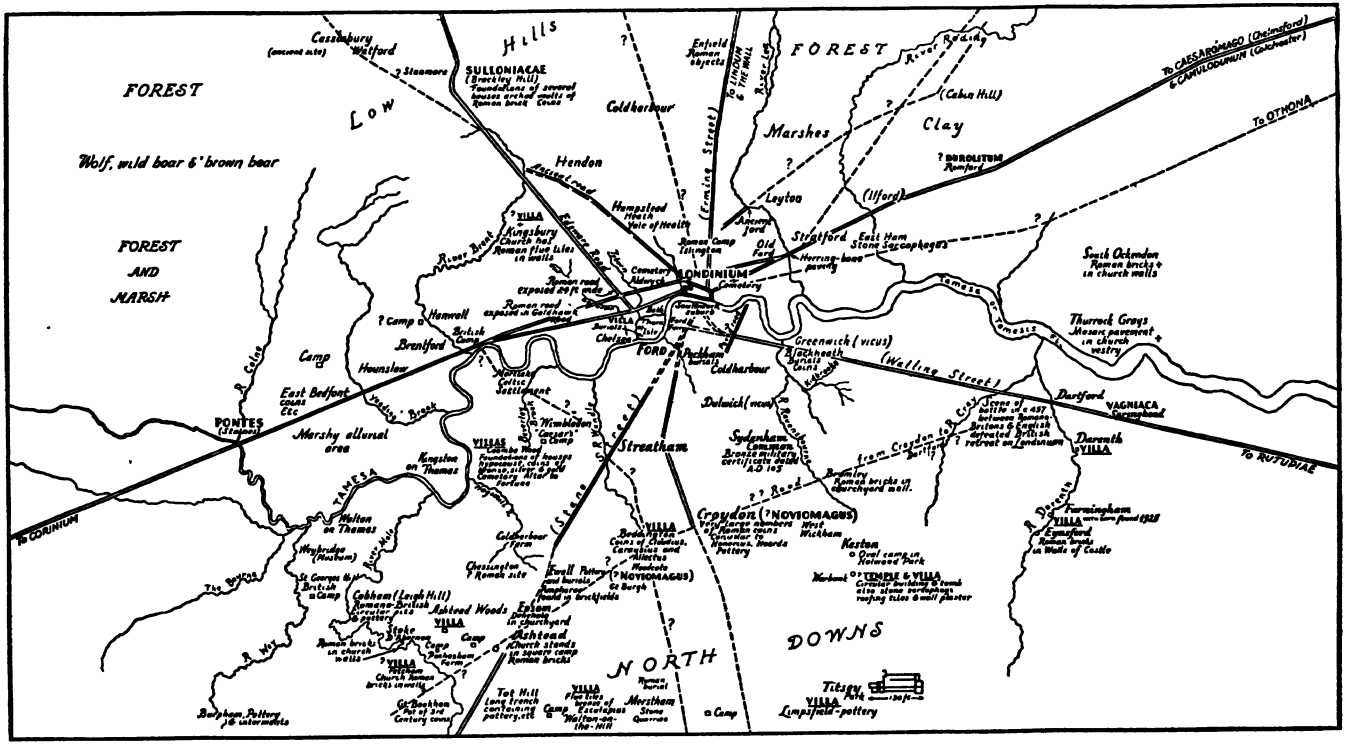



FIG. 3. A SEGMENT OF AN ANCIENT URBANIZED SOCIETY. From G. C. Home, *Roman London*, Ernest Benn, Ltd.

Morover, Huntington and Williams show that the degree of urbanization — that is, the proportion of the populations of these regions residing in large cities — is in some degree correlated even more closely with climatic endowment. This fact is brought out in Table I.

TABLE I

TYPE OF CLIMATIC ENERGY, AND URBANIZATION*

| *Type of Climatic Energy* | *Approximate Percentage of Population in Great Cities* |
|---|---|
| Very stimulating | 17.9 |
| Stimulating | 6.0 |
| Medium | 4.6 |
| Enervating | 3.8 |
| Very enervating | 1.5 |

Within the areas of maximum climatic endowment there are, however, important variations in the degree of intensity of urban development. Moreover, certain societies which are, at least, partially urbanized, such as those of India and China, are situated in regions which, according to Huntington's criteria, are poorly endowed climatically. To account for these features of urban distribution, it is necessary to consider economic, political, and cultural factors.

## ECONOMIC INFLUENCES

THE economic influences affecting the diffusion of urbanism appear to be chiefly two: (1) the development of commerce and (2) the development of industry. The primitive city was concerned with commerce to a certain degree, although defence, worship, and administration were probably of equal if not of greater importance. As they grew, however, commerce steadily assumed a more important rôle. The Ægean city civilization, and the Phœnician civilization which was an offshoot of it, depended largely on trade for their wealth and influence. Rostovtsev † goes so far as to hazard the con-

* Reprinted by permission from *Business Geography*, p. 312, by E. Huntington and F. E. Williams, published by John Wiley & Sons, Inc.

† M. I. Rostovtsev, *op. cit.*, p. 109.

jecture that the Trojan War was in part born of rivalry for the possession of the iron and the gold to be secured from the Black Sea trade.

Miletus, on the coast of Asia Minor, founded a powerful federation of cities in the eighth century, B.C., principally on the basis of trade. Beginning its career with the aid of the commerce brought by the Mæander River, and its own four harbors, it extended its influence up and down the coast. Finally, it secured a virtual monopoly of the Black Sea traffic, and established more than 60 subsidiary cities along the Black Sea-Hellespont trade route.*

In recent times the economic forces affecting the diffusion of urbanism have grown constantly in importance. In fact, the city of the present day is so conspicuously commercial and industrial that many observers fail to regard it as anything more than an offshoot of modern industrialism. For this reason there seems to be a sharper differentiation between the city life of the ancient world and of modern times than does in fact exist.

The commercially-dominated type of urban civilization began to emerge in early modern times with the rise of the Venetian Republic. For example, the city of Augsburg subsisted largely on the commerce between Eastern Europe and Asia and Western Europe and lost its position after this commerce had been cut off by the Turkish occupation.† Equally striking is the rise of urbanism in Northern Europe, particularly in Holland, Belgium, and England, which followed the discoveries of the fifteenth and sixteenth centuries, and the establishment of new trade routes thereafter. It may be said that much of the preëminence of these regions at the present day is traceable to the commercial impetus which they received in the Early Modern period.

Following the Commercial Revolution of the sixteenth and seventeenth centuries came the Industrial Revolution of the eighteenth and nineteenth centuries. Its story needs no repetition. Partly because it possessed ample coal and

* See C. M. Poëte, *op. cit.*, p. 32.

† *Ibid.*, p. 39. See also R. H. Tawney, *Religion and the Rise of Capitalism*, New York 1926, pp. 68–71.

iron deposits; partly because it gave birth to a notable array of inventive geniuses, Great Britain leaped into the forefront of world industry, and held its preëminence until the beginning of the present century. There can be no gainsaying that much of the enormous expansion of city life which has taken place in England, and more recently in Belgium, France, Germany, and the United States, during the nineteenth and twentieth centuries is directly related to industrial development. Not only has modern industrialism given employment to thousands of city-dwellers, it has also cheapened living costs to such an extent that a degree of urbanization has been developed which would probably otherwise be economically impossible. Moreover, both by lowering costs and by multiplying production, industrialism has enormously increased the volume of commerce, and thereby powerfully reinforced the commercial factors in urban growth. Black * points out that New York City and its surrounding area, which is not generally looked upon as an industrial center, increased its total population in the 22 years ending 1922 by approximately 67 per cent, but the number of factory employees, representing the major portion of its industrial population, increased by 84 per cent.

In fact, so intimate has been the relation between industrialism and urbanism that the two are often confused. The social by-products of industrialism are frequently charged for good or evil — chiefly evil — to urbanism. And the city is often considered essentially an industrial center. These errors are exaggerated interpretations of a most important sociological phenomenon: the intimate relationship between urban society — particularly that of the present time — and industrialism. It might indeed properly be asked how far the present phase of urbanism could continue without it.

### POLITICAL INFLUENCES

THE commercial and industrial factors in the diffusion of urban society have been of greater significance in modern than in ancient society. This is not the case with the politi-

* J. D. Black, *Introduction to Production Economics*, New York 1926, p. 918.

cal and cultural influences, which have been important for thousands of years. The chief political element in the expansion and diffusion of city life can be epitomized in six words: *public tranquility over a wide area.*

In a disturbed society, the isolated city can make shift to maintain its inhabitants and to keep alive its commerce and industry out of the resources of its immediate region. If it possesses special advantages, such as a seaport, or location athwart an important traffic way, it may even develop considerable size and wealth, as did Marseilles and Constantinople, after almost all of the remainder of the Roman world had reverted to town and rural economy.

Few cities, however, can long remain more than good-sized towns, and relatively few cities of any sort can long maintain themselves in a society that is disrupted by piracy and banditry, by war, or by mutually destructive quarrels. The reason is obvious. Trade is vital to the city, and trade, except in small articles of great value, cannot subsist in a society in which the merchant is liable to robbery and plunder, and in which the channels of trade are likely to be interrupted or raided. The "merchant-adventurer" of the late Middle Ages was a romantic figure, perhaps, but until he was able to become a prosaic and sober merchant, he did not assume the dominant economic position that he has held since the sixteenth century. Similarly, the commerce that has built city civilizations, from the days of the storm-tossed galleys of Crete and Phœnicia and of the camel-trains of Palmyra and Damascus to those of the express liners of England and the freight trains of the United States, cannot live without continuous and widespread public order.

Moreover, the city, once it has begun to reach substantial proportions, must go far afield for the food, fuel, and other necessities required by its inhabitants and for the raw materials needed by its industries. During the World War a few short weeks of intense submarine warfare so disrupted the food supply of the cities of Great Britain that the whole Allied cause was jeopardized. The maintaining of such lines of communication as these likewise also requires public tranquility over a wide area.

The specific police methods by which this end can be accomplished are outside the scope of this discussion. It need only be said that they are essentially political in their inception and direction. In ancient and in early medieval times, they took the form of the provision of convoys for merchant fleets and overland transportation trains; of the use of political and military authority to secure special privileges for traders; and of the planting of trading colonies — such as those of Crete, Phœnicia, and Miletus. Later, they were embodied in the police functions of national states and of empires. Thus, it was under the *Pax Romana* that the urban civilization of the ancient world reached its greatest prosperity. Still more recently, the creation of international conventions — formal and informal — for the protection of commerce, and the minimization of international conflict and internal dispute are widening the area of general public tranquility beyond national and imperial boundaries. So it is that the United States asserts an interest in the maintenance of public order in countries with which it is engaged in trade, and the great commercial nations of the planet promulgate treaties "outlawing" war.

Generally speaking, Europe and America have achieved a greater degree of public tranquility than Asia or Africa. Western Europe (even allowing for the World War) has been more successful than Eastern Europe; North America, than South America; Japan, than China. And the disparate degree of urbanization between these several pairs of regions is probably, at least in part, to be related to this fact.

### CULTURAL INFLUENCES

THE cultural factor in the distribution of urban society has already been suggested. The statement has been made that the city is intimately associated with cultural development, (1) since its rise depends in part upon a prerequisite degree of cultural growth; (2) since, once evolved, it becomes in itself a culture element. This second point is the one with which this portion of the discussion is concerned.

The city cannot be classified, in terms of cultural sociology, as a culture trait, nor yet as a culture complex. It

might, perhaps, be described as a *constellation or configuration of culture traits and complexes.* Certainly, its total sociological import is powerful and distinctive. The city itself — its economy, occupations, amusements, crimes and vices — all these constitute a way of life as definitely characteristic as any other culture element. That it is larger, more intricate, and of greater social and economic importance than most of the phenomena ordinarily included in the study of culture in no wise alters its cultural significance.

From this it follows that the city must, in some degree, participate in the characteristic forms of culture behavior. Of these, the most important from the point of view of this discussion is culture diffusion. As Wissler and Dixon * point out, it is usual for any culture phenomenon to spread outward from its point of origin. Local conditions and fortuitous circumstances distort the pattern of diffusion, so that it is never entirely symmetrical. In some cases the diffusion of a particular culture element may be quite irregular. This work is not concerned with the particular processes by which culture diffusion is carried forward. Suffice it to say that migrations, trade, propaganda, conquest, and travel all play their part.

Accordingly, as a culture element radiates from its source, those points near at hand will receive it sooner than those far away, the time sequence of their reception of the trait or complex being roughly proportional to their distance from its place of origin. Again, the particular impulse giving rise to the diffusion process may be modified, or may altogether disappear — just as a popular song or a catch-phrase will continue to spread in the hinterland of a city, after it has been out-moded and thrown aside in the city of its source.

All of these characteristics of culture diffusion appear to be exemplified in the spread of urban society. The city civilization of the Mayas in Central America originated in Honduras, and spread thence northward and southward, its southward migration being checked by collision with the

* C. Wissler, *Man and Culture*, New York 1923; and *Introduction to Social Anthropology*, New York 1929, Chaps. XIX–XX; R. B. Dixon, *The Building of Cultures*, New York 1928, Chap. VII.

Peruvian culture. In the north, however, it penetrated into Mexico, and colored the subsequent Toltec and Aztec civilization. Moreover, at the time that the "Renaissance" Maya culture of Yucatan was at its height, the old cities of the original center of the culture were standing deserted and had been so for hundreds of years. The later Aztec civilization did not arise until after the whole Maya culture had crashed to ruin.

There is equally clear evidence of the spread of urbanism by culture diffusion in Egypt, Hither Asia, and the Ægean area. The Egyptian influence penetrated into Asia Minor. The Sumerian civilization, although eventually eclipsed, radiated its influence over the Babylonian plain, and spread throughout Asia Minor and Western Asia. The history of the ancient Hebrews, for example, is shot through and through with influences from Egyptian, Babylonian, and Ægean sources. The legend of the exodus from Egypt; the Phœnician collaboration in the building of the temple of Solomon; the Babylonian Captivity — these are only a few of the many instances of the way in which this small nation was subjected to influences from the three chief *foci* of urbanism in the ancient world. The eastward course of the wave of urbanism is obscure, but it is not without significance that Chinese tradition ascribes the building of its first cities to the semi-mythical "Yellow Emperor," whose approximate date is the middle of the third millennium B.C., at a time when the Sumerian city civilization had already advanced to its highest point and was on the way to decline.*

The westward course of the urbanized type of society is too well known to require detailed discussion. Its spread to Greece and Italy, and, under the ægis of Rome, throughout Europe is an historical commonplace. It is also well known that the original center of this urbanizing impulse has been almost completely de-urbanized. The causes of its decline are of no immediate concern here. The only significant fact is that here — as in many other instances of culture diffusion — the impetus for diffusion continued for many years after

* K. S. Latourette, "China: History" in *Encyclopedia Britannica*, 14th Ed., Vol. V, p. 531.

the original focus, or group of foci, had ceased to be an active representative of this type of society.

From modern history one striking instance of the effect of cultural factors in the spread of urbanism may be noted. It is furnished by Australasia. This area is chiefly agricultural and extractive in its economic life, having over 82 per cent in value of its total exports (1916–17–1925–26) agricultural, such as wool, dairy products, and cereals. Yet 43 per cent of all its population as of 1921 was urban. Obviously an important element in this situation is the fact that Australia derives the greater part of its population from England, one of the most intensively urbanized countries in the world.

It is likely that the cultural element in the diffusion of urbanism is less significant than it was at the dawn of history. Nevertheless, it doubtless still exercises considerable influence, particularly since, as pointed out in Chapters VI, XIII, and XIV, a number of the social-psychological factors reinforcing it seem to be of greater weight in very large cities, such as those of today, than in smaller ones.

To the extent that this influence has been and remains operative in the expansion of city life, it is of great significance. Cultural phenomena are only indirectly, if at all, related to economic phenomena. They follow their own course, irrespective and in spite of economic forces — as in the case of Australia. Since this is so, it is possible that the *cultural* factors in the diffusion and expansion of urbanism and the social-psychological forces related to them may outstrip the *economic* factors, bringing about a state of disequilibrium that must eventually prove disturbing to city life. In the author's opinion, this situation arose in the latter days of the Roman Empire, and it may not altogether inconceivably enter into the future course of the urban society of the present day.

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# CHAPTER II

## *THE LOCATION OF THE CITY*

SOME TEN miles north of the White House is the little town of Silver Spring, Maryland. Until a few years ago when it was engulfed in the advancing tide of Washington's suburban expansion, it was a drowsy little country village, subsisting on the trade of the surrounding farmers and a few large estates, and harboring the recollection of its one brief day of stirring fame, when Jubal Early paused there — a little too long, it would seem — on his all-but successful raid upon the nation's capital. Yet Silver Spring was a settled community when the city of Washington was part of a vast expanse of woods and plantations. Had it been located ten miles further south, it might have become the nucleus for one of the most magnificent cities in the world. Instead, it has remained very much the same as it was when Washington designated L'Enfant to plan " the Federal City."

The annals of every country are full of similar instances, of towns and villages which have never " grown up " because of deficiencies in their locations — and of obscure hamlets and even wilderness tracts that have burgeoned into flourishing cities by reason of their location.

The discussion of the city's location contributes to the understanding of city life, since the factors affecting its location are vitally related to the function and development of the city itself.

The major portion of this chapter is devoted to the general geographic situation of the city, although brief attention is

given to the site of the city proper — largely on account of the light that it throws upon the historical development of city life.

## THE URBAN SITE

In early times, when the city was relatively small and compact, its site — that is to say, the plot of land covered by the city proper — was of considerable importance. Such considerations as healthfulness, water-supply, defence, and accessibility were all affected by it. At present, however, the particular site of a city is of much less importance than is its general geographical location.

The sites that have most frequently lent themselves to the establishment of urban communities are those with defensive advantages, being either difficult of assault or relatively inaccessible.

Other urban sites are those affording a good water-supply, and those associated with religious shrines or other objects of great popular esteem.

### THE DEFENSIVE SITE

Hundreds of cities seem to owe their location to the suitability of their sites for defence. Two types of urban locations in particular appear to have been selected with such a purpose in view. They are the hill-top and water-bound sites, which lend themselves to the warding-off of an attack, and the secluded sites, which reduce the liability to attack.

### THE HILL-TOP OR WATER-BOUND SITE

Before the invention of long-range artillery, the ideal defensive location was the summit of a hill: the higher and steeper the hill the better. The cities of the ancient Orient were so frequently perched on the summit of some one or another natural eminence that the followers of Jesus could be expected instantly to comprehend a parable of "a city set upon a hill" (Matthew V:15).

Greece and Italy were filled with "acropolis" towns, such as Athens, Corinth, and the cluster of Latin settlements from which sprang ancient Rome. The French have a special

designation for such a city: *la ville haute,* of which Carcassonne is one of the best known. In fact, so universal has been the association of the hill-top with the fortified town in ancient times, that from Armenia and Arabia to England and Ireland the word "town" has been derived from the Sanskrit root for "high rising ground." Thus: Aryan *bhrgh* and German *berg,* meaning "mountain" or "hill"; and Armenian *burgan,* Arabian *burg,* late Latin *burgus,* Italian *borgo,* Old Irish *borg,* German *burg,* French *bourg,* and English *borough,* all meaning "town" or "city." Certain authorities go further and relate these associated root ideas of "hill" and "town" with a third, connected with the German *bergan,* meaning "hide," "shelter," or "protect." *

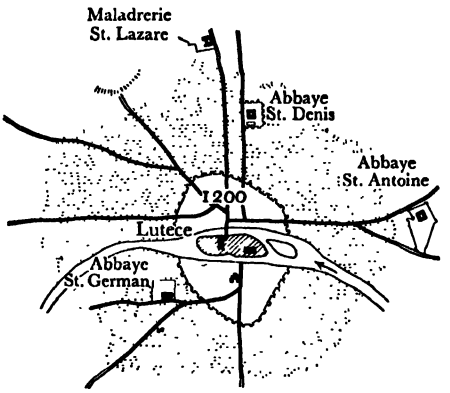



FIG. 4. THE EVOLUTION OF A WATER-BOUND CITY: OLD PARIS †

Where hill-top sites have not been available, city-builders have had recourse to the protection afforded by open water. The most suitable location of this sort is, of course, an island, and at least three of the world's great cities, Venice, Paris, and Stockholm, are insular in origin. At the time of its original settlement, the site on which Venice was built had, in fact, little to recommend it, except that it was an island — and a singularly inaccessible one at that. It was low, barren, without good drinking-water, but, when northern Italy was overrun by the Huns in the fifth century; and by the Lombards in the sixth, Venice and her sister islands were the only sure sanctuaries in all of northern Italy from the

* See F. Kluge, *Etymological Dictionary of the German Language* (translation), London 1891. D. H. E.-Sanders Muret, *Encyclopädisches Wörterbuch;* J. A. H. Murray, *Oxford English Dictionary;* and H. Pirenne, *Medieval Cities* (translation), Princeton 1925, p. 73.

† From Le Corbusier (Jeanneret, C. E.), *The City of Tomorrow,* Brewer & Warren, Inc.

dreaded "Barbarians." So, while the great cities of the Venetian plain languished and died under the "Barbarian" incubus, a city arose amidst the shallow waters of the Adriatic that was later to dominate the commerce of Europe.

Paris was likewise originally built on an island. Under the Roman occupation, it spread to the right and left bank of the Seine, but under the shock of the break-up of the Roman Empire and Norse invasions, it retreated to the island stronghold, whence it repulsed attack after attack of "the Norse fury." Through medieval and early modern times, the island site remained the administrative center of the city, as its name, *la Cité* indicates.

Stockholm was built on the island of Stadholm, the narrowest point in the channel connecting Lake Malar with the Baltic Sea. The modern city now covers portions of the mainland to the north and south, but the island of Stadholm remains an integral portion — and in certain respects the principal one — of the city.

Island sites suitable for the location of cities have, in the nature of things, always been relatively rare, but promontories, and points of land, formed by lakes and seas, by bends of rivers, or by the confluence of two streams, have been relatively plentiful. As for Quebec, there can be no doubt that Champlain had military considerations clearly in mind when he laid the foundations of the city. The site chosen by Champlain was not only protected by the junction of the St. Charles with the St. Lawrence River, but had the added advantage of being set on a high bluff, which sheered off sharply on the landward side, thus constituting a strong point, the difficulty of whose attack provided the setting for one of the most spectacular military undertakings in early American history.

Of the many European cities whose original sites were protected by water barriers, York and Fribourg may serve as examples. York is situated on the high point of land formed by the meeting of the rivers Ouse and Foss. It seems to have been an ancient British stronghold before the Roman conquest. After the conquest it was converted into the pivot of the Roman power for the entire north of Eng-

land. Moreover throughout much of the subsequent history of England — particularly in the wars with Scotland — York remained an important military center.

Fribourg, Switzerland, was built to order in the twelfth century, because of the defensive value of its site. It was established at a point on the bank of the River Sarine, which "to this day flows solitary between steep walls of basalt that attain at places a height of 180 meters," at a place where a ford provided a point of contact with the outside world, but where a great bend formed a rocky promontory all but surrounded by "steep cliffs and deep ravines." *

### THE INACCESSIBLE SITE

PROBABLY the relative remoteness of Fribourg, as well as its strategic location, contributed to its freedom from outside interference. Certainly all the cities of Switzerland owe their traditional independence in large measure to the protection of their mountain barriers. To the extent that this is so, they illustrate the second type of urban sites that have been chosen for the sake of security — those that are relatively sheltered from outside attack. However, as Thucydides observed 2300 years ago,† it is the tidewater inlet locations that offer the best example of such cities. These cities are accessible to sea-borne commerce at the same time that they are at least relatively immune from attacks from the water — particularly from the sudden attacks of pirate raiders, which have been a constant menace to seaport towns at certain periods of history.

The city of Bruges is one of the most striking examples of the advantages enjoyed by the comparatively inaccessible tidewater-inlet port as contrasted with the coastal city. In the early part of the ninth century the bulk of the newly-developed foreign trade of Flanders went to two coast towns, Quentovic and Durstede. In fact, the coinage of the latter is known to have been current in Sweden and Poland. But when the Northmen descended upon that coast, Quentovic

* J. Brunhes and C. Vallaux, *Geographie de l'Histoire* (2nd Ed.), Paris 1921, p. 33.

† C. M. Poëte, *Introduction à l'Urbanisme*, Paris 1929, p. 7.

and Durstede were among the first cities to be pillaged and destroyed, one of them never to be rebuilt. Meanwhile, however, Bruges, which had hitherto been a relatively obscure market town at the head of the Gulf of Zynn, enjoyed a measure of tranquility, by virtue both of its remoteness and of the energy of its overlords, the redoubtable counts of Flanders. As the years passed by, Quentovic was forgotten, and Durstede sank into obscurity, while Bruges became the most important commercial center of the entire region.* Such towns as these had the further advantage of being far enough inland to be spared most of the floods of abnormally high tides, a danger that must have been almost as menacing as pirate raids, in view of the havoc wrought as recently as January 1928, by a tidal wave in the city of London.

Semple identifies as tidewater-inlet cities: London, Colchester, Cambridge, Huntingdon and Stamford, Lincoln, Doncaster, Castleford, Todcaster and York, in England, and, on the continent, Utrecht and "all the river towns from Bremen to Königsberg." †

In the western hemisphere the city of Guayaquil, in Ecuador, enjoyed relative immunity from the sea-rovers who infested the west coast of South America in the seventeenth and eighteenth centuries, for it was situated some 30 miles from the mouth of the Guyas River.‡

### DEFENCE AND WATER-SUPPLY

HOWEVER impregnable a city's defences may be, its inhabitants would have to have access to water, or they would, in times of siege, quickly perish. Defensive considerations aside, the availability of water has always favored the growth of cities, for water is one of the most indispensable and one of the least easily transported of all commodities. So often has a good water-supply been associated with the establish-

* See H. Pirenne, *Medieval Cities* (translation), Princeton 1925, pp. 32–33, 99–100.

† E. C. Semple, *Influence of the Geographic Environment*, New York 1911, pp. 244–246.

‡ The author is indebted for this reference to his colleague, Dr. O. C. Lockhart, formerly a member of the Advisory Commission to Ecuador and Brazil.

ment of a city that Pliny the Elder once said: "Springs make towns and create divinities." The ruins of ancient Troy bear eloquent testimony to the indispensability of water to the life of any city. Of the nine cities built on the site, the sixth was the Ilium of Homer. There were three wells inside the walls of this sixth, or Homeric city, one of them being surrounded by a massive tower whose walls even today are thirty feet high and sixty feet thick. "This," says Baikie,* "no doubt was the chief water supply of the garrison and populace, and its strong defences show the importance attached to it. . . . One may imagine the daily traffic on the old well-stairway during the long months of the great siege, and the anxious watch that was kept on the Water-Tower lest the very life-blood of the city should be cut off. . . ." Without doubt, if the Neolithic founders of the city had not first convinced themselves that its site could be depended upon always to yield an abundance of good water, they would have settled elsewhere, and Troy would never have been.

Damascus is another city whose existence hangs largely upon the possession of a good water-supply. However, the prosperity of this metropolis of the Syrian desert is probably due in still larger measure to its location along a great and ancient trade route.

### THE SHRINE-CITY

PLINY said that springs made towns and created divinities. He might just as well have said also that divinities created cities. Curiously, very often a city grows around a site that is not particularly noteworthy geographically, but that is important because of its connection with something that enjoys widespread prestige.

### THE RELIGIOUS SHRINE-CITY

THE religious interest is found among nearly every people and every culture level, and religious veneration is often attached to definite localities. One has but to mention the Delphic Oracle, the tomb of Mohammed, the Mount of Olives, St. Peter's, Rome, the shrine of Thomas à Becket, and the grotto of Lourdes to appreciate how inseparable from the

* J. Baikie, *The Life of the Ancient East*, New York 1923, pp. 316, 323.

places in which they are found are the objectives of a great deal of popular piety. Wherever a people or a religious group is very numerous, its holy places are apt to be surrounded by cities, particularly in the case of those religions which emphasize the importance of localizations of divinity.

In the ancient world, as has already been pointed out, the temple and the sacred tomb were often the center of city life. Such cities as Abydos and Nippur maintained their sacred character for centuries. In medieval times Canterbury seems to have drawn most of its prosperity from its martyrs' tombs. Nor does the prestige of the holy city appear to be very greatly diminished in the present period. The throngs of the faithful that pour into Mecca, Rome, Jerusalem, and Benares seem to be no smaller than those of ten centuries ago.

Benares is a clear-cut present-day example of a city that is peculiarly holy. It is "considered to be deified in its whole material mass. All those who die within the boundaries of the city, be they Brahmins or low-caste Musslims or Christians, be they liars, thieves, or murderers, are sure of admittance into Siva's heaven." *

### THE LITERARY, ARTISTIC, OR HISTORIC SHRINE-CITY

It must not be forgotten that man has come to worship at other than religious shrines. Or, it might be said that a veneration almost religious in nature is sometimes bestowed upon places whose original associations have no particular religious significance. Such are the great literary and patriotic shrines, such as Longfellow's home, the tomb of Napoleon, and the birthplace of Shakespeare. Stratford-on-Avon, without the birthplace of Shakespeare, the cottage where his bride was courted, the house where he died, the Church where he lies buried, and the theater where his plays are acted (only during the tourist season, be it noted) would be indistinguishable from a hundred other English country towns — and would, incidentally, be deprived of a very large proportion of the trade upon which its economic life subsists.

Of much the same nature are those cities which have pre-

* E. A. R. Ball, *The Tourist's India*, New York 1907, p. 193.

served something of the beauty and splendor achieved at some previous period in their history. Modern Athens is not a particularly attractive city, but the beauty of the ruins of ancient Athens and the host of historical and other associations clustered around them will always make it a magnet for thousands of students and sightseers. Similarly such cities as Bruges, Venice, Granada, Chartres, Carcassonne, Hildesheim, and Rothenberg probably owe much, if not most, of their present activity to such battered and faded remnants as they have preserved out of the wreckage of their vanished greatness.

In some respects those cities that have come to be regarded as centers of education, of recreation, or of political influence, partake of the nature of the "shrine cities" just described. However, their development is more often due to general geographical influences than to the advantages inhering in particular local areas; so they are discussed later in this chapter.

## GENERAL GEOGRAPHIC LOCATION

A DISTINCTION has already been made between the rise of individual cities and the rise of urban society. Somewhat the same sort of differentiation may be made here. When a society of isolated cities evolves into a truly urban society, the city's *site* tends to dwindle in significance, and its general *geographic location* to acquire added importance. An explanation of such a development is not far to seek. As widespread public tranquility succeeds turbulence and insecurity, the need for defence drops away. Indeed such cities as are fortified tear down their walls, or grow beyond them — as Rome did in the early Empire. The commercial and industrial phases of city life spring to the forefront, and geographic considerations are of primary concern to these. Moreover, in such a society, cities tend to grow so extensively that the particular local site of their primary settlement ceases to be of any particular importance, and may even be deserted. Thus, the *Cité* of Paris is today little more than an architectural and historical museum. Except for such activity as centers around the *Palais du Justice* and the Cathe-

dral of Notre Dame, it would be — save for the perennial and ubiquitous tourist — virtually deserted.

Dallas, Texas, took its beginning in a dug-out shack, built some ninety years ago by John Nealey Bryan, on the site of an overnight camping-ground that took his fancy. He might have established his settlement anywhere within ten or more miles of that spot without materially affecting the city's ultimate development.

Boulder and Denver, Colorado, were founded in the same year, 1858, as "gold camps." Denver proved to be a failure as a mining town, but Boulder quickly achieved prosperity and remains to this day an important mining center. Yet Denver happened to become the principal "stop-over" and "grub-stake" point for the whole Rocky Mountain region, and has become a city of over 250,000 population, while Boulder has never numbered more than 25,000.* Clearly, the sites of these cities were of almost trivial importance as compared with their general geographic position.

The geographic position of the city is fixed by two types of social forces: (1) economic activity and (2) political, educational, and other non-economic activities.

### ECONOMIC ACTIVITIES

COMMERCE and industry have been shown to exercise a potent influence on the rise of and diffusion of urbanism. They play a correspondingly important rôle in the rise of the individual city. From the long-time point of view, commerce is the more important of the two, for industry, as has already been shown, is a relatively recent arrival upon the scene of economic history, whereas many of the characteristic forms of commercial activity have changed little for the past two or three thousand years.

### COMMERCE AND TRANSPORTATION

IN the sixth century, the extensive commerce that had been fostered by the widespread public tranquility of the *Pax Romana* had begun to shrink to the meager proportions that

* The author is indebted to Mr. C. Wedgeworth and to Miss E. M. Hall for accounts of the early history of Dallas and Boulder.

it was to assume in the early Middle Ages. Yet even then there was in far-off Paris a colony of Syrian merchants so important as to put forward successfully one of its members, one Eusebius, as a candidate for Bishop,* an office which at that time involved control of many features of city administration. Like many a modern elected city official, Eusebius proceeded to dismiss most of the clerks in the episcopal establishment, and fill their places with his friends — i.e., fellow Syrians.

The commercial importance of Paris, at that time, was related chiefly to its location. Lying athwart the Seine River at a point where its islands permit an easy crossing, it forms the intersection of two routes — a north-and-south route formed by the river, and an east-and-west route crossing the river. Moreover, the geographic structure of the part of France in which Paris is situated is such that a slight east-and-west depression — sufficiently great to facilitate communication — traverses the Paris area, thus assuring the city of a large share of whatever traffic may cross its region. Incidentally, the case of Paris illustrates the distinction between the significance to a city of its *geographic location* as distinguished from its *site*. The island site of Paris was invaluable from the point of view of defence, and contributed powerfully to the origin and early development of the city. Its general location, however — in which its island site was of only incidental significance — was the source of its later growth and prosperity.

The importance to Paris of its situation at the intersection of two trade-routes is a reminder that accessibility to facilities for transportation and communication constitutes one of the most important commercial advantages that a city can possess. In fact, Ratzel has said, "The city is vitally related to the road." Of almost equal importance is the city's position as a trading and industrial center.

Four types of urban location are related to transportation: (1) the intersection of routes; (2) the convergence of routes; (3) stopping-places on routes; and (4) points of change in the mode of travel.

* C. M. Poëte, *op. cit.*, p. 35.

### THE INTERSECTION OF ROUTES

THE crossroads settlement is familiar to everyone. Wherever two "main-traveled roads" intersect, a cluster of buildings of some sort is sure to be found — two or three farmhouses; a church; a schoolhouse; a burying-ground; a blacksmith shop; an inn, or such modern successors as the gasoline-pump, the service station, and the refreshment stand. If the highways are well established and the traffic steady, the crossroads hamlet becomes a town.

Of Damascus, Ratzel says:

> Damascus is one of the most notable intersections of great trading routes: (the routes) which join the Red Sea with Asia Minor and the Mediterranean with Mesopotamia. . . . Surrounded by a city-less desert, this glittering city has within its wide borders green gardens and fields, the most genuine oasis city, [enjoying] the greatest monopoly of commerce. . . . It is one of the oldest cities on earth; it is mentioned even as early as the Tel-Amara letters [about 1360 B.C.] *

### THE CONVERGENCE OF ROUTES

"CAPITALS, both economic and political, are enveloped by a 'star' of highways," says the French geographer Brunhes.† This phrase serves to call attention to the fact that "the more the physical features favor a concentration of routes, the more chances the city has to be great and — to grow."

The significance of converging highways to the city is not clear to the general reader for the average map does not indicate the great traffic ways of the world: the roads and the railways, and the valleys, the plains, and the mountain passes which they follow. Some notion of the importance of this factor to the city may, however, be gained from examination of any railroad map or automobile road-map. When such a map shows only main arteries of traffic, it looks astonishingly like a succession of cobwebs — with a city lying at the center of each.

It is, of course, true that many of these traffic ways have

* F. Ratzel, "Die geographische Lage der Grosstadte" in *Die Grosstadt*, Dresden 1903, pp. 44, 49–51.

† J. Brunhes, *La Geographie Humaine* (3rd Ed.), Paris 1925, Vol. I, p. 205.

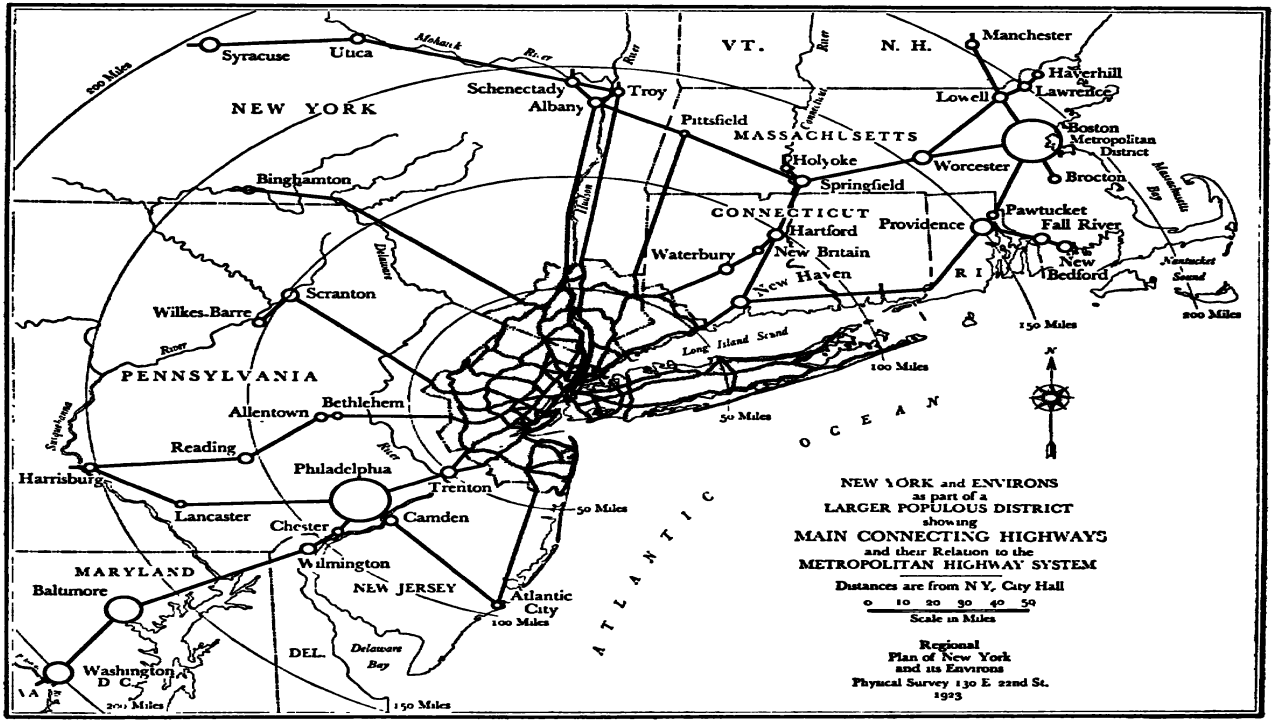



FIG. 5. THE CONVERGENCE OF ROUTES TOWARDS THE CITY: THE HIGHWAYS LEADING TO NEW YORK. From Lewis and Goodrich, *Highway Traffic.*

been laid out after the cities in question had already attained to industrial and commercial prosperity. On the other hand, once built, these railroads become feeders to the commerce of the cities served by them and accordingly add to their prosperity and growth.

Furthermore, most modern means of transport — except, possibly, airways — follow the natural lines of communication offered by the city's geographical setting. New York, for instance, is characterized by Smith * as "a supreme focus of routes by land and sea," and all of these routes are directly or indirectly determined by the topography of New York and the region surrounding it. On the one hand, New York's natural harbor brings to it ocean traffic from nearly every portion of the world. On the other hand, it is assured of easy communication with the territories to the north, south, and west, by means of the Hudson and Mohawk valleys, the Delaware Water Gap, and the New Jersey low-lands. These highways have been traveled successively by pack-train, wagon, canal boat, railway train, and motor truck. Whether pack-trail or motor highway, they have brought trade and prosperity to New York.

Likewise in Europe, the prosperity of such cities as Turin and Genoa is due in large measure to their location at the foci upon which converge the traffic coming down from the passes in the mountain walls enclosing them.

### THE STOPPING-PLACE

ONLY the shortest of journeys are continuous. Whenever men undertake to travel or to convey goods for long distances, they must occasionally halt. Their means of locomotion — whether mules, covered wagons, locomotives, motor-trucks, or airplanes — require replenishment and replacement. Often also new guides and other aids have to be recruited. Consequently, every great trade-route has its regular stopping-places, which may come to be important cities. This was more true five hundred or a thousand years ago than it is today, for travel was then so slow and arduous,

* J. R. Smith, *Industrial and Commercial Geography* (New Ed.), New York 1925, p. 867 and footnote.

and so dependent upon the endurance of man and beast that the community which was able to offer rest, hospitality, and fresh supplies to the traveler was very likely to become a place of considerable consequence.

One of the most splendid cities of the ancient world was such a stopping-point. Palmyra was situated around an oasis lying on the caravan route from the Phœnician coast and Damascus to the Euphrates and the Persian Gulf. All the trade that passed by the oasis was made to contribute to the town's wealth by the direct and arbitrary method of a toll. Its inhabitants used also to derive a large income from the organizing and conducting of caravans through the surrounding desert. With the rise of trade between the Orient and the Græco-Roman world, the wealth and power of Palmyra grew apace, until the Roman Empire, at the peak of its power, had to acknowledge Palmyra as a valued ally, and, later, as a formidable opponent. Its ultimate subjugation by Rome, however, was followed by evil days. For a time, the burden of imperial disfavor weighed heavily upon it. And later, when Rome's power no longer availed for good or evil in the east, the decline of trade, and the shifting of trade-routes, together with the progressive increase in the aridity of its climate, brought about complete and lasting decay. The modern Palmyra is a cluster of mud huts that suffices barely to fill the space formerly occupied by the courtyard of its great sun temple.*

### CHANGE IN THE MODE OF TRANSPORTATION

TWENTY-TWO of the thirty largest cities in the United States are seaports, or inland-waterway ports. The two greatest cities on the earth are seaports. The port-city owes its prosperity chiefly to its being a point at which the mode of transportation is radically changed. And the activity involved in the unloading and reloading of cargoes and passengers, and the trade directly and indirectly promoted by these operations are of such magnitude that they draw together a large population.

* See M. P. Charlesworth, *Trade Routes and Commerce of the Roman Empire*, Cambridge, England 1924, pp. 48–50.

Change in the mode of transportation also occurs at the points where level plains give way to mountains, at the head of navigation, where deserts begin, and where railroads end. Denver is a typical mountain-gateway city, as are Bologna, Verona, Zurich, and Tiflis.

Philadelphia, in America, and Antwerp, in Europe, each mark the head of navigation for ocean-going vessels of the rivers on which they are located. With the increased draft of ocean steamships, and the growing dependence upon railroad transportation, the city of this sort tends to give way to the seaport proper, as Alexandria, Virginia, has lost its trade to Baltimore.

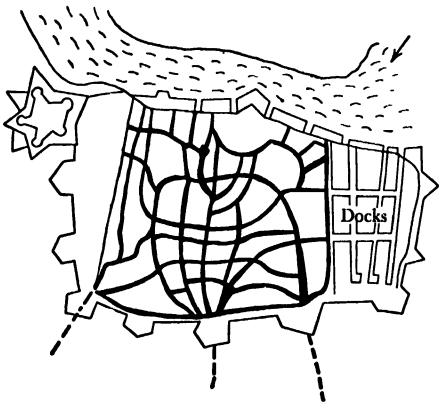



FIG. 6. A CITY AT THE HEAD OF NAVIGATION: ANTWERP *

Poëte presents a vivid account of the rôle that its location at the head of navigation of the Zuider Zee played in the history of the city of Amsterdam.

> Is there not summarized in the history of Amsterdam the conquest of a country primitively subjected to the domination of the sea? There the [construction of] a dike, which holds in check the destructive waters also is the birth of the city.
>
> A little settlement, seated on the right bank of the River Amstel, beside a castle, and with a dike (*dam* in Dutch), controlling to some extent the flow of the water at its point of emptying into the Zuider Zee: such was in the 13th century, Amsterdam, that is today, the Dike (Dam) of the Amstel. As for its humble inhabitants, before the dawn of maritime commerce, what else could they be except fishermen? And then the marriage took place between the city and the sea, — a marriage which has proven indissoluble. The point of emplacement of the dike became the heart of the city. The port, Damrak, is formed of the portion of the Amstel between the dike and the Zuider Zee.

* From Le Corbusier (Jeanneret, C. E.), *The City of Tomorrow*, Brewer & Warren, Inc.

In the 14th century, these fishermen became maritime merchants, to whom the war of independence in the second half of the 16th century, opened up the whole world. Amsterdam, during the whole 17th century, was a world city. . .*

Quite different in its geographic setting, but not in the essential nature of its economic advantage, is the desert-edge city. Such communities are the points at which the customary modes of transportation are given up for those peculiar to the desert, and they prosper because of this, and because of the trade that springs up at such places. Khartoum, Tripoli, and Timbuctu enjoy much the same sort of prestige as they did a half a millennium ago.

Somewhat similar to these desert-edge cities are the "railhead" cities that were characteristic of American life three or four generations ago. As "the iron horse" forged its way westward, there arose a succession of towns, beyond which the railway did not go, where pack-trains and covered wagon caravans took their beginning. So long as one such place remained as a temporary *ultima thule* in America's civilization, it became a flourishing town, where caravans were assembled and provisioned, produce was brought in for shipment "back east," and the less venturesome were constrained to pause in their migration and settle down. Kansas City was such a town for a number of years, and acquired sufficient economic momentum to continue as an important shipping and distributing point even after the "end of the railroad line" had moved ever westward to the Pacific Coast.

### THE TRADING CITY

TRANSPORTATION is one medium for bringing trade to a city. But it is not the only one. The geographical location of many cities provides them with special facilities for trade, independent of those related to transportation, or at least, supplementary to them. They fall into three general categories: the economic capital of a trading area or hinterland; the entrepôt; and the point of assembly.

* C. M. Poëte, *op. cit.*, p. 84.

THE TRADING CAPITAL AND ITS HINTERLAND

CERTAIN portions of the earth's surface are so situated geographically as to constitute natural trading areas. Every such trading area is dominated economically by a great commercial city. In fact, so dependent does the trading area be-

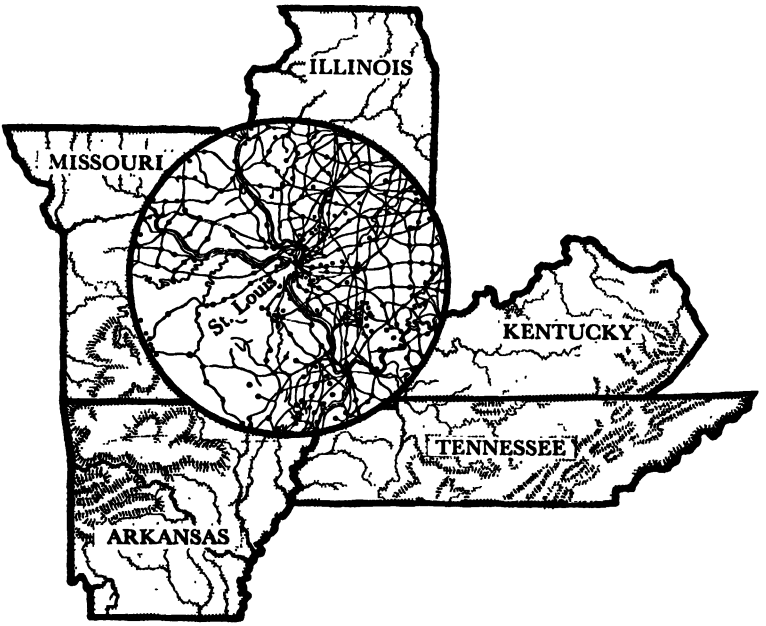



FIG. 7. A MODERN TRADING CAPITAL: ST. LOUIS AND "THE 49TH STATE" *

come upon its economic capital that the German geographers speak of the former as the *hinterland* of the city.

Thus, the city of St. Louis has become the economic capital of a trading area embracing portions of five states, as Fig. 7 indicates. The advantage enjoyed by such a city is obvious. Every influence that serves to increase the wealth and well-being of its hinterland serves also to increase its own prosperity.

No city, however, enjoys undisputed control over its trad-

* Courtesy of the *St. Louis Globe Democrat.*

ing area. There is always a twilight zone between the hinterland of one city and that of another, and a constant tussle between the two commercial centers for domination over this debatable territory.

St. Louis, for example, is subject to constant encroachment on the part of Chicago. A similar rivalry exists between Philadelphia and Baltimore.

Moreover, as transportation facilities are improved and marketing techniques perfected, the hinterlands of the larger economic capitals tend to grow larger and larger, absorbing those of their less favored competitors. Very likely another generation will see virtually all of the area of the United States parceled out into the spheres of economic influence of not more than three or four cities: New York, Chicago, Los Angeles, and — perhaps — New Orleans. Such cities are called by McKenzie,* *centers of dominance.*

### THE ENTREPÔT †

THERE are some cities whose hinterlands are already, in a sense, world-wide. In the terminology adopted by Gras,‡ they have an extended trade as well as a hinterland trade. Such cities are known as *entrepôts.* An entrepôt (literally "placed-between") usually develops from a city that is so located as to be a convenient transshipping center, where goods are brought for redistribution to other places. Gradually it develops such a network of trade routes and commercial connections that shippers find it cheaper and more satisfactory to let their goods take a circuitous route through the entrepôt than to let them go direct. Finally, it attracts to itself merchants and investors specializing in the types of commerce flowing through its warehouses, until it becomes a center for bargaining and investing activities, as well as the physical handling of merchandise.

The more irregular and unstandardized is trade, the greater is the power of the entrepôt, for it is only through

* R. D. McKenzie, "The Concept of Dominance and World Organization" in *The American Journal of Sociology* (Vol. XXXIII) July 1927, pp. 28–42.

† This section is drawn largely from pp. 874–890 of J. R. Smith, *Commerce and Industry* (2nd Edition), New York 1925.

‡ N. S. B. Gras, *An Introduction to Economic History,* New York 1922, p. 194.

such a city that the merchant can be assured of speedy and safe transport for his goods, of wise and dependable merchandising, of an active market, of abundant capital. Hence, as Smith shows, in the days when commerce was difficult and hazardous, when products were ungraded, and when mercantile practices were unstabilized, the great world-trading centers of Venice, Bruges, Antwerp, Amsterdam, and London had, each in its turn, a sort of commercial leadership over large portions of the earth.

Nowadays, the services of the great entrepôt are not so indispensable as they were formerly. Nevertheless, London, Antwerp, Amsterdam, Hamburg, and New York still derive tremendous advantage from their entrepôt trade. London has a firm grip on the trade-routes to the British possessions; Antwerp on those to West Africa. Hamburg dominates the trade to the Baltic countries, as does New York to the interior of North America. Amsterdam controls most of the lines to the Dutch East Indies. Moreover, despite the British control over South Africa, Amsterdam is still the diamond market of the world.

### THE POINT OF ASSEMBLY

ALMOST the exact opposite of the entrepôt is the point of assembly. The entrepôt is associated with populous, economically-matured regions, where the instrumentalities of trade are highly developed. The point of assembly is ordinarily found in relatively newly-opened regions, where there still exists a sufficient surplus of primary products to warrant large-scale exporting. One looks for entrepôt cities in Western Europe or in Eastern United States, but for cities of assembly, in Eastern Europe, Western United States, South America, or certain portions of Asia.

Duluth is such a city. Economically speaking, Duluth is little more than a good harbor, a set of docks, and a number of railroad connections. Yet it is strategically located along the routes used for shipping the iron ore of the Mesaba Range, the wheat of the Red River Valley and the Canadian Northwest, and the lumber of the Northern woods to the nation's mills and factories. As a result, it handles a stu-

pendous volume of commerce. Its annual shipments of iron are approximately 38,000,000 tons; of wheat, 65,000,000 bushels; of lumber, 146,000,000 feet. All of these, be it noted, are primary, extractive products.

Galveston is another such assembling point; so also is Norfolk. The mainstays of Galveston are cotton, petroleum products, and lumber, and of Norfolk, lumber, coal, grain, and cotton. Santos, in Brazil, is one of the greatest centers of assembly in the Western Hemisphere. Its exports of coffee alone amount to 540,000 tons per year. It is also a shipping-point for large quantities of hides, frozen meat, cocoa, and other primary products of the South American interior.

### INDUSTRY

THE economist considers the productive process as consisting mainly of two sorts of functions: the actual working up of material into usable commodities, and the distributing of those commodities. The first of these might be called *production proper;* the second, *transportation and merchandising.*

It has been seen that the distributive type of economic effort bears a vital relation to the location of the city. It might be expected that production proper would be of equal importance. As a matter of fact, however, production does not control urban development so often or so significantly as do transportation and merchandising. The reasons for this seeming anomaly are various. The principal one is that many productive activities of first importance must, of necessity, be carried on away from an urban environment. This is true of agriculture, fishing, and forestry, for example. Again, a considerable volume of productive activity is conducted in small-scale units, away from the city, despite the tremendous increase that large-scale industry has made during the past hundred and fifty years.

On the other hand, wherever large-scale production is under way, it is almost always found in or near a city. Even where such an enterprise is located away from the city, it requires such a large working force that a city springs up around it. This has been the case with Gary, Indiana.

EXTRACTIVE INDUSTRY

IT IS obvious that most extractive industries — that is, those concerned with the procurement of materials as they occur in nature — have to be undertaken away from the city. Certain extractive industries, however, are occasionally carried on in an urban environment. This is particularly the case with minerals, for a relatively small area may be so rich in some product that thousands of men are employed in its exploitation.

Ordinarily, however, such cities are in the highest degree ephemeral, for the more intensively the mineral wealth of such a city is worked, the more quickly it is exhausted, and the more speedy is its decay. Pithole City, Pennsylvania, had a population approximating 15,000 in 1860, and, for a time, its postal receipts were the largest for any community in the state, except Pittsburgh and Philadelphia. But when the oil, from which the town's prosperity was derived, became exhausted, Pithole City melted away so rapidly that only the memory of it is left today.

Nome, Alaska, had a population of 12,000 in 1900, but had shrunk to 852 in 1920. Dozens of mining towns in the gold fields of Colorado and Nevada which at one time seemed on the way to considerable prosperity, are today mere drowsing hamlets. Some of them are entirely deserted and ruinous.*

Occasionally, however, mineral deposits are so extensive and so valuable that they give rise to large and stable cities. Scranton, Pennsylvania, is one such city. It was an obscure town, known as Slocum's Hollow, until, in 1840, it was found to be underlaid with coal deposits. Since then, it has grown to a city of 137,000 which is literally honeycombed with tunnels, and studded with mine derricks. The farm of the founder of the city is now worked as a mine, and the mansion built by his son is an immigrant miners' boarding-barracks.†

Kimberly, South Africa, is another city which is founded

* See J. T. Faris, *The Romance of Forgotten Towns*, New York 1924, especially Chap. XL; and C. R. Cooper, *High Country*, Boston 1926, Chap. VII.

† The author is indebted for the account of the early history of Scranton to Miss Helen Slocum Taylor, a descendant of the city's founder.

upon the mining industry. The operations of the great De Beers diamond syndicate are conducted within the city limits, or very near at hand, and most of its 50,000 inhabitants are engaged in diamond-digging.

### MANUFACTURING

WHILE the city owing its location to extractive industries is rare, the manufacturing center has always been common. This type of urban center has, of course, appeared with increasing frequency since the Industrial Revolution.

Black* calls attention to five factors in the development of the industrial city: (1) accessibility to raw materials and supplies; (2) accessibility to the sources of power, including fuel; (3) accessibility to the market; (4) availability of capital; and (5) availability of labor. Of these, the first three are related primarily to geographic location. Adequate transportation and communication are also required, but these, having been already analyzed, are not discussed here.

Thus, Pittsburgh is located near the Pennsylvania iron fields (now exhausted); is near the heavily-settled Atlantic seaboard, and is easily reached from the great immigrant receiving-points. It also is close to the great Pennsylvania coal-fields. It has, or did have, raw material (iron), labor (the inhabitants of the Atlantic seaboard and recently arrived immigrants), and power (coal) ready to hand. It is but natural that the center of the nation's steel industry should arise in the Pittsburgh area. The exhaustion of the Pennsylvania iron fields has been a disadvantage, but the region has been able to maintain its position, partly by the development of advantageous transportation routes and powerful industrial and financial alliances, partly by the momentum it has previously acquired.

Gary, Indiana, is a city that was built expressly because of the advantages offered by its location for industrial purposes. Until early in the present century, Gary was a waste of scrub-grown sand. In 1906, its site was acquired by the United States Steel Corporation. Within a short time there was developed an immense steel plant, surrounded by a

* J. D. Black, *Introduction to Production Economics*, New York 1926, p. 25.

town whose population amounted in 1920 to 55,000, and in 1930 to 100,000. Gary is within a few hundred miles of the great bituminous coal-fields of Illinois, Indiana, and Ohio. It is guaranteed a plentiful supply of labor by its location within a short distance of Chicago and less than two hundred miles from such other centers of population as Terre Haute, South Bend, Indianapolis, and Peoria. Its location on the shore of Lake Michigan makes it possible for ore ships from the Michigan-Minnesota iron region to bring their cargoes directly to its steel mills.

Perhaps the most striking example of the urbanization of a locality suited for manufacturing is furnished by the North of England. Until the Industrial Revolution, certain portions of Lancashire and Yorkshire were virtually barren. But, with the rise of the factory system, the coal underlying this region was fully utilized; so that today the most populous parts of England, outside of London, are to be found there. There is, for instance, an urban area within a radius of twelve miles of the Manchester Exchange that embraces 2,200,000 inhabitants, whereas in 1801, the joint populations of the townships of Manchester and Salford were only 84,000 and, in 1774, a bare 27,000. In the case of Manchester, it should further be observed that the peculiarly moist climate of this region renders it particularly suitable for the spinning of cotton. Oldham, a city in the Manchester area, contains one third of all the spindles in England.*

Every industrialized country can duplicate the records of Pittsburgh and Gary, of Manchester and Birmingham. And, as the economic process continues to give rise to new industries and to thrust old ones aside, new industrial cities will come into being and old ones will either change their economic base or decay.

### POLITICAL AND OTHER NON-ECONOMIC INFLUENCES

THE present age is one in which man's economic interests seem to overshadow his entire social life. The student of social organization realizes, however, that this dominance of

* See G. G. Chisholm, *Handbook of Commercial Geography* (10th Ed.), London 1925, pp. 334-343, and H. R. Mill, (Ed.), *The International Geography* (2nd Ed.), London and New York 1916, pp. 170–173.

economic influences is by no means universal. The most conspicuous factors in any society are not necessarily the controlling ones, and the non-economic forces in contemporary social life probably exercise little less influence than in earlier periods. At any rate, the location of a number of cities — some of them distinctly modern — appears to be due chiefly to non-economic factors. Political capitals are the most noteworthy examples of such cities.

### THE POLITICAL CAPITAL

SEATS of government always attract a certain number of people to themselves. This is particularly true when the territory concerned is populous and wealthy, and when the governmental authority is strong and endowed with many functions. Thus it is that in those countries and at those periods when great national states have arisen, and powerful rulers have held the reins of government, political capitals have assumed metropolitan proportions. This was true of the great oriental monarchies of the ancient world, and of imperial Rome. It is true of the larger states that have emerged since the medieval period. On the other hand, during the thousand years that followed the break-up of the Roman Empire, the national capital was relatively insignificant, unless — like London and Paris — its life was based on a variety of interests. Indeed, during the twelfth century, the capital of France seems to have been located in whatever town or castle the monarch happened at any particular time to be.

As just suggested, there are many capitals which are metropolitan centers for a number of reasons, of which their political importance is only one.

Such cities are called " natural capitals " by Brunhes and Vallaux. These same authors, however, also point out that many countries are governed from " artificial capitals," that is, by cities which owe their position, if not their very existence, to their selection as seats of political authority. Washington is such a city. Before being set aside as the capital of the United States, it was a tract of woods and plantations. Today, it is a city of nearly a half million

inhabitants, outgrowing the area provided for it, and thrusting itself into the adjacent states of Maryland and Virginia.

In recent years, other nations have undertaken the creation of capital cities *ex nihilo*. The Commonwealth of Australia decided in 1911 to erect a new capital city at Cambera, in New South Wales, and in 1927, the new city was so far completed that the Commonwealth Parliament could be convened there.

In 1923, the reorganized Turkish Government moved from its capital at Constantinople to Angora, an obscure town in the interior of Asia Minor. The attractive force of an important political capital is well illustrated by the transformation that has come over this sleepy town since that event. Before 1923, it was a typical Turkish interior city, primitive and shabby, with a population of about 30,000. By 1924, the population had grown to 35,000 and by 1926, it was a city of 58,000, much of it of modern construction.

It is also to be observed that the loss of political power often spells the death of a city just as surely as accession of power gives it life. Brunhes and Vallaux enumerate a number of cities, such as Tygranocerta, created by the fiat of Tygranes, King of the ancient Armenian Empire, and Karakorum, built as Jenghiz Khan's imperial city, both of which fell into oblivion within a few years after their founders' deaths, and are now all but utterly vanished.*

### THE EDUCATIONAL CENTER

EDUCATION seems scarcely to occupy a position in human activity that is at all comparable with economic or political interests. Nevertheless education has brought cities into being. Such towns as Oxford and Cambridge in England, and Gieszen and Bonn in Germany have been seats of learning — and little else — for hundreds of years. In more recent years, much the same sort of cities have sprung up around Harvard, Princeton, Cornell, and Northwestern Universities. Still more recently, the great state universities of the United States have become the centers around which an almost unique sort of urbanization has taken place. The

* J. Brunhes and C. Vallaux, *op. cit.*, pp. 200 and 389.

city of Ann Arbor, Michigan, for instance, exhibits a rate of increase virtually correlative to the expansion of the University of Michigan.

Of somewhat the same order are those that have sprung up around some famous medical institution. The most outstanding of these is Rochester, Minnesota.

TABLE II

POPULATION GROWTH OF ANN ARBOR, MICHIGAN, AND STUDENT ENROLLMENT, UNIVERSITY OF MICHIGAN, 1880–1927*

| *Date* | *Population of Ann Arbor* | *Enrollment University of Michigan* |
|---|---|---|
| 1880 | 8,108 | 1,534 |
| 1890 | 9,431 | 2,420 |
| 1900 | 14,509 | 3,712 |
| 1910 | 14,817 | 5,381 |
| 1920 | 19,516 | 10,623 |
| 1925 | — — | 12,690 |
| 1927 | 28,493† | 13,595 |

THE HEALTH OR RECREATIONAL CENTER

THERE is little of real geographic significance in the development of such cities as Rochester, Minnesota. There is more of the fortuitous attraction of public esteem, such as is associated with the religious shrine.

The great health and recreational cities of the world are, on the other hand, often located quite explicitly with reference to their geographic position. Questions of climate and of accessibility to large centers of population are of chief concern in such places.

Atlantic City's prestige as a resort city is founded almost entirely upon its geographic position. In fact, it was nothing but a waste of sand and tidal marshes until it was laid out and developed as a national playground.

Miami, Florida, has profited by its mild, semi-tropical

* The author is indebted to Prof. R. L. Masson of the Harvard Business School for the data included in this table.

† Survey by *Ann Arbor Times-News*. The rest of the population figures are official.

climate which makes it attractive during the winter months to the aged and the invalid, and to an increasing number of those who are neither aged nor infirm, but who have the means and the leisure to seek refuge from the rigors of the northern winters.

Los Angeles owes most of its initial growth to its semi-arid, mild climate which made it a mecca for health-seekers of all sorts, particularly those suffering from tuberculosis. Other southwestern cities, such as Colorado Springs and Tucson, have also drawn large quotas of residents from tuberculosis-sufferers, and those caring for them. Los Angeles, however, had the additional advantages of a seaside location and great natural beauty; so that it came to be sought out not only by health-migrants, but by retired elderly people, and by tourists and pleasure-seekers, until Hollywood today is one of the gayest communities on the continent. It may incidentally be remarked that Los Angeles' great industry, motion picture production, has been brought to Los Angeles by much the same factors that attracted the health-seekers of a generation ago — its mild climate and its almost unbroken sunshine.

### THE POLYVALENT URBAN LOCATION

Los Angeles enjoys a location that makes it attractive at once to the sight-seeing tourist, to elderly people desiring quiet retirement, to those engaged in the pursuit of pleasure, and to the promoters of a great industry. And because its location is — to borrow a term from the field of physical science — polyvalent, Los Angeles has reached metropolitan proportions.

What is true of Los Angeles is true of most large cities. Their locations are favorable for the exploitation not of one or of two, but of a number of interests.

The long-continued prosperity and eminence of such cities as London and Paris are due largely to their multiple-favored locations. Both cities are (or were, under more primitive conditions of warfare) easily defended. Both stand astride of routes that have carried trade for more than a millennium. Both are trading capitals by virtue of their accessibility from

all portions of their national territories. Both are now so ancient and venerable that they are filled with shrines — religious, political, literary, and artistic — that draw annually throngs entirely comparable to those that raise their prayers at the Basilica of St. Peter or pay homage at the Holy Sepulchre.

London has, in addition, drawn wealth and power from the fact that it has been the seat of the greatest empire that history has known and the greatest entrepôt that humanity has ever seen, and probably ever will see.

New York, like London, is so located as to be able to take part in a number of phases of associated human life. It is the nexus of a dozen land and sea routes. It is the trading capital of the most populous and wealthy area on the continent, if not on the earth. Its resources in transportation, markets, and population have made it a manufacturing center of the first order. The advantages accruing to a political capital have been denied it. Yet, in nearly every interest other than government, it is virtually the capital of the nation. Certainly it dominates the United States in the financing and the administration of its business enterprises; in the setting of its styles; in the moulding of its tastes. It is the pleasure capital of America as Paris is of Europe. And it is not without shrines or pilgrims to do them homage — howbeit its shrines have as little in common with those of Europe as has the Woolworth Building with the Tower of Pisa or Times Square with the *Place de l'Opéra.*

It is clear that the fortune of any city is conditioned largely by the relation between its location and some one of the dominating interests of its time and region. It is also clear that the city whose position makes it attractive for the pursuit of a number of these interests is bound, in very truth, to have greatness thrust upon it.

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# CHAPTER III

## *THE PHYSICAL SETTING OF CITY LIFE*

### THE STRUCTURE OF THE CITY – THE CITY AND ITS REGION – CITY GROWTH AND ITS CONTROL OR CITY PLANNING

IN THE middle of the eighth century B.C. a little settlement was established on top of a hill in central Italy. Five hundred years later it was a great city, embarked upon a career of conquest that was to make it the most powerful city-state of antiquity. The visitor to the Rome of the late republic or the early empire would find little to remind him of the hill village from which it had grown. Nevertheless the physical structure of the Rome of Cæsar and of Septimus Severus was in most respects a logical development from the Rome of the primitive Latin tribesmen.

### THE DEVELOPMENTAL HISTORY OF ROME AS AN EPITOME OF THE PRINCIPLES OF URBAN STRUCTURE AND GROWTH

THE richness of Rome's literary and monumental remains, together with the fruits of the researches of classical scholars, makes it possible to reconstruct the broad outlines of the city's physical development. This record, moreover, is more than the story of the growth of one particular city. It is an epitome of the principles underlying the structural evolution of cities in general. The discussion that follows, therefore, serves not only to throw light upon the history of the greatest city of the ancient world, but also to provide concrete illustration of the principles that constitute the subject matter of this chapter.

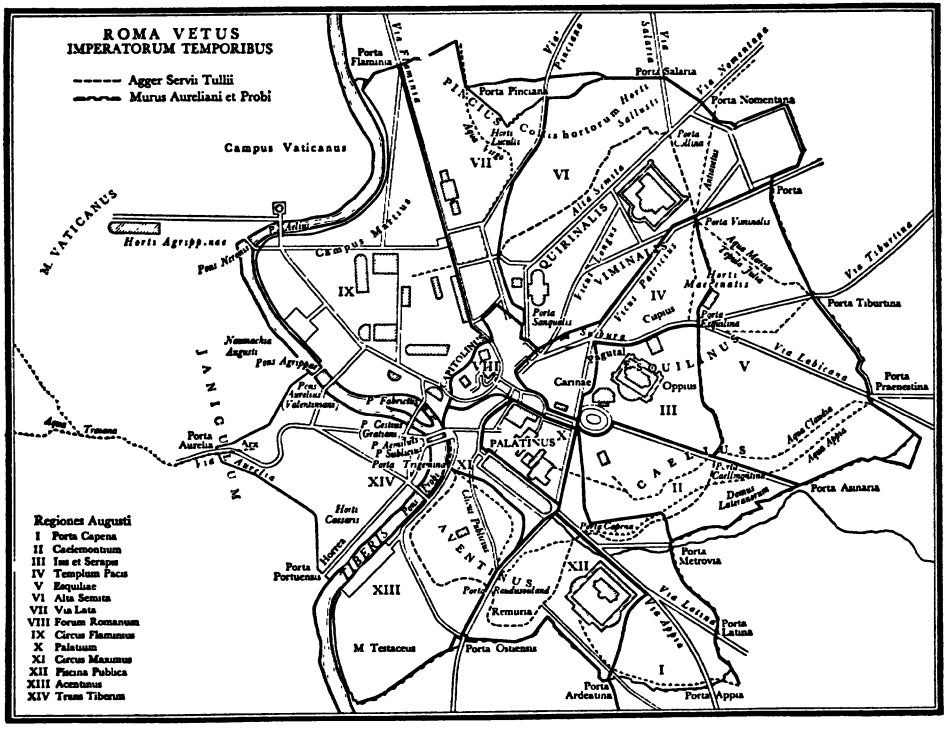
The site of Rome consists of a series of hills and depressions. The traditional "seven hills" around which the city developed constitute two groups. One, embracing the Capitoline, the Palatine, and the Aventine, rises directly from the plain traversed by the river Tiber, and stands close to the right bank of that stream. The other group, the Quirinal, the Viminal, the Esquiline, and the Cælian, are, in reality, spurs of the Apennines Mountains to the north. Two other hills, the Janiculum and the Vatican, rise from the plain across the Tiber. They were not incorporated into the city until some hundreds of years after its founding.

The Tiber River cuts close to the base of the Capitoline, the Palatine, and the Aventine; then swings away in a wide curve, making room for the Campus Martius, the only extensive level area in the immediate vicinity of the "seven hills." Elsewhere the space between these hills is occupied by narrow valleys, the most important of which is the Forum Valley, between the Palatine and the Capitoline on the one side, and the Esquiline on the other. This valley was originally crossed by a little brook running down the depression between the Esquiline and the Viminal, but the stream was arched over very early in the city's history, forming the *Cloaca Maxima*, which was later developed into the main artery of one of the earliest systems of sanitary engineering known to history.

The original settlement of Rome appears to have been on the Palatine, a site admirably suited to defense because "it was almost entirely surrounded by abrupt cliffs rising from deep valleys, swampy at the bottom, and frequently flooded by the Tiber." Moreover, "it commanded the only crossing over the lower course of the Tiber, the most important river of central Italy, and was thus the key of the route from north to south." *

Very early in the city's career, the Palatine settlement

* The material for this section has been drawn chiefly from the following: S. B. Platner, *Topography and Monuments of Ancient Rome* (2nd Ed.), Boston 1911; T. Ashby, "Topography of Rome" in J. E. Sandys, Ed., *A Companion to Latin Studies* (3d Ed.), Cambridge, England 1921; H. C. Bradshaw, "Rome: A Note on Housing Conditions" in *Town Planning Review*, Vol. X, Jan. 1923; G. Ferrero and C. Barbagallo, *A Short History of Rome* (Translation), New York and London 1918, Vol. I, Chap. I.


ROMA VETUS
IMPERATORUM TEMPORIBUS
Agger Servii Tullii
Murus Aureliani et Probi
Campus Vaticanus
M. VATICANUS
Horti Agripp. nos
Pons Neronis
Pons Aelius
Campus Martius
Pons Agrippae
Nymphaeum Augusti
Pons Aurelius Valentinianus
P. Fabricius
P. Cestius (Gratianus)
P. Aemilius
P. Sublicius
Porta Trigemina
Porta Aurelia
Aqua Traiana
Via Aurelia
JANICULUM
Horti Caesaris
Porta Portuensis
TIBERIS
Pons Aemilius
Pons Sublicius
Cloaca Maxima
AVENTINUS
Porta Raudusculana
Remuria
M. Testaceus
Porta Ostiensis
Porta Ardeatina
Porta Appia
Via Appia
Via Latina
Porta Latina
Porta Metrovia
Porta Asinaria
Via Caelimontana
Thermae Caracallanae
Domus Lateranorum
CAELIUS
Aqua Claudia
Aqua Appia
Via Labicana
Porta Praenestina
Porta Tiburtina
Via Tiburtina
Aqua Marcia
Aqua Julia
Horti Maecenatis
Porta Viminalis
Porta Sanqualis
Porta Collatina
Porta Salaria
Porta Nomentana
Porta Pinciana
Via Salaria
Via Nomentana
Via Flaminia
Via Pinciana
Porta Flaminia
PINCIUS
Horti Lamiani
Horti Sallustii
Horti Luculliani
Via Salustiana
Via Alta Semita
Via Antoniana
Porta
Porta Viminalis
Vicus Longus
Vicus Patricius
Vicus Sceleratus
Vicus Jugarius
Vicus Tuscus
Via Sacra
Via Nova
Via Sacra
Via Nova
Via Labicana
Via Tiburtina
Via Collina
Via Quirinalis
Via Salaria
Via Nomentana
Via Flaminia
Via Pinciana
Via Aurelia
Via Appia
Via Latina
Via Tiburtina
Via Labicana

began to expand to the neighboring "seven hills." The Esquiline, which was directly across the Forum Valley, seems to have been the first to be absorbed.

At about the same time, the Capitoline was included in the city's borders. There is some evidence that the Capitoline had been a bone of contention between the Latins who occupied the Palatine, and the Sabines who held the Quirinal, and that its incorporation into the city marked the establishment of peace between the two tribes. In any event, the hill was set aside as the community's citadel and religious center (*arx et capitolium*) almost from the date of its accession. At about the same time the Viminal and the Cælian were added, leaving only the Aventine to make up the "seven hills." It is worth noting that the Aventine was not taken into the city till the beginning of the fourth century, B.C., and that for centuries its inhabitants were given a status inferior to that held by the occupants of the other hills.

Within a few years after its founding, the city ceased to be a cluster of defensive hill-top settlements, and became the principal trading town for Northern Italy. As this transformation went forward, the valleys took on an ever-increasing importance, until most of the city's active life was to be found therein. The first of the valleys to be utilized was the Forum. It was the original marketplace of the community, and, with the passing of years, became the center of gravity of the entire Roman world. However, it was quickly outgrown, and the nearby lands along the right bank of the Tiber and at the base of the Capitoline, the Palatine, and the Aventine were drained and converted into the *Velabrum* (the place where goods are carried) a sort of wholesale market district. Here were set up a cattle-market (*Forum Boarium*), a vegetable market (*Forum Holitorium*), and a street of shops of foreign merchants (*The Emporium*). Later, docks, shipyards, and warehouses sprang up in this district, likewise slums and places of ill-repute. It happened that this region became one of the most congested and most unsavory quarters of the city, in much the same way as were, a thousand years hence, the Limehouse region along the docks

of London, the River Wards of New York's Lower East Side, and the Barbary Coast of the San Francisco water-front.

The hills, on the contrary, became the aristocratic residential sections of the city. The Capitoline and the Aventine were exceptions. The former remained the central shrine of the city during all the time that the ancient gods of Rome were venerated. The latter never quite succeeded in living down the plebeian flavor associated with its late annexation to the city. The Palatine, on the contrary, being the seat of Rome's earliest settlement, became the residence of the city's oldest and greatest families. During the Empire, it was monopolized exclusively as the site for the imperial residences and its name is still associated with the dwelling places of royalty and aristocracy [*palace; palais* (French); *palazzo* (Italian); *palacio* (Spanish); *palast* (German); *paleis* (Dutch); *palads* (Danish); *palats* (Swedish)].

The street system of Rome was always simple — far too simple for the traffic requirements of the late Republic and the Empire. The two principal thoroughfares were laid out during the city's infancy. The *Via Sacra* (sacred street) traversed the Forum, connecting it with the Capitoline at one end, and the Palatine and the Esquiline at the other. The *Via Nova* (new street) ran from the Palatine down into the market district of the *Velabrum*. Both streets, be it noted, served as channels of communication between residential and business sections, thus fulfilling a function that has always been of primary importance in the layout of any city.

When Rome began to build up an empire, a number of military roads were cut through the city, and were carried into the open country, as the parent stems of the far-flung system of Roman Roads. The first and most famous of these was the *Via Appia,* named in honor of its builder, Appius Claudius Crassus Cæsar.

Heavy traffic was carried largely through the various *fora* or market-places of the city and, as population grew and the volume of trade expanded, these channels became sorely congested. In fact, the activities of the emperors in building the so-called " imperial fora " as additions to the original

*Forum Romanum* may be understood as intended to provide relief for the city's traffic fully as much as to enhance its beauty.

It appears, however, that the emperors' efforts towards beautification were crowned with greater success than were their attempts towards the solution of the city's traffic problems. Practically every principle of modern civic æsthetics was brought to a point of high achievement in the colonnaded vistas of imperial Rome. But, up to the days when its decline brought stagnation and depopulation, Rome remained uncomfortably and dangerously crowded. Juvenal devoted the greater part of his Third Satire to an account of the inconveniences and risks surrounding the life of the average Roman citizen during the early Empire. He had to live in a tenement-house, so rickety that he was in constant danger of being crushed by its collapse, and so flimsy that he might be burned to death before his fellow-tenants knew it was afire. At night he was kept awake by the rumble of wheels on the cobble-stones, and the noisy recriminations of teamsters whose vehicles were caught in traffic-jams. If he ventured out at night, he found the streets dark, narrow, filthy, and infested with footpads and bullies. By day the crowds were so dense and the traffic so heavy that his feet were trodden on, his toga torn, his ribs knocked by a litter-pole, his head hit by a timber being transported on a porter's back. And there were positive dangers. Any day, for instance, a pedestrian might be crushed to death by a load of stone falling from a wagon smashed in a traffic accident.

Shortly after Juvenal's time, wheeled traffic was permitted within the gates of Rome only at night. Later it was prohibited entirely from the central portion of the city. At the same time, the emperors passed drastic building laws; erected new buildings; and created new thoroughfares — all with an exercise of arbitrary power and a disregard for private property rights that would make the modern planning-engineer gasp with mingled consternation and envy. Yet there is no evidence that the ordinary citizens of Rome ever found their life free from the inconveniences incidental to land-crowding and traffic congestion.

Brief and inadequate as this account has been, it serves to call attention to the wide variety of forces influencing the physical structure of Rome, and of any other city. These forces may, for the sake of exposition, be considered as effecting three phases of urban development: (1) the structure of the city proper; (2) the city in relation to its adjoining region; and (3) city growth and its control.

## THE STRUCTURE OF THE CITY

A STRANGER wishing to acquaint himself with the structure of a modern city would probably adopt two modes of investigation. He would first charter an airplane and ride back and forth over the city and its environs, thereby acquainting himself with the broad features of its plan and development. Then, he would hire a motor car and ride throughout the city, stopping frequently to explore afoot one or another quarter, to look into shop windows, and to rub shoulders with people. Thus he would familiarize himself with the two principal aspects of the city's external make-up: (1) its morphology and (2) its functional differentiation or ecology.

### THE MORPHOLOGY OF THE CITY *

IT HAS been shown that the layout of the city is in some degree related to the nature of its location, particularly to the topographical features of such a location. In addition to (*a*) topography, the city's outlines are determined by (*b*) its streets and other traffic-ways and (*c*) its parks and open spaces.

#### TOPOGRAPHY

IT HAS been seen that the structural outlines of ancient Rome represented in large measure a process of adaptation to the dominant characteristics of its site. The hills were settled first, and remained the preferred residential and civic-religious centers of the city. The valleys were less readily occupied, but came to be associated with the more mobile features of the city's life — its trade and industry; its assem-

* This phrase has been borrowed from R. Maunier, *L'Origine et la Fonction Économique des Villes*, Paris 1910, *passim*.

blies and tumults, its sports, its vice and crime. The city's main thoroughfares threaded the valleys or connected hills with valleys. The congested areas of the city were in the valleys, and improvement and expansion proceeded more rapidly through them than over the hills. It was only when the city had overflowed upon the Campus Martius and the plains across the Tiber that it was able in any sense to expand without direct reference to its physical setting.

### THE HILL-AND-VALLEY CITY

THE city of St. Louis has in many ways duplicated Rome in the contrasted development of its upland and lowland areas. The residential districts are to be found on the hills in the central and western portions of the city, whereas the industrial and commercial sections cling to the bottom land along the Mississippi, the old Mill Creek Valley, and the valley of the River des Pères. Similarly, Pittsburgh, which according to Holland has "seventy hills" in place of Rome's seven, carries on most of its business in its valley-bottoms, such as East Liberty and "the Point," while its hilltops are given over to residences, public buildings, and parks. One of the latter, Grant's hill, is a sort of Capitoline, being occupied by the City Hall, the County Building, and the County Courthouse.

These three may be taken as examples of the *hill-and-valley* city.

Occasionally, a hill-and-valley city never gets beyond a stage that Rome must have reached very early in its history — a separation into an "old" or "upper," and "new" or "lower" city. Many European cities have become crystallized in this form. As the American traveler to Europe well knows, upon visiting such cities as Assisi or Sienna in Northern Italy, Bergamo in Switzerland, Carcassonne in France, and York or Durham in England, it is in the "old town," on the heights rising above the "new town," on the plains, that he looks for picturesque relics and historical associations.

There are occasional instances of hill-and-valley urban sites that give rise to *valley-floor* cities, the uplands remaining only sparsely settled. Rio de Janeiro occupies a plain

studded with rocky hills that rise precipitously to a height of two thousand feet or more. The summits of these *marros* are given over to drowsing monasteries or curious jungle-choked slums, while their bases are swept by the traffic of one of the world's largest cities.

A more common, if less picturesque, type of valley-floor city is one which lies in a narrow deep-cut river valley. Duluth, Minnesota, is confined to a strip of land approximately a mile wide, lying along the western extremity of Lake Superior and the valley of the St. Louis River. Behind this strip a ridge of rock rises abruptly to a height of 500 feet or more. It is backed by a gently-sloping upland, ideally suited to urban development, but virtually untouched because of its inaccessibility. The difficulty is aggravated by the fact that the original plan of Duluth ignored the limitations imposed by its topography, giving many streets grades so steep as to be practically useless.

A number of European cities are closely confined within the steep banks of rivers. This is especially the case along such rivers as the Rhine and the Moselle.

### THE WATER-SIDE CITY

DULUTH is a valley-floor city. It is also a water-front city, and its growth has been, in part, controlled by this fact. All cities whose sites are close to bodies of water are significantly affected thereby. Water, while a valuable adjunct to long-haul transportation, is always a serious obstacle to that constant and rapid flow of inter-communication upon which urban life subsists. Cities built upon islands or peninsulas always find their growth severely limited. The direction of their growth is distorted by the necessity of their conforming to the configuration of the land masses on which they are located. Moreover their expansion is so restricted that they often become excessively congested. Thus the development of Venice has always been dominated by the size and the shape of the sundry islets on which it is situated, while Amsterdam has grown only as canals could be dug to drain the marshlands surrounding its original site.*

* C. M. Poëte, *Introduction à l'Urbanisme*, Paris 1929, p. 85.

Even when an island city succeeds in establishing itself upon the adjacent mainland, it may still find itself seriously embarrassed by reason of its original insularity. It is many years since the term *Manhattan Island* was applicable to New York City otherwise than in a sentimental sense. With the aid of a magnificent system of ferries, lighters, bridges, and tunnels, Manhattan has established intimate contact with the surrounding mainland, and sent out offshoots to occupy it. Nevertheless, the bulk of New York's important business enterprises, and a large fraction of its population, remain on Manhattan Island, for communication with the mainland is so slow and roundabout that any other location is out of the question. As a consequence, certain portions of Manhattan Island constitute one of the most intensively-built and most congested urban areas known to social science.

The peninsular city displays much the same sort of characteristics as does the island city. Such places as San Francisco, California, and Cadiz, Spain, gain in commerce by virtue of their location upon points of land close to good harbors but, like New York City, they have had to pay dearly for such advantages in the congestion imposed on them by the limited area of their sites.

Rivers do not seriously limit city growth, unless they are so wide or so swift as to be, in effect, water-fronts. A river that can readily be bridged, while offering no obstacle to a city's growth, nevertheless serves profoundly to influence its inner economy. In any city there runs a steady tide of intercommunication, and any force which interrupts the flow of this tide tends to bring about isolation and differentiation between the areas affected. A river offers such an obstacle, even when it is little more than a good-sized creek, as is the Chicago River, or the Seine in the vicinity of Paris. It may be bridged or tunneled, but — until the past century — any considerable work of this sort was both difficult and expensive. Even in the present era, the problem faced by a city in maintaining communication across a stream is a serious one, for — while industrialism provides many new facilities for bridge and tunnel construction — it also provides many new factors of congestion in the shape of heavy and

bulky traffic, both in the stream and across it. Consequently every urban area that is traversed by a river inevitably finds itself divided thereby into quarters or districts. The cities of the Old World, having been established before the advent of modern bridge-building, are more conspicuously affected by this divisive action of intra-urban streams than those of the New World. Nothing in this country equals the contrast between the "seven hills" and the *trans Tiberium* in ancient Rome, between *la rive gauche et la rive droite* in Paris, or between the "Middlesex side" and the "Sussex side" of the River Thames in London.

Yet contrasts of the same sort, if not in the same degree, are to be found in American cities. Chicago's "North Side" and "West Side" owe their distinct individuality to the Chicago River and its branches. It is only within the past decade that the "downtown" area of that city has ventured to "cross the river." The twin cities of Kansas City, Missouri, and Kansas City, Kansas, are separated by the Kansas and Missouri Rivers, and by the state-line which is accommodated to these water-courses. In addition, North Kansas City, which lies on the bank of the Missouri River opposite that upon which the main portion of Kansas City (Missouri) is built, is virtually a separate community.

A yet more striking example of the divisive effect of a river upon urban development is provided by the city of Milwaukee. It originated as three separate communities: Juneautown, on the east bank of the Milwaukee River; Kilbourntown on the west bank, and Walker's Point, to the south of the Menomonee River, near its confluence with the Milwaukee. For a decade, the bitterest sort of rivalry was maintained between them. At one time open violence was threatened. In 1845, the three communities were incorporated, but old Juneautown is still known as "the east side," while Kilbourntown and Walker's Point are "the west side," and "the south side," respectively. Moreover, multiple street names and jogs in street lines, the latter necessitating diagonally-built bridges, remain as conspicuous — and inconvenient — remainders of the earlier divisions and rivalries.

### THE LEVEL-PLAIN CITY

FROM the viewpoint of urban development, the ideal city site is one located on a level plain. It is partly for this reason that the majority of modern cities are so situated.

The level-plain city exhibits no peculiarities of development that are accountable to its topographical features. It is, in fact, the freedom which it offers to the city to work out its own destiny without regard to its physical setting, that makes the level plain congenial to urban development. Nevertheless plains cities do not conform to any uniform pattern, for the economic and sociological factors controlling the growth of cities exhibit wide dissimilarity from city to city. The factor of functional differentiation, in particular, varies from one locality to another.

### MODIFICATION OF TOPOGRAPHY

A COMPLETE account of the relation to the city of its topographical characteristics must contain some discussion of the reciprocal effect of the city upon its topography. The city is in itself a topographical feature of no mean significance. There are few large cities which have not substantially modified their sites.

The manner in which the cities of antiquity have buried themselves in their own débris is a commonplace to any student of archæology. Reference has already been made to the succession of cities, superimposed one on another, upon the site of Troy, Knossos, and Carchemish. Woolley's * account of Kasr Ibrim, in Upper Egypt tells how " the rubbish of centuries flung outside the gate to free the narrow confines of the plateau was heaped up there until the gate itself was choked, and the walls must needs be raised and a new gateway built, whose threshold was the carved lintel of the older door." Similarly, most of the remains of Roman London lie buried from 10 to 30 feet beneath the pavement level of the present city.

The city does more than bury itself in its own débris, however. It deliberately alters its *terrain*, striving particu-

* C. L. Woolley, *Dead Towns and Living Men*, Oxford 1920, p. 26.

larly to make it as nearly as possible conform to the level-plain type of topography. Streams are filled in, or are converted into sewers. Hills are leveled and the gradient of hillsides reduced. Depressions are up-graded and marshes drained.

As ancient Rome converted the stream crossing the Forum Valley into the main artery of its sewer system, London built over the Fleet River (now the site of Fleet Street) early in its career.* Paris has reclaimed wide areas from the marsh-lands and flood-channels of the Seine Valley, and in times of inundation the river re-asserts possession of its ancient domain.† Similarly, in the city of Buffalo, Scajaquada Creek, which has been converted into a storm-sewer, occasionally bursts out of its man-made confines, blocking traffic and flooding cellars in its vicinity.

The city levels off other surface inequalities in a manner familiar to anyone who has watched a crew of laborers working on a new subdivision in a present-day American city. Occasionally, as in Kansas City, Missouri, there are involved engineering operations of considerable magnitude.

### STREETS AND TRAFFIC WAYS

AN AIRPLANE view of any city is chiefly distinguished by the outline of its streets, railways, and — if it has them — streams and canals. They serve to control the speed and direction of the movement of goods and persons within the city. They also exert a powerful influence upon the direction of the city's growth. Later in this chapter attention is given to the relation which the city's streets and traffic-ways bear to urban growth and to city planning. At this point only the most characteristic street patterns need be considered.

When free from the constraining influences of topography, the city tends to adopt one of two major configurations: (1) the radial and (2) the rectangular.

* H. R. Mill, (Ed.), *The International Geography* (2nd Ed.), New York and London 1916, p. 183.

† C. M. Poëte, *op. cit.*, p. 82.

### THE RADIAL PATTERN

THE radial arrangement of streets and other traffic-ways is formed when the city lies at the center of a number of converging transportation routes. As it grows out from its center, it follows the lines of communication flowing into it. Conversely, it builds and maintains streets, railways, and the like, that are so arranged as to tap the principal arteries of traffic converging upon it from without. Even when the city is surrounded by a defensive wall, gates are pierced in the ramparts to give access to these means of communication. Thus, Home * shows that in modern London such districts as Newgate, Aldergate, Bishopsgate, and Cripplegate mark the sites of gates in the Roman wall of the third and fourth centuries, from which major highways debouched to other parts of Britain and to the seaports. Incidentally, some of these roads still contribute important links to the street-system and highway-system of London and its environs.†

### THE RECTANGULAR PATTERN

THE rectangular pattern tends to develop spontaneously when the city's principal arteries of communication lie along two axes set at right angles one to another. Moreover, many consciously-planned cities adopt the rectangular or " checkerboard " street pattern. Such configurations are very ancient, the oldest known city plant (that of an Egyptian workingmen's village) being of this general sort. A schematic arrangement such as this serves a number of purposes. It permits the laying-out of lots of approximately equal size. It facilitates the division of the city into administrative districts, and permits troops or police to maintain control over them with relative ease. It also lends itself to the construction of monumental public buildings — such as the vast temples of ancient Egypt — and to the working-out of large-scale architectural effects — as in ancient Rome and modern Paris.

* G. Home, *Roman London*, London 1926, Chap. IX.

† R. C. Hellard, "Roads, Streets, and Traffic of London" in A. Webb (Editor London Society) *et al.*, *London of the Future*, London 1921.

Such a plan has, however, serious inconveniences from the point of view of circulation; so that unless it is maintained with rigid arbitrariness, it tends to be combined with the radial scheme. This is true of Paris, whose principal external arteries are rectangular (along the Seine, as represented by the line of the Tuilleries and the Champs Élysées, and across the Seine opposite the Cité, as represented by the Rue St. Jacques) but whose general development is radial.

In the United States, largely under the influence of the urban outlines developed by Philadelphia and Savannah, the rectangular or "checkerboard" plan has become predominant. Hubbard and Hubbard observe that the "quasi-proprietary or speculative character" of many cities during their initiatory periods was probably partially responsible for their adoption of a form of development that was later to prove unsatisfactory and wasteful in many respects.

### THE CIRCUMFERENTIAL PATTERN

Occasionally a circular or circumferential series of streets is developed in the city, although they seldom arise spontaneously. Nevertheless, many European cities have acquired circumferential streets as a natural consequence of their developmental processes. Such has been the case particularly when the city has been fortified, and where — under the pressure of urban expansion or the inducement of the rise of widespread public tranquillity — one or another ring of fortifications has been destroyed. The *Ringstrasse* of Vienna, as Brunhes indicates, is only one of a dozen or more instances, where boulevards are derived in part from discarded fortifications. Others are Paris, Rheims, Moscow, Prague, Milan, Bruges, and Cologne. In fact, the word *boulevard* is itself derived from an old French word for "the horizontal portion of a rampart." According to the *New English Dictionary* the word has affinities with *bulwark* (English), *bollwerk* (German), *baluarte* (Spanish) and *baluardo* (Italian).

### RAILWAYS

In the modern urban community, the structural outlines formed by the city's streets are supplemented and modified

by its railways. *Intra-urban* railways, particularly those carrying passengers within the city and its immediate region, do not as a rule significantly affect the city's structure, since they follow the principal arteries of travel, and are, in fact, often routed over already existing street systems.

With *extra-urban* railways and their intra-urban connections, however, the situation is different. Their concern is primarily the maintaining of communications with points outside the city. They therefore tend, as far as practicable, to seek access to the most suitable traffic routes, regardless of the needs of the city itself, and sometimes in spite of them. In many cases, the location of a railway line, primarily with regard to extra-urban transportation facilities, operates to obstruct the city's own internal circulation and to constrict or distort its expansion. The West Side tracks of the New York Central Railroad have for a long time constituted a serious safety-hazard in lower Manhattan, besides blocking traffic and impeding the development of adjoining land areas. One portion of this trackage system ran, until recently (1930), down the middle of a street in a thickly-inhabited neighborhood, earning for that street the soubriquet of "Death Avenue." A picturesque feature of "Death Avenue" in its later years was the "cowboys," or special mounted police, employed by the railroad to ride up and down the avenue before oncoming trains, to clear pedestrians and children from the path. After 40 years of controversy, a re-location project was approved, which involved an expenditure of approximately $140,000,000.*

In an expanding city, a railway line originally located at the outskirts of the city, with a view to minimizing the possibility of interference with the city's internal development, is crossed by the city, and becomes an obstacle to development and circulation in the areas adjoining it. For example, a number of trunk railway lines were laid out across the northern section of Buffalo, which — until recently — was virtually uninhabited. As residential development has pushed northward, these lines have become a positive blight upon the neighborhoods traversed by them.

* *New York Times*, Dec. 12, 1929, p. 22, col. 2.

The location of railway terminals, more especially freight and produce terminals, at the outer edge of the city's central commercial area, places tracks, loading-platforms, round-houses, and other structures upon large expanses of land, to the virtual exclusion of every other type of development. In some cases, such as the Illinois Central terminal-yards along the Chicago water-front, the railway terminal with its appurtenances eventually exercises a constricting influence upon urban development. Modern engineering together with the electrification of power occasionally, however, makes it possible to mitigate but not entirely overcome such influences. The city of Chicago, for example, has built an elaborate park and boulevard system upon made-land along the waterfront beyond the tracks of the Illinois Central Railroad, which, in turn, has electrified its lines in that area.

### PARKS AND OPEN SPACES

THE open spaces of a city are often quite arbitrarily distributed according to the dictates of historical circumstance. The Tuilleries and the Luxembourg Gardens of Paris, for example, were laid out as the parks to royal residences. The same is true of Kensington Gardens and Regent's Park, London.

### PARKS

MANY other London parks are the relics of village and of manorial common-lands, or of ecclesiastical properties. In this connection, the history of Hyde Park, London, is instructive.* Originally a virgin forest to the west of Roman *Londinium*, it was, at the time of the Norman conquest, incorporated into a royal manor lying between the Thames and the old Roman road *Via Trinobantina* (the present Oxford Street). Shortly after the Conquest the manor was bequeathed to the monks of Westminster Abbey, to endow perpetual intercessions for the soul of its donor, one Geoffry de Mandeville. The monks divided the estate into three manors, Neat, Eubry, and Hyde. After the religious quarrels of the sixteenth century, the manor of Hyde became

* J. Larwood (Pseudonym), *The Story of London Parks*, London 1873, Chap. I.

royal property and was added by Henry VIII to Marylebone Park (now Regent's Park) and the property now known as St. James's Park to form a hunting ground. From the time of Charles I onward, Hyde Park became a fashionable rendezvous, although deer continued to graze there until the end of the first half of the nineteenth century. After passing into private hands during the Puritan Commonwealth,

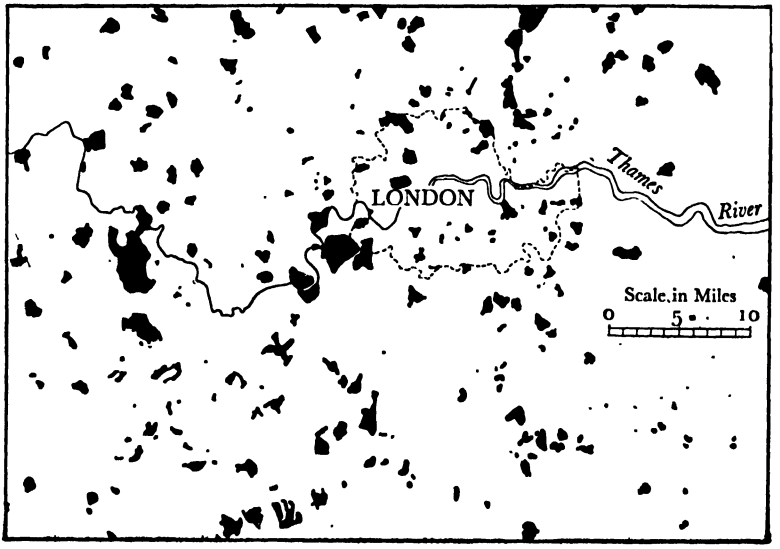



FIG. 9. THE "LUNGS" OF A GREAT CITY: THE PARKS OF LONDON *

it reverted to the royal domain in the Restoration. It gradually became a popular resort, as it is today.

Kensington Gardens, Regent's Park, St. James's Park, and Green Park were also formerly attached to the royal residences. These residences became the nucleus for the development of the fashionable "West End" of London. Thus it is that historical circumstance has given London a group of splendid parks in a region where, from the viewpoint of the general welfare, they are not nearly so badly needed as in other sections.

* From Regional Plan of New York and its Environs, Vol. V, L. F. Hanmer, *Public Recreation.*

More recently, parks have been laid out with conscious regard to social welfare, as well as æsthetics and topography. Hampstead Heath was acquired by purchase and condemnation in the late nineteenth and early twentieth centuries, its nucleus being an ancient expanse of manorial common land.*

In the United States, Central Park, New York, was acquired in 1856, as one of the first large-scale park developments of the country. Its site was selected, partly because of its location, and partly because its rugged topography made it suitable for landscape treatment, while at the same time it rendered the area unsuited for residential development.† At the present time considerations such as these — particularly those relating to public welfare — are taking precedence in the selection of park-locations.

### OTHER OPEN SPACES

PARKS do not constitute the only open spaces to be found in the modern city. The public square or place may attain considerable proportions, especially when it is the successor of an old market-place, or where it has been laid out with an eye to civic æsthetics. Occasionally, also, public or quasi-public buildings are surrounded with open spaces which may eventually come to have more significance than the building itself. It is likely that for one New Yorker to whom Trinity Church has any meaning there are fifty who are grateful for the oasis of greenery and sunshine provided by the churchyard surrounding it.

### THE SOCIAL SIGNIFICANCE OF OPEN SPACES

WHATEVER its origin or location, the open space occupies a place in the city which is of considerable importance. Certain types of recreation can be carried on only in such spaces. Moreover, by acting as " lungs " and " windows " they fulfill the essential function of providing fresh air and sunlight to

* *London Parks and Open Spaces:* being one of a series of popular handbooks on The London County Council and what it does for London. London 1924, p. 1. See also p. 37.

† T. Hubbard and H. V. Hubbard, *Our Cities Today and Tomorrow*, Cambridge 1929, pp. 4-5. Also article on "Central Park" in *Encyclopedia Americana* (1925 Ed.), Vol. VI, pp. 209–210.

areas that might otherwise be stinted of both. Recent investigations concerning the relation of sunlight to health give added significance to this latter characteristic of open spaces.

Few cities are adequately provided with open spaces at the points where they are most needed. The congestion characteristic of every growing urban community imposes such a burden upon its land areas that few are left unoccupied. Only rarely can an open space be made income-yielding, and, in competition with the scores of income-yielding activities that are clamoring for urban sites, it generally is narrowly restricted or altogether suppressed. Moreover, when a community comes to realize the value of providing open spaces near its centers of congestion, the site-values of land, plus the cost of the demolition of existing structures are so great as to make any extensive clearance projects almost prohibitive. It is not strange that heretofore such open spaces as have survived in the modern city have been those which were attached to churches and other public or quasi-public activities, or which had belonged to the public domain for several generations. According to the *Regional Survey of New York and its Environs* (Vol. V), there was in 1925, 1 acre of park for every 577 persons in New York City, but only 1 acre for every 1130 persons in Manhattan. As is indicated later in this chapter, one of the objectives of city — and regional — planning is to provide in advance for such open spaces as the urban community is likely to require during the predictable future.

### FUNCTIONAL DIFFERENTIATION OR ECOLOGY WITHIN THE CITY

Scarcely any city-reared child goes through his first ten years without reproof from his elders for playing with a child who lives in "the wrong part of the city." Before he has passed adolescence, he has become aware that his own immediate territory is surrounded by a dozen other districts, all of them fascinatingly and perhaps fearsomely different from his own. By the time he has reached maturity he has learned to know the intricate geography of his city, and to make the discriminating social judgments and business decisions that it

entails. He knows that acquaintances from the *X* section are not socially acceptable, no matter how charming or plausible they may appear. He is inclined to protest if his independently-minded sister proposes to fare forth into the *Y* section unescorted. He finds that property in the *Z* district carries a burglary-insurance rate higher than that of any other sections, and that it is inexpedient to leave his motor car parked in its vicinity.

His knowledge is born of the fact that every city is divided into a number of "areas of utilization," as Adshead * calls them, which are related to the functional differentiation in the uses to which the city-occupied area is put.

The average city will be found to be subdivided into three functional areas: (1) the central commercial area and its appendages, (2) the integumental area, and (3) the urban fringe. Since the city is, by reason of its expansion or of the fluctuations in its social and economic life, constantly shifting its areas of utilization, there are also to be found what Burgess, McKenzie,† and others have denominated as (4) "transition areas."

The foregoing classification is more applicable to the modern than to the ancient or early modern city. Thompson ‡ observes that the visitor to those cities which achieved their maximum development before the introduction of modern instrumentalities of rapid transportation are much less sharply differentiated than those to which the average American or European city dweller is accustomed. This is particularly true of the Orient, where the traffic and transportation still for the most part conform to the pace set by the feet of men and the hoofs of horses.

### THE CENTRAL COMMERCIAL AREA AND ITS APPENDAGES

THE economic core of every city is its central commercial area. From the days of the *Forum Romanum*, and earlier,

* S. D. Adshead, *Town Planning and Town Development*, London and New York 1923, Chap. III.

† E. W. Burgess, "The Value of Sociological Community Studies for the Work of Social Agencies" in *Social Forces*, Vol. VIII, No. 1, June 1930. Also R. D. McKenzie, "The Ecological Approach to the Study of the Human Community" in R. E. Park, E. W. Burgess, and R. D. McKenzie, *The City*, Chicago 1925, *passim*.

‡ W. S. Thompson, *Population Problems*, New York 1930, p. 280.

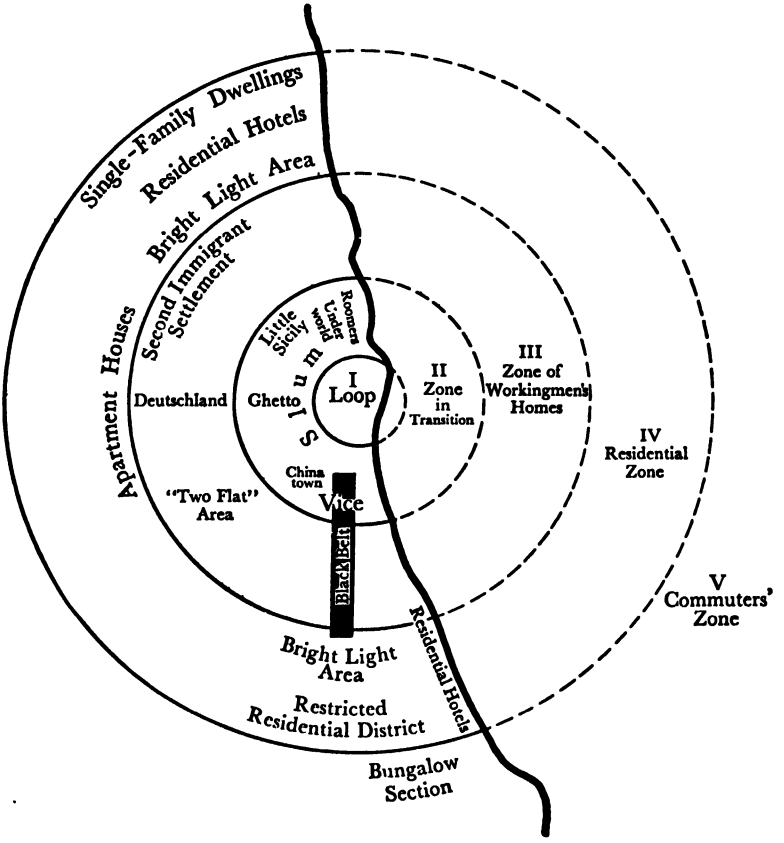



FIG. 10 (*a*). URBAN ECOLOGY: CHICAGO *

the economic life of every city of consequence has revolved around a specialized, intensely-developed, central area.

### THE CENTRAL AREA PROPER

SUCH an area is usually close to the geographical center of the city. In most cases, the city grows around an original focal point of major economic activity. In other cases, the central commercial area shifts to keep up with population movements, as has been the case in New York City. In still

* Park, Burgess, and McKenzie, *The City* (1925). Reproduced by permission of the University of Chicago Press.

other cases, the configuration of the city realigns itself to migrations of its central commercial zone. The West End shopping district of London is now both the economic and the geographic core of London, but, as its name implies, it

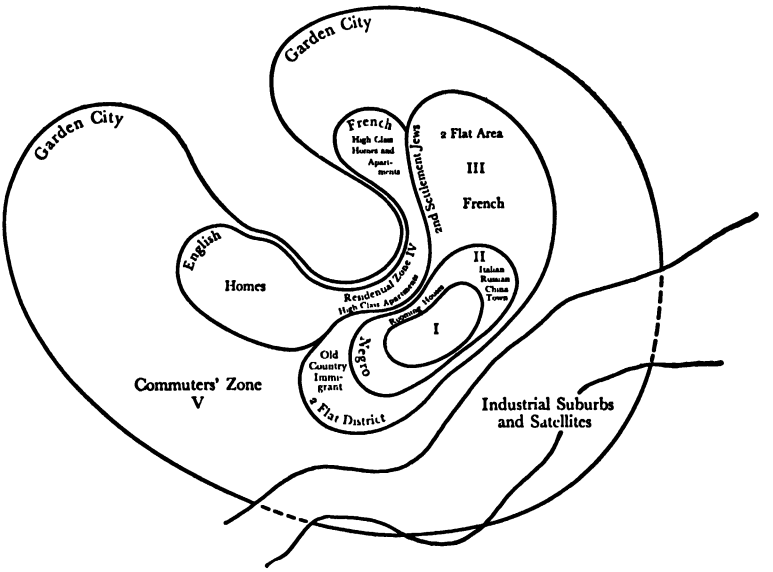



FIG. 10 (*b*). URBAN ECOLOGY: MONTREAL *

was at one time some distance removed from the center of that metropolis.

The chief economic activity of a city's central commercial area is retail merchandising. Two types of trade in particular are to be found there. They are described as follows by Haig and McCrea: †

One type is the trade of quality — the sale of the rare, the exclusive, the unstandardized: rich jewels, rare paintings, fashionable clothing, articles beyond the reach of the mass of men. The limited number of potential customers . . . can and will pay to have their time saved and their convenience served. The

* From C. A. Dawson and W. E. Gettys, *An Introduction to Sociology*, copyright 1929, The Ronald Press Company.

† Reprinted by permission from *Major Economic Factors in Metropolitan Growth and Arrangement*, by R. M. Haig and R. C. McCrea (Regional Survey of New York and Its Environs Vol. I, pp. 41–43). See also R. E. Dickinson, "The Commercial Functions of the Nuclei of English Conurbations," in *Sociological Review*, London, Jan. 1929, also R. Maunier, *op. cit.*, pp. 184–230.

saving in the aggregate is sufficiently large to make it possible for these shops to outbid competing activities for these sites.

The second type may be called the trade of selection, the sale of the required assortment of miscellaneous goods. The modern department store, catering not to the extremely wealthy, but to those of moderate and low incomes, is here the typical agency, although a conveniently grouped assortment of specialty shops under independent ownership sometimes performs the same function. The peculiar function of the great store is to provide an assortment. A woman may more conveniently buy a yard of blue taffeta in the little store on the main street of her suburban home town. But if she wishes to make her selection from twenty shades of a single quality of an identical fabric, she must go to the central shopping district. . . Much more must she go there if during the same morning she must buy . . . a new hat, a pair of silk stockings to match the blue taffeta, and a new set of dishes. . . The convenience of the thousands of such persons is sufficient to offset the convenience of the hundreds of de-luxe shoppers, with the result that the department store can compete for . . . sites on practically even terms with the exclusive shop.

The central commercial area is not, however, monopolized by retail merchandising. Besides certain directly subsidiary enterprises, like restaurants catering to shoppers and salespeople, such districts often include the city's administrative and cultural center.

### APPENDAGES TO THE CENTRAL COMMERCIAL AREA

THERE are, moreover, appended to the central commercial area a number of subsidiary areas that loom large in the life of the city. They are: (*a*) the wholesale merchandising area, (*b*) centrally-located industries, (*c*) centrally-located residential enclaves, (*d*) the larger hotels and higher-priced apartments, (*e*) passenger terminals, (*f*) the amusement district, and (*g*) the center of finance and of economic administration.

### WHOLESALE MERCHANDISING

THE wholesale merchandising area requires little discussion. It cannot compete with retail merchandising for the preferred downtown locations, but it controls a sufficient volume of trade to be situated not far away. Moreover, it is forced to remain fairly close to the city's center in order to be ac-

cessible to railway terminals and hotels, for unlike retail merchandising, it depends largely on buyers who have traveled from a considerable distance.

### CENTRALLY LOCATED INDUSTRIES

HAIG AND MCCREA point out that many industries persist in remaining in the central commercial area of a city, or in the zone immediately adjacent to it, despite the high site-values that they encounter. In certain cases — particularly where operations are conducted on a small scale and where the land area required is not large — an industry may find it worthwhile to retain a central location. In other cases, there are special advantages to be derived from an industrial site in or near the central commercial area. For example, the women's cloak and dress trade stays in the backwaters of New York's downtown sections because it (1) does not require specialized buildings; (2) must produce goods quickly; (3) engages in unstandardized, skilled work; (4) occupies relatively little ground area per worker; (5) is conducted on a relatively small scale; (6) can utilize obsolete buildings; (7) must maintain close contact with its market; and (8) has to keep an intimate touch with style-changes.

A similar analysis serves to show how many other industries persist in retaining central locations, despite the high cost of rental, the slowness of transportation, and other disadvantages. In some instances, an intricate subdivision of functions permits one phase of an industry to remain close to the center of the city, while others migrate towards the periphery, or go to other less populous centers. In New York, for example, the newspaper printing plants remain within easy reach of Times Square, because of the intimate contact which they must maintain with their editorial offices, as well as the desirability of promptly getting their editions on the street in the central commercial area and its appendages. On the other hand, other types of printing plants have been moved to the integumental area, or even outside the city altogether. One well-known weekly newsmagazine is edited in New York City, but is printed in the Middle West.

In many cases industries remain at the center of a city chiefly because, once established there, they have difficulty in moving elsewhere. A conspicuous group of such industrial stragglers are the meat-slaughtering establishments that have remained in the immediate vicinity of the central commercial area of New York for several years.

### RESIDENTIAL ENCLAVES

THE bulk of the city's population does not live in its central commercial area, nor close to it. Nevertheless, every city contains a number of residential enclaves within its central commercial area or immediately adjacent thereto. They are of quite diverse types: (1) the area designated by Zorbaugh as "the gold-coast"; * (2) the slum, and (3) the rooming-house district, and — usually, but not always, (4) the segregated ethnic area.

### THE "GOLD COAST"

THE "gold coast" or preferred residential area is generally located with regard to prestige, to accessibility and convenience, and to comfort and beauty.

The North West section of Washington, D. C., illustrates the potency of prestige in the establishment of a preferred residential section. The plan of Washington makes it clear that the city's development was designed to proceed radially from the central point at which the Capitol is located. However, the North East, South East, and South West sections are either incompletely developed, or given over to lower-middle-class and slum residential areas and to industry, while the North West section has always contained the bulk of the city's commercial and official activity, and all of its preferred residential areas. An element in this situation is the fact that the White House is located in the North West section, and has — since the day it was first occupied — been the center of the city's official social life. Under the pressure of an expanding central commercial area, the city's aristocratic residences have moved away from the White House,

* H. W. Zorbaugh, *The Gold Coast and the Slum*, Chicago 1929, *passim.*

but their direction of migration has always been north and northwest.

Accessibility is a factor of declining importance in the location of a preferred residential area. Before the advent of rapid transportation, a city's aristocratic quarter was generally to be found within easy walking or carriage-driving distance from the central commercial area. Such was the case with Washington Square in old New York. Today, although the subway, the suburban train, and especially the automobile, have all but overcome the advantages of the easily accessible residential section, there are still to be found near the center of most cities small areas where persons of great wealth maintain their family mansions, or reside in apartments commanding fabulous rentals. The Beacon Hill section of Boston is a conspicuous example of the persistence of a preferred residential area at the very heart of a great city. Portions of the "Hill" have been lost to commercial uses and to slums, but its crest remains today — as in the early years of the Republic — one of the most aristocratic residential areas in the United States.

Considerations of convenience, comfort, and beauty often give precedence to hill-top locations. Such have been the hills of Rome, the Heights of Brooklyn, Knob Hill, San Francisco, and Beacon Hill just mentioned. Areas adjacent to parks and water fronts are also often occupied by the wealthy and aristocratic. Such neighborhoods are to be found near Hyde Park in London, the *Parc Monceau* in Paris, the *Tiergarten* in Berlin, Riverside Drive in New York, and Lincoln Park in Chicago.

### THE SLUM

THE juxtaposition of the aristocratic residences of Beacon Hill with the slums of Boston's West End and North End has just been noted. Zorbaugh finds a similar situation in Chicago. To quote a Chicago social worker: "The lower North Side has a beautiful front yard but a sorry-looking back yard." Some of Chicago's most slum-ridden residential areas lie almost within the shadow of its central commercial area. A similar situation exists in the East Side of New

York City, in parts of the North West section of Washington, and in the Michigan Avenue and William Street section of Buffalo.

In many cases, these sections are, as Burgess and others have shown, *transition* areas, thrust in between the advancing central commercial area on the one hand, and the retreating interstitial residential area on the other. In such areas, community control is relaxed, building dilapidation is encouraged by the prospect of the supersession of residential by commercial construction; and stability of occupancy is difficult. As a consequence, those families which can afford to do so move elsewhere. Those which for economic reasons are forced to stay find the maintaining of normal family life made difficult not only by the dilapidation of their homes and the fluctuating character of their neighborhood, but also by the crowding that high rents and poverty force upon them, as well as by the fact that such a neighborhood often attracts the shiftless, the unstable, and the vicious elements of the city's population.

The slums are not, however, confined to areas of transition. In European cities where areas of utilization are relatively stabilized, and where areas of transition are correspondingly rare, slums are to be found which have occupied the same locations for generations and centuries. Such are the East End of London, and, in Paris, the "old" *Quartier Latin,* and the Montmartre section (excepting for its tawdry window-dressing of tourist show-places). In fact, as the author has pointed out elsewhere, there are instances where a phase of transition betokens the conversion of a long-standing slum or vice area into a more socially-approved type of area utilization.*

### THE ROOMING-HOUSE DISTRICT

THE rooming-house district of a city is generally to be found at the inner end of a retreating integumental residential area. It is inhabited, as Wolfe and Zorbaugh † point out, mostly

* N. Carpenter, "Urban Expansion and Neighborhood Change" in *Social Forces*, Oct. 1930, pp. 80–85.

† A. B. Wolfe, *The Lodging House Problem in Boston* (Harvard Economic Studies), Boston 1906, *passim.* See also H. W. Zorbaugh, *loc. cit.*

by unmarried individuals in early maturity, who, being free from family obligations, have no particular motive to reside in the more remote residential districts, but who, on the contrary, are attracted to the central commercial area and its appendages. It offers to them the stimulus of its amusement district (and possibly its vice area) and also enables them to have easy access to the shops and offices where many of them are employed.

### THE SEGREGATED ETHNIC AREA

A HIGHLY specialized type of residential area often located near the center of a city is the segregated ethnic area. In many instances, it overlaps the slum area. In fact, there are many cities where the slum is essentially little more than an aggregation of immigrant and Negro settlements. The inhabitants of a segregated group colony are not necessarily confined to their district by their poverty. They are kept there by a consciousness of difference between themselves and the inhabitants of the city at large. The distinctness and cohesion of such a colony varies directly as the degree of social distance between the group concerned and the rest of the population. In the United States the Negro, the Oriental, and the "new" immigrant are the most generally disapproved, and their residential districts are the most clearly marked and the most rigidly hedged about. The underlying cause of one of the most disastrous outbreaks of mob violence in the recent history of the United States was the effort of the Negro group in Chicago to extend the boundaries of the "black belt" within which it has previously been confined.

While the segregated group colony is a characteristic feature of the city of the United States, it is by no means limited to this country. Nearly every European city has some sort of foreign quarter. London has its Limehouse, inhabited largely by Orientals of various descriptions; its Whitechapel, filled with Eastern European Jews; and its Soho, home of Italians and Frenchmen — and of the dingy restaurants which they maintain for their fellow expatriates and for Londoners in quest of "atmosphere." In the cities of central

and eastern Europe, as Wirth * shows, are to be found ghettos where the Jewish groups are — or were — subjected to disabilities similar to those experienced by the Negro in the United States. The *Judengasse* of Frankfort existed as a distinct and rigidly restricted community for hundreds of years.

Still farther to the east, in the Levant and the Orient, the segregated population colony is carried to perhaps its greatest development. Every considerable Asiatic city, which is to any degree under Occidental influence, has a special European quarter. The arbitrariness with which the European residents of Shanghai controlled their section of that city provided one of the exciting forces for the recent Nationalistic outburst in China. Yet, even if there were not European nor foreign quarters in the cities of Asia, many of them would still be cut up into segregated areas. Gamble † describes the "Chinese" and "Tartar" cities of Peking (Peiping) which have existed for centuries. The cities of India are divided, not only on religious lines, but also on caste lines.

### THE LARGER HOTELS AND THE HIGHER-PRICED APARTMENTS

THE large hotel and the high-priced apartment house are likely to be found adjacent to the city's central commercial area, if it is not, indeed, set in the heart of such an area. The hotel must, on the one hand, be accessible to the city's great passenger terminals. On the other hand, it must be conveniently located with reference to the retail shops, theaters, and the "White-Way" amusement- and eating-places which attract the out-of-town visitor. Most of the larger hotels of New York City are within easy walking-distance of Times Square, and many of them are clustered around either the Pennsylvania Station or the Grand Central Terminal.

In recent years the tendency of the city to produce multiple dwellings of skyscraper proportions has resulted in the development of groups of high-priced apartments close to the center of the city. These *de-luxe* apartments are beginning to take over the functions that were, until a genera-

* L. Wirth, *The Ghetto*, Chicago 1928, Chaps. IV, IX, X, XI

† S. D. Gamble and J. S. Burgess, *Peking: A Social Survey*, New York 1921, pp. 28–29.

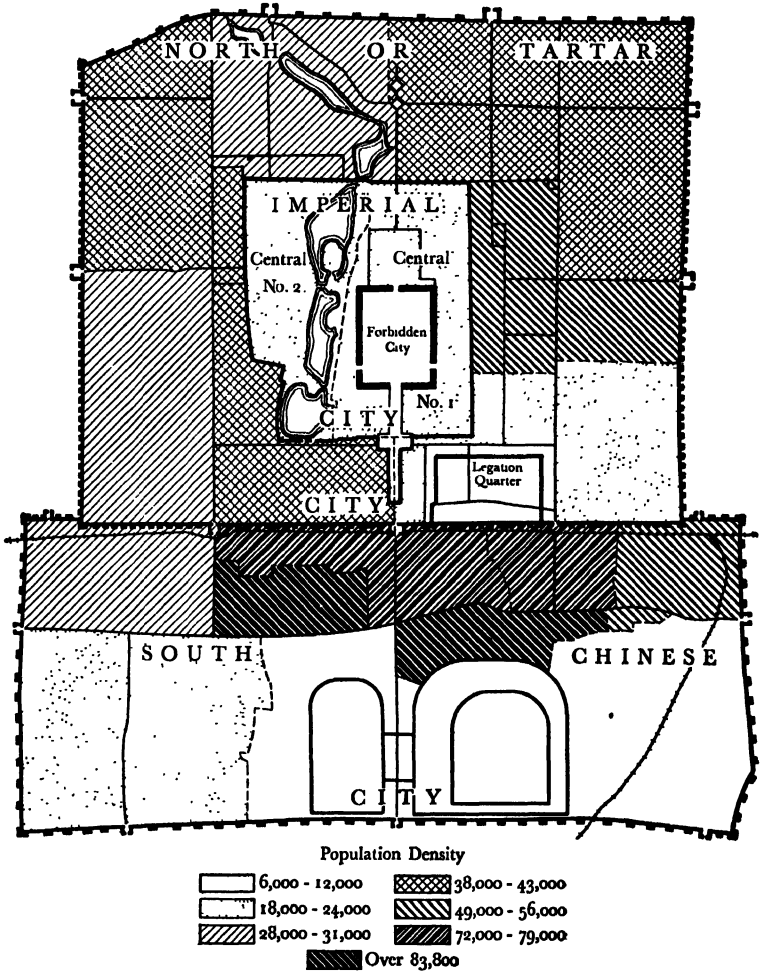



FIG. 11. ETHNIC SEGREGATION IN AN ORIENTAL CITY: OLD PEKING *

tion ago, filled by the "gold-coast" mansions on the fringe of the city's central area. In some cases, these apartments intrude themselves into a preferred residential area, and take on some of the prestige formerly attaching to it. This has been the case in the West End of London, and in the Brattle

* An adaptation from S. D. Gamble and J. S. Burgess, *Peking: A Social Survey*, Richard R. Smith, Inc.

Street section of Cambridge, Massachusetts. In other cases, such apartments are built *de novo,* in sections that have formerly been put to a variety of uses, but that are easily accessible to the downtown area. Such is the Park Avenue district of New York, which replaces a drab second-rate shopping district. In the Washington Square section of New York City, and in the Luxembourg section of Paris, high-priced apartments are rising phœnix-like out of the ruins of slums and third-rate lodging-houses.

In passing, the observation may be made that in such types of building the distinction between the apartment house and the hotel breaks down. The hybrid apartment-hotel tends to take on the characteristics of each type of institution. In this way, the tendency of the urban home to give over many of its functions to outside agencies is accelerated, the service features of such an establishment displacing many housekeeping activities which were considered a *sine qua non* to domesticity a few years ago.

### THE AMUSEMENT CENTER

FREQUENT mention has been made of the desire of the city-dweller — both permanent and transient — to be near the amusement center of the community. Such a center consists primarily of those passive, space-economizing enterprises which can attract and accommodate large numbers of persons. In the present-day city they include the theater, the cinema, and the "White-Way" type of dance hall, cabaret, and restaurant. If the city has a segregated vice area, it is likely to be located near the amusement center. The extent to which certain of the city's amusement enterprises may be concentrated can be inferred from the fact that in New York City, in 1923, there were in the Broadway area, 78 theaters and halls with a total seating capacity of nearly 100,000. Lewis says that within 1000 feet of the center of the Broadway and Forty-Second Street intersection, there were 44 theaters with a seating capacity of about 56,000.* It was estimated that, in 1929, there were in all of New York City, about 500 theaters, in addition to 300 cinema houses. Since

* H. M. Lewis, *op. cit.,* p. 54.

that time, a number of enormous cinema theaters have been constructed, not to mention "night clubs," etc. One who has ever tried to get into the Times Square Subway Station of New York, or the Picadilly Circus Tube Station of London, after an evening's theater performance realizes all too well that thousands of individuals are nightly packed into the amusement center of every great city.

### PASSENGER TERMINALS

THE city's passenger terminals tend to be located as near as is practicable to its central commercial area, for there the greatest number both of its day-to-day "commuting" and its long-haul passengers wish to go. The two great passenger terminals of New York City are inside the central commercial area, and, of the eleven additional union terminals projected by the Regional Plan of New York and its Environs,* one is located on Manhattan Island, and four in the boroughs of New York immediately adjoining it.

It should be borne in mind that present-day developments in transportation are bringing about increasing use of motor-busses and aircraft for passenger transportation. Such bus terminals as have been established are generally well within the city's central commercial area. Technological requirements, however, have forced the location of aircraft terminals at points remote from the city's center. Le Corbusier, however, proposes, in his "Contemporary City," to have a small landing-field established in the very heart of the city.†

### THE CENTER OF FINANCE AND ECONOMIC ORGANIZATION

IN London, the term *city* is not applied to the city as a whole, but to one very small segment of it, its center of finance and of economic administration. Every city of any size possesses such a district, usually close to the city's center, although its relative stability sometimes leaves it stranded after the central commercial area has moved elsewhere. This is true in the Wall Street section of New York, which stubbornly

* *Ibid.*, pp. 190–191.

† Le Corbusier (Pseudonym for C. E. Jeanneret-Gris), *The City of Tomorrow* (English Translation), London 1930, Chap. XI.

clings to the lower end of Manhattan Island — the central commercial area of one hundred years ago — while the present-day center of activity is several miles to the north. Whether physically attached to the central commercial area or not, the center of finance and of economic administration is functionally attached to it. Such a district, in fact, dominates the economic life of the entire city, as well as its surrounding region and its trading-area, or hinterland. In some instances, as in London, Paris, Berlin, Rotterdam, and New York, the economic fortunes of the entire world may be influenced by such an area.

The financial significance of the Wall Streets, the Lombard Streets, and the Bourses of the great city are readily perceived. Their economic-administrative functions are not so generally appreciated. As Haig and McCrea put it, "the coördination and control" of economic activities proceed from such centers. Besides the convenience in the transfer of funds, the exchange of securities, the making of bank clearings, etc., a compact and unified financial district promotes the constant, intimate contact of the relatively few technicians and policy-controlling personalities who determine the course of economic activities throughout the city and its tributary areas.

### THE INTEGUMENTAL AREA

AROUND the central commercial area and its appendages, there lies a broad irregularly-shaped belt that may be best described as *integumental.* On its inner border, it merges into the central area; on its outer edge it fades away into the urban fringe.

### SUBORDINATE COMMERCIAL AREAS AND THEIR APPENDAGES

ITS leading characteristic is the location within itself of a number of subordinate commercial areas and their appendages. In some cases, these sub-centers represent the central areas of suburban and satellite communities that have been absorbed by the main body of the city in its outward expansion. In other cases, they are the nuclei of segregated ethnic groups — particularly when these latter are

shut out from participation in the life of the community at large. The Negro centers in the vicinity of Seventh Street and Florida Avenue in Washington and of Lenox Avenue and 116th Street, New York (Harlem), are economic and social focal points as self-sufficient, in many respects, as if they were separate cities.

Ordinarily, the subordinate commercial area arises as a response to the requirements of one or another integumental residential area. It provides retail merchandising of the small-unit type, and its appendages consist usually of small banks, neighborhood theaters or cinemas, and other amusement enterprises. During the past decade, large retail stores, of the sort formerly associated exclusively with the central commercial area, have been established in the city's larger sub-centers. These decentralized department stores may be regarded chiefly as responses, on the one hand, to the increased use of the private motor car, and, on the other hand, to traffic congestion. It is significant that those stores of this sort in the New York Region * are being "erected at strategic points along the transit-corridors within the 15-mile radius" and "in open districts where ample space can be obtained for circulation and parking of cars." One great chain-store organization which has established large retail department stores in a number of cities regularly locates its stores at some distance from the center of the city, and provides extensive free parking facilities to its patrons.

### INDUSTRIES — FREIGHT AND PRODUCE TERMINALS

THE integumental area also contains a number of industries, often associated with freight and produce terminals, or the trunk-line traffic ways connected with them. All port cities develop extensive docks and waterside terminals, the latter being utilized primarily for freight, but also for passenger traffic. The area occupied by such terminals is often enormous. The warehouses alone in the port of Hamburg have a combined floor space of 5,000,000 square feet. New York City has over a hundred miles of improved harbor frontage.

* Regional Plan of New York and its Environs, *The Graphic Regional Plan* (Vol. I), New York 1929, p. 331.

The Port of London Authority controls 2263 acres of land and 730 acres of water. That is to say, that portion of the London waterside terminals controlled by this body occupies the equivalent of an area more than four and one-half miles square.

These freight and produce terminals tend to be located at some distance from the urban center because of their space requirements, and industries usually cluster around them. Besides securing accessibility to trunk-line transportation and accordingly to its markets and raw materials, the industry located in the city's integumental area profits by the relative cheapness of land and its availability in moderately large tracts. It profits also from the lesser traffic congestion than that found towards the city's center. Another — and in the opinion of Maunier * — a very important consideration is accessibility to the homes of large numbers of working people. Maunier believes that, in many cases, industrial migration follows residential migration away from the center of the city, and is secondary to it.

### RESIDENTIAL AREAS

As THE foregoing indicates, the integumental area of the city is given over largely to residential uses. It is subdivided into a number of minor residential segments, including moderate-priced apartments, and less expensive and more expensive single-family dwellings, two-family houses, and the like. It may occasionally — as Burgess and others point out — include a number of diluted ethnic areas, or " neighborhoods of second immigrant settlement."

As these areas approach the urban fringe, they depart more and more from the typical urban type of community, and approach more and more to rural norms. Mowrer † goes so far as to say that a rural type of family life begins to make its appearance in these areas. In any event, the externals of family life are notably modified: single family houses replace multiple dwellings; yards and gardens put in an appearance;

* R. Maunier, *op. cit.*, p. 287.

† E. R. Mowrer, *Family Disorganization* (Sociological Series), Chicago 1927, pp. 111–112.

the decrease in traffic density and the increase in open spaces permit the formation of spontaneous play-groups of children. This latter fact, together with the increase in home ownership and long-term tenancy fosters the development of something approaching a true neighborhood.

Such sub-communities never wholly escape the influence of the city, however. The family's economic activities carry its members daily away from the home, and the mobility and anonymity of the downtown area is ever available to the individual or family group wishing to escape from the primary group control which is of the essence of neighborhood life.

### THE URBAN FRINGE

THE integumental area of the city turns its back upon the central commercial area and its appendages, and faces the open country. When it meets the latter, it breaks down into a vaguely-defined, discontinuous area that may best be described as *the urban fringe*. It is in part residential, in part industrial, in part quasi-agricultural, and in part devoted to more or less temporary open-area types of development. In places it is entirely deserted.

### RESIDENTIAL SEGMENTS

THE residential portion of the urban fringe contains many houses that are relatively expensive. In some cases, they are surrounded by extensive grounds and are dignified by the name of estates. They offer their owners many of the amenities associated with residence in the open country, together with easy access to the city proper. Such urban fringe residences have become relatively numerous since the advent of the motor vehicle. They have tended to replace the large, " gold-coast " mansions of another generation. Nevertheless, they have been found in cities of all ages — except, perhaps, in disturbed periods when residence outside a city's walls was insecure. The Luxembourg Palace, and its surrounding gardens, was an urban-fringe palatial residence built by Marie de Médicis, who was weary of the court life in the city proper. Some hundreds of years earlier, the

wealthy residents of Gallo-Roman Lutetia built their villas in the same district. The Cluny Museum contains the remains of the baths of one such villa. Indeed, in the early Middle Ages, the ruins of these ancient villas were so numerous that they became the refuges of vagabonds, thieves, and madmen, and a monastery, which was later incorporated into the Luxembourg Gardens, was erected to "exorcise" the "devils" infesting the place.* A millennium and a half before the Romans occupied Gaul, there were built near the city of Nuzi in Asia Minor a number of substantial houses, some distance from the main body of the city. Two of these houses were excavated in 1929 by the American School of Oriental Reseach in coöperation with the Fogg and Semitic Museums of Harvard University.

Whether or not the urban-fringe estates of Nuzi, or Lutetia, or seventeenth century Paris were forced to compete for space with "subdivisions" of inexpensive houses, their present-day successors assuredly do. A commonplace occurrence in a contemporary European or American city is the cutting-up of a large estate into small building-lots. Such an incident marks the passing of the urban fringe and its engulfment by the advancing tide of the expanding city.

### INDUSTRIAL SEGMENTS

THE industrial sections of the urban fringe are similar to those located outside the city and in the surrounding region. Their discussion is therefore deferred.

Likewise the agricultural portions of the urban fringe represent the urban edge of the rural residue of the city's surrounding region, and, as such, are discussed below. It may merely be noted here that whatever agriculture is carried on in this area consists largely of market-gardening, poultry-raising, and dairying for the nearby city markets.

### OPEN-COUNTRY AND OPEN-DEVELOPMENT SEGMENTS

CERTAIN portions of the urban fringe are left deserted. In some cases, the topography is not amenable to utilization, except after the expenditure of larger sums than it is ex-

* A. Gosset, *Quartier Latin et Luxembourg*, Paris 1928.

pedient to invest. In other cases, particularly in present-day Europe and America, land-speculation puts large tracts into the hands of owners whose only intention is to re-sell at a profit and who meanwhile allow the land to stand idle. Occasionally within the urban fringe may be found the remains of an enterprise, either residential or industrial, which has come to grief, its windowless structures and smokeless chimneys looming wraith-like in a wilderness of weed-choked rubbish.

Many *temporary open-development* * types of utilization are found at the urban fringe. The most nearly permanent of these are cemeteries. Indeed, as the city expands, a series of cemeteries scattered through its integumental area is often all that is left of the urban fringe of bygone years.

Various amusement enterprises also tend to be located on this area, particularly if they require open spaces, or if they are anxious to escape the police supervision of the city proper. The golf club and the more respectable roadside tea-room represent the first type of urban-fringe enterprise. The disorderly roadside dance-hall or drinking-resort represents the second. The amusement-park partakes of the nature of both. Few of these enterprises own their property outright; they usually do not build permanent structures. When overtaken by urban expansion, they promptly migrate out towards the open country.

Within the past decade, airplane landing-fields have also been established in the urban fringe of many cities. Whether or not they will constitute permanent features of the urban fringe depends upon future developments in the technique of aviation and in the volume of air-traffic. It seems likely that landing-fields will be developed in considerable numbers during the next few years in the urban fringe, or just beyond it. Writing in 1928, Goodrich estimated that New York City and its environs required 35 square miles of landing-fields, in contrast with the 4 square miles that were actually in existence.†

* This phrase is taken from the Regional Plan of New York and its Environs *op. cit* p. 336.

† E. P. Goodrich, "Air Ports as a Factor in City Planning," *National Municipal Review* (Vol. XVII, No. 3), 1928, p. 190.

## THE CITY AND ITS REGION

BEFORE ancient Rome was many years old, the country round about began to be definitely altered by it. Bit by bit, the city absorbed those portions of the country immediately adjoining it. Other portions were taken over by great cemeteries; still others by the country villas of the city's magnates. Streams and springs for miles around were linked up with the city's water-supply by means of aqueducts. These monumental structures, together with the great highways by which the city maintained contact with its constantly-growing dominions, were characteristic features of the landscape for miles around the city. One adqueduct, the *Anio Novus* extended for a distance of 62 miles, 9 miles of it being supported on arches, some of which still remain.

Every modern city leaves much the sort of impress upon its surrounding region as did ancient Rome. It invades the countryside, both by its own expansion and by the establishment of subordinate, semi-urban communities, and it transforms the country to subserve its own particular needs.

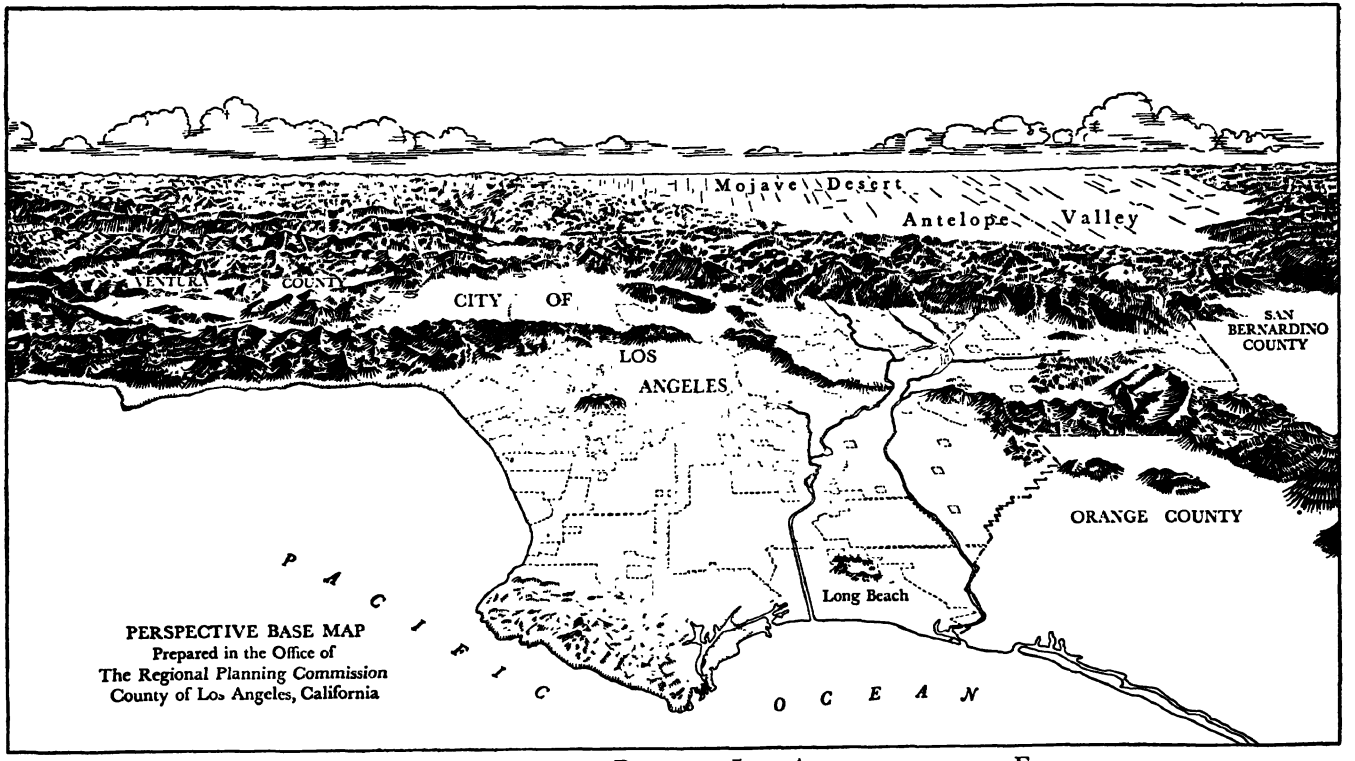
The city sends out two types of sub-communities into the region surrounding it. They may be described as (1) the suburb, and (2) the satellite. That portion remaining may be characterized as (3) the rural residue. The region's configuration is determined largely by the (4) zones of accessibility surrounding the city.

### THE SUBURB

BEYOND the urban fringe lies the suburb. It may be defined as a detached community, which nevertheless remains dependent upon the city in many important phases of its activities. Making use of the functional analysis employed by Douglass,* the suburb may be looked upon as a separated segment of the city, in which some, but not all, of the normal activities of city life are carried on.

Douglass classifies suburbs as being of three general types: residential, industrial, and specialized. He mentions

* See H. P. Douglass, *The Suburban Trend*, New York 1925, *passim*, especially Chaps. VI, VII, and VIII for much of the material contained in this section.




(*By permission, Redrawn*) FIG. 12. A METROPOLITAN REGION: LOS ANGELES AND ITS ENVIRONS

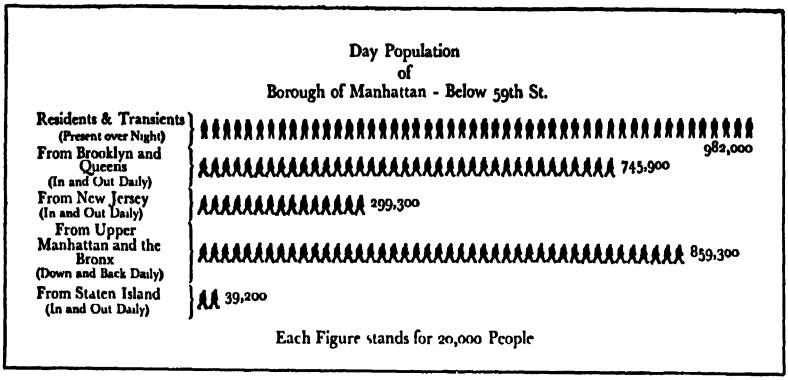
a fourth type, the rural, but this may better be considered in connection with the rural residue in the urban district — as has been done by Douglass himself.

### THE RESIDENTIAL SUBURB

THE residential suburb requires little description. It is epitomized by the witticism of pre-motorized times: "Life in our town consists in running for the 7.14 train in the morning and carrying a paper home from the 5.17 train in the evening." The English call such a community a *dormitory suburb*, and this is essentially what it is. It provides its inhabitants with a place where they may live in relative freedom from the congestion of the city proper, and from many of the conditions that accompany such congestion.

However, it is more than a mere sleeping-place. Like the urban residential area, it supports those economic and other activities that are directly tributary to any residential district, including food-purveying, small retailing, emergency medical services, and the like. More than this, it is congenial to those interests that concern women and children, since the majority of these groups spend most of their time in the suburb. Educational activities are always highly developed in such a community, as are also the various formal and informal associated activities in which married women customarily participate. Finally, the residential suburb includes activities and organizations which the adult male population may make use of during its evenings and weekends. Social clubs, dance-halls, motion picture theaters, etc., all flourish in suburbs. So also do churches and golf clubs, both representing typical, if not altogether compatible, forms of weekend activity for the suburban dweller. The prosperity of these organizations in suburban districts may also be due in part to the fact that both subserve the weekend interests of the married women in their respective communities.

Nevertheless, the residential suburb is by no means sociologically complete. Its economic life is, obviously, oriented towards the city. Most of the income of its inhabitants is derived from the city and much of their income-spending is



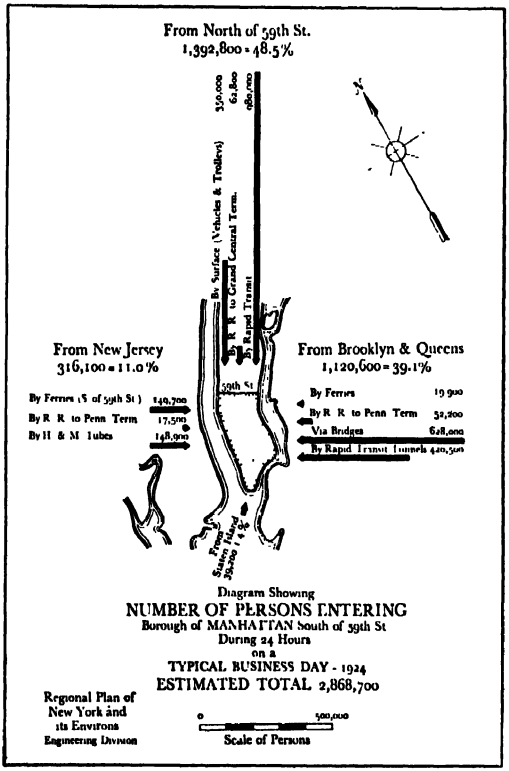




FIG. 13. SUBURBAN COMMUTERS TO A GREAT CITY: THE POPULATION OF LOWER MANHATTAN

From H. M. Lewis, *Transit and Transportation*

centered there as well. A considerable part of the recreational and intellectual life of the suburban-dweller is anchored in the urban center. The personal associations arising out of what Douglass aptly calls "the fellowship of the job" are likewise attached to the city, or to one or another of its many suburbs. The suburban-dweller's dominating interests and loyalties — the events that compel attention; the issues that stir emotions — are associated with the city. The average suburbanite reads the same newspapers as his completely urbanized fellow, and feels no sense of incongruity in finding that news items referring to his own particular town are invariably subordinated — if they are printed at all — to those that are of primary concern to the city proper.

### THE INDUSTRIAL SUBURB

THE industrial suburb is not exclusively devoted to industrial plants, as might be inferred from its name. It has a substantial residential population, but the bulk of this population — instead of commuting daily to the city proper — finds employment in the suburb itself. More than this, a considerable diurnal migration goes on from the city to the industrial suburb. The city of Binghamton, New York, with a population of less than 100,000, sends such large numbers of industrial workers to the neighboring industrial suburbs of Endicott and Johnson City that a "workman's special" train proceeds thither every morning and returns thence every evening.

Incidental reference has been made earlier in this chapter to the factors underlying the migration of industry to the environs of the modern city. Some further treatment of the subject is, however, required, for it is industrial decentralization that provides one of the major clues to the whole process of urban growth. Haig and McCrea have pointed out that industrial decentralization arises primarily from "friction of space," that is, from the competition of various kinds of economic activities for the very limited area of land that is available at the center of any city. Where the industry — because of special advantages or imperative needs — can

overcome the "friction of space" it remains in the central area, and carries the high cost involved therein. Otherwise it moves as far outwards as it can — or must — and maintains contact with the central areas by means of rapid transportation.

The detailed elements in this process are far too complex to be discussed here. The New York Regional Survey has devoted ten separate monographs to the subject, besides the summary volume prepared by Haig and McCrea. It is therefore possible only to quote briefly certain portions of these authors' summarization of their analysis: *

> There is a . . . group . . . which, in the absence of special measures may be expected to abandon central sites if, indeed, they have not already done so. The particulars relating to this group may be set forth as follows:
>
> 1. Comparatively large size;
> 2. Time or service factor unimportant;
> 3. Large ground area per person required;
> 4. Nuisance features (odors, noise, high fire hazard, etc.);
> 5. Specialized buildings required;
> 6. Serious problem of waste disposal; and
> 7. Large quantities of fuel and water required.

Maunier † adds another factor, the desirability of establishing contact with the country-at-large, as contrasted with the city. This observation applies particularly to the large-scale industry, which produces for a nation-wide market or even for a world-market.

The process is, however, accompanied by many exceptions and special influences. Thus the manufacture of the cheaper grades of cigars has begun to be localized in certain New Jersey towns, where it can tap the labor supply furnished by the wives and daughters of the men employed in the heavy chemical industries of that district.

An industrial suburb is likely to be somewhat more cohesive than a residential suburb, for a large proportion of its inhabitants live as well as work in it. However, its life is

* From *Major Economic Factors in Metropolitan Growth and Arrangement*, by R. M. Haig and R. C. McCrea (Regional Survey of New York and Its Environs, Vol. I, p. 105).

† R. Maunier, *op. cit.*, p. 305.

in no sense self-sustaining. It is economically dependent upon the central urban community, for the investing, marketing, and directive aspects of its industries. Most of the clerical work and even some of the final productive processes associated with these industries may be located in the principal urban center. Self-sustaining social, cultural, and civic organizations languish, or are altogether absent. The population, being made up principally of industrial workers and the humbler grades of managerial employees, lacks in leadership and balance.

### THE SPECIALIZED SUBURB

RESIDENTIAL suburbs and industrial suburbs are both, in a sense, specialized, but the specialized suburb, properly called, is one which is devoted almost exclusively to one single interest. Douglass mentions four types of specialized suburbs: (*a*) educational, (*b*) institutional, (*c*) governmental, and (*d*) recreational.

### EDUCATIONAL

CAMBRIDGE, Massachusetts, Evanston, Illinois, and Berkeley, California, are, or rather were, educational suburbs, the combined influence of rapid transportation, urban expansion, and social prestige having gone far to destroy their original character.

### INSTITUTIONAL

DUNNING AND MUNDELEIN, Illinois, and Central Islip and Ossining, New York, are all institutional suburbs.

### RECREATIONAL

RECREATIONAL suburbs are found near most large urban centers. New York has its Coney Island; Boston its Revere Beach and Nantasket; Los Angeles its Venice, and so on. The population of the great conurbation surrounding Manchester, England, seeks relaxation in the recreational cities such as Blackpool, Southport, and Llanduduc to all of which the workers of this region go when holiday-bent.

### GOVERNMENTAL

THE governmental suburb is the center of one or another of the minor political divisions surrounding the urban center, such as the county seat at Mineola, Long Island, or Rockville, Maryland. The political suburb is usually a fairly well-balanced community, exhibiting most of the attributes of a typical rural county seat — as, in large measure it still is. The other types of specialized suburbs are, however, likely to exhibit curiously-distorted community patterns. Recreational and educational towns undergo an enormous seasonal fluctuation in both population and activity and, together with institutional suburbs, are dominated by the requirements of the constituency which they serve. On visiting days at the Central Islip State Hospital the number of relatives and friends of patients from New York City is so great that a special train is provided for them. A visitor to Coney Island during the height of its season wonders who, among its milling throngs, are permanent residents, and where they dwell.

No such abnormality of community life is found, however, in the satellite city.

### THE SATELLITE CITY

THE term *satellite city*, invented a little over a decade ago by Taylor,* has been used with a variety of meaning by city planners and urban sociologists. Taylor originally applied it to communities of the type that are discussed in this work as industrial suburbs. An English city planner applies it to "garden suburbs" such as Letchworth and Welwyn, in England,† while Douglass, in a somewhat similar sense uses the term to describe the large, relatively self-sustaining city, which is, however, located in the orbit of a larger city, and is dependent upon the economic and social life of which that larger city is the center.‡ That is, while not so directly

* G. R. Taylor, *Satellite Cities* (National Municipal League Series), New York, 1915, Chaps. II and IV. See also M. F. Byington, *Homestead: The Household of a Mill Town* (Russell Sage Foundation), (Pittsburgh Survey, Vol. IV), New York 1910, *passim*.

† C. B. Purdom, *The Building of Satellite Towns*, London 1925, Chap. III.

‡ H. P. Douglass, *op. cit.*, p. 23.

dependent upon the central urban area as, say, the industrial suburb, its life, nevertheless, ebbs and flows in accordance with the forces set in motion by that city. This definition is not given by Douglass in the form used here. Douglass seems, however, to imply it.

As thus defined, the satellite city is not common, for only in a highly-developed and long-settled metropolitan area can such a community spontaneously arise. Paterson and Newark, New Jersey, in the New York district; Lynn, Massachusetts, in the Boston district; and Wilmington, Delaware, and Trenton, New Jersey, in the Philadelphia district, are among the few clear-cut American examples.

In the great conurbations of Europe, however, satellite cities are fairly numerous. In fact, in such regions as those surrounding Manchester and Liverpool, in England, or in the Lille-Turcoing-Rubaix district, in France, it is hard to draw the line between city and suburb or between central city and satellite.*

As has already been suggested, the satellite city is in most respects a completely-organized and well-integrated urban community. Newark, New Jersey, for example, has a larger population than either New Orleans or Cincinnati, and in many respects, economically in particular, it is at least as highly organized as they. Yet there are many ways in which the satellite city's life is less highly organized than the urban community which is free from the overshadowing influence of a metropolitan center. Thus Newark supports no university, while both Cincinnati and New Orleans do.

### THE RURAL RESIDUE †

As recently as 1921, the United States Census reported that there were within the corporate limits of New York City over eight hundred farms with a combined acreage of more than twenty thousand acres and an annual production valued at around three and one-half million dollars.

* See H. R. Mill (Ed.), *The International Geography* (2nd Ed.), New York 1920, pp. 172–175, 249, and 288.

† See H. P. Douglass, *op. cit.*, Chap. IX. The author has drawn extensively at this point from K. Butterfield, *The Farmer and the New Day*, New York 1919, Chap. V.

The greater portion of the non-urbanized residue of the territory surrounding any city is under cultivation or devoted to uses allied to agriculture. Indeed, it has already been pointed out that most cities are set in the midst of rich agricultural areas, yet the city sets its stamp upon the rural portion of its environs. Under the principle of territorial advantage, discussed in Chapter IX, their produce, for the most part, is intended specifically for consumption in the city and its neighboring towns. Staple crops such as grain or livestock give place to "truck," small fruits, poultry, and dairying. Large cities draw quantities of such products from distant points, it is true, but they secure a considerable proportion of their supply of such commodities from their own immediate environs.

In 1919, the farmers of the State of New Jersey derived the greater part of their income from potatoes, sweet corn, peppers, onions, and asparagus, only 40 per cent of the total value of their products being obtained from hay and grain. More than half of the peppers produced in the United States are raised there, and the state ranks second in the production of asparagus, tomatoes, and cranberries.*

There are other ways in which both the economic and the social life of the countryside is transformed by the presence of a city. The marketing of farm products is less roundabout than elsewhere; the farmer usually hauls his own produce to the city, and often sells it direct to the retailer or even to the ultimate consumer. Such portions of the urban region as are easily accessible by motor offer the opportunity for a yet more direct form of marketing, that is, the roadside-selling of produce to motorists driving out from the city.

The labor supply of the farmer is also affected by the city. The competition of the urban labor market forces the farmer to depend largely upon the services of himself and his family. This fact, together with high land-values, makes small-scale farming far more prevalent than elsewhere. Thus, it has been found that farms situated within a nine-mile radius

* United States Children's Bureau, Bureau Publication Number 123: A. Channing, *Child Labor on Maryland Truck Farms*, 1923. Number 124: *Work of Children on Truck and Small Fruit Farms in Southern New Jersey*, 1924. Also J. Brunhes and C. Vallaux, *Geographie de la Histoire*, Paris 1921, p. 37.

of the city of Louisville, Kentucky, average less than half the size and nearly three times the value per acre of those farms that are three or four miles farther removed from the city.*

On the other hand, the city offers to these close-in farms an abundance of inexpensive labor for short periods of "peak-load" activity. The bulk of this labor supply comes from the women and children occupying the city's slum areas, to whom this type of employment is often looked upon as something in the nature of a country outing. The United States Children's Bureau found that during the crop season of 1921 there were 140 migrant families with a total number of 262 children engaged in gathering small fruits and vegetables in one of the rural counties near the city of Baltimore.

The city also makes possible alternative and auxiliary occupations for the rural-dwellers within its orbit of influence. The farmer's wife may run a tea-room or operate a gasoline station, while he attends to his crops. He and his son may seek employment in a factory during the winter months. His daughter may commute daily to an office in the city.

In many instances, the most profitable agriculture in the neighborhood of a city requires a type of person very different from that in remoter regions, for hand labor, unremittingly applied, is involved. In this country, such farming often proves uncongenial to the native American and is abandoned to the immigrant and his children. As a result there are to be found near every large American city old-established farming areas resembling the peasant-farming communities of Italy, Poland, Germany, or Holland. In 1924, the United States Children's Bureau found that over 70 per cent of all the farm families in southern New Jersey, visited by its investigators, were immigrant.†

On the other hand, in the Pacific-Coast region of the United States, more particularly in California, are to be found a number of small farms, from one-half acre to five acres in extent, all of them within commuting distance of

* United States Department of Agriculture, Bulletin No. 678; J. H. Arnold and F. Montgomery, *Influence of a City on Farming*, Washington 1918.

† See also J. Daniels, *America via the Neighborhood*, New York 1920, Chap. XIII.

the city proper. Many of them serve primarily as suburban homes for families whose chief support comes from the city. Yet, on each of them, some sort of farming enterprise (poultry, small fruit, vegetables) is followed, partly for home consumption, partly for income. These suburban small farms seem to represent the maximum effect of the city upon the rural area surrounding it, for they are transitional in character, being partly suburban and partly rural.

### THE FACTOR OF ACCESSIBILITY

WHEN one attempts to plot on a map the rural residue of any urbanized region, he is immediately struck by the extreme irregularity of its shape. At one point it approaches the borders of the city proper. At others, it retreats a dozen miles or more. Indeed, its inner margin is contorted into deep indentations and bulging extensions, very much like the boundaries of a thoroughly-gerrymandered political district. This eccentricity of outline is due chiefly to the wide variations in the typical urban area's zones of accessibility.

Fig. 14 shows graphically how irregular the zones of accessibility in an urban area can be. Thus, the circle connecting points equidistant by thirty miles from the New York City Hall passes through some districts that are less than an hour's ride from the metropolitan center, as at Greenwich, Connecticut, and others that can be reached only after a trip consuming more than an hour and forty-five minutes, as in the Pompton Lakes, New Jersey, region. There is even wider variation within the forty-mile zone. New Canaan, Connecticut, is only a little over an hour and fifteen minutes from the City Hall of New York, whereas the district west of Sterling Forest, New Jersey, is more than two hours away — is in fact, outside the commuting zone altogether.

Consideration of these variations indicates that in the main they are the corollary of topographical factors together with differences in transportation facilities. The Hudson River separating Manhattan from New Jersey offers more of a barrier than does the East River separating it from Long Island; while the Harlem River flowing between Manhattan

and the New York-Connecticut mainland is scarcely any barrier to communication at all. Consequently, points in New Jersey are all the way from fifteen minutes to half an hour

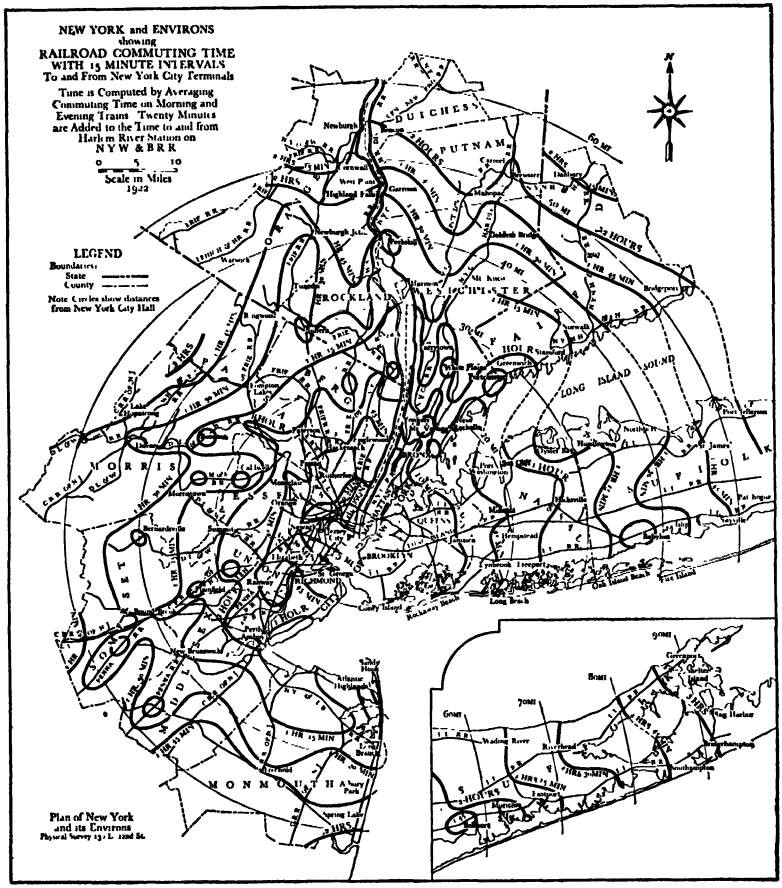



FIG. 14. THE FACTOR OF ACCESSIBILITY: COMMUTING BELTS IN THE NEW YORK REGION *

more remote than equidistant points on Long Island; and three-quarters of an hour to an hour and a half more remote than corresponding points on the mainland of New York and Connecticut. Local eccentricities in accessibility appear to be due largely to differences in transportation facilities. Thus,

* From H. M. Lewis, *Transit and Transportation.*

Bound Brook, New Jersey, is served by both the Lehigh Valley and the Central of New Jersey Railroads, the latter having a heavily-patronized commuting service in that direc-

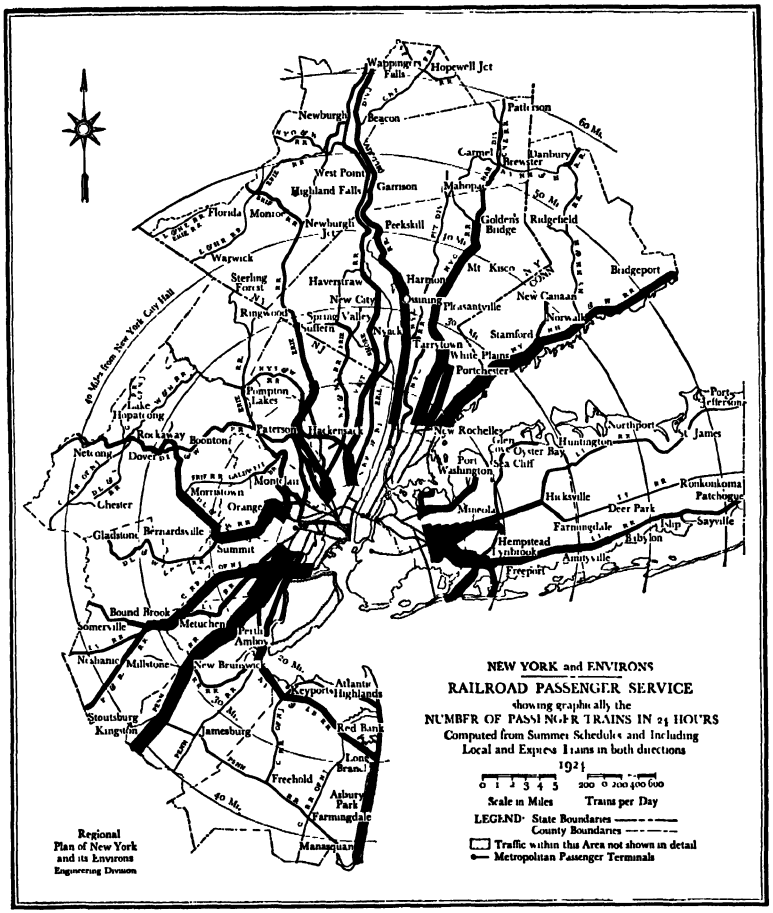



FIG. 15. TRANSIT INTO A MODERN CITY: NEW YORK AND ITS RAILROADS *

tion. On the other hand, the region west of Montclair is served only by a little-traveled branch of the Erie Railroad, which, moreover, makes a wide detour before reaching it.

Such differences in accessibility inevitably affect the distri-

* From H. M. Lewis, *Transit and Transportation*. (A few of the smaller places appearing on the original map have been omitted in this reproduction.)

bution of population, making one area a clearly-defined suburban or satellite-city community, while another, no further from the metropolitan center, remains almost wholly rural. Turner,* calculated in 1920 that there were nearly 5,600,000 persons living within a radius of twenty miles from the City Hall of New York on the New York side of the Hudson River, but only a little over 1,900,000 on the New Jersey side.

Even more striking are the contrasts between urbanized and rural-residue portions of a city region when local differences in accessibility are considered. The North Shore area along the west shore of Lake Michigan, just north of Chicago, as compared with the district immediately to the west, is a case in point. The former is a succession of suburban communities from Evanston, just north of the Chicago city limits, to Lake Forest. It has had first-rate transportation for a number of years. The Chicago and Northwestern Railway has provided it with an excellent commuting service for over a generation, and for about two decades it has been served by one of the best electric rapid-transit systems in America. It has been connected with Chicago by a trunk boulevard, Sheridan Road, since the eighteen-nineties. In addition, its almost continuous series of high wooded bluffs overlooking Lake Michigan make it one of the most attractive residential areas in the Chicago region.

The section immediately to the west has had a different history. For the most part, it consists of flat monotonous prairie but it is no more unattractive in this respect than the densely-populated Northwest Side of Chicago that lies to the south of it. Its chief lack is, or until a few years ago was, in transportation. It has had no extensive railroad commuting service; it has had no electric rapid transit at all; and its highways have been neglected. As a consequence, it has remained an almost unbroken succession of truck- and poultry-farms, and cross-roads villages, only occasionally occupied by straggling outposts of the nearby metropolis, in the form of country clubs, of roadhouses, and of religious,

* Quoted in H. M. Lewis, *The Transit and Transportation Problem* (Regional Plan of New York and its Environs, Engineering Series, Monograph No. 2) New York 1926, p. 23.

educational, and corrective institutions. And yet, while this district has stayed so persistently and amazingly rural, a bare five miles away an intensive process of suburbanization has been under way for nearly two generations. Within recent years the contrast between these two neighboring areas has been somewhat lessened, partly by virtue of the development of motor transportation; partly because of the extension westward of feeders from the electric rapid transit lines serving the North Shore.

Similar contrasts arise from differentials in accessibility by means of highways, particularly in the present-day régime of motor-vehicular transit. Until well into the present century, the town of Silver Spring, Maryland, just across the border from the northernmost point of the District of Columbia, remained a country village. With the improvement in highway transportation from the central portion of the District, however, this little community has undergone a kaleidoscopic process of transformation, first, into a residential suburb and then into a segment of the urban fringe of Washington proper. Yet, even in 1930 those sections of the area that were not on "the Pike" or immediately accessible to it, remained very little changed. It is still possible to take a 20-minute walk from the outskirts of Silver Spring and to encounter primitive log-cabins, set in the midst of bedraggled corn patches and inhabited by Negroes living very much as did their slave-born grandparents who watched Jubal Early's veterans sweep past their doors.

On occasion, parts of an urbanized region experience a recrudescence of rural character, because of alterations in the factor of accessibility. The abandonment of electric interurban railways in certain sections of the Massachusetts-Rhode Island-Connecticut conurbation has resulted in the reclaiming by the countryside of parts of the territories formerly served by these railways.*

Usually, however, the change that takes place is all the other way — the steady conversion of sections of the open country into segments of urbanized and quasi-urbanized territory, under the pressure of urban growth.

* Paper by L. B. Fawcett, before World Conference of Geographic Associations, quoted in *Washington Star*, Jan. 24, 1929. See also *Geography*, March, 1929.

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# CHAPTER IV

## *CITY GROWTH AND ITS CONTROL (CITY AND REGIONAL PLANNING)*

THE MAYOR of a great American city is reported to have said that he was going abroad in the hope that, by the time he returned, " they might get the old town finished." But when he returned the " town " was not finished and will not be for many a generation. No city can escape growth and change until it encounters the stagnation that spells decay and dissolution. The only cities that do not change are those which have lost their vitality. Rothenburg, Bruges, and Carcassonne: these are all changeless cities — and they are all dead cities.

Urban expansion appears to go forward by means of three types of processes, *symmetrical and asymmetrical growth* and *absorption*. Other aspects of the phenomenon of urban growth are: its *extent*, its *consequences*, and its *control* — the subject of *city and regional planning* being included under the last-mentioned topic.

### TYPES AND DIRECTION OF URBAN GROWTH

CITIES grow like trees. They add layer on layer of urbanized territory onto the central cores constituted by their original point of settlement. When no other forces interfere, the city, by pushing out along the traffic arteries radiating from it, tends to develop a circular or symmetrical type of urban community.

#### SYMMETRICAL AND ASYMMETRICAL GROWTH

THE city of London has for a millennium, and longer, steadily and implacably pushed out in all directions into the coun-

try around it until today it lies athwart the Thames Valley like a vast urban sea, nearly seven hundred square miles in area. In the United States, Denver and Philadelphia have also, by and large, grown symmetrically and developed into symmetrical urban agglomerations.

Most cities, however, do not exhibit so simple a pattern of growth as do those which have just been mentioned. More often, the city's expansion proceeds more rapidly in one direction than another, and at certain points it may be altogether inhibited.

The result of this sort of process is a distorted or asymmetrical type of city growth, and the influences bringing about such development are generally topography, transportation, or local economic and social forces.

The relation of topography to urban growth has been thoroughly discussed in the preceding chapter. It may, however, be pointed out that, in the case of one city, topography may exercise a dominating rôle during the early stages of growth, and a quite subsidiary one later; while, in the case of another city, just the reverse is the case. As New York City overflows upon Long Island and the mainland above the Harlem River, it escapes the restrictive influences of its insularity and begins to exhibit the characteristics of normal circumferential or symmetrical growth. On the other hand, Pittsburgh has outgrown the limited open space of "the Point," and has been forced to accommodate itself to a network of hills and valleys.

Ordinarily, transportation tends to promote a symmetrical form of city growth, for, as just pointed out, the city is typically the center of a number of converging lines of communication and its expansion proceeds outward in various directions along them. Occasionally, however, one or another traffic way dominates all the others and the city's most extensive growth follows it. This is particularly likely to occur when the city is linked up with some great traffic route.

The cities of Rome, Rochester, and Buffalo, New York, are all more or less affected by their locations along the great highway to the West formed by the Mohawk Trail and its western extension. Similarly, the old Boston Post

Road from Boston to New York influenced the growth of such cities and towns as Cambridge, Watertown, Waltham, and Worcester, Massachusetts.

At times the social and economic circumstances attending a city's development make it expand irregularly. Washington, D.C., is one of the very few cities of modern times which has been established on the basis of a carefully drawn — and highly symmetrical — plan. Yet Washington's growth has been far from symmetrical. It has expanded more rapidly in a northwesterly direction than elsewhere. Extensive growth to the south is, of course, precluded by the barrier of the Potomac River, but no such obstacle appears in any other direction. As has already been shown, the principal influence appears to have been the glamour and prestige of the preferred "Northwest section" for residences in the immediate vicinity of the White House.

Fort Worth, Texas,* has expanded chiefly in a north-and-south direction, although nothing in its topography precludes a normal circumferential type of expansion. It seems to have taken this course chiefly because of the stockyards and packing plants, upon which most of the city's early development was founded, established to the north of the city proper. The preferred residential district migrated to the south, as far away as possible from the odors and smoke of the stockyards district, and the middle-class residential districts followed suit. As the central commercial area expanded, the residential South Side continued to push southward. On the other hand, a working-class residential area sprang up to the north of the stockyards district. Originally, this area was a separate, industrial suburb but as the intervening territory has been occupied, it has become incorporated into the city proper as the North Side.

### GROWTH BY ABSORPTION

SOMETIMES also a number of small communities coalesce (*agglomerate* in the terminology of Maunier),† to form a larger city. Lagash, in Babylonia, and Rome were such

* The author is indebted for this account of Fort Worth to Miss Clay Sandidge.

† R. Maunier, *L'Origine et la Fonction Économique des Villes*, Paris 1910, pp. 68–69.

cities. Georgetown was a well-established community before ever the federal city was dreamed of, having been laid out in 1751 and incorporated in 1789. As late as 1864, it was sufficiently important to contain the customs house for the District of Columbia and it was governed as a separate municipality until 1871.* Today, however, it is completely incorporated — politically and otherwise — into the city of Washington. Since the day when the Aventine Hill was forcibly annexed by the city of Rome, a fate similar to that of Georgetown has been suffered by hundreds and, probably, thousands of communities that have stood in the way of the outward expansion of some large city. In most cases these absorbed communities are so completely submerged as to have even their names forgotten.

Occasionally, however, some shreds of its individual entity remain, as a decentralized residential community center or as a subsidiary commercial area. This is particularly likely to be the case when some old landmark or institution, harking back to the earlier days of the older community, survives the tide of urbanization. Such a community rallying-point is Bunker Hill and its Monument, in Charlestown, Massachusetts, and the City Hall in Brooklyn, New York. *Mont St. Genevieve,* which has been incorporated in the city of Paris for centuries, retains enough of its former identity to have made it possible for an appeal for a public subscription, in 1929, to be addressed to "*Les Montagnards.*"

Once in a while a community is even able altogether to escape assimilation by a metropolis. Evanston and Oak Park, Illinois, have blocked repeated efforts at annexation by the city of Chicago and seem destined to preserve their civic individuality for an indefinite period. More remarkable are the communities of Highland Park and Hamtramck, Michigan, which are completely surrounded by the city of Detroit and yet are completely independent of it, the former being a city and the latter an "incorporated village" albeit it had in 1926 a population of nearly 90,000.

Yet these triumphs of localism over urbanism tend to be

* See H. T. Taggart, "Old Georgetown" in *Records of the Columbia Historical Society,* Vol. XI, 1908, pp. 120–225.

rather in the nature of Pyrrhic victories. As the larger city grows up to the smaller one, it absorbs the latter economically and socially, so that the two become for most practical purposes merged. It is said by residents of Detroit that they are aware that they are passing through the village of Hamtramck, only because of the fact that the traffic signs are of different design from those in the larger city!

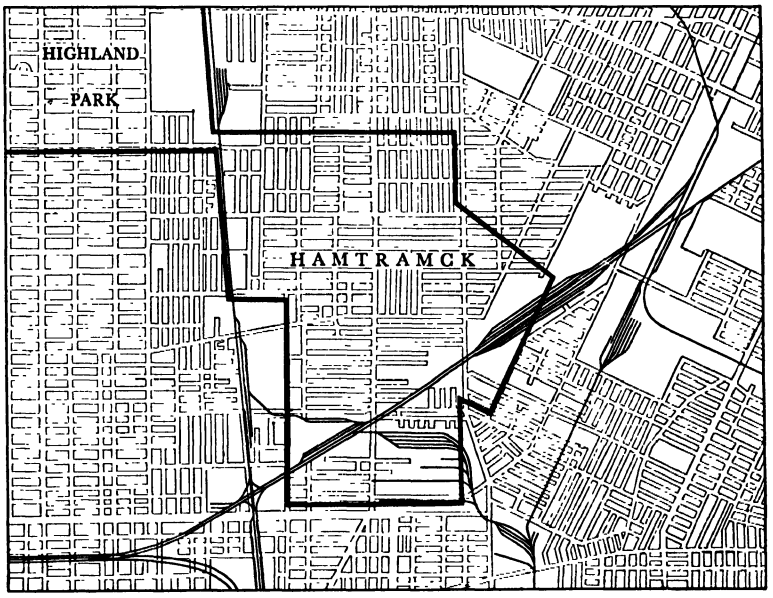



FIG. 16. A CITY WITHIN A CITY: DETROIT, HAMTRAMCK, AND HIGHLAND PARK

On the other hand, the only individuality left to the absorbed community is often that which inheres in its street plan, for, as in ancient Rome, a community's street plan may survive the vicissitudes of generations and even of centuries. Writing in the *Encyclopedia Americana* on Brooklyn, Leonard-Stuart says of the villages that were, one after another, acquired by the city (now the borough) of Brooklyn, New York: "Williamsburg, Flatbush, Canarsie, Bushwick, and East New York — more than twenty villages and hamlets all told, that are now parts of the Borough of Brooklyn — had each its own plan and its own system of nomenclature. The

result has been hopelessly and to a large extent irremediably confusing. Duplications of street names may be corrected . . , but the confusion resulting from the multiplicity of independent plans on which the various parts of the borough were originally laid out has never been wholly corrected, and Brooklyn will continue to be a puzzle to strangers and even to old residents."

## THE EXTENT OF URBAN GROWTH

THE growth of cities shows variations not only in the matter of direction. There are also marked differences in the extent of urban expansion. Los Angeles, California, occupies more territory than any other city in the Western Hemisphere * but ranks only as fifth among the cities of the United States in point of population.

Table III, based on the United States Census for 1920, shows that both New York and Chicago are decidedly inferior to Los Angeles in extent, though very much larger in population.

### TABLE III

POPULATION AND AREA OF NEW YORK, CHICAGO, AND LOS ANGELES, 1920 †

| *City* | *Population* | | *Area [Acres]* | |
|---|---|---|---|---|
| | *City Proper* | *Entire Metropolitan Area* | *City Proper* | *Entire Metropolitan Area* |
| New York | 5,620,048 | 7,910,415 | 191,360.0 | 751,887.3 |
| Chicago | 2,701,705 | 3,178,924 | 123,382.9 | 469,569.6 |
| Los Angeles | 576,673 | 879,008 | 234,037.0 | 831,605.0 |

* An Associated Press Dispatch released in October 1928, quotes the Berlin Statistical Bureau to the effect that Los Angeles is the largest city in the world, with Berlin the second largest.

† From Abstract of the *Fourteenth United States Census*, Table 19.

Similar discrepancies are to be found in Europe, as Table IV shows.

TABLE IV

POPULATION AND AREA OF PARIS AND BUDAPEST, 1926 *

| *City* | *Population* | *Area [Hectares]* |
|---|---|---|
| Paris | 2,871,429 | 7,802 |
| Budapest | 964,386 | 19,444 |

Chicago has about one-half of the territory of Los Angeles, and New York about seven-eighths, but the present population of Los Angeles is only about 36 per cent of that of Chicago and 17 per cent of that of New York. Paris has almost exactly three times the population of Budapest but less than half its area.

The reasons behind these disparities can only be conjectured. Topography exerts some influence, it is certain. The excessive density of New York City is attributable largely to the fact that it originated on an island. Yet no such limitations apply to Chicago, and Paris out-grew the tiny islet of the *Cité* centuries ago. Differences in age may have had some influence between New York and Chicago, on the one hand, and Chicago and Los Angeles, on the other, since the younger the city, the greater part has rapid transportation played in its development, and the farther-flung can its territory be. However, both New York and Chicago have enjoyed modern transportation facilities for generations; as for Paris and Budapest, they are both ancient capitals of long-established states.

When, however, the *period of greatest growth* of the various cities is related to the development of rapid transportation, a clue to their differing territorial extension appears. Rapid transportation has been an effective influence in the distribution of urban populations since about 1860, and, with the technical improvements that have come in the succeeding years, its importance has constantly increased. Reference to the population figures for the cities listed in

* From *Annuaire Statistique des Grandes Villes.* The Hague 1927, Tables 2 and 11.

Table V shows that those cities which occupy the widest territory are those whose period of maximum expansion has been the most recent.

TABLE V

INCREASE OF POPULATION, VARIOUS CITIES, 1800–1926 *

| City | Population | | | |
|---|---|---|---|---|
| | 1800 | 1860 | 1920 | 1926 |
| Paris | 547,756 | 1,696,141 | 2,906,472 | 2,871,429 |
| New York | 79,216 | 1,174,779 | 5,620,048 | 5,924,000 |
| Chicago | ..... | 109,206 | 2,701,705 | 2,995,239 |
| Budapest | 54,176 | 197,356 | 928,996 | 964,386 |
| Los Angeles | 315 | 4,399 | 576,673 | 977,291 |

Another factor of importance has probably been the degree to which the regions surrounding these various cities have been occupied. Los Angeles has been able to expand, virtually unhampered, in a nearly virgin agricultural region; Chicago is set in the midst of a fairly thickly-populated agricultural and industrial region; New York is surrounded by an area that is almost continuously urbanized for hundreds of miles.

Likewise, Paris lies in the heart of a region that has been thickly settled and more or less urbanized for centuries, whereas Budapest is the one large city in a country of peasant farmers.

These interpretations of the disparities in the extent of urban growth are, of course, largely conjectural. However, whether it can be satisfactorily explained or not, it remains as a most significant factor in urban sociology. For there are many points of difference between the organization of life in a city as close-built as New York and one as dispersed as Los Angeles.

## THE CONSEQUENCES OF URBAN GROWTH

FEW features of city life are of greater concern to the sociologist than is the process of urban growth. Its consequences pervade the entire field of social life within the city. Else-

* Same sources as Tables III and IV above.

where in this work attention is devoted to the bearing of urban growth upon the life of the city-dweller. At this point, its consequences to the city itself and to the broader aspects of its activities are considered.

There are three ways in which the city is affected by the process of growth: (1) congestion develops; (2) there is a continuous shifting and overlapping of the city's areas of utilization; (3) and most fundamental of all — a quality of instability is imparted to the whole texture of urban activity.

## CONGESTION

CONGESTION has come to be regarded as a normal accompaniment of modern urban life. Yet the cities of the ancient world were also familiar with crowded thoroughfares and over-filled houses, as an earlier chapter has shown.

### THE NATURE OF CONGESTION

MANY influences operate to bring about urban congestion, but the basic one would seem to be the process of growth. The structural features of the city — particularly those to be found in its central area — become progressively less adequate as the city expands. The street-plan is not equal to the burdens of traffic imposed upon it. The transit facilities become overloaded. What Haig and McCrea call the "friction of space" * — that is, the difficulty of gaining access to central locations — increases to such a point that the areas of maximum activity become overcrowded. The enhanced land values accompanying this overcrowding result in a yet more intensive utilization of space — whether for residential uses or business enterprise — and a still greater degree of overcrowding takes place. Moreover, some of the devices designed to relieve urban congestion tend to aggravate it. The erection of high buildings lessens *congestion in density,* but increases *congestion in movement,* by vastly adding to the number of goods and passengers that must be moved into or out of, and within the area affected. The provision of

* R. M. Haig and R. C. McCrea, *Major Economic Factors in Metropolitan Growth and Arrangement* (Regional Survey of New York and its Environs, Vol. I), New York 1927, pp. 38–39.

additional transit facilities — unless they are very skillfully planned — also tends to increase congestion by concentrating the flow of traffic upon those very points where the saturation in population and activity is already high.

### THE CYCLE OF CONGESTION

IN SUM, what might be called a cycle of congestion seems to accompany urban growth. First, *congestion in movement*

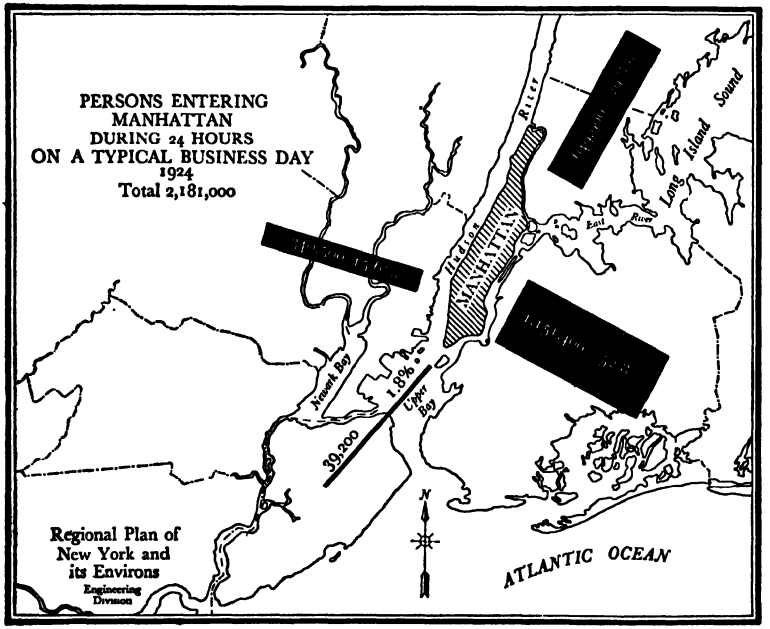



FIG. 17. CONGESTION IN THE MAKING: DAILY TRAVEL INTO MANHATTAN *

follows upon the overloading of existing means of transportation. Second, *friction of space* results in competition for centrally located land, with the view of avoiding the loss of time involved in congestion in movement. Third, *high site values* follow upon friction of space, or rather upon the competitive bidding for centrally located land that accompanies it. Fourth, *congestion in density* is correlative to high land values, since individuals and business enterprises seek to

* From H. M. Lewis, *Transit and Transportation.*

minimize the expense burden of these high values by economizing in the use of space, particularly through the medium of multiple-storied dwellings and commercial structures. Finally, *congestion in movement* is engendered by the increased density of settlement, and the whole cycle of congestion is set once more into action.

Accordingly, a selective process takes place, as the inconveniences and costs of congestion mount up, until only a few specialized activities, such as described in the previous chapter, can afford to remain at the center of the city. Eventually, unless technological changes supervened, continued urban growth would render virtually all activities at the center of the city economically unfeasible, and cause an arresting of expansion, or even regression to a less urbanized condition.

In the modern city, where skyscrapers five and six hundred feet in height are not uncommon, and where multiple-level rapid-transit systems are capable of hauling tens of thousands of passengers an hour, there is an astounding degree of congestion both in population density and in population movement that can take place. In New York City, certain sections of the Lower East Side have had a resident population that average block by block, 867.2 per acre. In this same city, the number of persons entering lower Manhattan, south of fifty-ninth Street on a typical business day of twenty-four hours, in 1924 was estimated at 2,868,700. A single elevated railway line carried over 130,000 persons in twenty-four hours, and over 25,000 persons per hour during the rush hours.*

### THE INESCAPABILITY OF CONGESTION

LATER in this chapter, a section is devoted to the efforts of civic engineering to relieve urban congestion. At this point, it may be observed that no expanding city is likely to escape congestion entirely, however skillful and far-sighted may be the city-planning applied to it. Such efforts may go far

* T. Adams, H. M. Lewis, and T. T. McCrosky, *Population, Land Values, and Government* (Regional Survey of New York and its Environs, Vol. II), New York 1929, p. 56; and H. M. Lewis, *Transit and Transportation* (*Ibid.*, Vol. IV), New York 1928, pp. 35 and 38.

towards palliating and postponing congestion, but, if the foregoing analysis is sound, they cannot hope entirely to overcome it, unless they can prevent urban growth. Moreover, urban growth is the end-product of a multiplicity of events that seem to be only partially subject to conscious human control.

Although congestion is one of the *sequelae* of urban expansion, it is not solely chargeable to this influence. The original configuration of an urban site, as shown in an earlier chapter, often seriously constricts movement, and so tends to increase congestion. Sudden alterations in the modes of transportation also add to congestion by overloading existing traffic ways. The automobile, which has been a typical mode of transportation for less than twenty years, has all but paralyzed traffic in certain urban centers. During the year 1924, there were about 430,000 motor vehicles registered in New York City alone, or about 1 for every 14 inhabitants. During that same year nearly a thousand persons were killed by automobiles. A traffic count on a single street corner in New York showed that motor vehicles were passing that point at the rate of 700 to 800 per hour.*

Eventually, the modern city will adjust its street layout and traffic control to automotive transportation, unless technical and economic changes continue to render such adjustments obsolete almost as soon as they are effected. If and when that time comes, however, congestion will probably still be felt in those cities that continue to grow.

### DISCONTINUITY OF LAND UTILIZATION

No less characteristic of a growing city than congestion is the discontinuity in the type of use to which its land area is put. The two phenomena may, indeed, be said to have a causal relation one to another. It has been seen that "friction of space" is an element in congestion. It also appears as an influence of primary importance in this connection, for it is because of "friction of space" and the high land values that result therefrom, that one type of activity constantly invades another in a growing city.

* H. M. Lewis, *op. cit.*, pp. 42–45 and 80.

It should be repeated that this type of competition for space is to be expected in a *growing city*. In a stationary city, the result of "friction of space" could be expected to work itself out, so that a fairly stable territorial allocation of activities would take place. Some instability could be looked for as the corollary of changes in fashion, new inventions, etc., but, barring these, one would expect a stationary city to exhibit a high degree of stability in the location of its activities — as indeed is the case in those Old-World cities such as Carcassonne, Bruges, and Venice, which have long since ceased to grow.

Not so in a growing city. The more intense manifestations of the "friction of space" become operative over a constantly-widening area, and the result is a continuous thrusting-out from the more desirable areas of competitively weak activities.

Moreover, there does not seem to be any escaping the conclusion that this sequence of phenomena — "friction of space," struggle for space, and displacement — is inevitable in any growing city. City-planning, zoning regulation in particular, can go far towards restraining and guiding this process, but it cannot prevent it.

It is seen, therefore, that two of the most frequently deplored features of city life, congestion and discontinuity of land utilization, are unavoidable in any growing city. Social engineering can hope to hold these tendencies in check and to devise methods of escaping some of their manifestations, but it is not to be expected that they can be prevented unless urban growth is to be stopped.

### THE GENERALIZED PROCESS OF SUCCESSION

THE process by which discontinuity of land utilization manifests itself in the economy of the urban community has been aptly described by Maunier * as *successive*. That is to say, as the city grows, one type of functional development succeeds another. The successive displacement of one type of land utilization by another may be said to proceed through

* R. Maunier, *op. cit.*, p. 166. See also R. E. Park, E. W. Burgess, and R. D. McKenzie, *The City*, Chicago 1925, p. 50.

two sorts of processes: succession of general types of use; and succession of particular types of use. Succession by general types of use goes forward in fairly uniform manner in most urban communities. It proceeds from the center outwards. And it exhibits a characteristic pattern, the displacement of integumental industrial, trading, and residential areas by the expanding central commercial area; the displacement of one type of residential area by another; and the displacement of rural areas by urban fringe residential or industrial areas.

One has only to drive in a straight line from the center to the outskirts of any growing city to observe the evidences of this process. Here is an old mansion transformed into a commercial building by means of a store-front built into its façade. There is an entire block of erstwhile middle-class homes now doing duty as multiple-family slum dwellings, their stables converted into yet dingier habitations. Further out is encountered a group of towering apartment houses elbowing their way into a neighborhood of noble residences and spacious, carefully-tended lawns. Near the edge of the city, a subdivision with its newly-painted houses and freshly-laid pavements contrasts incongruously with the straggling fruit-trees, the sagging fences, and the decrepit barns of the farms that have already been purchased by the real-estate developer and are awaiting the onslaught of the steam-shovel and the ditch-digger. A half-mile away, the smoke from a switch-engine that is hauling structural steel to a newly-cleared factory site rises above a patch of woodland which has remained inviolate for half a century.

Tarkington, in *The World Does Move,* has given a striking interpretive description of this generalized successive process in a middle-western city.

> Cameras of the new age sometimes record upon strips of film the slow life of a plant from the seed to the blossoming of its flowers; and then there is thrown upon the screen a picture in which time is so quickened that the plant is seen in the very motions of its growth; twisting itself out of the ground and stretching and swelling to its maturity, all within a few minutes. So might a film record be made of the new growth bringing to full life a quiet and elderly Midland town; but the picture would be dumbfounding. Cyclone, earthquake, and miracle would seem

to stalk hand in hand upon the screen; thunder and avalanche should play in the orchestra pit.

In such a picture, block after block of heavy old mansions would be seen to topple; row on row of stout buildings would vanish almost simultaneously; families would be shown in flight, carrying away their goods with them from houses about to crumble; miles of tall trees would be uprooted; the earth would gape, opening great holes and chasms; the very streets would unskin themselves and twist in agony; every landmark would fly dispersed with powder upon the wind and all old-established things disappear.

Such a picture would be but the truth with time condensed — that is to say, the truth made like a man's recollection of events — and yet it would not be like the truth as the truth appeared to the men who made the growth, nor like their subsequent memories. For these men saw not the destruction, but only the city they were building; and they shouted their worship of that vision and were exultant in the uproar. They shouted as each new skyscraper rose swimming through the vast drifts of smoke, and shouted again as the plain, clean, old business streets collapsed and the magnificent and dirty new ones climbed above the ruins. They shouted when business went sweeping outward from its centre, tearing away the houses where people had lived contentedly for so long; and they shouted again as the new factory suburbs marched upon the countryside, far and wide, and the colossal black plumes of new chimneys went undulating off into a perpetual smoke mist, so that the distant level plain seemed to be a plain surrounding not a city, but an ever-fuming volcano.*

### THE SHIFTING OF POPULATION

AN interesting by-product of the outward push of the central commercial area upon the surrounding residential areas is a shifting of population. At the core of the city, population increase is halted or even converted into a decrease, while the urban fringe and the suburban areas proceed to grow apace.

Table VI, taken from the Census of England and Wales for 1921, gives striking evidence of the way this feature of urban growth is manifested for the London Metropolitan Area.

* From *The World Does Move*, copyright 1928 by Booth Tarkington, and reprinted by permission of Doubleday, Doran and Company, Inc.

TABLE VI

PERCENTAGE OF POPULATION CHANGE, 1911–1921 IN DIFFERENT SECTIONS OF GREATER LONDON *

| *Area* | *Per cent Increase* | *Per cent Decrease* |
|---|---|---|
| Central Core (City and Inner Metropolitan Boroughs) | | 9.1 |
| Outer Zones of City Proper (Remainder of London Administrative County) | 2.0 | |
| Peripheral Sections and Urban Fringe (Outside the London Administrative County but wholly or partly within a radius of 10 miles from Charing Cross) | 9.0 | |
| Nearer Suburbs (Outside the 10-mile radius but within greater London — approximately 15-mile radius) | 15.8 | |

The 1920 and the 1930 census enumerations of New York City reveal a similar process. The more remote boroughs show high rates of increase, while the central borough of Brooklyn shows a low rate of increase and Manhattan, an actual decrease.

TABLE VII

POPULATION CHANGES IN THE BOROUGHS OF NEW YORK 1920–30 †

| *Borough* | *Population* 1920 | *Population* 1930 | *Per cent of Change* |
|---|---|---|---|
| Manhattan | 2,284,103 | 1,867,312 | − 18.0 |
| Brooklyn | 2,018,536 | 2,560,401 | + 28.6 |
| Richmond | 116,531 | 158,346 | + 35.3 |
| Bronx | 732,016 | 1,265,258 | + 73.0 |
| Queens | 469,042 | 1,079,129 | + 130.0 |

* Adapted from Census of England and Wales 1921, *General Report*, London 1927, p. 28.

† From final figures 15th (1930) United States Census.

SPECIALIZED PROCESSES OF SUCCESSION

THE broad outlines of the generalized process of succession of different types of land utilization in a growing city can be described fairly easily. This is not the case with succession of particular types of land utilization. This process is so intricate and shifts its base so often that its pattern can scarcely be traced. As Haig and McCrea show, those activities deriving no great advantages from central locations are steadily crowded out towards the periphery of the city, the rate of their movement depending upon the rate of growth of land values which, in turn, depends upon the city's growth. That is to say, an exclusive shop, selling expensive jewelry will always find it desirable to remain in the central commercial area, the profits derived from a favorable location being more than sufficient to compensate for the high rent. On the other hand, a shop dealing in the cheaper and more standardized types of jewelry would find itself pushed out from the center of the city, probably towards one of the city's subsidiary commercial centers. Its goods are not such as yield a high margin of profit; so that it has difficulty in meeting high rents. Also, there is nothing so unique about its merchandise as to attract customers from widely-separated portions of the city; therefore there is no particular disadvantage in being away from the center of the community.*

In such cases, the factors underlying the displacement of one type of land use by another seems to be easily explained. In others, the elucidation of the antecedent influences affecting this process is, however, very difficult. Why, for example, has meat-packing, which in general has been excluded from large metropolitan centers, been able to maintain a foothold within a few blocks of the Forty-second Street shopping area of New York? The answer to this question has to do in part with inertia, with the difficulty of selling any but fresh-killed pork in the New York market, and with the demand of thousands of orthodox Jews in New York for only

* See R. M. Haig and R. C. McCrea, *op. cit.*, pp. 69–70. The entire discussion of the location of special types of land utilization at this point is based on principles laid down by these writers. See also R. D. McKenzie, *op. cit.*, p. 74.

kosher meat, which has been slaughtered not more than seventy-two hours.

Why, again, has the wholesale fur trade in New York City begun to migrate uptown from the vicinity of the Pennsylvania terminal, and why is the wholesale flower trade occupying the locations that the wholesale fur trade vacates? The explanation for this phenomenon probably is related to the tendency of the retail fur trade to move uptown in common with retail trade in general, and the desirability of keeping the wholesale trade — much of which is conducted on a special-order basis — in close touch with the retail trade.

These illustrations could be multiplied indefinitely. They are sufficient to suggest that the migrations and invasions of every growing city are the responses to a number of intricate and recondite circumstances in which chance, inertia, fashion, as well as all the multitude of influences playing upon the economic life of a city play their part. They serve also to suggest how hard it is for any individual or group to predict the way in which the process of succession in particular types of land utilization will work its way out, let alone to control it.

### THE AREA OF TRANSITION

As pointed out above, the *area of transition* is another consequence of urban growth. It does not require further discussion here.

### INSTABILITY AS A CHARACTERISTIC NOTE IN THE LIFE OF AN EXPANDING CITY

IT IS scarcely to be doubted that the way of life of the occupants of any urban area is profoundly affected whenever the process of succession of use types overtakes it. A transitional area is not an altogether normal area whether it is actually deteriorated or not. And every section of a growing city becomes, sooner or later, a transitional area. Some sections undergo the vicissitudes accompanying the transformation of the character of their development, not once, but a half-dozen times within the span of a human life. In a real sense, the whole expanse of any growing city is one vast area of transi-

tion. As a result of this, the instability, in physical appearance, in institutional organization, in mental habit, that accompanies the change in the character of a local area, is imparted to the entire city. Any growing city is a changing city, and many aspects of its life are rendered unstable because this is so.

## THE CONTROL OF CITY GROWTH – CITY AND REGIONAL PLANNING

City planning is a specialty which involves such a mass of technical knowledge that it cannot be given anything ap-

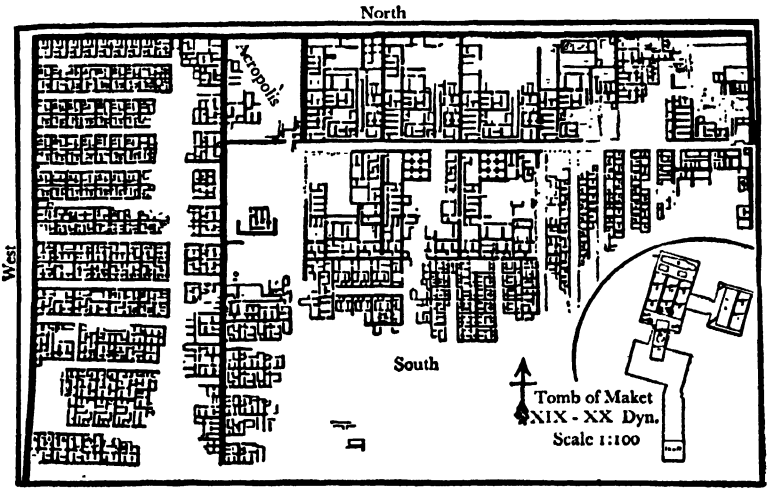



FIG. 18. TOWN PLANNING THREE THOUSAND YEARS AGO: THE PLAN OF KAHUN, AN EGYPTIAN WORKERS' VILLAGE *

proaching adequate treatment in a work of this sort. It must suffice summarily to indicate the principal objectives of this profession, and to indicate their relation to the broad principles of urban sociology.

In earlier times, urban civic engineering has subserved a variety of purposes. Among them were defence, worship, and æsthetics. These objectives — the latter two, at least — still have a place in the counsels of the city planner. Nevertheless they are dominated by two others, health and effi-

* From H. V. Lanchester, *Art of Town Planning*, Chapman & Hall, Ltd.

ciency. These *desiderata* have probably never been wholly neglected in urban design, but it is unlikely that they have been of such primary importance as they are today. The urbanization of the nineteenth and twentieth centuries is characterized at one and the same time by tendencies inimical to individual health and to economic and social efficiency and by a keen awareness of the desirability of correcting these tendencies.

The civic engineer addresses himself to his task by undertaking (1) to correct the consequences of urban growth in the past; (2) to guide and restrain urban growth in the present; and (3) to anticipate and direct urban growth in the future.

### THE CORRECTION OF THE CONSEQUENCES OF PAST GROWTH

A STREET system once adopted and developed must remain indefinitely. . . A catastrophe such as the great fire of London, in 1666, or the San Francisco fire, in 1906, may afford an opportunity for a recasting of the plan for a considerable area, but it is seldom availed of.*

This quotation from Lewis serves to suggest the nature of the task which the urban civic engineer undertakes when he sets out to correct the results of past city growth.

### THE RECONSTRUCTION OF THE CITY PLAN

THE most effective form of corrective civic engineering is the reconstruction of the city plan, but such measures are of only limited effect. Street-lines, once established, can be altered with the greatest of difficulty, for the whole gamut of economic and other activities adjust themselves to the original pattern. Moreover, the cost of demolishing buildings and other structures for the purpose of establishing new street lines is large, and the compensation to their holders is enormous, although this last cost can be reduced by the device known as "excess condemnation." Thus, the Fairmount Parkway improvement in Philadelphia — a boulevard cut through the heart of the downtown district — involved the demolition of more than 1000 structures, and cost the city $30,000,000, while the ten major street improvements called for in the Chicago Plan Commission's program is expected

* N. P. Lewis, *The Planning of the Modern City* (2d Ed.), New York 1923, p. 48.

to cost nearly $100,000,000. It is therefore scarcely to be wondered that the average city undertakes radically to alter its existing configuration only in rare cases, and that the original nuclear points of Philadelphia, Boston, New York, Paris, and London are laid out very much as they were two centuries or more ago. In point of fact, the six principal highways leading into central London are built on the lines laid out by the Romans.

On occasion, however, extensive modifications in the structure of the city may be accomplished, if the need is great, and if those entrusted with the task of reconstruction are resolute and far-seeing, and have at their command an amplitude of funds and of authority. The multiple-level streets now being constructed in Chicago, to which reference has just been made, are virtually making over the districts through which they are being laid.

The most conspicuous example of the possibilities of a comprehensive program of urban re-planning is furnished by Paris. As early as the eighteenth century, Louis XIV began to enlarge the Tuilleries gardens. At intermittent periods until the later years of the nineteenth century, but especially during the régimes of Napoleon I and Louis Napoleon, the central portion of Paris was transformed. The old fortifications were converted into boulevards; open spaces were enlarged and new ones added; avenues were cut straight across the wildernesses of ancient buildings and tortuous streets that had been inherited from the medieval city. The last set of improvements, executed by Baron Haussmann under the authority of Louis Napoleon, is estimated to have cost over $246,000,000.*

### CO-ORDINATED PLANNING AND REGULATION

GENERALLY speaking, however, the urban civic engineer intent upon the remodeling of a city that has already completed the initial stages of its growth must rely upon such devices as the co-ordinated planning of public building and the regulation of private building. Such measures are most

* H. V. Lanchester, *The Art of Town Planning* (University Art Series), London and New York 1925, pp. 97–101.

effective as means of guiding and directing urban growth, and they are capable of working considerable change in already-established sections. Chicago and Washington are

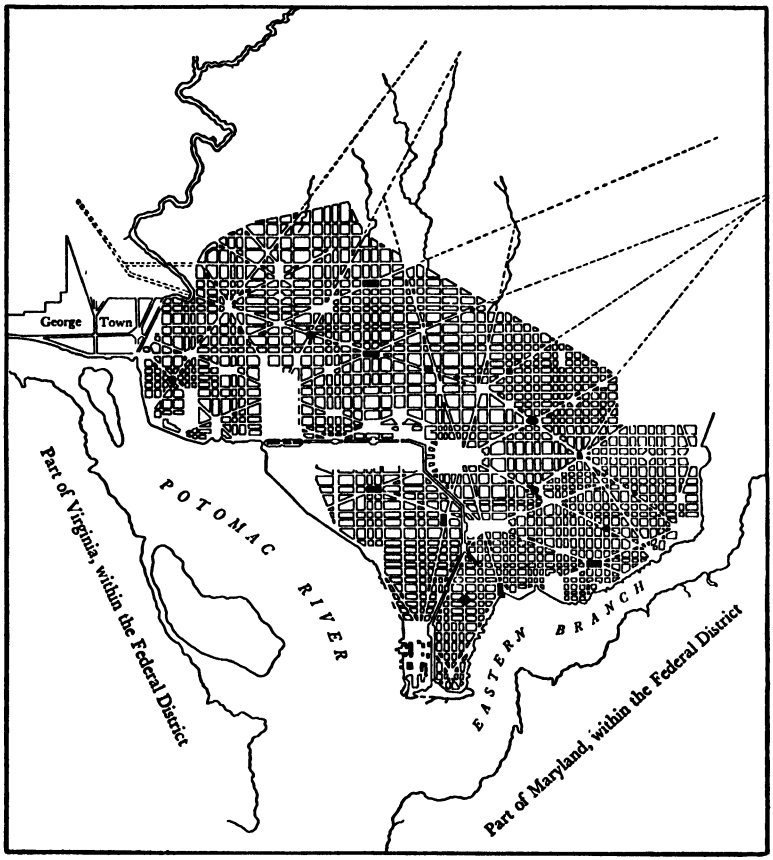



FIG. 19. A CITY BUILT-TO-ORDER: THE ORIGINAL PLAN OF WASHINGTON *

both evolving extensive civic centers by the expedient of locating public and quasi-public buildings according to a prearranged plan. The efficacy of building regulations and zoning laws in an urban area is evident to anyone who has watched developments in New York City in the vicinity of

* From E. Kite, *L'Enfant*. By permission of the Institut Français de Washington.

the Grand Central Terminal within the past ten years. Nevertheless, it is well to remember that, despite more than half a century of housing reform and building laws, New York City, in 1927, still possessed over 556,000 tenement apartments, housing more than 2,500,000 people.*

### TRAFFIC CONTROL AND RAPID TRANSIT

TRAFFIC control and rapid transit are not, strictly speaking, measures for connecting the results of urban growth, but they are devices for escaping one of its characteristic consequences, congestion. It has been seen that traffic regulation is at least as old as Imperial Rome. Rapid transit in the form of suburban railways, street railways, omnibus-lines, subways, elevated railways, motor speedways, and air-ports — either or all of them — is a feature of virtually every city on earth.

Both expedients are of great value in mitigating the more extreme phases of congestion, but they cannot go far towards reducing it. Moreover — as has been suggested — many types of rapid transit development actually add to congestion by increasing the number of people that may be transported to the focal points of urban activity.

As G. S. Rogers points out in an unpublished manuscript, no plan of traffic regulation or of rapid transit development can achieve its maximum of usefulness unless it is co-ordinated with an orderly distribution of population and of economic activities. If this distribution is unbalanced from the beginning, the flow of traffic is bound to be obstructed and congested, in spite of everything that can be done to expedite it.

There is no intention here to minimize the value of carefully-controlled traffic or of adequate rapid transit. One has only to drive through a city where traffic is inefficiently directed to appreciate the value of traffic regulations. Again, let one try to make a crosstown train connection in a large city imperfectly equipped with rapid-transit — as, for example, Chicago — and he will perceive that such improvements are an indispensable adjunct of urban life. On the other hand, one has only to ride in a subway train during the

* T. Adams, H. M. Lewis, and T. T. McCrosky, *op. cit.*, p. 58.

morning and evening rush hours or to watch the maelstrom of vehicles in even the most rigidly traffic-controlled city thoroughfare to realize that traffic regulation and rapid transit, by themselves, can accomplish only limited results in a city whose structural features have already been established.

Corrective urban civic engineering is thus seen to be of restricted efficacy, although such palliatives and reconstructive measures as it can accomplish are often of great immediate value.

### THE GUIDING OF URBAN GROWTH

THE growing city is still relatively plastic. It offers wide scope to the city-planner. His armamentarium consists chiefly of two devices: (1) zoning and (2) street-planning.

### ZONING

ZONING is an administrative device whereby a city is divided into sections, and the use to which the land in each section is put is regulated according to the character of each sector. In 1927 it was estimated that 525 cities with a combined population of more than 30,000,000 had adopted zoning regulations. By 1928 the Department of Commerce "Standard Zoning Act" had "been used wholly or largely in zoning when enacted in some thirty states." *

Zoning regulations usually cover (a) *use* (commercial, industrial, residential, etc.), (b) *height*, and (c) *area* (the proportion of the lot that can be occupied by the building). Occasionally zoning regulations also cover such matters as the type of building material used, the style of architecture — as has recently been done in Washington, D.C. — and building set-backs — that is, the provision for making a building occupy less and less area as it increases in height. The characteristic "stepped" appearance of the more recently-erected New York City office buildings is a response to set-back zoning regulation.

Zoning affects city growth in a number of ways. In the

* J. Nolen, *Twenty Years of City Planning Progress in the United States* (Pamphlet), New York (National Conference on City Planning) 1927. See also T. Hubbard and H. V. Hubbard, *Our Cities Today and Tomorrow*, Cambridge 1929, p. 21.

first place, it promotes stability in use-type. It has been seen that instability in the type of use to which urban property is put constitutes one of the characteristic corollaries of city growth, and that its social and economic *sequelæ* are generally deleterious. Property values fluctuate. Jerry-building and the neglect of the upkeep of properties is encouraged. Community organization is handicapped. Areas of transition — many of which become areas of deterioration — are created. Residential sections in particular are jeopardized by liability to invasion by commercial or industrial activities, by incongruous types of residential building, such as apartments or row-houses, and by nuisances, such as filling stations and refreshment stands. To the extent that zoning can so control the processes of urban growth as to prevent or at least to restrain such vicissitudes, it promotes the stabilization of both the economic and the social life of the city.

A second form of control over urban growth accomplished by means of zoning is the limitation of land-crowding and of the blocking of light and air. It is necessary only to realize that an office building forty stories in height and an acre in extent can accommodate 10,000 persons * and then to calculate the burden placed on transportation facilities by the tenants of this one structure to realize the relation between congestion and unregulated building. The effectiveness with which lofty and close-built structures cut off light and air is obvious to anyone who has had to pass down a skyscraper-lined street on a summer day or who has had to work in an office illuminated by artificial light at mid-day, despite its outside windows.

Finally, zoning furnishes a fundamental means of controlling urban traffic. The volume of traffic depends, in the final analysis, upon such factors as the size, the location, and the intensity of development of the various sections of a city — particularly, of its residential, commercial, and industrial areas. All of these can be regulated by zoning and so, by the same token, can traffic. G. S. Rogers, in an unpub-

* F. A. Delano, "Skyscrapers" in *The American City*, Jan. 1926, quoted by H. James, *Land Planning in the United States for the City, State, and Nation*, New York 1926, p. 230.

lished manuscript, has an unusually suggestive proposal in this connection:

> Over-concentration of population and the concentration of business produces vehicular movement in such quantities that, if highways were constructed or widened to accommodate this traffic, there would be little or no remaining land for the construction of buildings. Business therefore should be so decentralized that the destination of traffic will be distributed over the entire area.

One final observation should be made concerning zoning. It is that zoning can never completely control the direction of city growth. Occasions are bound to arise when the exigencies of a city's expansion run counter to the pattern established by zoning regulations, and when these regulations have to be modified. The casual perusal of the administration of any municipal zoning law in the United States will serve to establish the validity of this observation. The majority of such changes as are made, whether by amendments to the ordinances or by decisions of the zoning board, are ratifications of growth processes — more especially invasions of residential zones by commercial activities, or of single-family house zones by apartment-houses — that are quite contrary to the trends contemplated by the original zoning law. Once more, it should be repeated, urban growth occurs in response to forces only partially subject to social control.

### STREET-PLANNING

IN THOSE sections of a city that are still plastic, it is possible to control the basic pattern of streets, blocks, and open spaces more easily than in those where structure is definitely set. In these areas, new streets may be laid out; existing streets widened or re-routed, and open spaces acquired with relative ease. Moreover, by *platting control*, that is, the supervision of the subdivision plans proposed by real estate promoters, every new residential area can be made to fit into the master plan of the city and its region.*

Careful street-planning is of value chiefly in establishing

* See T. Hubbard and H. V. Hubbard, *op. cit.*, Chap. X.

the channels for traffic. If the urban civic engineer has sufficient latitude and is reasonably assured — by means of zoning regulations and by studying the underlying trends in the city's expansion — of the manner in which residential, industrial, commercial, and recreational areas will be distributed, he can lay out a system of traffic ways that will overcome most of the dangers and inconveniences that now characterize the movement of persons and of goods in most urban communities. He can provide radial streets, giving direct access to centers of major activity, and " by-pass " streets permitting through and intra-city traffic to avoid congested centers. He can establish a " loop " around the central commercial area, and the integumental sub-areas, and can lay out sufficient street space to carry traffic through that area and to give it at least a modicum of light and air.* The approach to parks and recreation grounds can be made easy. Heavy and light traffic can be separated.

More than this, he can plan to develop the various use areas so as to give them their maximum efficiency. Sub-centers of trade and community life can be laid out. Block areas and lot-lines can be made to suit the uses for which they are intended. Practically every slum in America has block after block of multiple-family houses on land that was laid out to contain single-family houses set in large yards.

## REGIONAL PLANNING

THE civic engineer's scope of action is widened when he passes from the correction of the results of past growth to the control of existing growth. He enjoys even freer rein when he undertakes to provide for the future expansion of the urban region. Physical obstacles to his plans scarcely exist, except as they are offered by natural conditions. Administrative obstacles can be overcome, although — as in the case of the Hackensack Meadows in the New York region — their encompassing may require years of patience and determination. In the main, however, his chief difficulty lies in the impossibility of accurately predicting the

* See Regional Plan of New York and its Environs, *The Graphic Regional Plan*, (Vol. I.), New York 1929, pp. 178–179.

lines of urban growth in general, not to mention the trends that any given city will follow.

Difficult as it is to predict the future of any city, it is nevertheless possible to anticipate at least some features of a city's growth sufficiently far in advance to make adequate plans for them. Since this future growth may be expected to proceed most rapidly in the outer portions of the city, and in the partially-urbanized sections of the surrounding region, it is necessary to take into account the urban region as well as the city proper. Indeed, regional planning may be considered as being essentially that phase of urban civic engineering which is addressed to the future.

Prospective planning makes use of many of the devices which have already been discussed, but it uses them more freely and effectively than is possible when dealing with a situation that is already crystallized or in process of becoming so. Thus, the greater part of an urban region may be zoned so far in advance of actual growth as greatly to increase the stability and consequently the utility of the zoning plan. Highways can be developed, and new ones built so as to facilitate the flow of traffic. Railways can be re-routed and supplemented. Aviation fields can be established.

Recreation can be provided for; open spaces can be set aside; scenic and historic landmarks preserved; hikers' trails and camp-sites developed. Water supplies can be conserved, and the rival claims of adjoining cities can be adjusted. In a word, all those engineering and administrative procedures which have been discussed earlier in this section are given far wider scope when applied to planning for the future development of the city with relation to its surrounding region than when devoted to the correction of the results of previous growth or the guidance of existing growth.

Finally, it is possible to bring about a measure of decentralization, partly by the laying-out of traffic ways, partly by establishing subsidiary communities. This latter has proceeded in two directions: the development of suburbs and the development of self-sufficient satellites. Residential and industrial suburbs have been set up in the peripheries of

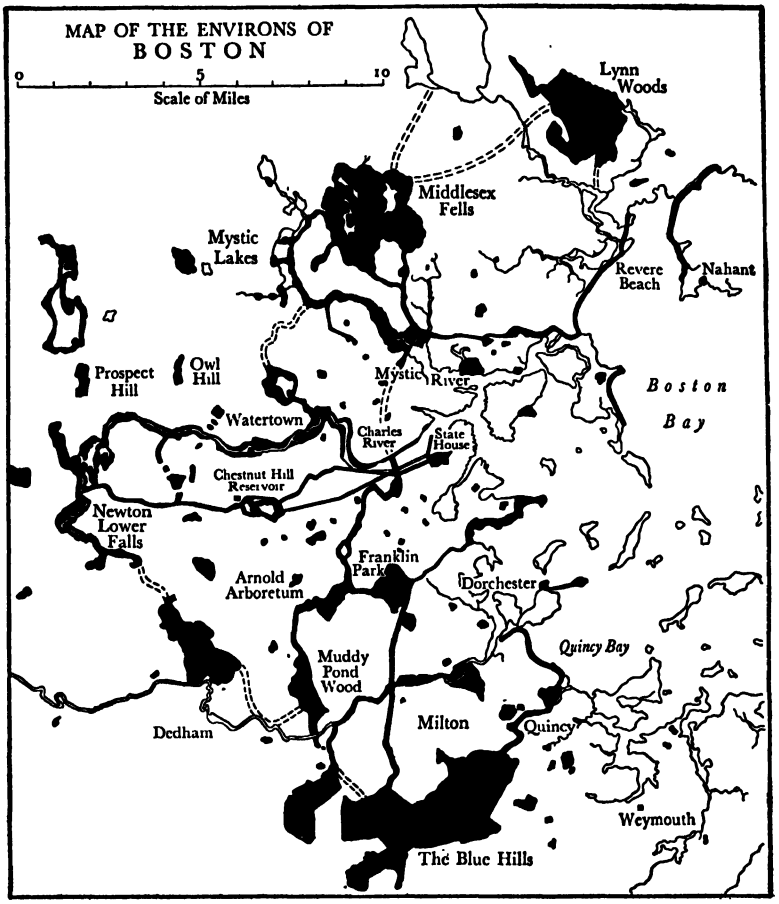



FIG. 20. OPEN-AREA RECREATION FACILITIES IN AN URBAN REGION: THE BOSTON METROPOLITAN PARK SYSTEM *

large cities for a number of years. Both public and private enterprises have contributed to their development. Many of them — especially the "garden" residential suburbs of England and Germany — have gone far towards fulfilling the hopes of their sponsors. They have all suffered, however, from one fundamental anomaly which has already been indicated: they have never even approached self-sufficiency.

* From H. V. Lanchester, *Art of Town Planning*, Chapman & Hall, Ltd.

The satellite differs from the suburb in that its economic life is more nearly balanced. In fact, it is the primary objective of the founders of consciously-created satellites to enable the men and women inhabiting them to carry on most of their normal life activities (home-making, education, earning a living, recreation) in these communities.

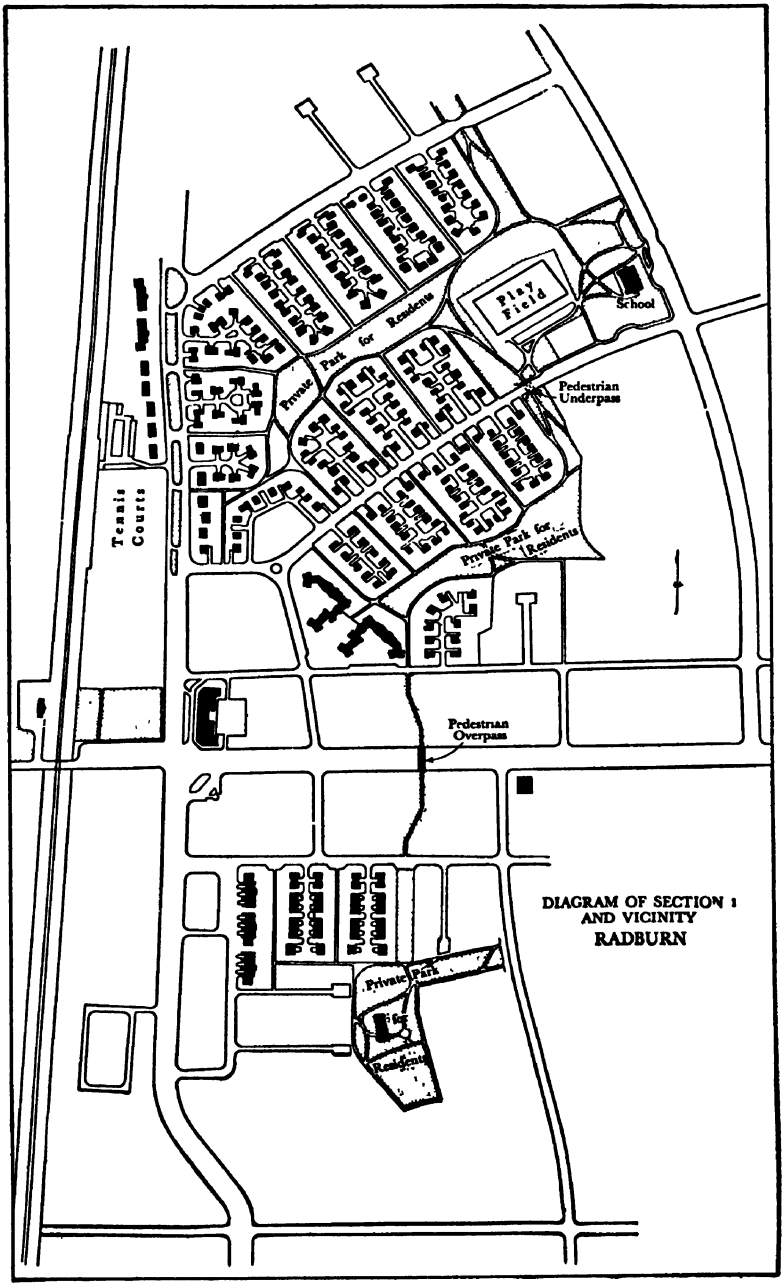
The oldest and most famous of these "made-to-order" satellites is Letchworth, England. It was laid out early in the present century on a site, about 35 miles from London, that had been acquired for the purpose. It has achieved worldwide fame as a "garden city," has attracted a number of industries, and has grown steadily in population, having in 1924 over 13,000 inhabitants.

Welwyn, a second English "garden city," was established in 1919 on a site about 20 miles from London. By 1924, it contained about 2600 inhabitants.

In Germany, an effort to build a satellite near Dresden was aborted by the death of its founder and by the outbreak of the World War. At least two urban satellites have been established in the United States. They are Mariemont, near Cincinnati, Ohio, and Radburn, New Jersey.* The latter involves many interesting features, chief among them the "super-block" whose houses turn their backs upon main thoroughfares and whose inhabitants can carry on most of their daily activities without encountering motor traffic and the risk that it entails.

The deliberately-planned satellite town is not altogether self-sufficient; no community within an urban region could be. Radburn, for example, is expected to have a large proportion of commuters in its population. Nevertheless, it is possible to organize a better-balanced community life in such a locality than in an ordinary suburb. This is particularly true for the industrial worker, who is enabled to live in proximity to his work, but to avoid the conditions that usually accompany residence in a typical industrial suburb.

* C. B. Purdom, *The Building of Satellite Towns*, London, 1925, pp. 8, 47, 201. See also H. James, *op. cit.*, pp. 268 and 269, City Housing Corporation, *Fourth Annual Report*, New York 1928, p. 7, and G. Smith, "A Town for the Motor Age" in *The Survey*, March 1928, pp. 695–699.




*Courtesy City Housing Corporation.*

FIG. 21. A SATELLITE TO ORDER: RADBURN, N. J.

DELIMITATION OF THE URBAN AREA

FROM time to time throughout this chapter it has been suggested that the lines of urban growth can never be brought entirely under control. Much can be done to guide it, and to inhibit the extensive development of certain of its tendencies. Yet, to a considerable extent, a city's expansion, once under way, proceeds in response to forces that can be neither anticipated nor directed. If, therefore, the civic engineer desires effectively to cope with urban growth, he must undertake to control — not one or another of its consequences or phases — but the thing itself. In short, if he is to set a limit on those aspects of urban growth that he considers undesirable, he must set a limit on urban growth.

So far no comprehensive program for limiting the expansion of any urban area has been put into effect. Nevertheless, some degree of inhibiting influence on urban expansion is already being exercised by forest preserves, by water-supply reservoirs and watershed protective areas, and by public reservations. In as highly urbanized a state as New York, there were, in 1928, over eighty state parks, with a combined area of approximately 150,000 acres. The forest preserves in the same state cover over 2,000,000 acres. In addition, about 21,000 acres have been set aside for county, city, and town reforestation enterprises. Furthermore, thousands of acres of land are required for the water-supply reservoirs of the cities in the state, those of New York City extending for a distance of 120 miles from the city.* It might be possible to co-ordinate those projects into a plan for definitely checking the expansion of metropolitan New York and other urbanized regions in the state, but no such scheme seems to be in immediate prospect.

Two interesting proposals for schemes of this sort have recently been made. Both propose to hedge the city in by legally reserved open spaces, which would automatically set a stop to its expansion.

* See New York State Conservation Department: *Eighteenth Annual Report for the year* 1928, Albany 1929, pp. 138–140–3 and 342–345; also *Report of the Commission of Housing and Regional Planning* (Pamphlet), Albany 1926, pp. 58, 62, 63.

The *Regional Plan of New York and its Environs* proposes to establish around the city a zone of "open development areas" in which urbanized building would not be allowed. It would, however, permit "urban and semi-urban uses" to be made of these areas — as, for example, country clubs.

MacKaye * has a more far-reaching plan. He would lay out a virtually unbroken belt of "primary open ways" around the urban region. These reservations would be "wilderness areas," which would serve "the double purpose of a public forest and a public playground." Moreover, as far as topographical features would permit, he would set aside radial "primary open ways," extending from the outer belt towards the urban center. By this means, he would not only establish a limit to the growth of the city, but would also prevent its achieving compact growth within its own area. In order further to promote the dispersion of urban growth, Mr. MacKaye would establish "inter-towns" at various points in the path of the city's expansion. In these "inter-towns," a quasi-rural development would be allowed, such as farmhouses, cottages, country-estates, and wayside inns and automobile service-stations. Under this plan, therefore, an absolute limit would be placed upon the expansion of the urban region, and within that region, a discontinuous type of development would take place.

* B. MacKaye, *The New Exploration*, New York 1928, Chap. XII.

## BIBLIOGRAPHICAL NOTES

The most complete discussion of urban growth and its control is to be found in the publications of *The Regional Survey of New York and its Environs,* particularly Regional Plan, Vol. I. Two more technical works are T. Hubbard and H. V. Hubbard, *Our Cities Today and Tomorrow,* Cambridge 1929 and A. Webb, (Ed. London Society) *et al., London of the Future,* London 1921.

There are also available a large number of special studies dealing with individual cities and their regions. Among them are St. Louis City Plan Commission (Harland Bartholomew, Engineer), *Problems of St. Louis* 1917, and Duluth City Planning Commission. *Preliminary Major Street Plan and Transit Plan,* Duluth 1928.

# CHAPTER V

## *THE DWELLER IN THE CITY*

### SIZE, SOURCES, AND COMPOSITION OF CITY POPULATIONS — BIRTHS AND DEATHS

To begin at the beginning, a baby is born in New York every 4 minutes and 6 seconds. . .

Using a twelve-hour day as a basis of computation, couples are getting married in New York at the rate of 14 every hour. . . Everybody can't get married, however, and stay within the law, because in the population of 6,065,000 it is estimated that there are 15,000 more females than males.

In this wise, a pamphlet issued by the Merchants' Association of New York dramatizes some of the salient features of the population of that city. At first glance the effort to dramatize urban demography may seem futile. Nevertheless the facts that lie behind the population statistics of any urban or any rural area are in reality intensely dramatic. The student who makes himself familiar with them, with age and sex ratios, marriage rates, birth rates, and death rates has acquired a clue to the understanding of the city's whole gamut of human experience.

For example: Sellier, of the *Institut d'Urbanisme à la Sorbonne* in Paris, shows that the death rate in the city of Milan increases directly in proportion to the degree of overcrowding in the different sections of that city. Thus, where the inhabitants are housed at the rate of a little more than one room per person, the death rate is 196.8 per 100,000. But, where there are, on the average, more than two persons for each room, the death rate rises to 255.9. The tuber-

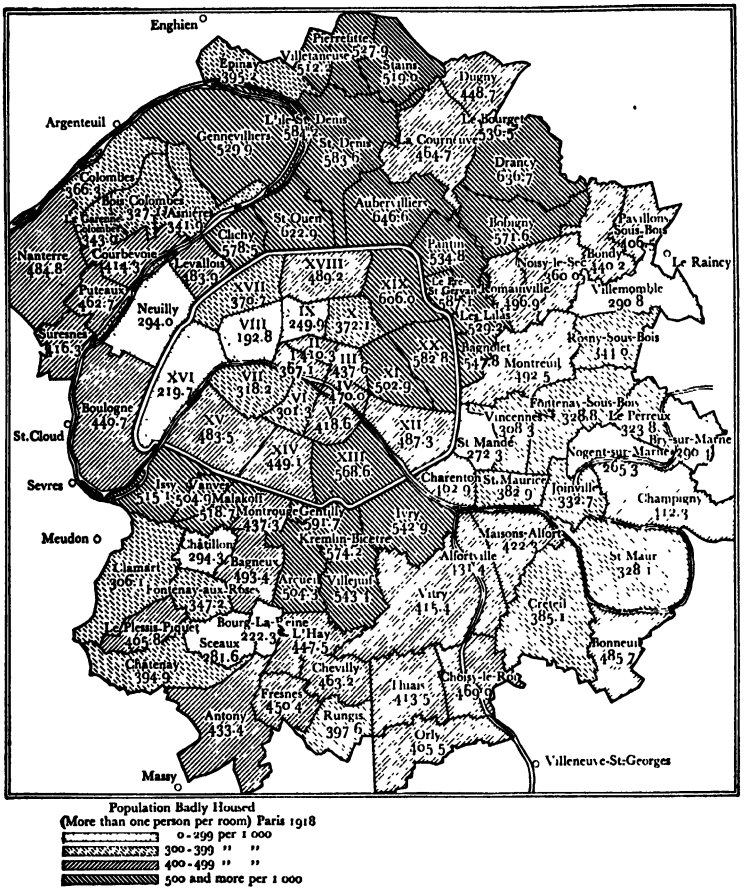



FIG. 22 (*a*). ROOM CROWDING IN PARIS

From H. Sellier, *La Crise du Logement*, Vol. I, Paris 1921

culosis mortality shows a similar trend as Figures 22 (*a*) and (*b*) indicate.* It takes little imagination to visualize, through the medium of these figures, dismal streets of crowded tenements, with their stale, contaminated air, and their never-broken circle of contagion — sickness — death — contagion — sickness — death.

There are three questions which the student may be

* H. Sellier, "Evolutions Comparées du Logement et de la Population" in *La Vie Urbaine*, Paris Feb. 15, 1921.

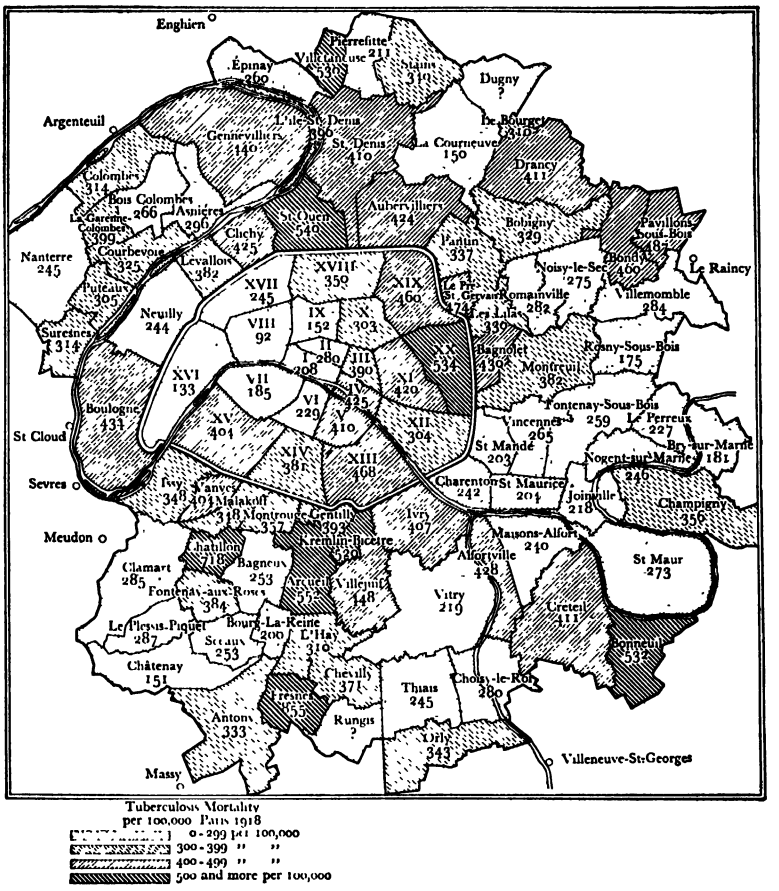



FIG. 22 (*b*). TUBERCULOSIS IN PARIS

From H. Sellier, *La Crise du Logement*, Vol. I, Paris 1921

expected to ask concerning the population of a city. *How many people are there in it? Who are they? What is becoming of them?* A section of this chapter will be devoted to each of the topics suggested by these questions.

## THE SIZE OF URBAN POPULATIONS

CITIES would not be cities if they were not large agglomerations of people. It is difficult to say just how small an urban community may be. The United States Census places the

lower limit at 2500, but does not give detailed tabulations for communities under 10,000. In the 1930 census an approach has been made towards this objective. Urban population, for the purpose of this census, is defined as including "cities and other incorporated places having 2500 inhabitants or more" as well as "townships, and other similar political subdivisions (not incorporated municipalities) that had a total population of 10,000 or more and a population density of 1000 or more per square mile." It would seem that 10,000 might properly be considered as constituting the smallest community which could be called urban — and characteristically urban phenomena could scarcely be expected to reach their full development in communities of less than 100,000. When it comes to the upper limit of urban populations, it seems to depend upon the number of people that can be fed and housed in an urbanized community at a given state of social organization. At the present time, somewhere around ten millions seems to be the maximum urban population. New York and its surrounding region appear to have passed this mark in 1926, while "greater London," if measured in the same manner as the New York region would almost certainly be well above that figure.* The English Census put the population of "Greater London" at about 7,500,000 in 1921, but included an area of only 20 miles, against 50 miles used by the New York Regional Survey. It is likely that, if the populations of the two areas were calculated in the same manner, the frequently asserted claim that New York City is "the greatest city on earth" would be very difficult to establish.

### THE ANCIENT AND MEDIEVAL PERIODS

Such great urban agglomerations are distinctly a modern phenomenon, for they could not subsist without industrialism and its twin-sister, rapid transportation. Nevertheless, the Ancient World and the Medieval Period were by no means devoid of great cities. Rome, under Augustus, had

* T. Adams, H. M. Lewis, and T. T. McCroskey, *Population, Land Values, and Government* (Regional Survey of New York and its Environs, Vol. II), New York 1929, p. 65. See also Census of England and Wales 1921, *General Report*, London 1927, p. 28.

between 250,000 and 1,000,000 inhabitants. Carthage and Alexandria, at the height of their power, are estimated to have numbered 600,000 and 700,000, respectively. As early as the fourteenth century Paris had a population of approximately a quarter of a million, and in the reign of Louis XIV it went beyond a half-million.* No city in the Medieval Period attained to the magnitude of the great cities of the Ancient World.

### THE MODERN PERIOD

It is impossible to do more than conjecture the relative significance to society as a whole which city life held in the Ancient World and in the Medieval-Renaissance Period.

## TABLE VIII

PERCENTAGE OF POPULATION IN URBAN COMMUNITIES IN THE UNITED STATES AND CERTAIN EUROPEAN COUNTRIES

| *Country* | *Percentage of Population in Urban Communities at Approximate Dates* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1930 | 1925 | 1920 | 1910 | 1900 | 1890 | 1850 | 1800 |
| United States (Old Basis) | .... | .... | 43.8 | 38.7 | 32.9 | 29.0 | 12.5 | 4.0** |
| United States (New Basis) | 56.2 | .... | 51.4 | 45.8 | 40.0 | .... | .... | ...† |
| England and Wales | .... | .... | 79.3 | 78.1 | 77.0 | 72.0 | 50.0 | ...‡ |
| Belgium | .... | .... | 78.1 | 77.7 | 75.1 | 71.4 | 61.3 | ...§ |
| France | .... | .... | 46.3 | 44.2 | 40.9 | 37.4 | 25.5 | ...‖ |
| Germany | .... | 64.4 | 62.4 | 60.0 | 54.3 | 47.0 | .... | ...¶ |
| Switzerland | .... | .... | 61.0 | 59.0 | 53.0 | .... | .... | ...¶¶ |
| Denmark | .... | .... | 43.0 | 40.0 | 39.0 | .... | .... | ...¶¶ |

* P. Clerget, *Urbanisme* (English translation in Annual Report of the Smithsonian Institution 1912), Washington 1913, pp. 653–657.

** From *Fourteenth United States Census*, Vol. I, p. 43.

† Under the present census classification, urban areas are interpreted as consisting of incorporated communities having a population of 2500 or over. On the 1930 Census a further change has been made so as to include urbanized unincorporated places. See p. 156, above.

‡ Census of England and Wales 1921, *General Report*, London 1927.

§ *Annuaire Statistique de la Beligique*, Vol. XLI, Brussels 1928.

‖ Office Statistique Generale de la France, *Resultats Statistiques du Recensement General*, Vol. I, Paris 1923, p. 59.

¶ Deutsches Statistisches Reichsamt, *Die Gemeinden mit 2000 und mehr Einwohnern*, (Sonderhefte zu Wirtschaft und Statistik No. 3), Berlin 1926, p. 6.

¶¶ *Ibid.*, p. 21.

Thanks to modern statistics, it is possible, however, to measure at least the numerical importance of the city in contemporary western civilization. Tables VIII and IX contain a compilation of the degree of urbanization in the populations of the United States and of certain European countries.

TABLE IX

NUMBER OF PERSONS PER 100,000 OF TOTAL POPULATION LIVING IN CITIES OF 100,000 OR MORE IN VARIOUS COUNTRIES, 1800–1910 *

| *Countries* | 1800 | 1860 | 1880 | 1910 |
|---|---|---|---|---|
| Great Britain | 70 | 192 | 262 | 355 |
| France | 27 | 44 | 100 | 145 |
| Belgium | ... | 75 | 153 | 195 |
| Holland | 70 | 73 | 161 | 233 |
| Germany | 10 | 28 | 70 | 212 |
| Austria Hungary | 9 | 23 | 80 | 85 |
| Switzerland | ... | ... | ... | 119 |
| Spain | 21 | 48 | 70 | 82 |
| Portugal | 33 | 58 | 82 | 106 |
| Italy | 55 | 63 | 84 | 117 |
| Balkan States | ... | ... | 52 | 90 |
| Russia | 16 | 20 | 36 | 60 |
| Denmark | 100 | 102 | 133 | 164 |
| Sweden | ... | ... | 43 | 93 |
| Norway | ... | ... | ... | 100 |

INCREASING URBANIZATION

IN THESE tables, two tendencies are to be observed: (1) a steady increase in the degree of urbanization throughout the period tabulated; (2) a slackening in the pace of this city-ward tide since the turn of the twentieth century — particularly in those countries such as England, Germany, and Belgium in which the urbanizing process has been under way for a relatively long time. Thus, the tables point to the conclusion that the movement of population towards the city is a process that has been in operation in Europe and America for upwards of a century, and, while it has gone forward more vigorously in some countries than in others, it now shows signs of diminishing in force — particularly in those countries which have witnessed its widest development.

* From H. Sellier, *La Crise du Logement*, Paris 1921, p. 11.

DIMINISHING RATE OF INCREASE

IT HAS just been pointed out that there is a marked falling off in the rate of urbanization in those countries where this type of population shift has been most widespread. It would seem that this fact would be explained, in part, as correlative with the tendency of very large cities to grow at a distinctly slower rate than those of moderately large populations. This fact is made clear in Table X. American cities of 100,000 and over increased only at the rate of about 25 per cent during the decade ending 1920, as against 33 per cent for cities with 25,000 to 100,000 inhabitants. From 1920 to 1930 the rate of increase for cities of 100,000 and over was 23.8 per cent.

There are interesting variations between cities of approximately the same size, apparently because of local differences in economic conditions for the most part. Thus Detroit increased at the rate of 113 per cent from 1910 to 1920, as contrasted with 42 per cent for Cleveland. The two cities showing the highest rate of increase from 1920 to 1930 were Miami, Florida, and Long Beach, California, whereas, Manhattan Borough (New York City), Lowell, Massachusetts, New Bedford, Massachusetts, Fall River, Massachusetts, and Wilmington, Delaware, showed actual decreases.

It is likely that the slowing up in the growth of very large cities, such as is indicated by these tables, is a response to the obstacles encountered by such a community in maintaining necessary administrative and other services. More extended reference to this phase of urban growth must be reserved for a later chapter. At this point it may be said that after a certain optimum population has been reached, many elements in the cost of the transporting of goods and persons, the operation of systems of communications, the furnishing of supplies, the disposal of waste, and the administration of protective services appear to increase directly as the size of the community. The inconveniences and hardships attendant upon urban congestion are also likely to be greater in a very large city than in a moderately large one. If this is the case, it is not improbable that there is a certain "saturation

level" at which a city ceases to attract sufficient newcomers to maintain its rate of growth.

The explanation of the relatively slight rate of increase for the smaller cities has already been suggested. A community of less than 10,000 is, in many respects, part and parcel of the rural countryside — unless it happens to be situated within the orbit of a large urban area. To the extent that these smaller communities are oriented towards the rural rather than urban social pattern, they must be expected to partake of the retardation in population growth that has been the lot of the rural regions throughout the United States and other urbanized countries.

TABLE X

PER CENT OF INCREASE IN POPULATION OF CITIES OF DIFFERENT SIZES IN THE UNITED STATES, 1910–1920 *

| *Classes of Cities* | *Per cent Increase* 1910–1920 |
|---|---|
| 2,500– 25,000 | 23.0 |
| 25,000–100,000 | 33.0 |
| 100,000 and over | 24.9 |

## THE COMPOSITION OF URBAN POPULATIONS

THE population of the city differs from that of the countryside not only in its size and its rate of growth, but also in its composition. There are at least three important respects in which urban and rural populations are markedly contrasted: (1) age; (2) sex-ratio; (3) origin, and (4) proportion of individuals married. More than this, each of these points of contrast signifies important and characteristic differences in the sociology of the city and the country.

### AGE

GENERALLY speaking, the inhabitant of the city is more likely to be in youth or middle life than the country man. In other

* From W. S. Rossiter, *Increase of Population* 1910–1920 (United States Census Monographs Number 1), Washington 1922, pp. 78–79.

words, there are proportionately fewer infants, children, and elderly people in the urban than in the rural community.

Figs. 23 and 24, taken from Truesdale's monograph on *Farm Population in the United States*, show quite distinctly the relative excess of very young and very old persons in

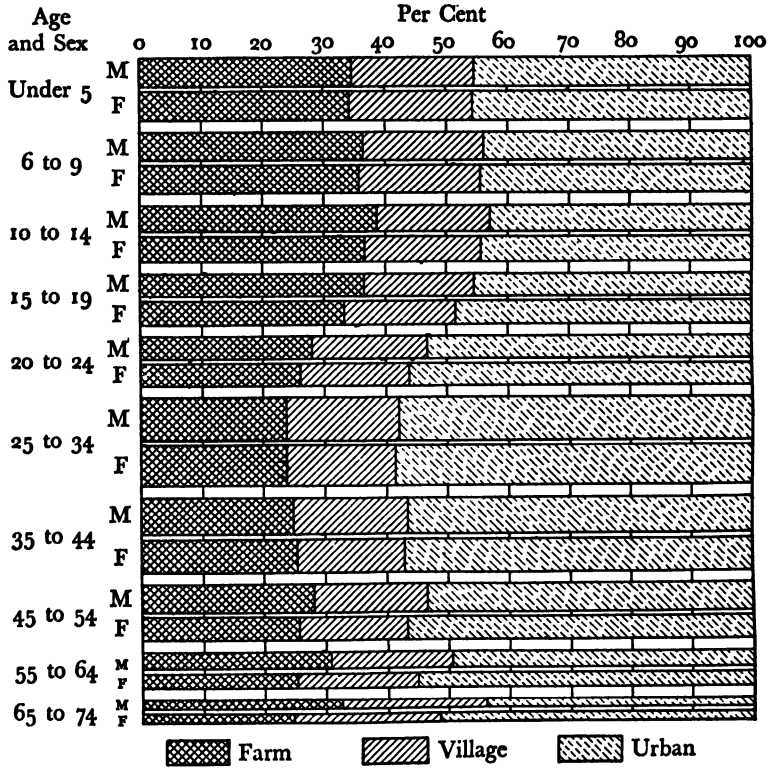



FIG. 23. THE LARGE PROPORTION OF YOUNG MEN AND WOMEN IN THE CITY

Farm, Village, and City Population of the United States, by Sex and Age Groups, 1920

the rural as compared with the urban portions of this country. That there is nothing peculiar about the situation in America may be demonstrated by the examination of the data from other countries. In England and Wales, for example, there are 310 male children and young people under twenty years of age for every 10,000 persons in the rural

areas, as over against 298 for all urban areas, and 191 for London. And, at the other end of the life-span there are 424 old men of sixty years and over, per 100,000 for the rural districts, 264 for the urban districts, and 266 for London. That is to say, in a random sample of the population of an English city one would find about two-thirds as many male infants, children, and youths and about one-half as many old people as in a rural community.* The proportions are not exactly the same for females, as the migration of young

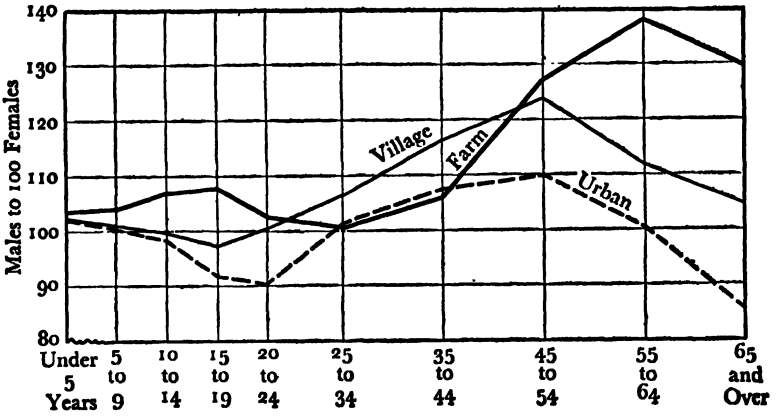



FIG. 24. THE PREPONDERANCE OF YOUNG WOMEN IN THE CITY

Males to 100 Females in the Farm, Village, and Urban Population of the United States, by Age, 1921

persons from the country to the city seems to begin at an earlier age for females than for males.

The antecedent factors behind these dissimilarities in the make-up of urban and rural populations are various. They have to do partly with marriage, birth, and death rates, and partly with migration. The birth rate of city populations is lower than that of rural ones, and the death rate higher. Consequently, fewer children are born in the cities, and fewer persons survive the vicissitudes of life into old age. More than this, there is a heavy migration from country to city, beginning in early maturity and continuing for some years thereafter. The city, therefore, contains a dispropor-

* Census of England and Wales, *op. cit.*, p. 71.

tionate number of young and middle-aged men and women, partly because its inhabitants are biologically non-productive and relatively short-lived, and partly because they are heavily recruited by migrants from the country.

It may be pointed out that this feature in the population structure of the city gives it a considerable advantage in many respects over the countryside. Its inhabitants are, in large measure, at the height of their physical and mental vigor. They are charged with the care of relatively few infants and children and elderly people. The rural and village community, on the other hand, rears a large number of children, only to see many of them depart for the city just as they reach the age of economic and intellectual productiveness. At the same time it is forced to accommodate itself to the presence within its population of a relatively large proportion of elderly people, who are both economically non-productive and — for the most part — intellectually inert.

TABLE XI

NUMBER OF FEMALES PER 1000 MALES OF ALL AGES IN TEN EUROPEAN CITIES, AND ONE ASIATIC CITY, *circa* 1910 *

| *City* | *Females per* 1000 *Males* |
|---|---|
| Amsterdam | 1099 |
| Berlin | 1083 |
| Bombay | 530 |
| Brussels | 1198 |
| Copenhagen | 1203 |
| London | 1127 |
| Milan | 1012 |
| Moscow | 843 |
| Paris | 1136 |
| Stockholm | 1223 |
| Vienna | 1086 |

* From *Annuaire Statistique des Grandes Villes*, The Hague 1927, Table 13. The year 1910 has been selected rather than 1920, as the latter reflects the excess of mortality among males caused by the World War.

TABLE XII

SURPLUS OF FEMALES OVER MALES IN COMMUNITIES OF DIFFERENT SIZE IN GERMANY, 1925 *

| *Size of Community* | *Females per* 1000 *Males* — 1925 |
|---|---|
| Rural Areas and Small Towns (up to 12,000) | 1081 † |
| Small and Medium-sized Cities (12,000 to 100,000) | 1089 |
| Large Cities (100,000) | 1146 |

SEX RATIO

IN THE argot of the traveling salesman, a city is often referred to as "this man's town." The phrase might better be "this woman's town," for women are proportionately much more numerous in the city than in the country. Reference to Figs. 23 and 24, particularly the latter, serves to show how much more important numerically are men on the farm and in the village than in the city. The statistics for the United States are, moreover, distorted by the fact that its immigrant population, which contains an abnormally high proportion of males, is largely settled in cities. But for this fact, it is likely that the women would actually outnumber the men in the average American city. This is, indeed, the case in many European cities. Thus Table XI which shows the proportion of males to females of adult age in a number of European cities puts the latter in the majority in almost every instance. Table XII derived from recent German data, moreover, shows that the surplus of females is greatest in the more highly urbanized centers. If the data were available for the years of late youth and early maturity, this table would probably show an even more striking discrepancy between the proportions of males and females in the majority of these cities.

* From Deutsches Statistisches Reichsamt, *Die Gemeinden mit* 2000 *und mehr Einwohnern*, (Sonderheft zu Wirtschaft und Statistik, No. 3), Berlin 1926, p. 15.

† There is an abnormally high proportion of women throughout Germany because of the number of men killed during the World War.

Parenthetically, it is to be observed that the only two cities in which the females of all ages do not outnumber the males are Moscow and Bombay — the latter an oriental city; the former a quasi-oriental one. It is likely that this apparent anomaly is due to the relatively low population mobility in the cities of the east. This assumption is borne out by the fact that Moscow, for 1920 — that is to say, after the social upheaval following the Russian Revolution had made itself felt — showed a sex ratio quite comparable to the cities of western Europe — 1063 females per 1000 males.

It should be borne in mind that only towards the beginning of early maturity is the relative feminine dominance of city populations observed. During infancy and youth there is nothing out of the ordinary in the sex ratio of the urban community. This fact suggests that a large proportion of the girls and women to be found in the city are migrants from the country, and, further, that the city holds greater attraction for girls than for boys.

The conditioning influences behind this phenomenon are various. The most obvious of them is the relatively limited economic opportunity for a woman in a rural environment, save as homemaker, whereas she may encounter a wide range of occupations in the city. On the contrary, there are many ways in which a man can make a living in the country. Or, to put in another way: the rural economy is primarily a man's economy, in which the woman must play a subsidiary and more or less passive rôle, whereas, in the city, with its more intricate division of labor and its greater number of clerical and non-laborious manual occupations, a woman is able to make her own way in gaining a livelihood.

It is also possible that the relative freedom from certain customary patterns of conduct, particularly those giving inferior social status to the unmarried woman, gives the city added attraction to certain groups of women. Lynd and Lynd think that these two influences are reciprocal.*

It can readily be seen that the characteristic sex ratio of the population of the city has an important bearing upon the

* R. S. Lynd and H. Lynd, *Middletown*, New York 1929, p. 127.

social life of such a community. First of all it reduces the prospects of marriage for the women, especially in those cities where men are in an actual minority. By reducing the opportunities for marriage, it serves to reduce the birth rate, at least in Europe and America, where illegitimate births are not of great significance. And because a large number of the women who live in cities cannot look forward to conventional marriage and normal home life, there arises a whole chain of situations having to do with sex-relations, domestic arrangements, emotional stress, and economic maladjustment that would not arise if the men and women dwelling in cities were numerically equal one to another.

### NATIVE AND MIGRANT ELEMENTS

SOMEONE has called the city " the devourer of peoples," and there is a sort of oral tradition among observers of city life that no city could long maintain itself without heavy and constant recruiting of country-born people. Thompson * points out, indeed, that from 1925 onward, the city of Berlin has shown an actual net natural decrease — that is to say, without accessions of migrants from outside its limits, this great urban center would be actually dwindling in population. For the most part, as pointed out later, the favorable age composition of urban populations enables them to maintain a small rate of natural increase. Nevertheless, in the present period, and probably in earlier urban eras, cities have subsisted largely on the vast masses of migrants which they have attracted to themselves. In Chapter VIII, further detailed data dealing with the existing country-to-city migration in the United States are presented.

Table XIII indicates the extent of the cityward drift in different parts of the world. When it is realized that the data in this tabulation cover only the first generation of migrants to these cities, its significance becomes positively startling. If approximately seven-tenths of the population of St. Petersburg (now Leningrad) were born outside that city, how many of the remaining three-tenths had been children of parents who themselves had been born elsewhere?

* W. S. Thompson, *Population Problems*, New York 1930, pp. 310, 311.

TABLE XIII

PERCENTAGE OF POPULATION NATIVE TO THE CITIES IN WHICH THEY WERE RESIDING, IN VARIOUS EUROPEAN CITIES *circa* 1890 *

| *City* | *Percentage of Population Native* |
|---|---|
| St. Petersburg (Leningrad) | 31.7 |
| Paris | 35.4 † |
| Berlin | 41.0 |
| Vienna | 44.7 |
| London | 68.0 |

Sorokin presents some striking figures from certain German and Austrian cities.

Of 1200 workmen in a cable factory in Berlin, only 8.7 per cent were born in Berlin; 88.6 per cent were born in different parts of Germany; and 2.65 per cent were foreigners. Among 72 workers of another factory in Berlin only 36 were Berliners and 3 were foreigners, the others being born in different parts of Germany. Among 140 employees of the third factory in Berlin 55 were Berliners and 3 foreigners; the remainder were from all parts of Germany. Among 230 employees of a Siemens-Schuckert factory in Vienna only 80 were from Vienna and 9 were foreigners, the remaining number from other parts of Austria and Hungary.‡

Sorokin also points out that there is probably less migration into cities in socially "immobile" societies, such as India and China, than in Europe and the United States.

It is not easy to procure data comparable to these for the cities of the United States. Rossiter, however, demonstrates that during the decade 1900–1910 the native white population of native parentage increased at the rate of 42.9 per cent for the country at large, and 49.7 per cent for cities of 100,000 or more inhabitants. For the succeeding decade, 1910–1920, the discrepancy between the two rates of increase is

* From P. Clerget, *Urbanisme* (English translation in Annual Report of the Smithsonian Institution 1912), Washington 1913.

† In 1901, only one out of the twenty *arrondissements* of the city of Paris had a majority of native-born Parisians.

‡ Reprinted by permission from *Social Mobility*, p. 386, by P. A. Sorokin, published by Harper & Brothers.

even more noteworthy. The native whites of native parentage increased at the rate of 35.1 per cent for the entire United States, as contrasted with 54.7 per cent for the large cities.* When it is remembered that the city uniformly shows a lower birth rate than the rest of the country, it is clearly seen that these figures indicate a very heavy influx of native-born Americans of native parentage into the cities of this country.

More striking, perhaps, are the computations recently made by Woolston, based upon the birth rates of various American cities. He shows that, if the population of New York had been recruited only from its own surplusage of births over deaths since the year 1790, it would have contained in 1920 a bare 90,000 inhabitants, as over against the 5,600,000 that it actually did contain. Putting the matter another way, the early inhabitants of New York might claim credit as furnishing ancestry for only sixteen persons in every thousand in the city as it is now constituted.† Obviously, as Woolston goes on to observe, the greater proportion of the population increase of New York City since the end of the eighteenth century is due to the migrants who have settled in that city during the past fourteen decades.‡ In a later chapter detailed data are presented concerning the extent of country-to-city migration in the United States and England. For example, in 1928 the farms of the United States lost 598,000 individuals.§

A special influence affecting the cityward migration in the United States is the presence of a large number of immigrants from other countries. Largely because the initial adjust-

* W. S. Rossiter, *Increase of Population in United States* 1910–1920 (U. S. Census Monograph No. 1), Washington 1922, p. 91.

† H. B. Woolston, "American City Birth Rates" in *Papers and Proceedings of the Twentieth Annual Meeting of the American Sociological Society*, pp. 103–113. (Vol. XXXII, No. 1, Part 2 of *The American Journal of Sociology*), Chicago 1926, pp. 106–107. Also in E. W. Burgess, (Editor) *The Urban Community*, Chicago 1926, pp. 122–133.

‡ It should be noted that Woolston imputes back to 1790 the birth-rate of 1919–1920. This method involves a factor of error, as birth rates in this country have undoubtedly declined during the interval between 1790 and 1920. On the other hand, death rates — particularly urban death rates have also declined. The picture drawn by Woolston, therefore, while not to be taken as accurate in its details, probably does represent in general outline the situation relating to the sources of New York's population.

§ See below, Chap. VIII.

ment of the immigrant to the American environment is most easily accomplished in a city, where employment is readily obtained and where contact with others of his countrymen may be maintained, the average migrant from abroad settles in an American city, and rears his family there. The consequence is that the typical American city contains a much higher proportion of immigrants than does the population of the country as a whole. Immigrants and their children composed only about one-fifth (20.1 per cent) of the rural population of the United States in 1920, but nearly one-half (48 per cent) of the urban population.* Furthermore, as Table XIV makes clear, the larger, more completely urbanized cities include an even heavier quota of immigrants of the first and second generation among their inhabitants.

TABLE XIV

PERCENTAGE OF NATIVE WHITES OF FOREIGN AND MIXED NATIVE-AND-FOREIGN PARENTAGE AND OF FOREIGN-BORN WHITES IN CITIES OF DIFFERENT SIZES IN THE UNITED STATES, 1920 †

| *Classes of Cities* | *Per cent of Population which is Native White of Foreign or Mixed Native-and-Foreign Parentage, or Foreign-Born* |
|---|---|
| 2,500– 25,000 | 34.8 |
| 25,000–100,000 | 43.4 |
| 100,000–500,000 | 45.4 |
| 500,000 and over | 66.0 |

Mention has already been made of the segregated ethnic colonies that are to be found in most American cities, and particularly in the larger ones. The material just presented suggests how significant a part of the life of many American cities may be played by such "little islands of foreignness."

The immigrant migration to the American city needs, however, to be considered as part of the larger phenomenon with which it is connected. There is a tendency on the part of certain observers to regard the settlement of the immi-

* N. Carpenter, *Immigrants and Their Children* (Census Monograph No. 7), Washington 1927, p. 25.

† From N. Carpenter, *Ibid.*, p. 23.

grant in the cities of the United States as something exceptional and — in some sense — to be deplored. Yet cities everywhere derive large proportions of their inhabitants by means of migration from elsewhere, and whether these migrants are native-born or foreign-born is, from the viewpoint of urban populations in general, a matter of only secondary importance. Moreover, it has just been shown that the native-born American of native stock, no less than the immigrant and his children, has been attracted to the city. It is true that a relatively larger proportion of immigrants is to be found in the cities than in the rural portions of the United States, for the special reasons just enumerated, but it is also true that this serves simply as an additional stimulus to a tendency that exists in all population groups — to trek into the city. It is, in point of fact, not at all unlikely as Zimmermann suggests that the American countryside would have been even more heavily denuded of its population, were it not for the large portion of the city population furnished by immigration from abroad.*

Ravenstein and other English statisticians have made an interesting discovery concerning the nature of native migration into the city. Their data apply only to English cities, but it is likely that their generalizations may be carried over to other countries as well. They have found that the migration to the city decreases directly as the distance from the city. In other words, the city of London drew a very much larger portion of its population from the counties in its immediate vicinity than from the more distant parts of England. The English Census of 1881, for example, showed that 287 out of every 1000 inhabitants of London came from places within 50 miles of London, as contrasted with only 41 from places located more than 175 miles from the English metropolis.†

### PROPORTION OF INDIVIDUALS MARRIED

It has been previously shown that the city contains a relative excess of persons in late youth and maturity — that is to

* See C. C. Zimmermann, "The Migration to Towns and Cities" in *The American Journal of Sociology* (Vol. XXXII), Chicago, Nov. 1926, p. 455.

† E. G. Ravenstein, "The Laws of Migration," in *The Journal of the Royal Statistical Society* (Vol. XLVIII), London 1885, pp. 167–236.

say, in the ages most favorable for marriage. Nevertheless, there are relatively fewer persons married in the city than in the country, and — as Groves and Ogburn have demonstrated — when correction is made for the peculiarities of the age-structure of urban populations, the difference between city and country with respect to marriage is striking. This fact is brought out in Table XV.

TABLE XV

PROPORTION OF PERSONS 15 YEARS OF AGE AND OVER WHO ARE MARRIED, IN URBAN AND RURAL POPULATION OF THE UNITED STATES, 1920 *

| *Population 15 Years of Age and over* | *Per cent Married* | |
|---|---|---|
| | *Urban* | *Rural* |
| Not corrected for Age Structure | 58.3 | 61.8 |
| Corrected for Age Structure | 57.0 | 63.5 |

As might be expected, it is the women rather than the men who are most markedly affected by the urban trend away from marriage. Groves and Ogburn say:

In the country, there are more men and also more women married than in the city. Of the males in urban communities 15 years old and over 58.9 per cent are married and in rural communities 59.5 per cent. If, however, the age distributions of males in city and country were the same — then there would be 57.7 per cent of the urban males married and 61.0 per cent of the rural males. . . The differences in the percentages of married women in city and country are even greater. . . 57.6 per cent of urban females 15 years old and over are married, a difference of 6.7 per cent of the female population. If the females in the city and in the country were of the same ages, then there would be 56.4 per cent of the urban females married and 66.0 per cent of the rural females, a difference of 9.6 per cent.†

The excess of migration of women into the city as compared with men comes largely from woman's dissatisfaction

* From E. R. Groves and W. F. Ogburn, *American Marriage and Family Relationships*, Henry Holt and Company, New York 1928, pp. 299–301.

† *Ibid.*, pp. 301–302.

with the rural economic and social status which forces upon her the occupation of home-maker. Generally speaking, such a position is bound up with marriage. It follows, therefore, that the unmarried woman would find greater economic opportunity and less social isolation by moving into the city. Furthermore, the city-born woman would feel less economic impulsion towards marriage than her country-born cousin. Finally, it must not be overlooked that the absolute numerical preponderance of women in most European cities, and their relative preponderance in most American cities — particularly among the native American stock — materially diminishes the opportunity for marriage for the urbanized woman.

The social significance of these distinctive features in the marital structure of urban populations is taken up in a later chapter.

## BIRTHS AND DEATHS

PERHAPS the most fundamental single question that could be asked concerning the dwellers in any city is, "What is happening to them?" In other words, are they surviving as a population group; are they being biologically exhausted by reason of their being city-dwellers; or are they displaying sufficient vital power to make a net contribution to the race-stream?

It is easier to ask these questions than to answer them. In the first place, the urban vital record has undergone profound modifications within recent years. For example, according to Beaume, the city of Paris suffered deaths from typhoid numbering 912 per 100,000 in 1900, but they were reduced to 102 per 100,000 in 1920.* Deaths by typhoid and other infectious diseases were virtually endemic in most large cities not so many generations ago, and were responsible for a substantial portion of their death rates. Today, many of these diseases have been rendered of only minor importance as causes of death, in most European and American cities. Consequently, a generalization that would have been quite valid fifty years ago is at present inapplicable to the average European and American city.

* G. M. G. Beaume, "L'Eau à Paris" in *Liberté*, Paris July 21, 1929.

In the second place, certain other morbid conditions, for example, the relation between tuberculosis mortality and crowding, seem to be clearly attributable to city life. However, closer examination of the subject indicates that they are part of an intricate complex of conditions, including poverty and unemployment, which are at least as closely related to industrialism as to urbanism. Thus the "county boroughs" of Wales show a substantially higher respiratory tuberculosis mortality than does the London area, although the latter is far more urbanized in every sense of the word than the former, (110 per 100,000 compared with 94 per 100,000). More than this, the "rural districts" of Wales show a death rate from this disease that is only 3 per 100,000 less than that of London (91 per 100,000 compared with 94 per 100,000).* The poverty and bad housing associated with the depressed condition of the mining areas in Wales and the unhealthy working conditions of the average coal miner are probably in large measure responsible for the high tuberculosis mortality of that region. Whatever the cause, it serves clearly to demonstrate that tuberculosis and the decimation of a population by its ravages are phenomena that by no means are universally associated with city life.

Even overcrowding, which — as pointed out previously — appears to be intimately associated with a high mortality rate, is not necessarily an urban phenomenon. Land-crowding there assuredly is in any large city, but *land*-crowding does not necessarily imply *room*-crowding. Multi-family houses make it possible to provide for a relatively dense population upon a given area of land without subjecting any of them to room-crowding. On the other hand, it is possible for a community to exhibit a relatively low degree of land-crowding, or population density, but a very high degree of room-crowding, and it is room-crowding — "les logements sur-peuplés," to quote Sellier's striking phrase — which is associated with high death rates. Thus, there are certain industrial towns of only moderate populations in the north of England which show a far higher degree of room-crowding

* *The Registrar General's Statistical Review of England and Wales for the Year* 1925, London 1927, p. 35.

than does the city of London. In Northumberland, the proportion of the population housed at the rate of more than two per room in 1921 was 30.8, and in Durham, 29.5, as compared with a corresponding ratio in London of 16.5. Of the 27 communities having the highest proportions of their populations so housed, 16 were outside of London, and 10 were separate boroughs within the London area. The 5 most congested areas all represented relatively small communities in the counties of Durham and Northumberland.*

Four generalizations, nevertheless, can be made concerning the biologic productivity of urban populations. They are: (1) Urban birth rates are relatively low and (2) death rates are relatively high, so that the net contribution of the city to the racial stream is small and may constitute an actual deficit. (3) Urban death rates are falling more rapidly than rural rates, particularly for diseases of children and for diseases controllable by sanitary and public health measures. (4) Urban death rates remain relatively high for the so-called degenerative diseases, for accident, and for homicide. The suicide rate is discussed in Chapter X.

### LOW BIRTH RATE

THE essential facts concerning the net prepotency of urban dwellers as a class may be observed from Tables XVI and XVII.

TABLE XVI

BIRTHS PER 1000 INHABITANTS, IN BERLIN AND IN THE ENTIRE GERMAN REPUBLIC, 1926 †

| *Births and Deaths* | *Rates per* 1000 *Population* | |
|---|---|---|
| | *Entire German Republic* | *Berlin* |
| Live Births | 19.5 | 11.3 |
| Relation of Births to Deaths | 7.9 | − 0.03 |

The unbalanced age and sex ratio of the average city operates to bring about a slightly higher " crude " or un-

* *Census of England and Wales, op. cit.*, pp. 50–51, 58, 136.

† From Deutsches Statistisches Reichsamt, *Wirtschaft und Statistik* (8th Year No. 3), Berlin 1928, p. 116.

corrected birth rate in the urban than in the rural portions of the country. That is to say, the relative excess of persons of child-bearing age, especially of women, in urban populations creates a very slight excess of births in such groups, as compared with rural populations. When, however, births are compared with deaths, the rural populations are seen to have a decided biological advantage over the urban.

TABLE XVII

BIRTHS PER 1000 OF POPULATION AND BIRTHS PER 100 DEATHS FOR WHITE POPULATION IN CITIES AND RURAL PORTIONS OF THE REGISTRATION AREA IN THE UNITED STATES, 1926 *

| *Population Groups* | *Births and Deaths (White)* | |
|---|---|---|
| | *Births per* 1000 *Population* | *Births per* 100 *Deaths* |
| Urban | 20.9 | 167 |
| Rural | 19.6 | 181 |

When, in addition, the urban and the rural birth rates are corrected to take into account the discrepancies in their age ratios, the greater biological productivity of the rural populations is even more strikingly revealed. Woolston has made a calculation of urban and rural birth rates for the year 1919–20, in which the age factor is eliminated. He shows that, per 1000 of population, the adjusted urban birth rate was 21 and the rural rate, 25.8.

The Census of England and Wales presents birth rates which are corrected for marital condition. Taking the rate for England and Wales as 1000, the rate for the rural districts is 1092 — in other words, about 9 per cent above the average for the total area. The rates for " other urban districts " and for " county boroughs " are, respectively, 964 and 993, while that for London drops to 948.

For the most part, other countries show similar ratios between urban and rural birth-rates. Holland and France,

* From United States Census, *Births, Stillbirths, and Infant Mortality Statistics for* 1926, Washington 1929.

however, are exceptions. It is likely that there should be a further factor of correction for American cities, namely that American vital statistics record births by place of birth, rather than by place of residence of the mother. Many American mothers go into hospitals for their confinement and, as hospitals are more numerous in urban than in rural areas, there is probably a substantial number of births credited to cities which should be recorded as rural, i.e., as births to rural mothers who have come to cities only at the time of their confinement.*

Later in this chapter there is discussed the hypothesis of certain observers: that the city is, *in ipso*, biologically inimical to the continuation of the race, since populations subjected to urbanism exhibit a low birth rate and a high death rate.

At this point, consideration is given to certain specific factors that, at the present time, tend to reduce the reproductive capacities of city populations.

### POSSIBLE DECLINE IN FERTILITY

THE city-dweller is more frequently engaged in sedentary and non-laborious pursuits than the inhabitant of the countryside, and, through some biological mechanism as yet unidentified, the less physically-active occupations appear to reduce his biological fertility. Tables XVIII and XIX based on German and English data respectively serve to establish this generalization. Table XIX is particularly striking, since it shows that unskilled laborers produce on the average nearly twice as many offspring as do members of the upper and middle-class groups.†

Contraceptive devices are probably more widely resorted to by these upper and middle-class groups, but Pearl's investigations suggest that without regard to the use of such devices there is less frequent and less fertile sexual activity

* See J. Downes, "The Accuracy of the Recorded Births Statistics in Urban and Rural Areas" in *The Journal of the American Statistical Association*, for March 1929, Vol. 24, pp. 15–27. See also J. G. Thompson, *Urbanization*, New York 1927, p. 472.

† See F. J. Hankins: *Presidential Address*, Eastern Sociological Conference, New Haven, May 1931.

within the well-to-do and the occupationally-inactive population groups than in the general population.*

TABLE XVIII

LEGITIMATE BIRTHS PER 1000 MARRIED MEN UNDER 50 YEARS OF AGE FOR THE YEAR 1925 IN SELECTED OCCUPATIONS, FOR CERTAIN GERMAN PROVINCES †

| *Occupation* | *Births per 1000 Married Men under 50 Years of Age* | | | |
|---|---|---|---|---|
| | *Upper Silesia* | *Westphalia* | *Rhine Province* | *Saxony* |
| Farmers | 365.1 | 342.8 | 302.0 | 192.3 |
| Textile Workers | 114.8 | 118.4 | 87.1 | 109.8 |
| Building Workers | 309.9 | 176.1 | 145.0 | 129.3 |
| Technical Supervising Personnel | 215.7 | 118.0 | 107.1 | 92.6 |
| Postal and Telegraph Employees | 222.8 | 160.2 | 123. | 87.9 |
| Merchants, etc. | 165.7 | 161.3 | 128.3 | 101.5 |

TABLE XIX

LEGITIMATE BIRTHS PER 1000 MARRIED MEN UNDER 55 YEARS OF AGE IN ENGLAND AND WALES, IN 1921, ACCORDING TO SOCIAL AND OCCUPATIONAL CLASS ‡

| *Social and Occupational Class* | *Births per 1000 Married Men under 55 Years* |
|---|---|
| Upper and Middle Class | 98 |
| Intermediate | 104 |
| Skilled Workers | 141 |
| Intermediate | 162 |
| Unskilled Workers | 178 |

CONTRACEPTION

IT IS generally assumed that city populations are more prone deliberately to restrict reproduction than are rural populations. Yet there are at least two lines of analysis which tend

* R. Pearl, *The Biology of Population Growth*, New York 1925, Chaps. VII and VIII.

† From Deutsches Statistisches Reichsamt, *Beitrage zum deutschen Bevolkerungsproblem* (Sonderhefte zu Wirtschaft und Statistik, No. 5), Berlin 1929, p. 33.

‡ From *The Registrar General's Decennial Supplement* 1921. Part II, "Occupational Mortality, Fertility, and Infant Mortality," London 1927. Quoted in *Beitrage zum deutschen Bevolkerungsproblem* (See Table XIX), p. 34.

to cast doubt on this assumption. In the first place, Carr-Saunders has shown that the limitation of offspring is practised in all sorts of societies. In the second place, contraception, both as a technique and as a set of attitudes, is a culture innovation which, while now most often encountered in urban centers, may be expected to diffuse out from the city into the country, in the same manner as do other culture changes.

Carr-Saunders has collected an impressive array of ethnological, historical, and sociological data, all of which establish the fact that practices, whose ultimate effect if not their deliberate intent is to limit population growth, are to be found in all sorts of societies, ranging from pre-literate primitive tribes to present-day peasant populations. Contraception, as such, plays a minor rôle in these habits and customs, although it has an important part in the virtually stationary state of French rural populations. In general, however, population restriction has been accomplished by such indirect means as prolonged lactation, pre-pubertal intercourse, postponement of marriage, and various taboos surrounding spousal relations within marriage, together with such direct devices as abortion and infanticide. Whether any or all of these customs have as their primary objective the limitation of population increase is immaterial. Their result is undoubtedly in that direction.* In the face of this evidence, it seems difficult to adhere to any hypothesis proceeding from the assumption that the voluntary limitation of population growth is a peculiarly urban characteristic.

It is possible, however, and even probable that contraception as such is a phenomenon that is, on the whole, more commonly encountered in the city than elsewhere. This proposition rests upon no firmer foundation than general observation. It would seem to be unlikely, however, that any other situation than this would arise.

* A. M. Carr-Saunders, *The Population Problem*, Oxford 1922, *passim*, but especially Chap. XI.

### CONTRACEPTION AS AN URBAN-CENTERED CULTURE INNOVATION

IN CHAPTER VI there is a discussion of the general principle, familiar to cultural anthropologists, that culture innovations and modifications go through the initial stages of their diffusion in culture centers, and radiate to the outlying portions of their areas only after some time. Moreover, in an urbanized society it is the city which usually serves as a culture center.

Now contraception is a very distinct sort of cultural innovation. Its consummation depends upon the use of processes, most of which, in turn, rest upon relatively recent technological developments. Moreover, the willingness to resort to these processes involves a set of attitudes towards marriage, sex, and child-bearing that constitutes a sharp break with those attitudes which were general until a relatively short time ago. It is therefore to be expected, *a priori*, that the knowledge, the materials, and the state of mind necessary to bring about the widespread adoption of contraception would, at present, be more generally diffused in the city than elsewhere. On the other hand, it is to be expected that all of these will eventually penetrate first into the immediate environs of the city, and finally into every portion of its culture area, just as does any other cultural novelty. To the extent, therefore, that deliberate contraception is to be accounted a factor in the relatively low birth rate of the city, it is probably to be regarded as a point of differentiation between city and country that will be of diminishing significance.

### LOW MARRIAGE RATE

HOWEVER there does seem to be at least one characteristic of city life that tends, indirectly, towards the reduction of this urban birth rate. It is the disposition, noted by Groves and Ogburn, of city-dwellers to marry less frequently, and to postpone marriage longer than do the inhabitants of the village and the open country.*

* E. R. Groves, and W. F. Ogburn, *op. cit.*, p. 300.

### HIGH DEATH RATES

GENERALLY speaking, urban death rates are higher than rural ones, particularly when the favorable age constitution of urban populations is taken into account. For the year 1923 the unadjusted death rate per 100,000 for the cities in the United States Registration Area was 13.2, and for the rural portions of this same area 11.5. In the year 1926 the death rate for the urbanized portions of England and Wales was 12.3, and for the rural portions 11.3.

There is, however, by no means a universal association between urbanization and a high death rate. De Jastizebski states:

> Rural death rates are higher than urban rates in the Netherlands, in Sweden, in Denmark, and in Japan. In the Netherlands, moreover, there is an inverse ratio between the degree of urbanization and mortality — the larger the city, the lower the death-rate.*

At the end of this chapter an explanation for this apparent contradiction will be offered. At this point it may be said that such an explanation takes into account the fact that in Japan there is probably not so high a degree of industrialization in these countries as in England and Wales and the United States.

### THE FALL IN THE URBAN DEATH RATE

AS LONG ago as 1899 Weber was able to show that in certain European countries the cities were reducing their mortality more rapidly than the rural areas.† This tendency appears to be still in operation.

In the United States the urbanized portions of the "Original Registration Area" have shown a mortality rate that is

* Towns of less than 5000 . . . . . 10.96
Cities of 5000 to 20,000 . . . . . 10.16
Cities of 20,000 to 100,000 . . . . . 9.12
Cities of 100,000 and over . . . . . 8.79
The data are for the year 1924. From *Encyclopedia Britannica* (14th Ed.), article on "Death Rates," Vol. VII, p. 112.

† A. F. Weber, *Growth of Cities in the Nineteenth Century* (Columbia University Studies in History, Economics, and Public Law, VII), New York 1899, pp. 355–356.

declining much more rapidly than the rural districts in the same area. As Table XX indicates, moreover, this trend is to be noted for infant mortality no less than for mortality in general.

TABLE XX

BIRTHS AND DEATHS AND INFANT MORTALITY, 1915 AND 1922 IN THE "ORIGINAL REGISTRATION AREA" OF THE UNITED STATES *

| *Area and Date* | *Birth and Death Rates* | | |
|---|---|---|---|
| | *Births per* 1000 *Population* | *Deaths per* 1000 *Population* | *Deaths under* 1 *Year per* 1000 *Births* |
| Cities 1922 | 22.7 | 12.5 | 81 |
| Cities 1915 | 26.0 | 14.6 | 103 |
| Rural Districts 1922 | 22.3 | 12.2 | 76 |
| Rural Districts 1915 | 23.8 | 13.4 | 94 |

For certain specific causes of death, it is seen that the city has been notably successful in controlling infectious disease conditions. Thus, reference to Table XXI shows that for virtually all the major contagious and infectious diseases (typhoid, malaria, whooping-cough, influenza and pneumonia, diphtheria, tuberculosis, and diarrhœa and enteritis in infants) the urban death rate has declined more rapidly than the rural rate. In some instances (malaria, influenza and pneumonia) the rural rate has risen while the urban rate has fallen, and in certain diseases (malaria, typhoid, and tuberculosis) the death rate is now higher outside the city than in it. It is particularly noteworthy that tuberculosis is in this latter group, although only as recently as 1915 the urban death rate was 136.8 per 100,000 of population compared with 111.8 for the rural rate.

### SANITATION AND THE CONTROL OF COMMUNICABLE DISEASE

REFERENCE to the literature of public health administration provides the clue to the differing experiences of the urban and the rural community in dealing with contagious

* From United States Census, *Births, Still Births, and Infant Mortality Statistics for* 1922. Note that these rates are not corrected for the favorable age constitution of urban populations; so that the actual birth rate for the cities is lower, and the actual death rate higher than the table indicates.

## TABLE XXI: Mortality Rates for Certain Causes of Death in Urban and Rural Portions of the Registration Area of the United States, over a Period of Years *

| Cause of Death | Mortality Rate per 100,000 Urban | | | | | Estimated Population † Rural | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1923 | 1921 | 1919 | 1917 | 1915 | 1923 | 1921 | 1919 | 1917 | 1915 |
| Typhoid and Paratyphoid | 4.6 | 5.8 | 6.1 | ..... | ..... | 8.7 | 11.9 | 11.8 | ..... | ..... |
| Malaria | 0.6 | 0.9 | 0.9 | 1.0 | 0.7 | 4.8 | 6.1 | 6.2 | 4.9 | 2.8 |
| Smallpox | 0.1 | 0.6 | 0.2 | 0.2 | 0.1 | 0.1 | 0.6 | 0.6 | 0.3 | 0.2 |
| Measles | 10.8 | 4.1 | 4.3 | 10.4 | ..... | 10.8 | 4.4 | 3.6 | 17.6 | ..... |
| Whooping Cough | 8.7 | 7.7 | 4.8 | 9.4 | 8.0 | 10.6 | 10.5 | 6.2 | 11.5 | 8.6 |
| Scarlet Fever | 3.9 | 6.4 | 3.2 | 4.1 | 4.1 | 3.3 | 4.4 | 2.4 | 3.0 | 3.1 |
| Diphtheria | 13.3 | 19.3 | 19.0 | 19.6 | 17.6 | 11.1 | 16.4 | 11.2 | 12.3 | 12.9 |
| Influenza and Pneumonia | 160.3 | 110.7 | 234.7 | 192.1 | 168.7 | 147.5 | 88.6 | 210.5 | 142.7 | 125.8 |
| Acute Anterior Poliomyelitis | 0.7 | 1.8 | 0.6 | 1.1 | 0.9 | 1.0 | 1.9 | 1.1 | 1.7 | 1.2 |
| Tuberculosis of the Respiratory System and Acute Disseminated Tuberculosis | 81.7 | 86.6 | 115.8 | 139.5 | 136.8 | 83.9 | 86.6 | 106.1 | 116.5 | 111.8 |
| Cancer | 106.9 | 102.1 | 96.8 | ..... | ..... | 73.5 | 70.9 | 66.4 | ..... | ..... |
| Diabetes Mellitus | 21.9 | 20.2 | 18.0 | 20.3 | 20.1 | 14.3 | 13.6 | 12.2 | 14.1 | 15.4 |
| Diseases of the Heart | 201.0 | 174.3 | 168.4 | 191.3 | 176.6 | 153.3 | 141.1 | 128.5 | 153.6 | 153.5 |
| Pneumonia | 128.9 | 101.4 | 153.1 | 179.4 | 156.9 | 90.7 | 75.3 | 97.3 | 120.8 | 105.9 |
| Diarrhœa and Enteritis (under 2 years) | 33.3 | 43.3 | 52.0 | 70.2 | 68.8 | 30.8 | 39.3 | 36.7 | 52.8 | 44.7 |
| Acute and Chronic Nephritis | 101.6 | 93.9 | 102.6 | ..... | ..... | 79.4 | 76.3 | 74.6 | ..... | ..... |
| All Puerperal Causes ‡ | 7.1 | 7.7 | 7.9 | ..... | ..... | 5.9 | 5.9 | 6.9 | ..... | ..... |
| Suicide | 14.2 | 15.0 | 13.6 | 16.2 | 19.2 | 9.3 | 10.1 | 9.5 | 10.4 | 13.3 |
| Homicide | 9.6 | 9.1 | 8.8 | 8.8 | 7.0 | 6.4 | 7.2 | 5.7 | 5.4 | 5.0 |
| Automobile Accidents | 19.6 | 15.3 | 13.5 | 11.9 | ..... | 10.4 | 7.6 | 5.6 | 5.9 | ..... |

* From United States Census Bureau, *Mortality Statistics* 1923, Washington 1926, pp. 19–72.

† "Crude" Death Rates, i.e., not adjusted for age differences between urban and rural populations.

‡ Per 1000 live births.

and infectious disease. The city is able more effectively to equip itself for such purposes. It can raise the funds and command the professional skill necessary for providing medical care and hospitalization, for reporting disease outbreaks, and for safeguarding its food- and water-supplies. It can also exercise its police power for enforcing quarantines, for embargoing contaminated food-supplies, and for maintaining sanitary standards by food dealers and restaurants. It can educate its population in the principles of hygiene, and can count on a favorable response to such education.

The Health Department of the City of Chicago, for example, applied quarantine and supervision to over 13,500 cases of communicable disease during the year 1928. During the same period, it examined over 1,200,000 school children for communicable disease, and excluded 16,000. Throat cultures to the number of 29,000 were made for the detection of diphtheria alone. Forty inspectors were employed constantly in examining the sanitary conditions of the 35,000 dairy farms, situated in seven states, from which the city's milk supply was drawn. The city's water-supply was protected by chlorination and filtration, and by the construction of elaborate works for sewage disposal.

Remarkable success has attended these and other administrative and educational public health measures. Chicago had, in 1890–94, a typhoid death rate of nearly 100 per 100,000 of population. By 1926, the rate for this disease was reduced to less than 1 per 100,000. If the earlier rate were still prevailing in 1927, there would have been 2940 typhoid deaths in Chicago instead of the 23 that actually did occur.

The diphtheria mortality of Chicago in 1928 was 450. At the rate which obtained in 1898, it would have been 1800.

In sharp contrast is a report recently published concerning sanitary conditions in 853 Pennsylvania mining villages, averaging about 300 in population. The report states that:

85 per cent disposed of waste water in such a manner as to form a nuisance.

55 per cent had defective means of garbage and waste disposal.

18 per cent were being served by unsafe springs.
13 per cent were using unprotected wells.*

### MEDICAL FACILITIES

PEEBLES † shows that physicians and hospitals are very unevenly distributed throughout the United States, rural districts being particularly poorly supplied. In 1927 there were in the United States 126 physicians per 100,000 of population, but in Montana the proportion fell to 71, and in South Carolina to 81. In the state of North Carolina, in 1927, there were 735 persons per each physician in counties containing towns of 20,000 or over, as against 1831 persons for each physician in counties containing towns of less than 3000.

In South Carolina there was in 1928 only one hospital bed for every 749 persons, although the average for the United States was 270 persons per hospital bed. In the same year, there were ten states more than half of whose counties were entirely devoid of hospital facilities.

Of the 2500 counties in the United States that are wholly or in large part rural, only 414 employed full-time health officers in 1928, whereas in 354 out of the 824 cities of 10,000 or more population there were full-time health officers.

### THE PERSISTENCE OF A HIGH MORTALITY RATE FOR CERTAIN CAUSES OF DEATH IN THE URBAN COMMUNITY

TABLES XX and XXI indicate that the city has been more successful than the countryside in mobilizing its resources for the prevention and control of disease, and has thereby lowered both its general and its infant mortality rates more rapidly. On the other hand, Table XXI shows that, for certain causes of death, the urban rate has steadily risen, while the rural rate has risen only moderately, or has fallen.

This observation is applicable to the so-called degenerative diseases, to accidents, and to homicides.

* H. F. Bronson, "The Slum Environment — What is It?" — In *Pennsylvania's Health*, Vol. VII, No. 1, Jan., Feb. 1929. Summarized in *Social Science Abstracts*, Nov. 1929, No. 9412.

† A. Peebles, *A Survey of Statistical Data on Medical Facilities in the United States* (Committee on the Cost of Medical Care Publication No. 3), Washington 1929, pp. 49, 51, 65, 66, 91, 92.

THE "DEGENERATIVE DISEASES"

OVER the period covered by Table XXI, the death rate for diabetes and heart disease has risen in the urban portions of the United States Registration Area, and fallen in the rural portions, while the cancer rate has mounted more rapidly in the former than in the latter. Deaths from "acute and chronic nephritis" do, to be sure, show a slight falling-off in the urbanized areas as contrasted with an increase in the rural areas. Acute nephritis is, however, often a terminal complication in acute infections, such as pneumonia and scarlet fever, which have been brought under a measure of control in the city. Chronic nephritis which is generally considered a "degenerative disease" has probably increased in the city, in common with other "degenerative diseases." In any event, deaths from cerebral hemorrhage, which often overtakes persons suffering from chronic nephritis, have, according to Woolston, risen sharply in the urban portions of the Registration Area, during the decade 1910–1920.*

Thompson † interprets the United States Life Tables of 1920 to say that the older individuals who are city-dwellers have a strikingly shorter life expectancy than rural-dwellers. This fact is significant, for the "degenerative diseases" attack persons over middle age. For example, out of 100,000 males born living, 70,000 were, at the age of 42, still alive in 14 large cities as against about 76,000 in 5 rural states. By the time the 62nd year was reached the difference was truly startling, for there were only 46,000 survivors in the cities as against 59,000 in the rural states.

There is little point in considering the causes for this striking difference between the vitality of city and country folk, since the etiology of these various diseases remains very obscure. There seems to be some relationship between diabetes and prosperity, or more properly speaking, the dietary habits

* H. B. Woolston, "Changes in Mortality" in *American Journal of Sociology*, (Vol. XXXII), Chicago, May 1927, pp. 937–946 See also A. A. Stevens, *The Practice of Medicine*, Philadelphia 1926, p. 762 and *The American Illustrated Medical Dictionary*, (14th Ed.), Philadelphia 1927, p. 781.

† W. S. Thompson, *Population Problems*, New York 1930, p. 154.

that usually go with prosperity. It may be as Thompson * suggests, that certain concomitants of city life, such as an improperly-balanced diet, sedentary living, non-active occupations, and absence of sunlight, singly or in combination, operate to bring about these diseases. Again, it may be that they are, for the most part, the *sequelæ* of sub-acute infections, which, in turn, may be more common in the urban than in the rural community.

There is a possibility also that the smoke and dust pall hanging over the average city increases the liability to infection by irritating the respiratory passages and by shutting out sunlight to such an extent that resistance is lowered. According to a recent estimate four tons of smoke particles, dust, and other impurities are suspended each month in every cubic mile of air above New York City up to a height of one mile. During June 1930 air-pollution amounted to six tons per cubic mile, and some years ago it reached a maximum of twelve tons.

That medical science has already begun to cut down the toll of the " degenerative diseases " in the urban community is suggested by Winslow's and Marvin's recent compilation of the mortality data for the city of New Haven, Connecticut. The death rate for the three combined disease groups of heart disease, cerebral hemorrhage and apoplexy, and nephritis, " rose steadily and rapidly from 1877 to 1907, then rose slowly to 1916, fell sharply to 1920 [because of large numbers of persons with weak hearts eliminated by the influenza epidemic of 1918] and then rose again, but slowly." The rate of 382 per 100,000 in 1925 was nearly 50 below the peak year of 1916, when it reached 438.

For the age-groups 20–69, there is a striking drop in heart disease mortality for the nine-year period ending in 1926. Winslow and Marvin comment upon the improved outlook for these " degenerative diseases " in New Haven as follows:

> The factors at work in promoting pathological changes of the heart, arteries, and kidneys are many and diverse. In childhood, the majority of such disorders are due to attacks of acute communicable disease or to focal infections resulting from diseased

* W. S. Thompson, *op. cit.*, p. 304.

teeth or tonsils. In early adult life, venereal disease begins to play a leading role, while in later years, true degenerative changes due to the aging of the living machine become predominant. . . A man may die of heart disease at sixty largely because he had an infected tonsil at twelve.

It is evident then, that many different phases of the public health movement have an indirect but powerful effect upon the mortality from cardiac, arterial, and renal diseases. These elements in the death-rate can not fail to be influenced by all that is being done for the control of scarlet fever and diphtheria, for the correction of defective teeth and tonsils, for the reduction of venereal disease and for the promotion of habits of healthy living. We are inclined to believe that the check in "the rising tide of heart disease" manifest in New Haven since 1907 and the encouraging reductions manifest at ages under 70 are the result of such efforts.*

It is not unreasonable to anticipate that other cities may encounter a similar experience, for in the control of communicable disease and the promotion of preventive medicine and hygiene the urban community is achieving noteworthy results.

### HOMICIDE AND ACCIDENT

CONCERNING the factors responsible for the city's higher mortality from homicide and accident, it is possible to speak with somewhat greater certainty. That these hazards are distinctly greater in the urban than in the rural community is clear. Table XXI shows that the death rates for both homicide and automobile accidents are higher in the urban than in the rural portions of the American Registration Area, and that they are mounting more rapidly.

### ACCIDENT

THERE are no recent data available concerning the *general* accident rate in the urban portions of this country as compared with the rural portions. A recent German tabulation, however, indicates that there is a progressive increase, according to the size of the city.

* Reprinted by permission from *Health Survey of New Haven*, 1928, (Chap. XXV), by C. E.-A. Winslow, New Haven 1928.

TABLE XXII

ACCIDENT MORTALITY, PER 100,000 OF POPULATION, IN GERMAN CITIES OF VARIOUS SIZES, FOR 1926 *

| *Communities* | *Accident Mortality* |
|---|---|
| 100,000 and over | 33 |
| 50,000 100,000 | 30 |
| 30,000–50,000 | 25 |
| 15,000–30,000 | 24 |

The implication to be drawn from this table is that fatalities from accidents increase directly with urbanization. Reference to the American statistics, however, shows that it is not always possible to establish a direct correlation between city life and fatal accidents. The United States Census Mortality tabulations show that in the year 1923 the five states having the highest fatal accident rates were Wyoming (195.4), California (168), Washington (94.6), Pennsylvania (90.9), and Florida (90.1). Pennsylvania is the only one of these states which can be considered highly urbanized. Certainly Wyoming cannot by any stretch of the imagination be regarded as an urbanized state. More than this, examination of the detailed data for each of these states serves further to discourage the making of broad generalizations. Mining accidents account for nearly two-thirds of the accidental deaths in Wyoming, whereas in Florida more than half of them are due to automobile accidents. More than one-fourth of the accidental fatalities in California must be put down to automobiles, and one-sixth of those in Washington. Falls are responsible for one-sixth of the accidental deaths in the latter state, and for one-seventh in the former, as well as one-sixth of those in Pennsylvania.

Taking accidental deaths over the country as a whole, about one-fifth are due to automobiles, one-tenth to falls, and about one-eleventh each to drowning, burns, and railroad accidents. While there is no official tabulation for in-

* From Deutsches Statistisches Reichsamt, *Wirtschaft und Statistik* (8th Year), Berlin 1928, p. 332.

dustrial accidents, it is estimated by Hooktadt that fatalities from industrial injuries, in the year 1923, numbered approximately 21,000 out of 84,000 accidental deaths or about one-fourth of the total.* Automobile accidents and industrial accidents together, therefore, account for nearly one-half of all the accidental fatalities in the United States. It has been shown in Table XXI that automobile accidents are relatively more numerous in the city than elsewhere, and the fact that industry — mining excepted — is generally associated with urbanism makes it likely that industrial accidents are more frequent in the city than elsewhere. In other words, automobile and industrial accidents are probably responsible in large measure for the relatively high accidental death rate in the cities of the United States.

The correlation between automobile accidents and urbanism appears to be integrally related to city life, as such. It has been pointed out in a previous chapter that traffic congestion is an almost unavoidable concomitant of urbanism, and Lewis has demonstrated the existence of a direct correlation between automotive accidents and traffic congestion.†

The situation is not the same with industrial accidents. It has already been mentioned that industrialism is a social phenomenon which is not necessarily and universally conjoined with city life. Industrialism is a relatively recent accretion to the city, and, in accordance with the principles of culture diffusion laid down elsewhere in this work, a certain degree of dispersion of industrialism into the countryside may be expected to occur — has in fact already begun to take place, as is evidenced by the development of industrial suburbs, and by the occurrence of house-crowding, and a high tuberculosis mortality in the rural sections of England and Wales. More than this, one important industrialized activity, mining, is almost always carried on in regions that are remote from the city. Mining accidents resulted in about

* Quoted in L. A. De Blois, *Industrial Safety Organization for Executive and Engineer*, New York 1926, p. 2.

† See H. M. Lewis, *Highway Traffic* (Regional Survey of New York and its Environs, Vol. III), New York 1927, p. 54. It appears that the relation between fatalities and (automobile) registration has been a fairly definite one, represented by a straight line on double logarithmic paper. The equation of this line is — Fatalities = 0.073 (*Registration*) $^{\frac{3}{2}}$.

2300 deaths in 1923,* or about one-ninth of all the industrial fatalities for that year. As shown above, they are chiefly responsible for the fact that Wyoming, whose largest city has less than 25,000 inhabitants, in 1923 had the highest accident rate in the Union.

Here, as elsewhere, therefore, it is necessary to distinguish between those social conditions that are integrally related to city life, as automobile accidents, and those conditions, as industrial fatalities, that are related to other phenomena that are associated with city life. This distinction which must be kept in mind throughout the entire range of questions relating to urban sociology is considered at greater length in Chapter VI.

### HOMICIDE AND SUICIDE

THE situation in regard to homicides is confusing. Table XXIII shows that for the United States the urban death rate exceeds the rural for both of these causes, in spite of the fact that the colored population which is largely rural in distribution has a very high homicide rate. (In the year 1924, for instance, the white homicide rate was 5.3, while the colored was 40.1.)

TABLE XXIII

SUICIDE AND HOMICIDE RATES PER 100,000 ESTIMATED POPULATION FOR REGISTRATION AREA, 1924 †

| *Type of Territory* | *Deaths per* 100,000 *by* | |
|---|---|---|
| | *Suicide* | *Homicide* |
| Rural | 9.8 | 6.5 |
| Urban | 14.7 | 10.1 |

In certain other countries, however, rural homicides are relatively more numerous than urban ones. Moreover, homicide quite generally constitutes a smaller proportion of urban than of rural crime.

* American Engineering Council, *Safety and Production*, New York 1928, pp. 141, 142, and 284.

† *Mortality Statistics*, 1924, U. S. Government, Washington, D.C. 1927, pp. 69–70.

Suicide is not uniformly correlated with urbanization. The State of California, for example, has nearly double the suicide rate of New York City (28.0: 14.3 for the year 1924). It seems better, therefore, to postpone detailed discussion of these factors in urban-rural mortality until a later chapter in which attention is given to the whole gamut of social pathology in urban as contrasted with rural society. (See Chapter IX.)

PUERPERAL CONDITIONS

INCIDENTAL mention should be made of the higher mortality from child-birth (e.g. *Puerperal various* and *Puerperal septicemia*) in the city as compared with the country, as shown by Table XXI. If this contrast were to be found in other urbanized countries, it would point to the conclusion that urbanism promotes greater hazards in connection with one of the most significant phases in the life of any social group. This contrast is not, however, to be observed throughout other urbanized portions of the world. In England in 1925, for example, the *lowest* death rate of women in child-birth was in London and the *highest* in the rural districts.

TABLE XXIV

MORTALITY OF WOMEN IN CHILD-BIRTH FROM ALL CAUSES, IN ENGLAND AND WALES FOR 1925 *

| *Population Groups* | *Mortality per* 1000 *Children Born Alive* |
|---|---|
| Rural Districts | 4.29 |
| "County Boroughs" (Large Cities outside of London) | 4.26 |
| "Other Urban" Districts (Small Cities) | 4.08 |
| London | 3.19 |

In this connection, it may be noted that the maternal mortality rate of the United States is very high, in comparison with the rates obtaining in other countries on substantially the same culture level. There seem to be special influences at work in the United States (over-hospitaliza-

* From *Report of Registrar-General*, London 1927, p. 63.

tion? undue obstetrical interference?) which make for a relatively large maternity hazard, and it may be that these influences are more widely effective in the urban than in the rural portions of the country.*

GENERAL OBSERVATIONS ON URBAN FECUNDITY AND VITALITY

MENTION has been made of the theories advanced by observers such as Nordau and Spengler that the city being unable to maintain itself through the natural increase of its own population constantly recruits its numbers from the inhabitants of the countryside, who in turn come under the biological blight of urbanism, so that the long-run consequences of city life are depopulation and racial "degeneration." It is difficult to discuss such generalizations as these because of the quasi-metaphysical and dogmatic manner in which they are propounded. If, however, certain features of the material that has been presented in this chapter are reviewed, it is perceived that hypotheses of this sort, have, to say the least, no such sweeping and universal applicability as is sometimes claimed for them.

It has been seen that the assumption underlying these theories, that the city's birth rate is low and its death rate high as compared with the country, is not uniformly valid. It has been seen, again, that certain culture changes peculiar to present-day society such as contraception and industrialism appear to be more directly related to city birth rates and death rates than urbanism *per se*. In this connection, it may be noted that those countries which have relatively high urban birth rates (Holland and France) and relatively low urban death rates (Scandinavia, Holland, and Japan) are not so heavily industrialized as are such countries as Germany, England, and the United States, which are commonly

* The United States Census Report, *Mortality Statistics*, 1921, shows the following comparative figures for deaths from puerperal causes, per 1000 live births:

| | |
|---|---|
| United States (Birth Registration Area of 1915) — 1920 | 7.6 |
| England and Wales — 1920 | 4.3 |
| Ireland — 1920 | 5.5 |
| Japan — 1919 | 3.3 |
| Netherlands — 1920 | 2.4 |
| New Zealand — 1920 | 6.5 |
| Scotland — 1920 | 6.2 |
| Sweden — 1916 | 2.7 |

cited as examples of the debilitating effects of city life upon their populations.

It has been seen, further, that the city is reducing its death rate more rapidly than the country, and that it is meeting with particular success in those fields in which the fruits of modern medicine and public hygiene are most effective — infant mortality and the communicable diseases.

### POSSIBLE SHORT-RUN NATURE OF EFFECTS OF CITY LIFE UPON THE HUMAN ORGANISM

Two additional points which have not hitherto received detailed treatment may be considered in this connection. The first is the possibility that city life has an adverse short-run influence upon such population elements as are not inured to it — that it has, in other words, a *shock-effect* from which the first two or three generations of an urbanized population suffer, but which eventually loses its force. The second possibility is that city populations — irrespective of the methods employed — may lose the will to reproduce and become voluntarily sterile.

Three types of data may be adduced in connection with the first of these propositions. They relate to (*a*) the recent urban migration of the American Negro, (*b*) the immigrant population of the United States, and (*c*) the history of the Jewish people in Europe and America.

### THE URBAN MIGRATION OF THE AMERICAN NEGRO

DURING the decade 1910–1920, the American Negro migrated into cities — both northern and southern — in unprecedented numbers. The Negro population of the cities in the Southern States increased by 397,000 or 21.4 per cent, and of those in Northern and Western cities by 479,000 or 47.9 per cent. For cities of 100,000 or over, the increase was 65 per cent. The colored population of certain cities increased as follows:

| | | |
|---|---|---|
| Detroit | 35,000 | or 611% |
| Cleveland | 26,000 | or 308% |
| Chicago | 65,300 | or 148% |
| Norfolk | 18,300 | or 73% |
| New York | 60,700 | or 66% |

Fry shows that during this same interval, the total Negro population increased by only 6.3 per cent as against 11.5 per cent and 17.1 per cent for the two preceding decades. During the period 1915–1923 there were more Negro deaths than births in urban communities.*

Table XXV shows, moreover, that the biological maladjustment of the Negro to urban life is no less marked in Southern than in Northern cities.

TABLE XXV

BIRTHS, DEATHS, AND INFANT MORTALITY OF NEGRO AND WHITE POPULATIONS IN CERTAIN AMERICAN CITIES, 1924 †

| *Cities and Population Groups* | *Deaths per* 1000 | *Infant Mortality per* 100 *Live Births* | *Births per* 1000 *Population* | *Births per* 100 *Deaths* |
|---|---|---|---|---|
| New York City | | | | |
| White | 11.9 | 65.9 | 21.9 | 184 |
| Colored | 24.6 | 105.7 | 38.0 | 155 |
| Chicago | | | | |
| White | 10.5 | 73.0 | 19.5 | 186 |
| Colored | 24.2 | 126.2 | 29.4 | 122 |
| Detroit | | | | |
| White | 10.2 | 76.2 | 25.3 | 249 |
| Colored | 19.2 | 117.9 | 26.6 | 138 |
| Washington, D.C. | | | | |
| White | 11.2 | 61.6 | 17.4 | 155 |
| Colored | 20.4 | 108.5 | 24.1 | 118 |
| Jacksonville | | | | |
| White | 15.1 | 68.9 | 28.1 | 186 |
| Colored | 23.8 | 129.9 | 21.6 | −91 ‡ |
| Jackson (Mississippi) | | | | |
| White | 17.1 | 88.9 | 30.0 | 176 |
| Colored | 34.8 | 195.7 | 33.4 | −96 ‡ |
| Charlotte (North Carolina) | | | | |
| White | 11.6 | 51.2 | 34.7 | 298 |
| Colored | 24.8 | 163.5 | 26.0 | 105 |

THE IMMIGRANT POPULATION OF THE UNITED STATES

THE material bearing on the biological maladaptation of the immigrant relates primarily to his migration to the United

* C. L. Fry, "The Negro in the United States — A Statistical Study" in *The Annals of the American Academy of Political Social Science*, Philadelphia Nov. 1928, Vol. 140, pp. 32–33.

† From United States Census Bureau: *Birth, Stillbirth, and Infant Mortality Statistics*, 1924, Washington 1926, Table 1.

‡ Represents an excess of deaths over births.

States, rather than to his urbanization. Nevertheless, over three-fourths of the foreign-born population of the United States is to be found in cities, particularly in large cities. Accordingly the data that follow may be interpreted as representing primarily and chiefly the stress of a long-distance migration, but as also incidentally showing the immigrant's reaction to his initial experience of American city life.

On the basis of statistics covering the state of New York, for the year 1910, Dublin * found that the principal immigrant groups, excepting the Italian and the Russian (mostly Hebrew) showed a higher mortality in the United States than in their native countries, and that all but the Russians (mostly Hebrew) showed a greater death rate than the native-born children of native parentage.

In Table XXVI is presented material covering the entire United States, for the year 1920, and showing infant mortality, and the birth-death ratio, as well as the general death rate. The immigrant has, on the whole, a much higher *birth rate* than the native American, partly, presumably, because of his generally inferior social and economic status, partly also because the typical immigrant in recent years has come from a high-birth-rate country. His *death rate* is, however, very much greater than that of the native American, the mortality among his children being especially high.

TABLE XXVI

VITAL STATISTICS OF NATIVE AND FOREIGN-BORN IN THE UNITED STATES, FOR 1920 †

| *Population Class* | *Births per 1000 Females Aged 10–59 Years* | *Deaths (Ratio of per cent of Deaths to per cent of Total Population in Registration Area* | *Infant Mortality per 1000 Live Births* | *Vital Index Ratio of Births to Deaths* |
|---|---|---|---|---|
| Native White, Native Parentage | 62.3 | 85.4 | 75.8 | 118.8 |
| Foreign-Born White | 92.7 | 134.2 | 96.9 | 151.8 |

* L. I. Dublin, "The Mortality of Foreign Race Stocks" in *Scientific Monthly* (Vol. XIV), New York 1922, pp. 103–104.

† From N. Carpenter, *Immigrants and Their Children* (U. S. Census Monograph No. 7), Washington 1927, pp. 180, 197, 202, and 210.

### THE CITY-INDURATED JEWISH POPULATIONS

THE data relating to the Jewish group, both in this country and in Europe, have a different import. They point strongly to the conclusion that the Jews are a population element, that are, on the one hand, highly urbanized, and on the other hand, possessed of an abundant biological vigor. Fishberg estimates that the Jewish people in Europe have been confined almost exclusively to the cities for upwards of five hundred years, but that their numbers have increased enormously in that time. He calculates that there were not more than a million Jews in Europe in the sixteenth century, but that, by the first decade of the twentieth century, they had increased to 11,000,000. Even with the relaxation of formal restriction upon their settlement, the Jews have remained a city people; in 1899, for example, nearly nine-tenths of all the Jews in France were to be found in Paris.

### TABLE XXVII

GENERAL AND INFANT MORTALITY RATES — JEWISH AND NON-JEWISH POPULATIONS IN CERTAIN EUROPEAN COUNTRIES AND CITIES — ABOUT 1900 *

| *Country or City and Date* | *General Mortality per* 1000 *Population* | |
|---|---|---|
| | *Jewish* | *Non-Jewish* |
| Bavaria — 1897 | 12.70 | 21.33 |
| Russia — 1901 | 18.08 | 32.51 |
| Hungary — 1900 | 16.98 | 27.21 |
| Roumania — 1896–1902 | 20.84 | 28.00 |
| Amsterdam | 11.72 | 16.85 |
| Lemberg | 19.30 | 29.00 |
| *City and Date* | *Infant Mortality per* 1000 *under* 1 *year* | |
| | *Jewish* | *Non-Jewish* |
| Frankfort-on-Main 1907 | 4.56 | 11.67 Catholic<br>11.86 Protestant |
| Breslau — 1907 | 6.21 | 21.72 |

* From Testimony of Chief Rabbi Hertz before the National Birth-Rate Commission of England in *The Declining Birth Rate*, London and New York 1917, p. 427.

Hertz as cited in Table XXVII shows that in respect to both general mortality and infant mortality, the Jew displays a vitality superior to that of the Gentile.

Both Hertz and Fishberg show that the Jewish birth rate in western Europe is declining rapidly at present, but interpret this circumstance as ascribable chiefly to the voluntary limitation of parenthood in conformity with tendencies prevailing throughout that portion of Europe.*

Dublin † finds that the American Jew has a longer expectation of life than any other immigrant group, in fact than the native-born of native parentage. His data drawn from New York data for the year 1910 are as follows:

| *Population Group* | *Expectation of Life* |
|---|---|
| Native-Born of Native Parentage | 52.96 |
| Russian-Born — Mostly Jews | 53.44 |
| Italian-Born | 51.94 |
| English, Scotch, and Welsh-Born | 50.27 |
| German-Born | 49.44 |
| Irish-Born | 38.69 |

Here is a people, then, that has been exposed to city life for dozens of generations. It has not disappeared. On the contrary, it has increased and multiplied. It shows a notably low death rate, as compared with non-Jewish population elements at the present time, and, if its birth rate during the past decade or so has fallen off, it has done so, not through declining biological vigor, but through adaptation of a new culture-trait — voluntary restriction of offspring.

Taking the experience of the recently-urbanized American Negro, and of the recently-migrated and urbanized immigrant, on the one hand, and that of the long-urbanized Jew on the other, it seems reasonable to make the following generalization: A high death rate and (probably) a low birth rate are to be expected as concomitants of the stress and strain attendant upon the change from one sort of environment to another, but after long accommodation to a given en-

* M. Fishberg, *The Jews*, New York, 1911, pp. 3–10, 12–15, 230–238; J.H. Hertz, quoted in *The Declining Birth-Rate*, by National Birth-Rate Commission, London and New York 1917, pp. 425–426.

† From L. I. Dublin, "The Mortality of Foreign Race Stocks" in *The Scientific Monthly*. (Vol. XIV), New York 1922, p. 97.

vironment, whether urban or rural population group may be expected to show a fairly steady rate of natural increase.

This generalization may be applied to the existing population situation in Europe and America. Large increments of the urban populations of both the United States and Europe are being drawn constantly from the countryside. The initial shock of their first exposure to city life may impose a sufficient strain upon them to make them relatively short-lived and infertile. With increasing induration to city life, the descendants of these rural-urban migrants will perhaps become sufficiently adapted to urbanism to achieve a degree of fecundity and vitality comparable to that exhibited — after half a millennium of urban life — by the Jewish people. In short, in this as in other phenomena associated with city life, it is necessary to distinguish between the *short-run* consequences of initial exposure to urbanism and *long-run* and general responses to it.

### POPULATION RESTRICTION AS A CULTURE-TRAIT THAT MAY EXTEND TO NON-URBAN SOCIETIES

It is at least possible, therefore, to doubt the validity of the assumption that urban populations are inevitably doomed to enfeeblement and eventual decay. Is it equally possible to doubt that they tend voluntarily to give over reproduction to such an extent that, irrespective of biological considerations, they are in effect liable to eventual extinction? The discussion of this proposition constitutes the second of the two general considerations with which this chapter is brought to a close.

It has been seen that city populations, as such, do not have any monopoly on the limitation of population — that, in fact, both in modern agricultural populations and in primitive societies there are to be found practices that have for their effect — if not their conscious intent — the restriction of population. Contraception as a definite and widely-practiced technique seems to be peculiarly characteristic of the modern city, and this, as has been seen, is the product on

the one hand of a series of technological developments, and, on the other hand, of the development of a set of attitudes that constitute in every sense of the word a culture innovation, which, like most culture innovations in an urbanized society, has been confined principally to the city during the initial stages of its diffusion. Both the means of contraception and the willingness to use them may, in other words, be expected presently to spread from the city home to the country home very much as has the installation of electric lights or the purchasing of "store" bread. Assuming that this occurs, however, may it not still be that the city will resort more frequently to this, and other methods of restricting reproduction, than the country? Spengler shows that Rome underwent a long period of declining population in the centuries preceding its ultimate collapse, and concludes that —

> All civilizations enter upon a stage, which lasts for centuries, of appalling depopulation. The whole pyramid of cultural man vanishes. It crumbles from the summit, first the world-cities, then the provincial forms, and finally the land itself, whose best blood has incontinently poured into the towns, merely to bolster them up awhile. At the last, only the primitive blood remains alive, but robbed of its strongest and most promising elements. The residue is the *Fellah type*.
>
> This, then, is the conclusion of the city's history — it sacrifices first the blood and souls of the creators to the needs of majestic evolution, and then the last flower of that growth to the spirit of civilization — and, so doomed, moves on to final destruction. *

Spengler insists, furthermore, that this debacle of urbanism is largely metaphysical, being due to the loss of the desire for racial life in civilized man. It is possible to dismiss such mystical theorizings as this and yet to recognize that a certain substantial basis underlies them. Urban societies — as the earlier portions of this work have demonstrated — do decay. Some of them have altogether disappeared. Population attrition probably — almost certainly — has played a part

* Reprinted by permission from *The Decline of the West*, Vol. II, pp. 105–107, by O. Spengler, copyright 1928 by Alfred A. Knopf, Inc.

in their decline. But this factor would seem to be only one of several tending in the same direction. We shall see in the closing chapters, that there are other equally fundamental forces — social, economic, political — that tend to make urbanism increase in burdensomeness and precariousness as it develops.

Moreover, as these later chapters show, a distinction must be made between a slow process such as population *attrition,* under consideration here, and a rapid one, such as population *decimation,* which is promoted by an abnormally high death rate as well as by a low birth rate. In the declining years of the Roman Empire, this second phenomenon, population decimation, brought about much of that spectacular urban depopulation to which historians refer and which Spengler seems chiefly to have in mind. This vicissitude was apparently a secondary reaction to other and more basic factors in the decline of the urban society of the ancient world. As such, it possesses considerable interest from the point of view of this work, but it is not germane to this portion of the discussion.

## BIBLIOGRAPHICAL NOTES

The best discussion of the topics considered in this chapter is contained in W. S. Thompson, *Population Problems,* New York 1930. An older, but still valuable, work is A. F. Weber, *The Growth of Cities* (Columbia University Studies in History, Economics, and Public Law), New York 1899.

Certain chapters in J. G. Thompson, *Urbanization,* New York 1927, are valuable, particularly Chap. XIX, dealing with the "Effects of Urbanization on Health, Physique, and Natural Growth of the Population."

A mass of statistical information concerning urban populations can be found in the United States Census reports on *Mortality* and on *Births and Infant Mortality,* which are published annually. The annual reports of the Registrar-General of England and Wales are even more illuminating, because they contain less raw statistical material and more analytical discussion than the American official publications. The summary volume of the latest British census, which has been cited frequently in this chapter (Census of England and Wales 1921, *General Report,* London 1927), is of exceptional interest and value, but is not available in most libraries. Finally, mention should be made of the *Annuaire Statistique des Grandes Villes,* published by the International Statistical Office at The Hague, in 1927. It embodies an extensive body of statistical material concerning various phases of city life, particularly births and deaths. The data for American cities are, however, quite incomplete.

# CHAPTER VI

## *THE URBAN WAY OF LIFE — THE IMPACT OF THE CITY UPON PERSONALITY*

ACCORDING to newspaper reports, an old man was picked up on the streets of New York, in October 1930, virtually moribund from starvation. When his health had been restored sufficiently to permit questioning, he astonished his auditors by telling them that he had a good home awaiting him at his son's farm, "over in Jersey," but that he had grown homesick for the sights and sounds of the city in which he had been born and spent most of his life. He was finally persuaded to return to the security of his son's rural home, but only after the latter had promised to arrange for an occasional visit to the city.

There are thousands of individuals whose attitude towards the city in which they live, or towards city life in general, is essentially similar to this old man's — although they may not be prepared to adopt such heroic measures to give it expression! The psychological mechanism by which the city thrusts itself into the subjective life of its inhabitants is probably that which is generally known as the *conditioned response*. The aspects of the city-dweller's life that are subjected to characteristically urban influences are his *home*, his *work*, his *recreation* and *worship* — which are discussed in detail in Chapter VII — and the *general tempo of the urban community* — which is given summary treatment here. Brief consideration is also given to the *significance of the characteristically urban conditioned responses to city life*. Each of the foregoing topics constitutes a major division of this chapter.

## THE CONDITIONED RESPONSES CHARACTERISTIC OF CITY LIFE

THE conditioned response provides the *leit-motif* of modern social psychology.* Most of the significant activities of the human organism are so closely linked up with associated sensory impressions that the one becomes relatively dependent upon the other. Consequently, the individual experiences difficulty in carrying on a given activity — or may be quite unable to go through with it at all — in the absence of the "linked-up experiences" † associated with it. Again, the emotions and sentiments attached to an activity are carried over to those linked up with it.

Three further general observations may be made concerning the conditioned response: In the first place its effect is heightened by the degree of emotion attending the linkages on which it is built, and by the frequency of their repetition. Thus, those associations which arise at times of great stress or excitement will, other things being equal, endure longer and exert more influence than those whose setting is more commonplace.

Again, an association which is the product of constant and prolonged iteration — such as an eating or sleeping or working association — will, generally speaking, be of greater significance than one which springs out of linkages that are infrequent or that occur over a brief period.

Finally, those conditioned responses which are born out of associations occurring very early in life generally cut deep into the subjective life of the individual, exercising a considerable influence over a long period. Many "instinctive" fears and avoidances, as well as attachments and preferences, are referred by modern psychology to the linked-up experiences of early childhood and even of infancy.

This brief *excursus* into the field of psychology suffices to suggest the nature and significance of the characteristically urban conditioned response in the life of the typical city-

* See K. Young, *Social Psychology*, New York 1930, Chap. V; also F. H. Allport, *Social Psychology*, Boston 1924, pp. 39–40, 96–97, 394–395.

† H. Hart, *The Science of Social Relations* (American Social Science Series), New York 1927, Chap. VII.

dweller. That this influence is far-reaching is obvious. Virtually every activity physiologically and sociologically vital to the city-dweller occurs under conditions that have a distinctively urban flavor, or are uniquely urban. These conditioning circumstances are, moreover, ubiquitous and constant: they attend the city-dweller's life from his arrival into the urban community and they dog his every footstep while he remains within it. In a word, the intensifying effect of repetition and continuousness is frequently correlated with characteristically urban conditioned responses.

Where the individual is city-born — particularly where he springs from a family that is itself thoroughly indurated to urbanism — such linked-up experiences would be expected to exercise a maximum effect. If, on the other hand, he is a migrant to the city, or if he belongs to a family which retains the impress of earlier, non-urban experiences, then the ascendancy of the urban influences will be less pronounced. In fact, as is suggested later in this section, and later in this work, the characteristically urban conditionings may find themselves in sharp conflict with the non-urban, with consequences which may be disastrous to the integrity of the individual's personality.

### HOME, WORK, WORSHIP, RECREATION

THE greater part of Chapter VII is devoted to an examination of the way in which the most prominent of the city-dweller's activities and relationships are colored by the fact that he is a city-dweller. At this point reference will be made only to the fact that the urbanized conditioning influences associated with these activities and relationships are far-reaching in their scope and deep-seated in their effect.

One or another of these interests occupies the greater portion of the city-dweller's conscious activity, and all of them are strongly tinged with an urban flavor. One has only to contrast for a moment the inhabitants of the city and of the countryside — with respect to the homes in which they are born and reared, the play-spaces in which their early social contacts are moulded and the games that they play there, the occupations by means of which they secure their livelihood

and the places where they work, the content of their religious beliefs and the forms and setting of their worship, the ways in which they amuse themselves — to realize that the city-dweller's way of life is, in more than a score of ways, surrounded by influences that are distinctively and poignantly urban.

### THE TEMPO OF CITY LIFE

As DISTINGUISHED from the conditioning influences exerted by the city-dweller's home, or his job, or by any other single segment in his way of life, there remains to be considered the manner in which the city as a whole, as a rhythm of human relations, as an aggregate of material structures and mechanical activities, is linked up with his experience.

The most clear-cut way in which the totality of city life serves as a conditioning influence is through (1) the *physical stimuli* which it brings to bear upon the individual. Other media of the city's influence upon the personality structure of its inhabitants are the relative prominence of (2) *social mobility* and of *contacts of mobility*,* the relative frequency of (3) *emotion-inducing situations*, and the relatively large number of (4) *secondary* or *indirect* group relationships, as contrasted with *primary* or *face-to-face* relationships.

### PHYSICAL STIMULI

THE city-dweller's psycho-physical equipment encounters distinctively urban-conditioning influences in relation to at least three types of sense-impressions, sound, movement, and light and vision.

### SOUND

THE sounds occurring in the city are peculiar chiefly in their intensity, their diversity, and their continuousness. The intensity of noise occurring in any city is enormous. In recent years, efforts have been made to measure noise, through a device known as the *audiometer*. In Chicago† and its

* P. A. Sorokin and C. C. Zimmerman, *Principles of Rural-Urban Sociology*, New York 1929, pp. 28–45. Also R. E. Park and E. W. Burgess, *Introduction to the Science of Society*, Chicago 1921, pp. 283–285 and 341.

† *Chicago's Health*, Vol. XXIII, No. 11, March 19, 1929, pp. 74–75.

environs, the following results have been obtained for "the continuous merged sound" for various districts:

| *District* | *Noise "Per Cent"* |
|---|---|
| Country | 8–10 |
| Suburban | 15 |
| Residential | 25 |
| Commercial | 30 |
| Industrial | 35 |
| "Loop" (Central Commercial Area) | 40–43 |

Zero per cent represents the point where sound first becomes audible to the normal ear. One hundred per cent represents noise that would drive one distracted if continued over an extended period of time.

In the same study, the quantum of noise arising from various individual sources of sound has been tabulated. A street-car, at three blocks of distance, yields 15 "per cent" of noise; a 5-passenger automobile, in fair condition, driven over a brick pavement at 15 feet distance, yields 45 "per cent"; an elevated railroad train, 20 feet overhead, yields 90 "per cent."

In New York City a Noise Abatement Commission * has devised a new unit for measuring noise, namely, the *decible*. The number of decibles between sounds of varying intensity indicates an actual difference of intensity equivalent to ten times the common logarithm of the intensity ratio. Thus, "between sounds of 10 and 20 decibles above the threshold of hearing, there is an intensity difference of 90, while the difference between the sounds of 90 and 100 decibles is 9 billion." The average outdoor intensity in very heavy traffic with an elevated railway train running overhead has been found to be 80 decibles, or an intensity about 100 million times greater than that at the threshold of sound. Even in a relatively quiet residential street the average noise was found to be nearly 50 decibles or 100 thousand times threshold intensity. The champion noise-maker was found to be the pneumatic riveting machine which averaged at 35 feet dis-

* New York (City) Dept. of Health, Noise Abatement Commission, *City Noise*, New York 1930. (Report edited by Edward F. Brown and others.)

tance an intensity of 97 decibles, which equals nearly 10 billion times the intensity at the threshold of hearing. The humble traffic policeman's whistle reached an intensity of 57.5 decibles when heard at a distance of 185 feet. After the appearance of this report, New York traffic policemen were instructed to restrict the use of their whistles.

A startling demonstration of the enormous volume of city noise was made by the investigators of the New York Commission. Tests made in the Zoo House in the Bronx indicated that a lion, whose roar is generally regarded as among the most terrific and awe-inspiring of sounds, could roar his loudest in a busy city street and not be heard for a distance of more than 20 or 30 feet. As for a tiger, " There are many places where a tiger from Siberia or Bengal could roar or snarl indefinitely without attracting the auditory attention of a passerby."

The Commission also studied the amount of noises making their way into the interiors of residences and office buildings. It was found that in a room of a 10-story office building, facing a steamship pier, the blast of a steamship whistle over a quarter of a mile away made a noise equal to 60 decibles — an intensity at which " conversation is difficult, study or concentration virtually impossible, and normal sleep almost out of the question."

The author once spent a summer as a resident worker in the Northwestern University Settlement, located in a densely-settled immigrant area of Chicago. At about five o'clock every morning, he was awakened by an unfamiliar rustling and scraping which seemed to come from the central artery of the district, and which rose in a rapidly-mounting crescendo until it became a roar, not altogether unlike a mountain torrent. It was several days before he realized that the noise which disturbed him was nothing more nor less than the footsteps of the thousands of men, women, and children going to work.

The diversity of urban sounds is readily perceived by an observer who analyzes the din of any city. The screeching of a defective brakeshoe, the rattling of a loose motor-vehicle fender, the insistent dinning of a radio loud-speaker, is not

particularly disturbing in and of itself. The cacophony of a dozen loud-speakers, and of hundreds of rattling fenders and squeaking brakes, continuing with scarcely any interruption for hours at a time, on the other hand, builds up a mass of noise that is as intensely nerve-wracking as it is peculiarly urban.

In some cases, the city, particularly the modern city, gives rise to sounds that are seldom, if ever, heard elsewhere. Such are the roar of the subway or the elevated train, the grinding of the subway turnstile, the staccato of the pneumatic hammer, and, particularly in Europe and Asia, the cry of the street-vendor.

The continuousness of city noise is readily noted by anyone who attempts to sleep in a strange city. The noises of the night are somewhat different both in volume and in origin from those of the daytime but they are none-the-less considerable. A heavy volume of traffic continues throughout the night — much of it, such as heavy trucking, refuse removal, and milk delivery, being confined to the night or early morning. It has already been observed that in the Rome of the later Empire heavy carting was limited to the night, and that the slumbers of the Roman householder were constantly broken by the noises arising from it.

Consideration is given in a later chapter to the effect of noise upon the physical and mental health of the individual. At this point, it need only be stated that noise apparently constitutes a definite strain upon the vitality of the individual, even when he "is used to it." The study quoted above states: "Noise not sufficient to wake a sleeping person will cause muscles to become tense and to stay tense for as long a period as 30 minutes before they relax." One authority,* moreover, asserts: "Many of the neuroses of the inhabitants of big cities may be regarded as analogous to the shell-shock that followed deafening bombardments during the war. . ." The New York Noise Abatement Commission asserts that noise has a fivefold effect upon the individual:

* Abstract of a Memorandum of the British Medical Association in *The Journal of the American Medical Association*, Vol. XCI, No. 26, Dec. 29, 1928, pp. 2074–2075.

1. The impairment of hearing.
2. Interference with efficiency, by lessening attention and concentration.
3. Strain upon the nervous system, "Leading to neurasthenic and psychasthenic states.

   (The report quotes the researches of Kennedy to the effect that as slight a noise as the explosion of a paper bag "raised the brain pressure to four times the normal level for seven seconds"—a greater increase than that induced by dosages of morphine or nitroglycerine.)
4. Interference with sleep, even if the individual is not consciously wakeful.
5. Interference with the normal development of infants and young children.

MOVEMENT

THE proverb: "Time and tide wait for no man," finds in the relentless movements of the urban mechanisms an extreme application.

This observation of Anderson and Lindeman is paralleled by one made a generation ago by Simmel: *

With every crossing of the street, with every fluctuation in the tempo and variety of domestic, professional, and commercial life, there arises within the perceptual foundations of the personality a deep cleavage with the slow, habitual, smooth-flowing rhythm of the psycho-physical structure of life in the small town or the countryside. (Translation abridged and freely rendered.)

Even in the absence of present-day instrumentalities of rapid movement the city-dweller would still have to hurry in and out of traffic. In fact, it has already been seen that only the fleet and agile pedestrian in imperial Rome was able to avoid serious injury while threading his way through the traffic of that ancient metropolis. The quickened tempo of city life, particularly that involved in its commercial and industrial activities, and in the stress of competition, carries with it a corresponding quickening of physical activity.

As for the present-day city, it is replete with mechanical devices whose sole objective is the acceleration of speed. Some of them, such as the motor vehicle, are encountered

* N. Anderson and E. C. Lindeman, *Urban Sociology*, New York 1928, p. 207. See also G. Simmel, "Die Groszstädte und das Geistesleben," in K. Bücher *et al.*: *Die Groszstadt*, Dresden 1903, p. 188.

away from the city, albeit not so frequently. Others, however, have their *raison d'être* in the large masses of persons and of goods that are found in the city. Such are the subways, the street-cars, the elevated railways encountered in most modern cities. Such also are the elevators located in the multiple-story buildings that are built in the city, and only there.

Any observer may readily gain some insight into the rapidity of movement involved in city life by noting the number of times he has to hurry, to dash or scuttle out of danger, or to make lightning decisions on which the safety of life and limb may depend.

### LIGHT AND VISION

COMPARE the number of sights and sounds which hale one in a city street with the number one meets in the country lane. Compare the big headlines, color, dramatic posters, and winking lights which have to be used in order to capture attention in the city with the modest sale notice posted at the cross-roads.*

The visual stimuli experienced by the city-dweller are peculiar in a number of ways. Since they are almost entirely man-made, they are more varied than those encountered in the country. They are also more vivid. On the other hand, they are deprived of many of the color tones associated with sunlight, for the building congestion that characterizes the typical city reduces the sunlight, not only from within the buildings themselves, but from the streets and other open spaces near them. Whether such sunlight-deprivation is as intimately correlated with the personality make-up of the individual as it is known to be with his general body-tone, is impossible to say. At all events, it probably is one of the more important, but one of the less obvious, of the physical-stimulus conditioning influences that he experiences.

### SOCIAL MOBILITY AND CONTACTS OF MOBILITY

URBAN populations on the average shift more often from place to place, from occupation to occupation, from poverty to riches, and *vice versa,* from slaves to masters and *vice versa.* In brief,

* Reprinted by permission from *Principles of Sociology,* p. 56, by E. A. Ross, The Century Company.

the city has a greater horizontal and vertical mobility than the rural population.

In this wise Sorokin and Zimmerman * define social mobility and indicate the manner of its functioning among city-dwellers. They go on to point out that *horizontal* or territorial mobility is manifested both by migration into the city and by changes of residence within it. *Vertical* mobility consists both of inter-occupational mobility and rising and falling within the social-economic scale.

Closely associated with social mobility are the group of phenomena described by Park and Burgess as *contacts of mobility*. They are in part the concomitants of horizontal mobility, as described in the preceding paragraph, but they include also "communication, by which sentiments and ideas are put in social circulation." † The telephone, the newspaper, the cinema, and the theater provide contacts of mobility, as do also less institutionalized media, such as the frequency and variety of personal intercourse.

All of these media for contacts of mobility are more abundant in the city than elsewhere. The modern city possesses a relatively large number of the mechanized and institutionalized agencies of mobility-contact (telephones, newspapers, cinemas, etc.), partly because it possesses a sufficiently large accumulation of population and wealth to support them, partly because the city, as the focal point of urban society, contains a relatively large representation of these, as of all, elements typical of contemporary culture.

More than this, as Park ‡ observes, the tempo of commercial life in the city encourages contacts of mobility. So also do the crowd situations which, as pointed out below, are promoted by city life.

* P. A. Sorokin and C. C. Zimmerman, *op. cit.*, p. 28.

† R. E. Park and E. W. Burgess, *op. cit.*, p. 284.

‡ R. E. Park, "The City: Suggestions for the Investigation of Human Behaviour in the Urban Environment," in R. E. Park, E. W. Burgess, and R. D. McKenzie, (Eds.) *The City*, Chicago 1925, pp. 18–20.

### SOCIAL MOBILITY AND CONTACTS OF MOBILITY AS CONDITIONING INFLUENCES

EXTENDED speculation upon the specific effects on human personality of social mobility and contacts of mobility is beyond the scope of this work. One point only may be noted — that they tend to interrupt the continuity of both individual and social life. Thus, horizontal mobility is inimical to the maintenance of lasting associations with localities, neighborhoods, and the like. Again, as Sorokin * has observed, vertical mobility is disruptive of social stratification, and of the fixation of institutions and of individual and group relations that is predicated upon it. Yet again, contacts of mobility, in the words of Park and Burgess,† promote the acceptance of "the strange and the novel," and accordingly favor flux rather than permanency of institutions and ideas.

These various forces, in other words, tend to make the social environment in which the city-dweller is placed replete with change, uncertainty, and insecurity. The relation of this feature of the conditioning elements in urban life to the shock-effect suffered by many new-comers into the city is obvious. Simmel's striking language, previously quoted, may be recalled: "There arises a deep cleavage with the slow, habitual, smooth-flowing rhythm of the psycho-physical structure of life in the small town and the countryside."

### EMOTION-EVOKING SITUATIONS

ONE of the great heroes of romance is a man who sought adventure, not upon the storm-tossed sea or on the hazardous mountain-peak, but rather up and down the crooked streets of an oriental city. Haroun-al-Raschid has had countless predecessors and successors wherever cities have arisen. Excitement, thrills, mystery, adventure — all these are part and parcel of the city-dweller's daily round. In some cases he comes into direct contact with an emotionally-significant situation; in others they are mediated to him by the news-

* P. A. Sorokin, *Social Mobility*, New York 1927, Final Section.
† R. E. Park and E. W. Burgess, *op. cit.*, p. 341.

paper, by the telephone, by gossip and rumor, or by other means of communication.

Various elements combine to heighten the emotional tension of city life, or, as Young * puts it, to extend "the range of excitation." Four may be singled out for especial mention: size, congestion, crowds, and the special pathologies of city life.

### SIZE

THE size of the city enhances the emotional significance of events that would otherwise be relatively commonplace. A conflagration, an epidemic, or a siege generates relatively little emotional voltage in a small town or village, but in a great city it assumes the proportions of a major tragedy. Thus the Siege of Troy, the London Plague, and the destruction of Pompeii are events the emotional reverberations of which are still being felt hundreds of years after their occurrence.

It may be that the increased emotional tone of the vicissitudes of city life is related to the number of people involved. It may be associated with the prestige of a particular city. Or again, it may arise chiefly from the longer duration and greater magnitude of the events themselves. Thus, a conflagration in a great city actually is hotter, covers a wider area, and lasts longer than one in a village.

Catastrophes are not the only events whose emotional overtones are heightened in the city. All happenings of general import derive in significance by virtue of their occurrence within an urban community. Religious ceremonies, civic pageants, dramatic episodes of any sort gain in color and thrill when they take place in a city. On many occasions, indeed, they are consciously brought to the city for the sake of the added meaningfulness which the urban setting gives to them. Just as the helmeted veterans of Cæsar and Trajan won their laurels on distant and remote battlefields, but held their triumphs in the streets of Rome, so the *poilus* and Tommies and doughboys of the World War conquered their enemies in the fields and forests of rural France, but cele-

* K. Young, *op. cit.*, p. 573.

brated their victories in the streets of Paris, London, and New York. Here the size of the crowds that can be assembled within a city is a factor of prime importance, for a religious or military or civic procession acquires significance and meaning in direct proportion to the size of the multitudes witnessing or participating in it. Yet of probably equal importance are the other and less obvious emotion-evoking features to be derived from a great city.

What is of more immediate moment to this discussion is the great intensity of emotion felt by the city-dweller who takes part, if only as a spectator, in one of the major dramas of city life. Any one of the thousands who saw Lindbergh's triumphal progress from *Le Bourget* to the American Embassy, or from the foot of Manhattan Island to upper Fifth Avenue, must have had an experience of such depth as to leave its impress upon him for years to come.

### CONGESTION

To SOME degree the emotional tone of the city is enhanced by the close crowding of its inhabitants. Even if the relative number of births, deaths, accidents, homicides, etc., were no greater in the city than in the country, they would *enter more frequently into the city-dweller's experience as a result of the greater congestion of city life.* The author once lived in a western ranching district in which his "next-door neighbor" was about two miles distant, on the other side of a dense woodland. By walking a half-mile and listening intently he could, on a quiet night, hear the neighbor's dog bark. Otherwise he was as remote from the author's experience as if the latter did not exist. He might have died in his bed or have been shot in his tracks, but the author would have had no knowledge of it save as he was told of it afterward. Indeed, on an earlier occasion, and on another ranch, the author saw the lightning-bolt which killed two horses of his neighbor a mile away, and all but killed the neighbor himself, but he learned of the episode only by hearsay several days later. When, on the other hand, the author took up his residence in a slum area of Chicago, where men, women, and children were crowded at the rate of several hundred to

every city block, then he was constantly made aware of one or another vicissitude in the life of the hundreds of individuals living within a stone's throw of him. A neighborhood wedding, a funeral, a christening, a quarrel, a brawl was bound to come to his attention almost daily.

### CROWDS

SOCIAL psychologists are not altogether agreed as to the precise way in which participation in a crowd affects the individual. They are all unanimous, however, in stating that such participation constitutes a profoundly disturbing experience. Some observers, such as Martin,* go so far as to say that crowd activity approximates the behavior of the mentally-diseased.

That crowd situations, with their emotional concomitants, arise more frequently in the city than elsewhere is a proposition that requires no demonstration. The raw material of the crowd, namely, a large number of people, easily assembled, is normally to be found only in the city. And many (but not all) of the characteristic attention-forming stimuli which are necessary to crowd formation occur at least as frequently in the city as elsewhere, particularly when weight is given to the cumulative influence of congestion.

### THE SPECIAL PATHOLOGIES OF CITY LIFE

SOME emotionally-potent events are of relatively frequent occurrence in the city, by virtue of their association with certain characteristic features, most of them socially pathological, of city life. Homicide, suicide, robbery, and accidents are among the more obvious of such phenomena. Each of them attains a relatively high rate in the city, and each is, generally speaking, highly charged with emotion. Merely to talk with an individual who has witnessed a gang "execution," or a serious motor-vehicle accident is to receive a severe shock. The author was only 12 years of age at the time of the burning of the Iroquois Theater in Chicago when over 600 lives were lost, yet he still vividly remembers the suc-

* E. D. Martin, *The Behaviour of the Crowds*, New York 1920, Chaps. III, IV, V.

cessive waves of suspense, horror, and grief that swept through his neighborhood when it was discovered that two of his schoolmates had perished in the holocaust.

Less obvious, but of considerable significance, is the emotional disturbance associated with the presence in the city of organized vice and the demoralizing recreational enterprises (dance-halls, theaters, amusement parks, drinking-places) associated with it. Whether he overtly patronizes organized vice or the activities more or less closely related to it, or whether he rigorously avoids them, the city-dweller can scarcely refrain from reacting emotionally to them in one way or another. Consequently, he can hardly keep from undergoing a degree of personality shock that is in some measure proportionate to the potency of the instinctive drives to which organized vice makes its appeal.

### SECONDARY VERSUS PRIMARY RELATIONSHIPS

IN CHAPTER VII is discussed the relative insignificance, in the city, of the neighborhood and of other primary or face-to-face groups. Here it need only be said that the absence of vital neighborhood life, on the one hand, and the widespread division of labor, on the other, throw the city-dweller into far more frequent and close contact with secondary groups than is the case with the dweller in the village or the countryside. He gains his livelihood almost entirely through large-scale, impersonal agencies. Even if he should happen to work individually or in a small partnership, he sells his goods or services impersonally. Likewise he spends his money impersonally, for the most part, scarcely knowing the names of most of those from whom he purchases his food, clothing, shelter, transportation, etc. His very recreation and religion are usually secured through the medium of impersonally-organized agencies, while government and public service in the city are almost wholly given over to secondary or indirect forms of organization.

There is great contrast between such a range of associations and the informal, direct, face-to-face relationships which characterize most activities in the rural community or small town. By the same token, the differentiation in the types of

conditioning influences experienced by the city-dweller and the rural-dweller is correspondingly great.

## THE SIGNIFICANCE OF CONDITIONING INFLUENCES CHARACTERISTIC OF CITY LIFE

THROUGHOUT the foregoing discussion reference has been made only incidentally and occasionally to the specific effect on human behavior of the various types of conditioning factors associated with city life. It is not that these effects are unimportant. They are enormously significant. Their discovery and elucidation lie, however, almost completely within the realm of social psychology. Moreover, only a few of them have as yet received sufficient experimental and theoretical study to justify extended discussion outside the pages of specialists' monographs.

One observation only will be offered here. It is so obvious as to be almost axiomatic, but its implications are far-reaching: *the total impact of urban life upon the individual is profoundly different from that of non-urban life.* As has been seen, in one or another category of human experience, there is a clear-cut contrast between city and country. More than this, when these various differences are totaled — when, that is to say, the whole gamut of the individual's life is envisaged — it is seen that most of the configuration of life in the city is different from that in the country or small town.

From this very obvious generalization, two less obvious but no less significant corollaries may be inferred.

### THE SHOCK-EFFECT OF CITY LIFE

THE first has already been implied. The migrant from the country to the city encounters such a new and unfamiliar universe of experience that the change is almost bound to visit upon him a distinct shock. This *shock-effect* of migration into the city is discussed at length elsewhere. Here it may merely be pointed out that, in the author's opinion, many of the disorganizing effects of the city upon the individual (crime, mental breakdown, etc.) are to be interpreted not so much as effects of city life as such, but rather as the effects of the *sudden impact of the characteristically*

*urban set of conditioning influences upon a personality that has been accommodated to a characteristically non-urban set of influences.* In short, certain individuals break down as a consequence of their failure to become adequately reconditioned to the city.

One further point may be noted. The shock-effect of the city may be carried into the second or even the third generation of migrants. Many conditioning influences are imbedded in traditional folkways. Others are passed on from one generation to another, by conscious precept or by imitation, particularly when the migrating group is also an immigrant group, as is often the case in the cities of the United States. That is to say, there may be reverberations for two or more generations of the shock-effect attendant upon country-to-city migration.

### THE CULTURAL-PSYCHOLOGICAL FACTOR IN URBAN GROWTH

THE second correlative generalization has to do with the ultimate outcome of an urban society, such as was that of the Roman Empire — such as may be that of contemporary Europe, America, and much of Asia. An individual who is thoroughly conditioned to the city is not likely to care to live elsewhere. On the contrary, *he may continue to live in the city, or to build new cities, long after the further expansion of city life has become economically inexpedient.* In the author's opinion this is precisely what occurred in the ancient world. He interprets much of the difficulty encountered by the ancient civilization, as represented by the later Roman Empire, as being related to the fact that the cultural and social-psychological factors of urban expansion continued to operate after the economic factors had ceased to do so. In short, the Roman Empire kept on building new cities, and increasing the size of its old cities, after the economic limits upon further urban growth had been overpassed, and they did so because the average member of that civilization was *so completely conditioned to urban life that he simply could not conceive of living outside a city.*

It is the author's further opinion that a similar overstepping of the economic bounds of urban expansion, under the

impulse of culture growth and the enthrallment of the urban way of life, may not inconceivably bring the present urban civilization to a similar dilemma.

## BIBLIOGRAPHICAL NOTES

A useful discussion of the impact of the city upon personality is contained in N. Anderson and E. C. Lindeman, *Urban Sociology,* New York 1928. See in particular Part III, "Urban Personalities and Groups."

Two recent discussions of the bearing of the conditioned response upon social behavior are F. H. Allport, *Social Psychology,* Boston 1924, and K. Young, *Social Psychology,* New York 1930. See also H. Hart, *The Science of Social Relations,* New York 1927, especially Chap. VII.

Stimulating general treatments of the impact of city life upon personality are to be found in R. E. Park, E. W. Burgess, and R. D. McKenzie, *The City,* Chicago 1925, particularly Chap. I (Park) and Chaps. II and VIII (Burgess).

A valuable treatment of the purely sociological content of the conditioning influences in personality development is contained in E. T. Krueger and W. C. Reckless, *Social Psychology,* New York 1931. See especially Chaps. I, III, and IV.

# CHAPTER VII

## *THE URBAN WAY OF LIFE* (Continued)

### WORK – HOME – WORSHIP – RECREATION

### WORK

NO MAN can long survive without some form of income, either in the material wherewithal of existence, or in the money and other instrumentalities with which it can be secured. Most individuals, moreover, are unable to secure income, without working or depending upon someone who does work. What the city-dweller does to earn his living, therefore, constitutes the natural point of departure for the study of his way of life — as it does for any social type.

Three features characterize the economic activities of the typical inhabitant of the city. They are: (1) the pre-eminence of non-manual work; (2) the ubiquity of the woman wage-earner, but not necessarily of the child worker; and (3) the intrusion of the economic into the other interests of the individual, or — in the vivid phrase of Lynd and Lynd — " the long arm of the job."

#### THE PRE-EMINENCE OF NON-MANUAL WORK

THE discussion of the origins and the development of the city embodied in earlier chapters has served to emphasize the wide scope of merchandising and associated activities in the life of the typical city.

#### MERCHANDISING

MANY cities have had their inception as trading places, and most cities have built up a considerable array of mercantile

interests for supplying the economic needs of their own inhabitants no less than for their trading areas — which latter are, in some instances, world-wide in scope.

The more densely-urbanized any area is, the less able are its inhabitants to depend upon direct, or even relatively direct means of obtaining the necessities of life. Rather, they must resort to an intricate and often cumbersome distributive mechanism for virtually all of the goods and services that they require, and the administration of this mechanism involves an enormous amount of merchandising activity of one form or another.

For example, the inhabitant of a rural community may secure the greater part of his food from his own farm and garden. The citizen of a village or a moderate-sized town can still raise a certain proportion of his foodstuff, and secure most of the rest from a farmer who has himself raised it, or from a retail tradesman who buys directly from such a farmer. One who lives in an urban community of any size, however, must depend upon a number of purveyors of groceries, meat, milk, etc., most of whom procure their products from wholesalers, who may, in turn, patronize commission merchants, flour millers, packers, canners, which latter may have to work through a number of other intermediaries before actual contact with the ultimate producer of the foodstuff is secured. In other words, without regard to the primary or general merchandising activities of any urban community, its secondary merchandising interests, those required for the provisioning of its own population, are of considerable importance, and increase in importance in direct ratio to the size of the city itself.*

The magnitude of these secondary trading activities in the more heavily-urbanized communities may be inferred from Table XXVIII based on a special census of distribution in eleven cities of the United States. The table shows that their retail trade alone aggregated $4,224,000,000 in 1926, and that it employed a total personnel of 489,000 amounting to one person so engaged for every thirteen persons in the

* See P. D. Converse, *Marketing Methods and Policies* (2nd Ed.), New York 1924, Chap. VI.

total population of these cities. Not all the retail trade of any urban center can be reckoned as secondary merchandising for the supplying of its own inhabitants. A certain proportion of it is concerned with the city's function as a shopping center for the less remote portions of its trading area — a function which in a city such as Paris is of capital importance so far as luxury-goods are concerned.

TABLE XXVIII

RETAIL TRADE IN 11 AMERICAN CITIES, 1926 *

| *CITY* | *Number of Establishments* | *Sales* | *Persons Engaged* | *Total Population* |
|---|---|---|---|---|
| Atlanta | 3,749 | $ 177,782,800 | 20,871 | 244,100 |
| Baltimore | 11,127 | 369,027,300 | 48,071 | 808,000 |
| Chicago | 41,224 | 1,981,140,400 | 222,398 | 3,047,600 |
| Denver | 3,899 | 155,672,800 | 19,539 | 285,000 |
| Fargo | 392 | 19,652,600 | 2,128 | 25,600 |
| Kansas City (Mo.) | 5,373 | 300,310,700 | 35,326 | 375,300 |
| Providence † | 4,877 | 192,272,500 | 23,033 | 443,600 |
| San Francisco † | 14,000 | 655,350,900 | 73,850 | 946,500 |
| Seattle | 5,808 | 222,842,100 | 26,885 | 367,300 |
| Springfield (Ill.) | 1,151 | 45,512,900 | 5,745 | 64,700 |
| Syracuse | 2,328 | 104,544,100 | 11,789 | 185,000 |
| *Total* | 93,928 | $4,224,109,100 | 485,639 | 6,792,700 |

CLERICAL AND ADMINISTRATIVE OCCUPATIONS

THERE is a certain amount of manual work associated with merchandising, but typically it consists of non-manual or — at the most — the lighter sorts of manual work. Moreover, the transportation and the financial and administrative activities connected not only with merchandising but also with the manufacturing and public service enterprises conducted in the city involve a considerable amount of clerical and office work. It is therefore to be expected that the city populations will be more generally employed in clerical, administrative, and similar occupations than those of other types of communities. Tables XXIX and XXX, derived from the Census reports of the United States and of England and Wales, respectively, show that this is actually the case.

* From Committee on Collection of Business Figures, *Retail and Wholesale Trade of Eleven Cities*, Washington 1928, Table I, p. 12.

† Includes portions of their metropolitan areas.

## TABLE XXIX

PERCENTAGE OF PERSONS GAINFULLY OCCUPIED IN VARIOUS CLASSES OF OCCUPATIONS FOR THE UNITED STATES, AND FOR NEW YORK CITY AND CHICAGO, 1920 *

| *Class of Occupation* | *Per cent of Gainfully Occupied Persons* | | | | |
|---|---|---|---|---|---|
| | *United States* | *New York* | *Chicago* | *Ratio to col. (a) of cols. (b) and (c)* | |
| | *(a)* | *(b)* | *(c)* | *(b)* | *(c)* |
| Agriculture, Forestry, Animal Husbandry | 26.3 | .3 | .3 | .001 | .01 |
| Extraction of Minerals | 2.6 | .... | .... | ..... | .... |
| Manufacturing and Mechanical Industries | 30.8 | 37.6 | 39.7 | 1.2 | 1.2 |
| Transportation | 7.4 | 9.5 | 9.0 | 1.3 | 1.2 |
| Trade | 10.2 | 15.5 | 16.8 | 1.5 | 1.6 |
| Public Service | 1.9 | 2.4 | 1.9 | 1.2 | 1.0 |
| Professional Service | 5.2 | 6.6 | 5.8 | 1.3 | 1.0 |
| Domestic and Personal Service | 8.2 | 12.1 | 9.4 | 1.4 | 1.1 |
| Clerical Occupations | 4.6 | 15.9 | 17.1 | 3.4 | 3.7 |

The last two columns of Table XXIX show that in the two largest cities of the United States it is "clerical occupations" on the one hand, and "trade" on the other, which appear to be in the greatest excess as compared with the country at large; not, it should be noted, as compared with the rural

## TABLE XXX

PROPORTION OF OCCUPIED MALES PER 1000 MALES, 12 YEARS OF AGE AND OVER IN ENGLAND AND WALES, IN COMMUNITIES OF VARIOUS TYPES, FOR DIFFERENT CLASSES OF OCCUPATION, 1921 †

| *Type of Community* | *Agriculture* | *Coal Mining* | *Misc. Mfg.* | *Metal Mfg.* | *Transportation* | *Commerce* |
|---|---|---|---|---|---|---|
| England and Wales | 84 | 71 | 251 | 113 | 103 | 117 |
| Greater London | 16 | ... | 216 | 80 | 143 | 171 |
| All County Boroughs | 11 | 31 | 332 | 169 | 126 | 130 |
| Other Urban Areas | 40 | 116 | 256 | 109 | 89 | 126 |
| Rural Districts | 309 | 137 | 137 | 54 | 56 | 59 |

* From 14th United States Census, Vol. IV, *Occupations*, Tables 2 and 18.

† From Census of Engiand and Wales 1921, General Report, London 1927, p. 90.

portions of the country. Because of this, the difference between the urban and the non-urban sections of the country is minimized in this table. Table XXX shows that it is in the category of "commerce" that the greatest difference is exhibited between Greater London and the rural portions of England and Wales.

It is true that trade and non-manual pursuits generally do not constitute the most numerous occupations in the cities of the United States or England and Wales. The manufacturing industries occupy this position. The tables already cited demonstrate, however, that such manual occupations are less important numerically than are the typical manual pursuits of the countryside, agriculture and mining. More than this, they show that manufacturing is by no means absent from the rural portions of the modern industrialized country. Of even greater interest is the fact that for Greater London, miscellaneous manufacturing and metal manufacturing employ a smaller proportion of the population than they do for the country at large.

The significance of this point should be emphasized. The modern city is often envisaged as primarily an industrial center. In a sense this is true, for the average city has, up to the present, responded to industrializing influences somewhat more extensively than has the rural community or the small town. More than this, industrialism has provided a powerful stimulus to urban growth in recent years by providing the technological means for increasing its trade, on the one hand, and for permitting it to enlarge its area and its population on the other. In other words, the city of today is in some measure a product of industrial civilization and in a considerable measure is affected by it.

On the other hand, it must be remembered that the city is a much more ancient institution than industrialism and that its economic basis was formerly in the field of trade rather than in production. Moreover, at present there are hundreds of small towns, and even villages, which exhibit every one of the characteristic phenomena of industrialism — machine production, low-paid labor, periodical unemployment, class cleavage, industrial conflict, and the rest — just

as prominently as does any great city. In fact, Table XXX strongly suggests that there are small cities and towns that are more intensely industrialized than are the great cities of Europe and America.

Economically speaking, therefore, it may be said that the modern city's essential and distinctive character remains in the field of merchandising, but that it differs from the ancient city in being an important part of industrial civilization.

It follows that a work such as this is concerned primarily with those phases of the city's economic life which are essentially and characteristically urban, and with the sociological consequences of industrialism only to the extent that they are responsible for certain special features of present-day city life.

### THE UBIQUITY OF THE WOMAN WAGE-EARNER

IT HAS been shown that breadwinning in the city is concerned much more generally with non-manual occupations of various sorts than in the country. And, further, although the skilled and unskilled labor connected with manufacturing and transportation constitute a substantial proportion of the activities of the city-worker, they do not account for so large a share of gainful employment in the city as do agriculture, mining, and industry in the country. The economic basis for the relative excess of women in the urban community is almost certainly to be found in this set of facts. For various reasons, notably the social and biological limitations incidental to child-bearing and child-rearing, women are unable to compete on equal terms with men in the heavier manual occupations. Such disabilities apply only to a lesser degree in connection with the lighter manual occupations, the multiplication of which is promoted by the machine process. And these disabilities are of very little moment in non-manual pursuits — particularly those which involve no administrative responsibility. Accordingly, a society which places a premium upon clerical and other non-laborious sorts of work is a society in which the economic opportunities for women workers are favorable. Table XXXI indicates the degree to which women have, in fact,

invaded clerical work and trade. They are also, as is to be expected, heavily represented in domestic and personal service. But reference back to Table XXIX shows that such occupations are not much more common in urban than in rural communities.

Table XXXII shows that in such typical urban communities as New York, Chicago, and Philadelphia, women are very much more generally engaged in gainful employment, that is to say, in working for wages or salaries, than in the United States at large. If, furthermore, it were possible to compare such communities directly with rural areas, the difference in this respect would appear to be even more striking than the table indicates.

TABLE XXXI

PERCENTAGE OF MALES AND FEMALES IN GENERAL OCCUPATIONAL DIVISIONS FOR THE UNITED STATES, 1920 *

| *Occupations* | *Percentage of all those Gainfully Employed in each Occupational Division* | |
|---|---|---|
| | *Males* | *Females* |
| All Occupations | 100.0 | 100.0 |
| Agriculture, etc. | 29.8 | 12.7 |
| Extraction of Minerals | 3.3 | ..... |
| Manufacturing and Mechanical Industries | 32.9 | 22.6 |
| Transportation | 8.6 | 2.5 |
| Trade | 10.8 | 7.8 |
| Public Service | 2.3 | .3 |
| Professional Service | 3.4 | 11.9 |
| Domestic and Personal Service | 3.7 | 25.6 |
| Clerical Occupations | 5.1 | 16.1 |

* From Fourteenth United States Census, *Occupations* (Vol. IV), Washington 1923, Table 2, p. 34.

TABLE XXXII

PERCENTAGE OF ALL FEMALES 10 YEARS OF AGE AND OVER, WHO ARE GAINFULLY EMPLOYED, IN THE UNITED STATES AND IN CERTAIN LARGE CITIES, 1920 *

| *Place* | *Percentage of Females Gainfully Employed* |
|---|---|
| United States | 21.1 |
| New York | 30.4 |
| Chicago | 29.2 |
| Philadelphia | 29.0 |

EXTRA-DOMESTIC EMPLOYMENT OF WOMEN

IT CAN readily be perceived that the social life of the urban community must be affected by the relatively high degree of gainful employment on the part of its women and girls. Of particular interest for the purpose of this chapter is its effect upon the home of the city-dweller. In the first place, such a condition encourages out-of-the-home employment of women. Lynd and Lynd found that a little less than half of the working-class mothers interviewed by them had been so employed during the five years 1920–1924. Since their inquiries were addressed only to mothers of children of school age, their data notably understate the actual situation. The stresses and cleavages in family life attendant upon extra-domiciliary employment are so many and so significant as to be treated in a separate chapter by Groves and Ogburn.†

REDUCTION OF MARRIAGE

THE same writers call attention to a second point to be observed in this connection. It is that marriage appears to be reduced by the gainful employment of women. Their data did not permit them to set forth this conclusion as anything more than a hypothesis. They do, nevertheless, find that — when corrections are made for other factors — those cities

* From Fourteenth United States Census, *Occupations* (Vol. IV), Washington 1923, Table 8, p. 47 and Table 20, p. 154.

† R. S. Lynd and H. M. Lynd, *Middletown*, New York 1929, p. 27, E. R. Groves and W. F. Ogburn, *American Marriage and Family Relationships* (American Social Science Series), New York 1928, Chap. V.

having a high percentage of women gainfully employed have a relatively low per cent of women married — particularly in the younger age groups.*

### THE QUESTION OF CHILD LABOR

WHETHER or not city life tends to encourage the employment of children for reasons similar to those that make it favorable to the gainful occupation of women, it is difficult to determine. Many of the more elementary sorts of clerical work and the less laborious forms of industrial employment can be undertaken successfully by children. In fact, child labor is generally considered as a characteristically urban phenomenon. It is, however, more accurately a corollary of industrialism, the rise of the movement for the limitation of child labor being virtually identified with the rise of the modern factory system. Moreover, all but the simpler forms of clerical, financial, merchandising, administrative, and similar non-manual occupations would seem to be beyond the mental capacity of the average child. An additional influence unfavorable to child labor in the city is the urban community's ability so effectively to mobilize its financial and administrative resources as to provide its children with more extensive and more adequate educational facilities than is the rural community, and to secure better enforcement of school attendance and child labor regulations.†

Certain data to be found in the census reports of the United States suggest that the larger cities at least exhibit a smaller proportion of child labor in their populations than does the country at large. Thus Table XXXIII shows that the percentage of children 10 to 15 years of age who are gainfully employed is smaller in the cities of New York, Chicago, and Philadelphia than in the United States in general, excepting only for girls in Chicago.

* E. R. Groves and W. F. Ogburn, *op. cit.*, Chap. XVII and p. 447.

† See especially the material on urban and rural illiteracy in J. G. Thompson, *Urbanization*, New York 1927, pp. 240–243.

TABLE XXXIII

EMPLOYMENT OF CHILDREN 10 TO 15 YEARS OF AGE IN THE UNITED STATES AND IN CERTAIN LARGE CITIES, 1920 *

| *Place* | *Percentage of Children Gainfully Employed* | |
|---|---|---|
| | *Males* | *Females* |
| United States | 11.3 | 5.6 |
| New York City | 6.3 | 4.9 |
| Chicago | 8.0 | 6.5 |
| Philadelphia | 6.7 | 5.5 |

"THE LONG ARM OF THE JOB" †

IN THE foregoing phrase, Lynd and Lynd have given expression to the fact that the bread-winning activities of the city-dweller touch his life at more points than is the case with the inhabitant of the countryside. Also the non-economic interests of the city worker, his health, his recreation, his social status, are more widely affected by his bread-winning activities. The influences entering into this situation have already been suggested; the city man is far more dependent than the rural-dweller upon goods and services that must be purchased with money, and his job contributes his principal means and in many cases his sole means of securing the money with which to buy these goods and services.

The farmer and the villager derive a number of the necessities and satisfactions of existence by their own direct efforts and by their informal, community contacts. Much of their food, their fuel, repairs and additions to their homes, care in sickness, recreation, are to be obtained without any direct outlay of money. Not so with the urbanite. He must buy virtually all of these things, and if his and his family's money income does not yield him the wherewithal to secure them, he must go without, or put himself in a socially-disapproved position by resorting to some form of charity.

The long-run social consequences of this relatively obvious

* From Fourteenth United States Census, *Occupations* (Vol. IV), Washington 1923, Table 2, p. 476 and Table 18, p. 597.

† Phrase quoted from R. S. Lynd and H. M. Lynd, *Middletown*, New York 1928, Chap. VII.

contrast between town and country are very far-reaching. The whole round of the city-dweller's life is circumscribed by his ability or inability to secure the money requisite for the purchase of the things he needs or wants. The non-economic phases of his life are inevitably tinged with economic considerations. His social relations are affected since he is a member of a pecuniary society.

Capitalism and industrialism serve but to add emphasis to these by-products of urbanism.

## HOME

THE domestic life of the city man and woman is no less affected by its urban setting than is their economic life. Yet, in this case also, it is difficult to differentiate between the influences of urbanism as such and those of certain present-day tendencies that are found in association with it.

For example, the mechanization of domestic work is an outstanding feature of many city homes. Lynd and Lynd found that virtually all of the homes in Middletown were wired for electricity. The *Literary Digest's* study of Zanesville showed that about three-fourths of that community's houses were so equipped, that about nine-tenths had running water and that over ninety-six in every hundred were provided with fuel and illuminating gas.* As with industrialism, however, so with electricity, gas, and running water, there were cities before these utilities existed; there will be cities when they have been superseded. Moreover, the processes of technological culture diffusion are beginning to carry these devices to the village and the farmhouse. Without doubt in another generation there will be no great contrast between city and country in the domestic use of mechanical equipment — unless, indeed, the countryside becomes permanently established on a lower economic level than the city.

It is possible to fix upon at least five ways, however, in which city life gives a distinctive character to the urbanized

* R. S. Lynd and H. M. Lynd, *op. cit.*, p. 172. R. O. Eastman, incorporated, *Zanesville and 36 other American Communities* (Edited by Richard J. Walsh), New York, *Literary Digest* 1927.

home: (1) the structure of the family, (2) the preponderance of the multiple dwelling, (3) mobility, (4) anonymity, and (5) insignificance of the neighborhood on one hand, and the ascendancy of the residential area on the other.

### THE STRUCTURE OF THE FAMILY

MANY of the principal features characterizing the make-up of the family in an urban environment have already been mentioned. It has been seen, first of all, that the family, as it is ordinarily defined, is not formed so often in the city as outside of it, because of the infrequency of marriage among urban men and women. It has been seen, further, that the proportion of childless families and of families with few children is higher in the city than elsewhere because of the comparatively low birth rate and the relatively high, if rapidly declining, infant mortality rate.

### INFREQUENCY OF MARRIAGE

THERE are at least three characteristic features of urban life that appear to be correlated with what might be termed the abbreviated nature of family life in the city, that is to say, its less frequent fruition into marriage and child-rearing, its postponement of marriage, and its greater liability to break down in divorce as compared with the rural family. The first is the fact that many of the city's domestic institutions represent adaptation to the disproportionate number of unmarried and divorced men and women — particularly of unmarried young men and women — to be found therein. An outstanding example of such accommodation is the widespread development in the city of the rooming house, the one-room apartment house, and the residential hotel. Zorbaugh found that, in the rooming-house area of Chicago's Lower North Side, about eighty-five in every one hundred lodgers were unmarried, 23 per cent of whom were unmarried couples living together. In other words, *home* life in the city is in no sense synonymous with *family* life; there are hundreds of homes in any urban community which consist of single men and women living alone or in groups, or of

unmarried couples maintaining more or less short-lived liaisons.*

In Detroit, in 1925, it was found that out of a total of about 1,200,000 of population, 157,400 were living as roomers. There were, at the same time, 308,400 households. Thus, in this city, the unattached, de-familialized roomers made up over one-eighth of the entire population, while there was one roomer for every two households of the traditional sort.†

Another social concomitant of the high proportion of unattached adults in the city is the development of what Mowrer calls "non-family areas," particularly those in which "hoboes," and predominantly male immigrant groups are found.‡

It is likely, furthermore, that irregular sex relations, particularly commercialized vice, find their roots to a greater or less extent in the relative plentifulness of unattached women and men in the typical city. Gamble found such a relationship to be particularly marked in pre-revolutionary Peking, whose students, officeholders, and aspirants for government appointments consisted principally of single men, or men separated from their wives. Indeed, the Pekinese houses of prostitution had a regular scale of prices for the benefit of those men who wished merely to sip a cup of tea and chat with one or another of their young women. The official price list of a "first class" establishment includes charges for "sitting and talking," "playing dominoes," and "attending dinner parties." "Those who go to the brothels for social entertainment and conversation with the prostitutes far exceed those who go for other purposes." §

One other factor relating to the comparative infrequency

* See E. A. Mowrer, *Family Disorganization*, Chicago 1927, p. 111; H. W. Zorbaugh, "The Dweller in Furnished Rooms," in E. W. Burgess (Editor), *The Urban Community*, Chicago 1926, pp. 98–106. (Also in *Papers and Proceedings of the American Sociological Society*, Vol. XX, Chicago 1926, pp. 83–90.) See also A. B. Wolfe, *The Lodging House Problem in Boston* (Harvard Economic Series), Boston 1906, *passim*.

† H. J. Kaufmann and L. A. Wiles, *The 1925 Detroit City Census* (Detroit Educational Bulletin, Research Bulletin, No. 9), Detroit 1925, p. 21.

‡ E. A. Mowrer, *op. cit.*, p. 110. See also Anderson, N., *The Hobo*, Chicago 1923, *passim*.

§ S. D. Gamble, *Peking: A Social Survey*, New York 1921, p. 252.

of marriage in the city is the disposition towards the postponement of marriage on the part of young men and women in an urban environment. Groves and Ogburn show that there is a decided difference between city- and country-dwellers in this respect all the way from the fifteenth to the twenty-fifth year. Moreover, as might be expected from the relative surplusage of women in the city, the differences are especially marked as regards females. The material upon which their conclusions are based is contained in Table XXXIV.

TABLE XXXIV

PERCENTAGE OF YOUNG MEN AND WOMEN WHO ARE MARRIED FOR URBAN AND RURAL PORTIONS OF THE UNITED STATES, 1920 *

| *Age Groups* | *Percentage Married* | |
|---|---|---|
| | *Urban* | *Rural* |
| Males, 15–24 years | 14.5 | 15.4 |
| Females, 15–24 years | 30.4 | 34.6 |
| Males, 15–19 years | 1.7 | 2.4 |
| Females, 15–19 years | 10.4 | 14.5 |
| Males, 20–24 years | 28.8 | 31.1 |
| Females, 20–24 years | 47.6 | 58.4 |

FREQUENCY OF DIVORCE

THE divorce rate has some bearing on the structure of the family, although its principal sociological value is as an index of the stability of family relations. There can be no doubt that divorce is a much commoner phenomenon among urban than among rural societies. The latest available United States Census data show that the cities of this country supply a much heavier proportion of its divorces than they do its population. For example, Cook County, Illinois (which is practically identical with the city of Chicago) contained, in 1924, not quite one-half of the population of that state, but was responsible for six-tenths of its divorces.†

* From Groves and Ogburn, *American Marriage and Family Relationships*, Henry Holt and Company, New York 1928, p. 230.

† *Ibid.*, p. 356.

### THE PREPONDERANCE OF THE MULTIPLE DWELLING

It is conceivable that in the city of the future there will be a new type of housing where every room will get plenty of sunlight and air, where every window will look out over terraces and park-like areas, where there will be privacy and protection, where charming vistas will be open in all directions, and where there will be plenty of space for play and recreation near at hand — all within easy walking distance of the various things that people want to do during the day or evening. The buildings would be tiered, terrace on terrace, all calculated in their form and orientation so as to let sunlight reach the lowest windows.*

### PRESENT-DAY TENDENCIES

THE foregoing is the prophecy of one of America's foremost city planners concerning the nature of housing in the city of tomorrow. It is to be observed that the multiple house is taken for granted.

In the Detroit study, mentioned above, it was found that less than half of all the individuals and families for whom definite data on housing conditions were secured were living in single houses. There were 202,135 roomers and households in single houses and 232,624 in flats and apartments. For the year 1927, the new dwellings constructed in Detroit provided for 5600 families, as over against 15,000 in two-family and multi-family dwellings, according to the Bureau of Labor Statistics.

Table XXXV shows that, for the cities of the United States, there are approximately two multiple dwellings for every single-family house.

* G. B. Ford, "Architecture and the New City" in *City Planning*, (Vol. V, No. 1) Jan. 1929, pp. 16–17.

TABLE XXXV

NUMBER AND PER CENT OF FAMILIES TO BE HOUSED IN NEW DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 302 IDENTICAL CITIES DURING THE CALENDAR YEARS 1927 AND 1928, BY KIND OF DWELLINGS *

| *Kind of Dwelling* | *Number of New Buildings for which Permits Were Issued* | | *Families Provided For* | | | |
|---|---|---|---|---|---|---|
| | | | *Number* | | *Per cent* | |
| | 1927 | 1928 | 1927 | 1928 | 1927 | 1928 |
| One-family dwellings | 164,268 | 143,889 | 164,268 | 143,889 | 39.2 | 36.1 |
| Two-family dwellings | 25,227 | 19,956 | 50,454 | 39,912 | 12.0 | 10.0 |
| One-family and two-family dwellings with stores combined | 3,329 | 2,620 | 5,399 | 4,276 | 1.3 | 1.1 |
| Multi-family dwellings | 13,663 | 12,063 | 179,177 | 190,282 | 42.8 | 47.8 |
| Multi-family dwellings with stores combined | 1,768 | 1,528 | 19,580 | 19,780 | 4.7 | 5.0 |
| *Total* | 208,255 | 180,056 | 418,878 | 398,139 | 100.0 | 100.0 |

Not only are multiple dwellings outstripping single-family houses in the modern city, but they are now built on a large scale. As long ago as 1910 Berlin contained 40 apartments, each accommodating more than 500 persons, and in 1925, there were in Budapest, a much smaller city, 35 such buildings.† The skyscraper type of construction enables the American builder to achieve prodigies in community dwellings. In 1930, there were in Chicago 92 apartment buildings containing 100 or more apartments each, or 13,914 apartments in all. A recently completed apartment house group in New York, Tudor City, is made up of 11 separate buildings, of from 10 to 32 stories, and contains over 2800 separate apartments.

### THE ANCIENT AND MEDIEVAL CITY

TENEMENT and apartment house life is by no means a new feature of urbanism. As Chapter I has shown, the inhabitants of both the ancient Roman city and the medieval town were housed chiefly in this fashion. A walk through

* From United States Bureau of Labor Statistics, *Building Permits in the Principal Cities of the United States* (Bulletin No. 500), Washington 1929, p. 3.

† *Annuaire Statistique des Grandes Villes*, The Hague 1927, Table 5, pp. 24–25.

some of the older sections of Paris, whose general outlines have changed little since the thirteenth century, leads one to suspect that the medieval city must have been for the most part a veritable human rabbit-warren, built over solidly with three-, four-, and five-story buildings, except for an occasional churchyard, a narrow street, or a dank courtyard. Such for example, is the Rue Mont Saint Geneviève, or the labyrinth of streets, alleys, and passageways to be found in the triangle formed by the Boulevard Raspail, the Boulevard Saint Germain, and the Rue de Sevres.

When it is remembered that urban life almost inevitably eventuates in congestion and the friction of space that results, the appearance of multiple housing in the city is no more than to be expected. Leaving out of account the influence of site-value and rent, it is the only possible means of accommodating as many people as find it desirable to live near the city's centers of activity.

### CONSEQUENCES OF MULTIPLE HOUSING

THE consequences of multiple housing depend largely upon the type provided. A slum tenement may be inimical to cleanliness, health, privacy, and a number of other personal and social values. On the other hand, a well-planned public housing project, such as is to be found in Vienna, or Berlin, or Paris, not only safeguards most of the accepted standards of the individual and the family, but may provide the basis for a vigorous infra-urban community life. Again, a penthouse apartment on upper Park Avenue, New York, may — from the standpoint of comfort, convenience, healthfulness, privacy — be an almost ideal dwelling place.

### THE ABBREVIATION OF FAMILIAL ACTIVITIES

IT CAN, nevertheless, be said that almost any form of congregate dwelling tends to abbreviate the activities of the home. The dwelling itself is physically smaller than the single-family house. Generally speaking, it contains fewer rooms serving the same social-economic group. Even where this is not the case, there are wanting certain adjuncts of the single-family house — the cellar, the attic, the storeroom, the

veranda, the garden, and the yard. Parenthetically, it may be observed that many urban single-family houses are almost equally constricted, on account of the small area of land occupied by them.

Accompanying this truncation of most congregate dwellings, and of many non-congregate dwellings in the city, there often occurs an abbreviation of the activities of the families housed therein. It is very difficult, if not impossible, to carry on in such cramped and condensed households many of the pursuits that are generally associated with family life, among them child-bearing and rearing; many features of domestic economy, such as gardening, cooking, and sewing; and various forms of face-to-face social relations such as family and neighborhood gatherings.* Again, the contracted household affords too little privacy for young people's entertainment and courtship at home.

Other influences than the physical shrinkage of the urban home are, of course, to be reckoned as causally related to the low birth rate, to the reduced importance of the household arts, and to the restricted scope of home recreation in the city. On the other hand, this would seem to be one of the more obvious, if not one of the most important, of the factors entering into these phenomena.

### THE LOSS OF FAMILIAL IDENTITY

THERE appears also to be a close relationship between congregate dwelling and one other feature of the urbanized home, the tendency for families to lose their identity. A recent German study develops the fact that the proportion of "homeless" families — that is, families that are not maintaining separate household establishments — increases directly with the size of the community. In communities of 5000 to 20,000 these families that are doubling up with others constitute slightly over six per cent of all the families enumerated. The proportion increases steadily for larger communities, and is over ten per cent for cities of 100,000 and over.†

* See N. Anderson and E. C. Lindeman, *Urban Sociology*, New York 1928, pp. 336–348.

† *Wirtschaft und Statistik* (8th year, No. 1), Berlin 1928, p. 2.

### THE DECLINE IN HOME OWNERSHIP

THERE is probably also a significant relationship between congregate dwellings and the comparative absence of home ownership in the urban community. Except by means of the coöperative apartment house device, it is impossible for all the tenants of a congregate dwelling to own their homes. They must, instead, lease their own portions of these buildings. The Detroit census cited above shows that barely one per cent of the city's apartments and less than fourteen per cent of their flats are owned outright by their tenants, as contrasted with nearly half of the single-family houses. In buildings accommodating two to four families, the exact percentages are: Single-family houses 49.0%; Flats 13.6%; Apartments 1.1%.

Taking the United States as a whole, the Fourteenth Census Report (1920) shows that six out of ten urban homes and about four out of ten rural homes are not owned by their occupants.*

### MOBILITY

NOT many years ago, a popular song appeared having the refrain:

> Any old place where I hang my hat
> Is home, sweet home to me.

Such a song would have no meaning for the average farmer or villager, but it is abundantly meaningful for the urbanite.

Lynd and Lynd found that more than half of the working class families interviewed by them had moved during a three-and-one-half year period and that about a fourth of them had moved more than once in the same period. The rooming-house population of the urban community is excessively migratory. Zorbaugh intimates that the rooming-house population of Chicago's lower North Side "turns over" every four months.†

There is, of course, a certain amount of mobility among rural populations. As Gilette observes, among tenant farm-

* Fourteenth Census of the United States, *Population* (Vol. II), Washington 1922, p. 1284.

† R. S. Lynd and H. M. Lynd, *op. cit.*, Table IX, p. 520. H. W. Zorbaugh, *op. cit.*, p. 85.

ers, in particular, annual moves are not at all uncommon. On the whole, however, rural families are more firmly rooted. Von Tungeln discovered thirty families in a single township in Iowa which had remained in the same vicinity for at least forty years. Likewise, Joy found that of all the occupational types which were represented in a group of families studied by him, farmers showed the least disposition to move. Over half of them had not moved from the place where they had married. In Europe, the peasant's tenacity to the soil is proverbial. The translator of Spengler's *Untergang des Abendlandes* cites a French peasant family that has occupied the same farm since the ninth century! *

It is likely that the mobility of the urban household is to be explained, in part, as a corollary of the infrequency of home ownership in the city. It is also likely that this phenomenon is connected with the fact that the city household — in strong contrast to that in the country — has little if any direct relation with the soil. This contrast is particularly clear-cut in the case of the family of the farmer-proprietor, whose entire economic fortunes are bound up in a fixed tract of land. A city household can change its dwelling place with no more dislocation of its economic activities than are involved in the changing of transportation routes. The farmer-proprietor, on the other hand, does not ordinarily substitute one place of abode for another without at the same time giving up one farm for another — too momentous a step to be taken often.

In a later chapter reference is made to the relatively high incidence of mental disease among urban as compared with rural populations. Very likely there are also to be found among city-dwellers correspondingly large numbers of individuals who are more or less unstable, although not overtly psychopathic. If this is so, there may be a certain psychological background for the mobility of the city household, for

* See J. M. Gilette, *Rural Sociology*, New York 1922, p. 278. Von Tungeln is quoted in W. C. Smith, "The Rural Mind" in *American Journal of Sociology*, (Vol. XXXII), Chicago 1927, p. 772. A. Joy, "A Note on the Changes of Residence of Familes of American Business and Professional Men" in *American Journal of Sociology*, Vol. XXXIII, p. 617. Quoted in P. A. Sorokin and C. C. Zimmerman, *Principles of Rural-Urban Sociology*, New York 1929, p. 31. O. Spengler, *The Decline of the West* (Translation), New York 1926–1928, Vol. II, p. 104.

a tendency to frequent changes of residence is one of the symptoms of certain forms of mental instability.

### ANONYMITY

A STRIKING characteristic of city life is its anonymity, as to both the individual and the household. An Englishman has recently referred to this phase of his domestic relations as a "blessing."

> It is a blessing which you can only really get in a big city. . . We don't even know the names of our next-door neighbors; and we know only two other families living in the same road, and these because we met them elsewhere and liked them and they liked us. In a small town, or in the suburbs . . , you've got to know your neighbors.*

The high mobility of the urban family makes for its anonymity. The household that is frequently "on the move" is unable to make close neighborhood attachments. It is, indeed, likely to drop completely out of sight of all its acquaintances save only those who have some special motive for keeping in touch with it.

As Park and Sorokin both observe, the impersonality of most of their encounters also promotes the anonymity of both the individual and the home.

> Only an infinitesimal part of the persons with whom an urban individual interacts are personally known to him. The greater part of them are only "numbers," "addresses," "clients," "customers," "patients," "readers," "laborers," or "employees." †

One obvious result of the readiness with which the city family may remain free from effective contact with its neighbors is the declining of the effectiveness of that form of social control that is associated with what Cooley calls "primary" or "face to face" group control.

This lack of effectiveness in the neighborhood group is in fact such a characteristic element in urban social life that it deserves separate treatment.

* G. Layman, "How the English Middle Class Lives" in *Harper's Monthly Magazine*, New York, Vol. 158, May 1929, p. 623.

† P. A. Sorokin and C. C. Zimmerman, *op. cit.*, p. 51–52. Also R. E. Park, "Human Behaviour in the Urban Environment," in R. E. Park, E. W. Burgess and R. D. McKenzie, *The City*, Chicago 1925, pp. 23–25.

### THE INSIGNIFICANCE OF THE NEIGHBORHOOD AND THE ASCENDANCY OF THE RESIDENTIAL AREA

THE intimate, primary residential-proximity group that is known as the neighborhood constitutes an important unit of social life everywhere. It is particularly significant to the family, for it is associated with the only fixed base of the family's collective activity — the residence. That is to say, the only social group with which the family in its entirety is likely to be effectively related is the neighborhood. The urban neighborhood is generally, however, but a feeble reflection of the rural. The urban neighborhood is, indeed, but an anæmic social organism; in many areas it has all but disappeared. On the other hand, the larger and more inclusive residential area strongly colors the life of the individuals and the families dwelling within it.

### THE NEIGHBORHOOD

THE nebulousness of the neighborhood in the urbanized environment is proverbial. Lynd and Lynd found that less than one-tenth of the "business-class" women interviewed by them and slightly more than half of the "working-class" had met their best friends "around the neighborhood." *

Even when a so-called neighborhood agency, such as a church or settlement-house, succeeds in becoming a focal point for a significant array of organized activities, its sphere of influence is generally found to go far beyond the bounds of its immediate neighborhood. The Northwestern University Settlement in Chicago, for example, draws its constituency from throughout the Northwest Side residential area.

Occasionally a rudimentary and incomplete sort of neighborhood may develop around a local trading center. This is particularly likely to be the case when such a center provides opportunities for recreation, for meeting, and for "hanging out," such as the cinema, the soda fountain, the billiard hall, the saloon, or the speakeasy. For Europe the café and occasionally the book-shop fulfill a similar function.

* R. S. Lynd and H. M. Lynd, *op. cit.*, p. 273.

Such agencies, however, build up their constituencies from special-interest groups of one sort or another and not from their communities at large. Moreover, economic considerations generally compel them to depend upon a wider area than can be included within the bounds of a neighborhood properly so called.

Once in awhile, also, a segregated ethnic group is so small and compact as to make it virtually coterminous with its immediate vicinage.* Yet such a community is only fortuitously a neighborhood, and as soon as any shifting in the ethnic make-up of the district occurs it promptly collapses. Any city contains a number of moribund or defunct churches and synagogues, left stranded by immigrant groups that have disintegrated or moved elsewhere.

A very different picture is presented by the small town or countryside. The rural and quasi-rural family finds many if not most of its social contacts in its immediate neighborhood. Sanderson observes that, even though the automobile and the telephone have provided the farmer and his family with a number of alternatives to the neighborhood, it can never sink into the insignificance that is its lot in the city. The rural household is much less mobile than the city one. Moreover, Sanderson shows that no rural environment has ever afforded facilities for communication at all approaching those to be found in an urban community, and, therefore, does not enable the rural family to divest itself of neighborhood associations nearly so readily as is the case with the urban family.†

There are several social institutions which, particularly in America, have been developed in a rural setting, and are therefore adjusted to the neighborhood community. The vicissitudes of such institutions in the city are to be explained largely in terms of their transference from a *milieu* dominated by the neighborhood to one in which the neighborhood has all but disappeared. This observation is of par-

* N. Anderson and E. C. Lindeman, *op. cit.*, p. 290.

† D. Sanderson, "The Relation of the Farmer to Rural and Urban Groups" in E. W. Burgess (Editor), *Personality and the Social Group*, Chicago 1929, pp. 95–108. (Also in *Publications of the American Sociological Society*, Vol. XXII, Chicago 1928, pp. 100–111.)

ticular importance to the understanding of the religious life of the city, as is pointed out later in this chapter.

### THE RESIDENTIAL AREA

SOME of the functions played by the neighborhood in the life of the family have been taken over by the residential area. Some community organizers, in fact, look upon the residential area as a sort of expanded neighborhood. It can not provide the family with the intimate, primary-group associations that a vitally active neighborhood can give. It can, however, as Steiner observes, go a long way towards giving tone and color to the background in which the family is set.* More than this, since it is bigger than the neighborhood, its characteristics are likely to be more clearly defined and its impress upon the life of the family more definite. Probably there is a far stronger contrast between the "good" and the "bad" residential areas in any large city than between the "good" and the "bad" neighborhoods of any given residential area, or of any rural or part-rural community. Likewise, there is apt to be a greater degree of differentiation between the families living in the "good" residential area and those in the "bad" residential area than between the dwellers in correspondingly dissimilar neighborhoods.

Burgess and Shaw have both worked out remarkable correlations between the type of residential area and the tempo of family life in the city of Chicago.

### THE DELINQUENCY AREA

ACCORDING to Shaw a number of forms of anti-social and disapproved behavior in the various residential areas of Chicago show a high rate of correlation. In those sections where truancy is high, adult and juvenile delinquency, criminal recidivism, and female delinquency are also high, and *vice versa*. Table XXXVI presents Shaw's coefficients of correlation of the delinquency rates per 100 of appropriate age- and sex-groups, by square-mile areas.

* See J. F. Steiner, *Community Organization* (Social Workers' Library) New York 1925, pp. 19–20.

## TABLE XXXVI

COEFFICIENT OF CORRELATION OF VARIOUS AREA — DELINQUENCY SERIES IN CHICAGO: 1900–1927 *

| *Deliquency Series* | *Coefficient of Correlation (with Series)* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | VII | VIII |
| I. 1917–23 School Truants | | | | | | | | |
| II. 1926 Police Delinquents | 0.88 ± 0.015 | | | | | | | |
| III. 1927 Police Delinquents | 0.88 ± 0.014 | 0.96 ± 0.006 | | | | | | |
| IV. 1917–23 Juvenile Court — Male Delinquents | 0.89 ± 0.014 | 0.85 ± 0.018 | 0.85 ± 0.017 | | | | | |
| V. 1900–06 Juvenile Court — Male Delinquents | 0.84 ± 0.019 | 0.80 ± 0.023 | 0.78 ± 0.026 | 0.85 ± 0.018 | | | | |
| VI. 1924–26 Boys' Court Offenders | 0.95 ± 0.010 | 0.90 ± 0.012 | 0.92 ± 0.010 | 0.90 ± 0.013 | 0.85 ± 0.020 | | | |
| VII. 1920 Adult Jail Offenders | 0.86 ± 0.017 | 0.84 ± 0.018 | 0.84 ± 0.019 | 0.89 ± 0.014 | 0.84 ± 0.019 | 0.88 ± 0.015 | | |
| VIII. 1917–23 Juvenile Court — Female Delinquents | 0.75 ± 0.028 | 0.80 ± 0.023 | 0.77 ± 0.026 | 0.79 ± 0.024 | 0.66 ± 0.037 | 0.77 ± 0.027 | 0.85 ± 0.018 | |

* From C. R. Shaw, *et al.*, *Delinquency Areas*, Chicago University Press 1929, p. 210

Shaw ascribes these correlations to the existence of certain delinquency areas, where the "resistance on the part of the community to delinquent and criminal behaviour is low, and such behaviour is tolerated and may even become accepted and approved." He goes on to point out that "delinquent patterns may *become dominant and shape the attitudes and behaviour of persons living in the area.*" (Italics not in original.)

As pointed out in the next two chapters, the etiology of criminal and delinquent behavior, in the city or out of it, is still obscure, so that it is not possible definitely to enumerate the elements that operate to bring into being these baneful residential areas. Shaw finds them to be generally related to closeness to the central commercial area of the city and the consequent break-up of normal community life under the impact of invasion by business and industry, physical deterioration, declining population, and invasion by immigrants and by Negro country-to-city migrants. This last point is of particular interest, for it dovetails with the hypothesis offered later in this work that the shock-effect of migration lies at the root of a substantial amount of urban criminality and other manifestations of personality breakdown.

### THE RESIDENTIAL AREA AND FAMILY LIFE

BURGESS finds a certain amount of correlation between the type of residential area and family disorganization, as indicated by divorce. Like Shaw he points out that, generally speaking, the areas in which there is a high degree of immigrant infiltration are also those in which there is family disorganization.

Table XXXVII indicates that, as one passes from the "central business district" through the "zone of first immigration settlement" out to the zone of the higher-class residential district, one also passes from an area in which one type of home life predominates to one where a very different sort of family life is to be found. In the one, males outnumber females, so that a high proportion of non-family homes must exist. The opposite is the case in the zone

## TABLE XXXVII

RELATIONS BETWEEN VARIOUS SOCIOLOGICAL VARIABLES RELATING TO HOME LIFE IN CERTAIN UTILIZATION AREAS IN CHICAGO *

| *Utilization Area* | *One-Mile Unit District* | *Percentage of Males* | *Percentage of Foreign-Born* | *Cases per 1000 Population:* | |
|---|---|---|---|---|---|
| | | | | *of Poverty* | *of Divorce* |
| Central Business District Zone | A | 85.5 | 88.2 | 2.0 | 2.0 |
| Zone in Transition (area of first immigrant settlement) | B | 66.3 | 81.2 | 3.2 | 2.9 |
| | C | 54.1 | 74.6 | 2.1 | 4.3 |
| Zone of second immigrant settlement (working-men's homes) | D | 49.0 | 67.6 | 1.3 | 3.4 |
| | E | 46.1 | 74.8 | 0.1 | 2.0 |
| Middle-class residential-district zone | F | 47.8 | 68.5 | 0.1 | 1.3 |
| | G | 49.8 | 67.1 | 0.1 | 1.2 |
| Higher-class residential-district zone | H | 48.4 | 66.7 | no data | no data |
| | I | 47.0 | 66.4 | no data | no data |

farthest removed from the downtown area. Poverty is more marked in the former section than in the latter; so also is divorce. Similarly, there is a higher proportion of immigrant families in the business and working-class residential areas than in the middle-class and upper-class communities. In a word, each one of these areas is a clearly-marked community, the distinctive characteristics of which are reflected in the homes to be found within it.

### A GENERAL COMMENTARY ON THE URBAN HOME

THE city resident's home life differs in many respects from that of the dweller in the country or in the small town. It is more compact, more mobile, much more likely to be included in what Anderson and Lindeman designate a "communized multiple dwelling." † It is less vitally related to its neighbors and to its neighborhood and, conversely, more strongly marked with the characteristics of the inclusive community areas in which they are located.

* From E. W. Burgess, "The Determination of Gradients in the Growth of the City" in *Proceedings of the American Sociological Society* (Vol. XXI), Chicago 1927, pp. 178–183. The data refer to the year 1920, excepting those for divorce, which are for the year 1919.

† N. Anderson and E. C. Lindeman, *op. cit.*, p. 340.

### IS IT "BETTER" OR "WORSE" THAN THE RURAL HOME?

Do THESE generalizations carry with them another — that the home, or more especially, the family, is somehow less vital and less firmly-established in the city than in the country? Is the countryside, in other words, more favorable to wholesome family life than the city? Such seems to be the opinion of a number of observers of social phenomena. Thus Thompson quotes a prominent ecclesiastic as saying that the home, "the fountain-head of the life of a civilized people . . . is less potent and sacred" in the city than in the country.* No categorical statement can be made concerning the validity of such a comment, for the matter resolves itself largely into one's own individual opinion as to the ideal of family life. Certainly the traditional family, fruitful in children, seldom broken by divorce or separation, carrying on a number of social and economic activities, and settled for long periods in a house ample in size and surrounded by large grounds, is more likely to be found in a rural than in an urban environment. Yet, sentimentality aside, is there any certainty that such a family is necessarily the "best"? Is a home in which eight children are born inherently "better" than one containing two? Is a wife who devotes most of her waking hours to housework a "better" wife than one who spends several hours each day in shopping, club-activities, or "clerking" in a department store? Is there anything more precious about a childhood that is daily concerned in chores and helping in the field than one which is virtually free of any but the slightest of responsibilities? Ready answers can be given to each of these questions, but they must rest largely upon individual biases and standards rather than upon established sociological principles.

### THE RELATIVITY OF CERTAIN ASPECTS OF FAMILY LIFE

Two final observations may be offered here. The first is that the fact of urbanization constitutes an important influence in the appraisal of family life. A large number of children is literally a blessing to the farmer, for it provides him with an

* J. G. Thompson, *Urbanization*, New York 1927, p. 14.

abundance of cheap and docile labor. In the city, a large family is just as literally a curse for any but the very rich, for it saddles upon the breadwinner an almost crushing economic burden. Unless one is able to find some virtue in the production of numerous offspring *per se,* one seems to be forced to the conclusion that, in this aspect at least, what is best for the rural family is quite different from what is best for the urban family. And it would not be difficult to multiply instances to which such a duality of standards could be applied.

### SHORT-RUN ADJUSTMENTS TO URBANISM VERSUS LONG-RUN CONSEQUENCES OF IT

THE second observation is related to a point that has been noted repeatedly in this chapter and in Chapter VI. It is that *phenomena which at the moment seem to be characteristics of urban civilization* may rather represent *transitional aspects of a population's adaptation to urbanism* or the *initial stages in the evolution and diffusion of new culture traits.* Typhoid fever, for example, is now a characteristically rural disease. Fifty years ago, it was more common in the city than in the country. The sociologist of fifty years ago might have said that city-dwellers were peculiarly subject to this malady; he might today make the same generalization regarding farmers and villagers. Neither observation would be accurate. Typhoid results from ground- and stream-pollution, which is greater in densely-populated areas, such as cities, than elsewhere. But recent developments in sanitary science make possible the actual eradication of typhoid, and cities have adopted these measures more promptly than rural communities. The initial high typhoid rate of cities was a fortuitous accompaniment of urban growth. Its present reduction in the typical modern city represents a culture innovation that has *not yet* been so widely adopted in the country as in the city. Neither the presence nor the absence of a high typhoid rate in the urban community has, therefore, any significant relation to the question of the inherent disease-resistant qualities of city people.

Likewise certain phenomena associated with the home and

the family may be similarly interpreted. Thus, while it is true that the high divorce rate among city-dwellers may be explained in terms of the peculiarities of urbanized personality or of the special vicissitudes encountered by established institutions in a city environment, it may also be accounted for as a more or less temporary reaction of a population to city life. Again, it may represent the initial phase of a form of culture change that has *not yet* become generally diffused. It may be observed that the divorce rate is increasing throughout the regions affected by western civilization, and is therefore apparently an index of a general trend towards the modification of familial *mores*. It may be further observed that social change ordinarily makes itself noticeable in nuclear points of a culture area — such as cities generally are — some time before it is widely diffused throughout the outlying portions of such an area. In this connection it may be pointed out that in Europe, where the drift away from the lifelong monogamous union has been in operation somewhat longer than in the United States, there is not a universally significant differentiation as between urbanized and non-urbanized countries. Germany has a lower rate than France, Belgium than Switzerland.*

## RECREATION

THE foregoing general observations apply with especial force to the study of the recreation of the urbanized individual. At present a number of influences relating to mechanical invention, to business organization, and to conditions of work, are converging upon the recreational activities of virtually every civilized society on earth, and are working a revolution in them.

The urbanized portions of each culture area generally constitute the starting-points for these recreational innovations. Consequently, as each one of these innovations is developed, it passes through an initiatory stage in which it appears to be a predominantly urban form of leisure-time activity. Thus there was a time when the commercial dance

* E. A. Mowrer, *op. cit.*, p. 33.

hall was confined largely to the city, whereas today it may be found fairly widely diffused in non-urban regions.

A number of other observations may be made concerning urbanized recreation. It tends to be adapted in type to the special needs of the city-dweller, for it is (1) passive and vicarious; (2) space-economizing; (3) organized; and (4) used for emotional release and escape from reality. (5) Its control is likely to be governmental or commercial, the latter sometimes being allied with organized vice. (6) It often overflows the bounds of the city and its immediate environs and develops a number of characteristic extra-urban expressions.

### THE CITY AND RECREATIONAL NOVELTY

WHEN the prophet Amos, (Amos VI, 16 and VII, 14) who testified to his rural origin by proclaiming himself "a herdsman and a dresser of sycamore trees," resented the Samarian nobles' indulgence in banquets, where they sang "idle songs" and drank wine "in bowls," he was probably condemning, not their wine-bibbing, but their drinking from new-fangled bowls, instead of from cups as did his neighbors in the desert-edge village of Tekoa.* He thus gives evidence that twenty-eight centuries ago the recreational habits of the city-dweller included innovations, unfamiliar to the country man — and disapproved by him. In a similar strain, seven hundred years later, the poet Horace (Odes, Book III, Ode VI), from the retirement of his Sabine farm, bewailed the fact that the young lady of fashion in the city of Rome took "delight in learning Grecian dances," instead of the more familiar steps of her native Italy.

A tendency towards innovation is likely to characterize the recreational activities of the city-dweller, for in an urbanized society most modifications in culture traits are originated in cities, or at least are diffused from them. Moreover, since recreation is one of the most pervasive of human interests, any major shift in the pattern of social behavior, whether directly concerned with recreation or not, is likely to affect it. Consequently the city, as a focal point of social change

* C. Gore, H. L. Goudge, and A. Guillaume (Editors), *A New Commentary on Holy Scripture* (American Edition), New York 1929, Pt. I, pp. 574–576.

in general, would naturally be the scene of frequent alterations in the recreational habits. For example, daylight-saving was originally introduced into the countries engaged in the World War as a national measure for economizing fuel and power. After the war, it failed to take hold, except in urbanized countries, and sometimes only in the urban sections of those countries. As a result all those developments in leisure-time occupations that have been influenced by daylight-saving, such as the increased participation in golf and baseball, and the wider use of automobiles for pleasure-riding, are for the time being confined chiefly to city populations.

It may be, also, that the restlessness and sophistication believed by some to be characteristic of urban populations cause new forms of recreation to be continually sought after in the city.

### CONSEQUENT RURAL DISAPPROVAL

PARALLELING the lag between the city and the country in the adoption of new forms of diversion is the fact that the rural-dweller, being generally conservative in his outlook, is likely to condemn whatever recreational innovations he finds in the city. The references to Amos and to Horace, given above, illustrate this tendency. It does not matter that a few years hence the country man may be blithely engaged in pursuing these identical forms of pleasure, for by that time he will have found new city fashions at which to point with disapprobation. It is true that urban recreations are sometimes associated with commercialized vice, and are, therefore, more likely to be demoralizing than those of the country. But it would seem to be true also that much of the "wickedness" of urban recreational activities consists in nothing more than a sort of legend compounded out of the country man's perennial disapproval of the new and the unfamiliar in city life.

### ADAPTATION TO URBAN CONDITIONS

THE city-dweller's way of life differs from that of the country-dweller in the type of recreation that he seeks as in other concerns.

## TABLE XXXVIII

TEN MOST COMMON RECREATIONAL ACTIVITIES AMONG MALES IN CLEVELAND, OHIO, AND PAULDING COUNTY, OHIO

| *Cleveland Men School-to-Marriage Age Period* 1890–1900 * | | | *Cleveland Men Present Day* 1917 * | | | *Paulding County, Ohio, Males* 11 *years of age and over* 1927 † | | |
|---|---|---|---|---|---|---|---|---|
| *Rank* | *Activity* | *Per cent Participating* | *Rank* | *Activity* | *Per cent Participating* | *Rank* | *Activity* | *Per cent Participating* |
| 1 | Reading | 55 | 1 | Reading | 76 | 1 | Sunday-visiting | 77 |
| 2 | Theater | 43 | 2 | Theater | 43 | 2 | Reading | 75 |
| 3 | Dancing | 42 | 3 | Walks or Hikes | 40 | 3 | Fairs | 74 |
| 4 | Walks or Hikes | 33 | 4 | Visiting | 39 | 4 | Picnics | 61 |
| 5 | Cards | 30 | 5 | Movies | 37 | 5 | Institutes | 57 |
| 6 | Baseball | 27 | 6 | ..... | 36 | 6 | Horse-shoe Pitching | 51 |
| 7 | Pool and Billards | 27 | 7 | Cards | 34 | 7 | Fishing | 51 |
| 8 | Swimming | 24 | 8 | Church Activities | 32 | 8 | Hunting | 50 |
| 9 | "Fussing" | 19 | 9 | Motoring | 32 | 9 | Concerts | 49 |
| 10 | Fishing | 18 | 10 | Baseball | 31 | 10 | Reunions, Church Sociables | 41 |

### PASSIVITY AND VICARIOUSNESS

As Table XXXVIII based on the studies of Gillen and Lively, suggests, the inhabitant of the city tends to engage in more passive forms of recreation than the farmer or villager. He reads, goes to the theater or "talkies," watches a baseball game, or plays cards. Or he may listen to the radio, or drive his automobile. All of these activities, if such they may be called, involve little physical exertion, and most of them call for very little exertion of any sort, except the release of vicarious emotional energy. This latter observation applies

* Reprinted by permission from *Wholesome Citizens and Spare Time* by J. L. Lowe-Gillen, (*Cleveland Recreation Survey* Vol. III), *The Cleveland Foundation*, Cleveland, 1918, pp. 138 and 156. Referring as it does to the period 1890–1917, this is not altogether typical of the present situation. It makes no reference to the radio, and probably indicates less interest in "movies" or "talkies," motoring, and card-playing than now obtains.

† C. E. Lively, "Rural Recreation in Two Ohio Counties," quoted in Hayes, *Rural Sociology*, New York 1929, p. 502.

particularly to attendance at the theater and the cinema and the watching of baseball and other sports.

On the other hand, the rural-dweller will hunt and fish; go visiting, or attend a fair or "church sociable," often traveling long distances over rough roads to do so. In this latter connection, the author remembers a farewell party, given in his honor a score of years ago by a group of friends in a remote section of the southwest. He had to ride more than ten miles on horseback over muddy roads to reach his host's house. One couple rode horseback from a tiny settlement fifteen miles away. Another guest came down from "the hills," an indeterminate distance, and came afoot. The organ, which furnished the dance-music, was brought in a farm wagon from a neighboring ranch two miles away. To clear a place for dancing, every piece of furniture, including the stove, was moved out of the kitchen and the "best room."

It is not easy to account for the city-dweller's *penchant* for inactive and vicarious amusements. Possibly he lacks the physical vigor that the country man has; certainly he is less used to physical activity. The author can not, for example, envisage any group of city young people, however fond of dancing, undertaking the sheer physical labor that was involved in preparing for and attending the frontier party that he has described. It is likely also that the type of work in which city-dwellers engage and the conditions under which they do it, leave them fagged mentally and emotionally, so that they seek entertainment which requires little physical or mental effort on their part. They may, it is true, engage in short-lived spurts of activity, as at a dance or "on a party," but it is likely that those manifestations are indicative of the narcotic effect which is occasionally sought by pleasure-bent city-dwellers. Space-limitations also serve to make urban recreation inactive. It is only necessary to vizualize the efforts of the 60,000 to 100,000 spectators at a World Series baseball game undertaking to organize 3300 to 5500 separate baseball games on their own account to realize the enormous economy of space involved in many passive and vicarious forms of play.

### ECONOMY OF SPACE

THE space-economizing nature of urban recreation is exemplified in a number of other ways. The motion-picture theater represents perhaps its most extreme development. Literally thousands of persons can be crowded into a vast building for the witnessing of a form of recreation which occupies only so much space as is involved in a projecting booth, a screen, and a sound mechanism. A half-dozen rolls of film, which, with their containers, occupy less space than a crate of eggs or a box of apples, can furnish an evening's entertainment to 5000 persons.

### RELATION TO "FRICTION OF SPACE"

THE influences impelling the city-dweller to seek out space-economizing forms of recreation are not far to seek. They have already been summed up in the term, *the friction of space.*

There is so much competition for land at the center of any urban area that every form of area-utilization must be as sparing as possible in the use of space. It has already been seen that the congested traffic-way, the multi-storied office-building and apartment house, and the compact, compressed urban home are all responses to "the friction of space." Recreation is similarly forced to contract its space requirements.

Some forms of recreation, indeed, are all but impossible at the center of a large city, because of the limitations of space. This observation is particularly applicable to open-air recreation for children, who, being economically dependent, are not on their own behalf able to compete against other and pecuniarily profitable forms of area usage. In the Borough of Manhattan, in New York City, Hanmer * estimates that less than 50 per cent of the minimum play-space requirements are available. In one district, 4300 children have access to no open-air play-space of any sort. In a later chapter consideration is given to the relationship between such a situation as this and urban juvenile delinquency.

* L. F. Hanmer, *Public Recreation* (Regional Survey of New York and its Environs, Vol. V), New York 1928, pp. 158–164. See also N. Anderson and E. C. Lindeman, *op. cit.*, pp. 163–164.

### ORGANIZATION

THE organized nature of urban recreation is probably also a response, in part at least, to the limitation in space available for play activity. Team-games are space-economizing, since a relatively large number of individuals engages in the same sport, at the same time and place. The same observation applies to card-playing, bowling, dancing, and many other recreations that are typically or largely urban.

### RELATION TO DIVISION OF LABOR IN CITY LIFE

ANOTHER and more fundamental element is, however, operative in this connection. It is the specialized nature of city life, to which reference has been made elsewhere in this work. The city provides little scope for undifferentiated, spontaneous activity, in play, or in any other pursuit. At the least, some sort of special arrangement or engagement as in a tennis- or golf-match is required. In addition, some individuals must devote much or all of their time to make even a simple recreational activity possible. Tennis courts must be laid out and maintained, as must golf-links. As for theaters and cinemas, Big League baseball games and football matches, these require the services of large full-time staffs. Even if the contest is amateur, a large paid force is required to prepare the grounds, sell tickets, usher, care for paraphernalia, etc.

### RELATION TO PASSIVITY AND VICARIOUSNESS OF URBAN RECREATION

AGAIN, the passive element in urban recreation fosters organization. The typical city-dweller often wants, not to amuse himself, but to *be amused*, and for this purpose special facilities and personnel must be provided.

### UTILIZATION FOR RELEASE FROM TENSION AND ESCAPE FROM REALITY

THE use of recreation for release of tension and for escape from reality is probably in part a corollary of the mental and emotional fatigue to which reference has already been made.

To this must be added the fact that the insecurity and tension of city life are likely at times to bring the city-dweller to a state of anxiety, depression, or *ennui* from which he is induced to seek some sort of escape. Such states of mind as these are particularly likely to overtake the recent migrant to the city or his immediate offspring.

For these and other reasons, the city-dweller frequently turns to forms of recreation that give him emotional release and compensation for whatever in his life-situation he finds unpleasant. Thus he "loses himself" in a piece of fiction; he finds stimulus and release in the fantasy of the theater or the cinema; he gains an illusion of accomplishment in winning a foursome of golf, or a rubber of contract-bridge. In certain moods, he turns to the æsthetic tonic of music or the other arts. If his tastes are more unsophisticated he vicariously hits home runs and delivers knockout punches from the bleachers of the baseball park or the prize-ring. If he feels the need of yet more elemental enjoyment (or if he is mentally and emotionally on the threshold of pathology) he seeks out the anodyne of drugs, the oblivion of alcohol, or the titillation of sex.

It may be argued that any form of recreation contains some element of release and escape. This may be true, but these are never the only elements. Sociability, physical exercise, the development of otherwise unutilized talents and energies — these may be and often are of equal significance. It is in the city that the seeking after sensation and illusion seems to be put into the foreground, sometimes to the apparent exclusion of other concerns.

### THE CONTROL OF URBAN RECREATION

THE foregoing has served to show how urban leisure-time activity tends to fall into the hands of governmental agencies or commercial purveyors.

### GOVERNMENTAL CONTROL

MANY types of recreation can not be available at all, unless the authority and financial power of the community as organized into a governmental agency provide them. Such is

particularly the case with those types of recreation that are not available to commercial exploitation. Thus it is that parks and playgrounds — particularly for children, who have little or no purchasing power of their own — are almost universally owned and administered by governmental or quasi-governmental bodies. The same is true of libraries, museums, and, to a lesser degree, of bathing beaches.

### COMMERCIAL ORGANIZATION

THE specialization and organization involved in many forms of urban recreation involve the provision of special facilities (theaters, motion-picture films and projectors, baseball parks) and paid personnel (care-takers, ground-keepers, actors, motion-picture operators, professional baseball players). All of these require the investment and handling of large sums of money, and a considerable degree of executive direction. These can be best provided in most cases by a commercial organization. It is true that an amateur athletic contest may be sponsored by a voluntary association, but its actual direction is usually entrusted to an organization that is largely commercial in its outlook and methods. The author has been told of one university whose athletic association built its stadium by the sale of bonds and then brought pressure to bear upon the faculty to cancel the ineligibility of a popular football player, on the grounds that his absence would imperil the profits of the stadium.

Moreover, the city-dweller who is eager for emotional release and escape is willing to spend large sums to secure what he seeks. He is often in no position to inquire into the cost of that which is purveyed to him, and just as often in no mood to do so, a certain recklessness being a characteristic feature of his state of mind at such a time. Therefore such forms of recreation offer the opportunity for large profits, and, accordingly, attract commercial purveyors, precisely as does any profit-yielding form of enterprise.

### OCCASIONAL ASSOCIATION WITH VULGARITY OR COMMERCIALIZED VICE

IF THE purveyor is unscrupulous, or if the form of recreation that he provides appeals to an elemental or a pathologically-conditioned emotional need, then the possibilities for gain are very great. It is for this reason that commercialized recreation occasionally slides over into the more or less open pandering to vulgarity and sensuality, or becomes frankly associated with commercialized vice.

While the Latin poet Horace professed to be quite content to eschew the attraction of city life for the rustic joys of his Sabine farm, he seems to have encountered some difficulty in bringing his city-reared servants to the same way of thinking. One of his letters is addressed to a bailiff who appears to have evidenced a desire to leave the country and return to the city. Horace rebukes him sharply, and says, "You miss the flute-playing courtesan, to whose strumming you can dance and thump the ground." (Epistles, Book I, Epistle V)

The poet's reproof bears witness to a phenomenon that seems to be well-nigh universal in urban communities: that commercialized vice is frequently found in association with what would otherwise be relatively wholesome forms of recreation.

Reckless has found that the presence of a number of burlesque houses (theaters offering a cheap and vulgar type of musical show), is generally an index of the existence of a commercialized vice area.* The Chicago Vice Commission of 1911 called attention to the provision of music and sometimes "vaudeville performances" for the patrons of houses of prostitution and disorderly saloons. It also commented on the frequency with which public dance halls were utilized for solicitation to vice.†

At present, the proprietors of many night clubs, cabarets, and dancing academies permit the use of their establishments for the making of assignations, and they often employ "hostesses" or "entertainers" to facilitate such contacts.

* W. C. Reckless, "The Distribution of Commercialized Vice in the City," in E. W. Burgess (Ed.), *The Urban Community*, Chicago 1926, pp. 203–205.

† Chicago Vice Commission, *The Social Evil in Chicago* 1911, pp. 125 and 139.

This latter practice, it may be remarked, has, according to Ostwald, obtained in continental cities for at least a quarter of a century.*

### EXTRA-URBAN RECREATION

IN THE closing chapters of this work reference is made to the process of "rurbanization," by which is meant the interpenetration of urban influences into rural areas, and of rural influences into urban areas. One of the most potent "rurbanizing" influences is extra-urban recreation. Whole sections of the countryside of every urbanized society have as their major activity the purveying of recreation to city-dwellers. The "country-club belt" and the recreational suburb of the urban region have already been mentioned. To them must be added the "country home," and the week-end and vacation holiday-resort.

The German census of June 16, 1925 was taken at the beginning of the vacation season. The enumeration distinguished the permanent from the temporary residents in each district, and when these districts were ranged according to size, it was seen that the smaller communities and rural areas contained the largest percentage of non-residents, while the smallest percentage was to be found in large cities. Table XXXIX presents the results of this analysis. Clearly, as a German commentator upon these data puts it, there is here revealed the extent of the seasonal "flight from the city" (*sommerliche stadtflucht*). That is to say, the holiday season in Germany, as in every urbanized country, finds thousands of city people seeking rest and relaxation in small towns and in the country. And they have chosen to spend their vacations away from the city partly, at least, in order to find means of enjoyment not available to them in an urbanized environment.

There are dozens of villages in New England, whose summer visitors outnumber their permanent population by 200 or 300 per cent. The whole social and economic life of such communities is attuned to the comings and goings of the

* See H. O. A. Ostwald, *Berliner Tanzlokale* (Groszstadt-Dokumente, Vol. IV), Berlin 1905, pp. 27–33; also N. Anderson and E. C. Lindeman, *op. cit.*, p. 168.

TABLE XXXIX

NUMBER OF TEMPORARY RESIDENTS PER 100 OF PERMANENT POPULATION IN GERMAN COMMUNITIES, RANGED ACCORDING TO SIZE, JUNE 16, 1925 *

| *Class of Community according to Number of Inhabitants* | *Temporary Residents per* 100 *Permanent Residents (Shown as less or more than* 100) |
|---|---|
| *Less than* 100 | + 2.05 |
| 100–500 | + 1.40 |
| 500–1,000 | + 1.06 |
| 1,000–2,000 | + 1.55 |
| 2,000–5,000 | + 1.74 |
| 5,000–10,000 | + 1.65 |
| 10,000–20,000 | + 0.09 |
| 20,000–50,000 | − 0.34 |
| 50,000–100,000 | − 0.62 |
| 100,000–500,000 | − 0.98 |
| 500,000–1,000,000 | − 1.48 |
| 1,000,000 *and over* | − 2.09 |

summer people. Even the churches are closed or shrink to skeleton congregations worshipping in "winter chapels" after the close of the vacation season. Conversely in Florida and Bermuda and on the Riviera of France and Spain, it is the winter that brings life to communities that at other times are torpid.

### OCCASIONAL OUT-OF-THE-CITY EXCURSIONS

WHILE the high-tide of the city-to-country migration is reached during the summer and winter vacation seasons, it continues in greater or less volume throughout the year. Golf, motoring, hiking, Sunday and holiday excursions, weekend visits to resort centers or to country homes, motor-tours, hunting expeditions — all of these are manifestations of the same tendency, and serve to denote the extent of its diffusion. In the New York urban region, the weekly automobile *hegira* to the countryside is so great that the Regional Planning Committee has considered it wise to make a special

* From Deutsches Statistisches Reichsamt, *Die Gemeinden mit* 2000 *und mehr Einwohnern* (Sonderhefte zu Wirtschaft und Statistik, No. 3), Berlin 1926, p. 14.

study of "points of maximum weekend highway congestion." Of the thirty-nine traffic points so designated by the Committee's experts, twenty are ten miles or more from the City Hall of New York — that is, on the way out to the less urbanized portions of the region.*

The following quotation from an official report relating to a group of state parks adjacent to the New York City Metropolitan area gives evidence of the extent of the extra-urban recreational activities among the inhabitants of a great city:

> Approximately 5,200,000 people visited Harriman State Park and Bear Mountain Park, including the Storm King section, in the period between November 1, 1927 . . . and November 1, 1928. . . The Bear Mountain Inn supplied 600,000 persons with food and refreshments between January 1 and November 1, 1928. . . The Commission's omnibuses . . . carried 277,200 passengers during the year 1928. . . The largest number carried on any one day was 12,400. . . Over 53,000 campers were accommodated in organization camps for a total of 5289 camping weeks.†

Rapid transportation, especially automotive transportation, has greatly increased the range of these extra-urban spare-time activities, and has enormously enlarged the number of people to whom they are available, but they are in no wise to be considered as peculiar to present-day conditions. The country villa was considered essential to the well-to-do inhabitant of ancient Rome — so much so that Horace some centuries ago was moved to indite an ode deploring the virtual crowding-out of small farms by country estates in the region surrounding the metropolis of the ancient world.

> Ah, splendid homes anon will spare
> The busy plow a meagre place;
> And pools will dot the landscape fair,
> More broad than Lucerne's mirrored space:
> The elm to sterile plane-trees yield.
> Soon myrtle groves and violets blue
> With balmy wealth from every field
> Will scent the slopes where olives grew,
> And once repaid the laboring swain. . .
> (Odes, Book II, Ode IV, Pierce's Translation)

* H. M. Lewis and E. P. Goodrich, *Highway Traffic* (Regional Survey of New York and its Environs, Vol. III), New York 1927, pp. 137–138.

† State of New York, *Eighteenth Annual Report Conservation Department*, Albany 1929, p. 346.

A similar lament, it may be remarked, might be uttered over the vanishing farms and villages in the "country-club belt" surrounding any modern city.

## RELIGION

CERTAIN observers, particularly those whose outlook is rural, regard urban ways of life as wicked. Nowhere does this tendency toward the disparagement of the city and of city people take clearer form than in respect to religion. "The Godless city" and "the wicked city" are well-nigh universal clichés. "The severest contests of religion against irreligion and wickedness take place in city buildings and streets," wrote Leete in his book on *The Church in the City*, a decade ago. Pronouncements in a similar vein could be quoted almost indefinitely. They are seldom supported, however, by any concrete body of data. Indeed, it is difficult to see how they could be. For, as Thompson, as well as Sorokin and Zimmerman demonstrate, it is impossible to escape the conclusion that cities have throughout history been actively concerned in both the establishment and the maintenance of religion.* Reference has been made in Chapter I to the rôle played by religion in the evolution of city life, and to the existence, in all ages, of cities whose fame for sanctity has been such as to win for them the appellation of "holy."

Nevertheless, though the city is, in general, neither more nor less "religious" than the country, it has a distinctive religious life.

In the urban community, (1) the religious congregation is generally larger and engages in a more highly-organized type of worship than in the country. Again, (2) there is likely to be more of innovation in the content of religious beliefs, and (3) in rapidly-growing cities, at least, there is likely to be a number of religious groups that remain essentially rural in outlook and organization and that are, accordingly, unadapted and ineffective.

* F. D. Leete, *The Church in the City*, New York 1915, p. 12. See also J. G. Thompson, *op. cit.*, Chap. XXI, and P. A. Sorokin and C. C. Zimmerman, *op. cit.*, pp. 418–420.

THE SCALE AND ELABORATENESS OF ORGANIZATION — THE FORMALITY OF WORSHIP

I HATE, I despise your feasts, and I will take no delight in your solemn assemblies. Yea, though ye offer me your burnt-offerings and meal-offerings, I will not accept them; neither will I regard the peace-offerings of your fat beasts. Take thou away from me the noise of thy songs; for I will not hear the melody of thy viols.
[Amos V: 22–23]

In these words, Amos the country man voiced his disapproval of the large religious congregation that he encountered in the city, and of the elaborateness of its form of worship. He would probably be moved to a similar denunciation if he should visit the typical city church today. A modern observer, H. Paul Douglass, after making a statistical study of a thousand city churches, has fixed upon size of congregation and comprehensiveness of program as two of the distinguishing marks of urbanized religion. Douglass found that the typical (modal) Protestant city church had from five hundred to a thousand members. Morse and Brunner, on the other hand, studying 5500 town and country churches, computed the average membership for open-country churches as 72; for village churches as 108; and for town churches, located in communities of 2500 to 5000, as 194.*

Douglass further calculated the average church membership in cities of 100,000 to 200,000 as, 206, as compared with 253 for churches in cities having a million or more inhabitants.†

The same writer has compared open-country, village, and city churches as to the comprehensiveness of their programs with similar results. In the rural and town churches there generally are not more than two or three organized groups, while the typical city church has four or five. As elementary a form of parish activity as a women's organization (Ladies' Aid Society, Women's Guild, etc.) was found in only half of the open-country churches, as compared with nine-tenths

* H. P. Douglass, 1000 *City Churches*, New York 1926, p. 237. H. N. Morse and E. de S. Brunner, *The Town and Country Church in the United States*, New York 1923, p. 74.
† H. P. Douglass, *op. cit.*, p. 367.

of the town churches and one hundred per cent of the city churches. A men's organization was reported for a bare two per cent of the open-country churches and for ten per cent of the town churches, as contrasted with fifty-five per cent of the churches in small cities.*

Furthermore, Douglass observes that the more highly organized or "adapted" churches were encountered more frequently in very large cities than in other urban communities.

City churches are more elaborated than rural churches not merely as to organization; their worship is more formal and more ritualized. Within the Protestant denominations, city churches are apt to adopt a regular order of worship, to eschew informal and individualist types of preaching, and to make use of symbolism and pageantry. Moreover, the ritualistic forms of religious expression (Roman Catholic, Eastern Orthodox, Jewish, and Protestant Episcopal) are far more heavily represented in the cities of the United States than outside of them. Certain of these religious bodies are more or less closely connected with various immigrant groups, and are, therefore, naturally to be found in the cities of this country. Not so the Protestant Episcopal denomination. It is one of the longest-established religious bodies in the United States; yet it is one of the most urbanized.†

## RELATION TO POPULATION

IN UNDERTAKING to explain the relatively large size and elaborateness of organization and of worship in the urban church, one obvious fact should be remembered — that cities contain large populations. It is easy to assemble a large congregation in the city. And a large congregation permits of a more comprehensive organization and requires a more formal order of service than would the two- or three-score of worshippers assembled in the average rural church. Relatively ample financial resources for the support of a wide range of parochial activities and for religious ceremonial are, moreover, more likely to be provided from a large than from a small congregation.

* *Loc. cit.*, pp. 81–82. The next paragraph refers to *loc. cit.*, p. 362.
† *Loc. cit.*, pp. 324–326.

### RELATION TO "FRICTION OF SPACE"

A LESS obvious explanation for the elaboration and formalization of urban religious activities relates to the "friction of space." Urbanized religion, like recreation, has to adapt itself to the fact that the space available for its activities is restricted and expensive. Like recreation, also, it finds one form of adaptation to this exigency to be the assembling of large, compact congregations, participating in its activities passively and vicariously, which is to say through formal worship and symbols. Like recreation, again, the religious life of the city-dweller is highly socialized and well organized. In this connection it may be noted that these characteristics are most marked in the larger cities — that is to say, there is not only a difference between country and city churches in this regard but further differences between the latter according to the degree of urbanization of their communities.

### RELATION TO ABBREVIATION OF FAMILY LIFE

DOUGLASS offers a further observation anent the tendency of city congregations to take on a multiplicity of activities. It is that city-dwellers, having a relatively abbreviated family life, or none at all, are more likely to turn to their churches for social life than would the inhabitants of the town or the countryside.* Anyone who has witnessed the striking success that attends a well-organized Sunday evening social hour in a city church will appreciate the shrewdness of this observation. There should also be kept in mind the tendency noted by Lynd and Lynd for city people, in the United States at least, to utilize church attendance and church organizations as media for making acquaintances. "'Affiliate yourself with some church if you want to get acquainted,' newcomers to Middletown are told." †

### INNOVATION IN RELIGIOUS DOCTRINES

THE founders of religions may or may not begin their careers in the city, but they generally find their most fruitful field

* *Loc. cit.*, pp. 86–87.
† R. S. Lynd and H. M. Lynd, *op. cit.*, p. 275.

of activity there. Jerusalem, Mecca, Rome, Wittenberg, Geneva, all these cities have witnessed the rise of new religions, or the transforming of existing ones.

The history of Methodism is a modern instance of this tendency. Originally it was an obscure Moravian sect until the brothers Wesley, who had been converted to its doctrines in America, took it to London, and created out of it one of the most vital religious movements in modern Christendom.

It is not difficult to account for this tendency, for cultural innovations are, in an urbanized society, likely to evolve in cities and to be diffused from them.

It happens that in the United States at present the most significant forms of innovation in religious belief are related to Modernism, Mechanism, and Humanism. Moreover, these "heretical" and "atheistic" beliefs have achieved their greatest development in the cities, or at least in the urbanized sections of the country. It would, however, be rash indeed to conclude from this that the city as such is the habitat of "infidelity" and "irreligion."

It should never be forgotten that the very word "pagan" is derived from the Latin word meaning "peasant," and that at least two of the great orthodoxies of the present day, Judaism and Christianity, were centered in the city and had to labor long and earnestly against the stubborn adherence of the countryside to its ancient "heathen" gods.*

It is indeed possible that a century or two hence the "heresies" that are today characteristic of urban religious beliefs will have become the established dogmas of the entire country, and that yet new doctrines will have arisen in the cities, and will be bitterly combated by the conservative, rural adherents of "the old-time religion" of Humanistic Modernism. In fact, it would seem that the social scientist would be justified in regarding such a course of events as more nearly predictable than most of the future sociological sequences with which he is concerned.

* The reforms of King Josiah embodied in the Biblical book of Deuteronomy are to be explained as an effort to keep Judaism free from the danger of reverting to the ancient Canaanite polytheism, by centralizing it in Jerusalem. See C. Gore, H. L. Goudge, and A. Guillaume (Eds.), *op. cit.*, Part I, p. 148.

THE "UNADAPTED" OR RURAL TYPE OF CHURCH IN THE CITY *

EARLIER in this chapter it is stated that certain social phenomena which seem to be inherent characteristics of city life may in reality represent transitional phases of the adaptation of a population to urbanism. Nowhere does this generalization have greater force than in connection with organized religion.

This is particularly true in the United States and in any country in which the city is undergoing rapid expansion, where a large proportion of urban growth consists in recruitments from the countryside. It happens that, in the United States, the heavy influx of immigrants from abroad has operated to make this country-to-city movement smaller than it otherwise would have been, but it has by no means checked it. A substantial proportion of the population of every American city is either rural in birth, or removed from the countryside by not more than one or two generations. Like any migrant group, this element in the city population retains many of its rural folkways, and is faced with the necessity of adjusting them to a new setting. Such a process of adjustment is especially difficult in connection with religion, for two reasons. (1) The doctrinal structure and the comprehensive institutional organization that ordinarily accompanies present-day forms of religious expression tend to impede adaptation to new conditions. (2) In the United States it happens that most of the Protestant religious bodies, to which the bulk of the rural population is attached, are not strongly represented in the city as compared with the countryside. In fact there was in 1910 only one Protestant group which had more than half of its membership resident in cities of more than 25,000 inhabitants, and this was the Protestant Episcopal denomination which has been seen to be the most completely adjusted to urban life of all Protestant groups. This second factor tends to exaggerate the effect of the first, for it makes the various Protestant groups in this country preponderantly rural in outlook and forms

* The phrase "unadapted church" is taken from Douglass, *op. cit.*, Chap. VII, and *passim*.

of organization. In sum, the average Protestant congregation in the American city contains a large proportion of migrants from the country together with their children, and is aligned with a religious body whose norms of thinking and of organization have been evolved by a rural population and whose membership remains largely rural.

### ORGANIZATION AND ACTIVITIES

IT IS little wonder, therefore, that Douglass, whose analysis of the urbanized Protestant church has been drawn upon in this portion of the discussion, says: " By reasons of the underlying rural heritage, more than half of the urban [Protestant] churches must be regarded . . . as in the city rather than of it. The city church on the whole has not yet shaken the dust of the country from its feet." *

Douglass finds that such " unadapted " or rurally-minded churches are, in contrast to the " adapted " or city-minded churches, small, narrow in their scope of activities, limited in resources, and in physical equipment, are organized into compact, " neighborhood " parishes, and are led by pastors who are poorly trained and meagerly paid, and who are aided by few or no paid assistants. They are occasionally able to maintain a considerable measure of prosperity and vigor, when they are established in the suburban and urban-fringe — that is to say, the not-altogether urbanized portions — of their communities, or in cities that are located in un-urbanized portions of the country. Occasionally, also, an " unadapted " congregation is able temporarily to escape all of the consequences of urbanization by pulling up stakes and moving to one of the less densely-settled residential districts within its community.

The analysis may be carried a point further than Douglass has done. It may be said that those city churches which remain " unadapted " are in fact excellently adapted to the face-to-face type of group life that is exemplified in the average rural and small-town environment. Such a community in the maintaining of its religious and moral activities is able to lean heavily upon informal and spontaneous forms of

* *Loc. cit.*, p. 86.

organization and upon personal relations. It deals, moreover, with whole families rather than with isolated individuals. It is, therefore, small, relatively unorganized, only partially dependent upon professional leadership, undiversified in its program, and above all, bound to its neighborhood. When, however, it moves to the city, it faces a community in which the neighborhood has lost most of its vitality, and where it must deal with individuals who are not closely attached to their families, or who are not in families at all. If it persists in preserving its traditional program and outlook rather than imitating the various sorts of urban adaptation enumerated above, it must perforce encounter a diminution in influence, and, unless it has or seeks a favored location, it must also anticipate loss of vitality, if not actual extinction.

### IDEOLOGY

NOR does the rural-minded church remain poorly-adjusted to city life in matters of organization only. Its attitudes towards its community and towards current social and intellectual tendencies remain essentially those of the countryside. It can be postulated with considerable certitude that, at the present moment, those religious congregations in American cities which remain aggressively "Fundamentalist" in doctrine and Puritan in social outlook are "unadapted," or at least, are attached to denominations the bulk of whose constituents are enrolled in rural churches and in "unadapted" urban ones.

### PROTESTANT VERSUS CATHOLIC AND JEWISH TYPES OF CHURCHES

THIS discussion has been confined to the Protestant churches, because the Roman Catholic, the Eastern Orthodox, and the Jewish groups are heavily urbanized in this country, and have achieved a better adjustment to city life than the Protestant bodies have, on the whole. Their congregations are large (subject to the limiting factor of the size of their various national and provincial "colonies"); their organization is elaborate and their programs diverse; their services are formal; and their leadership is highly specialized. This

last observation applies with particular force to the Roman Catholic and the Eastern Orthodox bodies, whose priesthoods and religious orders are admirably suited for the provision of leadership in a city congregation.

The typical Jewish synagogue, on the other hand, is sparsely served with full-time organizers and leaders. This religious group has, however, evolved a close-knit community life, which is in many ways a substitute for the primary, face-to-face social life of the rural and small-town neighborhood. It can therefore rely upon informal and spontaneous means of maintaining its activities. Moreover, the overshadowing rôle played by tradition in the life of the Jewish people gives a quasi-automatic character to much of the religious behavior of this group. In this respect as in many others that are noted in this work, the Jewish people appear by reason of their long induration to city life to have become notably well adapted to it.

### ECCLESIASTICAL DISORGANIZATION AND RELIGIOUS INDIFFERENTISM

IN EUROPE the maladaptation of religious institutions to the rapidly-expanding cities is not so noticeable as in this country. There is a high degree of uniformity in religious belief (Roman Catholic, Eastern Orthodox, or one or another Protestant body); so that no major religious body is so overwhelmingly rural in its background and membership as is the case with many American denominations. Moreover, city life has been a continuous factor in European society for a thousand years, and in certain regions for an even longer time; so that most religious bodies have had ample opportunity to develop institutional forms and modes of leadership suited to urbanism. Nevertheless, maladjustment is to be observed. The parochial basis of organization — that is to say, the designation of the neighborhood as the unit of the congregation — has been largely maintained, despite its imperfect adaptation to the city. The result is apparent in any large and growing European city — confusion and rivalry between neighboring parishes; the multiplication of parishes, and the desertion and decay of par-

ishes which have been affected by the shifting of residential districts. In 1920, it was found that the Sunday congregations of nineteen churches located in the central commercial area of London totaled only 319, and it was officially proposed to demolish them and sell their sites.

The apparent "overchurching" of many of the older European cities is also partly due to the increased range of communication in the modern city as compared with the medieval or early modern community. In the thirteenth century, when communication was almost exclusively by foot, and when it was difficult or even dangerous to venture far from one's immediate vicinage, the religious needs of the population could not be served otherwise than by a large number of churches placed very close together.

Another and more far-reaching consequence of religious maladjustment in the urban environment is the high proportion of separation from organized religion that is to be observed in the urban community. That there are large numbers of unchurched individuals in the modern city cannot be doubted. Sorokin and Zimmerman present an impressive array of data from both the United States and Europe which tend to establish the existence of a markedly smaller degree of adherence to organized religion in the city than outside of it.* Indeed, the latest European census enumerations show that, in certain cities, from one-tenth to one-fifth of the entire population has no religious affiliation whatsoever.† It is possible, of course, to account for a substantial proportion of this "irreligiousness" on the basis of the generalization made above: to wit, that agnosticism and skepticism towards existing orthodoxies are a form of culture change that is characteristic of modern society, and which has, up to the present, gained greater headway in the city than elsewhere. In confirmation of this hypothesis, in virtually every European city the percentage of the population unaffiliated with organized religion is far greater today than it was before the World War. Thus, in Amsterdam, the percentage has

* P. A. Sorokin and C. C. Zimmerman, *op. cit.*, pp. 425–432.

† Amsterdam (1920), 21%; Prague (1921), 19%; The Hague, (1920), 16%; Leipzig, (1925), 10%. — *Annuaire Statistique des Grandes Villes*, The Hague 1927.

doubled between the years 1909 and 1920, and in Prague it has increased from less than one per cent in 1910 to nineteen per cent in 1920. Whether or not this hypothesis is sufficient to account for *all* of the drift away from formal religion in the modern city is problematical.

### RELATION TO CULTURE-SHOCK

IT IS at least possible that some additional influence is at work in this situation, and Sorokin and Zimmerman are sure that this is so. If such indeed is the case, it may be attributed to the fact that the rural migrant to the city together with his children is undergoing a process that might be termed *culture-shock*. That is to say, he is transferred suddenly from one sort of culture to another one, and the experience imposes a serious strain upon him, especially as regards the habituations in thought and attitude which he has derived from his rural heritage. This process of culture-shock is well recognized in the case of the immigrant. In its most marked manifestation, it involves personality disorganization, and even mental breakdown. A less spectacular and more common reaction is a sort of *interlude of confusion,* in which Old-World folkways are dropped while New-World ones are assimilated incompletely, if at all. This process is to be observed in connection with the immigrant's family life, his intellectual life, his economic life, and his religious life. The immigrant and more particularly his son or daughter cease to be Germans or Poles, or Italians, without yet becoming in any vital sense Americans. As indicated in the previous chapter, it seems reasonable to assume that a similar process takes place with the migrant from the country to the city, and with his children and grandchildren. It is therefore to be expected that, in any city drawing a substantial number of migrants from the countryside, there will be a number of men and women who have lost their hold on the standards of family life, the moral restraints, and the religious attitudes, acquired by themselves or by their immediate forbears in a rural environment, but who have not yet been able to acquire the corresponding urbanized standards, restraints, and beliefs. They are "agnostic" or "unchurched" not

because city life as such fosters such religious indifferentism, but because they are, in this respect, maladjusted to city life. Moreover, so long as a city expands, it will draw large increments of its population from the country, a certain proportion of which will become religiously unattached.

Two additional comments may be appended to this hypothesis. (1) It implies a transitional phase of the adaptation of population to urbanism, since it affects only those individuals who are close to their rural heritage. Moreover, if a city should cease to expand, the proportion of its population which was affected by this process would decline.

(2) Such an influence as this would not be noticeable in any population group that had been long indurated to city life. This would seem to be precisely the case with the Jewish people, who have been dwelling continuously and almost exclusively in cities for centuries. The typical Jew — that is to say, the conservative member of a close-knit urban community — is notably and tenaciously pious, partly at least, through age-long habituation to the city and through the working-out of a way of religious life that is in consonance with it. There is, to be sure, a tendency towards "liberalization" and skepticism in the Jewish group. But this, as Wirth says, can be accounted for as in part a response to the religious ferment to be observed throughout modern society, and as in part a corollary of the disintegration in Jewish community life that is now under way, particularly in the United States.*

The foregoing is, of course, a hypothesis rather than a demonstrated social principle. Other hypotheses may be put forward to explain the phenomenon under discussion. The one most commonly offered is that, somehow or other, city people are unsettled and unstable religiously and otherwise, and tend to drift into skepticism and indifferentism. This generalization has the weakness of failing to account for the great religious movements, notably Judaism, Christianity, and Mohammedanism, which were in their inception highly urbanized. It also involves the necessity of postulat-

* See L. Wirth, *The Ghetto* (University of Chicago Sociological Series), Chicago 1928, *passim.*

ing the existence of a distinctly urban type of personality. The hypothesis that has been put forward above, on the other hand, has the advantage of according with such data as are available. Moreover, it does not involve any postulates concerning human behavior other than those involved in generally-accepted formulas concerning the mechanisms of personality-response to changes in environment.

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# CHAPTER VIII

## *THE DEBIT SIDE OF CITY LIFE*

### POVERTY

SOME observers are prepared to assert that the city's influence upon its inhabitants is wholly bad. Few fail to find a certain degree of unwholesomeness in city life. In some instances, the pathology of the city is not essentially different from that to be encountered in any section of present-day society. In others, it is to be considered as correlated with phenomena other than urbanism, or as short-run manifestations of the adjustment to the city. There are, however, some disintegrating social forces which must be regarded as essentially urban.

The debit side of city life may be taken up under the headings: Poverty, Crime and Vice, Mental Disease, and Suicide.

One of the most difficult tasks encountered in the preparation of this work has been the discussion of poverty as an urban phenomenon. Poverty there is in plenty in any city. During the course of his memorable study of living and working conditions in the East End of London, during the eighteen-eighties, Booth estimated that approximately one-third of the working classes in that metropolis were without the means of maintaining themselves on a minimum subsistence level. In 1903 Hunter found that 60,000 families in the Borough of Manhattan, New York City, or about 14 per cent of all the families in the borough, had been evicted for non-payment of rent in the same year and that one-tenth of all the individuals dying in New York City were given paupers'

burials. During the second decade of the present century, Metzgar found that in Allegheny County, Pennsylvania, which includes the city of Pittsburgh within its borders, about two-thirds of the estates probated were valued at less than $5000, while slightly under one-third amounted to less than $1000.*

### EXTENT OF POVERTY IN THE CITY AND IN THE COUNTRY

NEVERTHELESS, there seems to be no definite correlation between urbanism and poverty. Gebhart finds, for example, that in the year 1926, only 2 per cent of the estates recorded in the Borough of Manhattan were below $1000 in value.†

Moreover, a large amount of destitution is to be encountered in the countryside, and in the industrial and mining village. Not many years ago the author was overtaken by nightfall in a remote western ranching community. As was the custom in that region, he threw his horse's bridle-rein over the gate-post of the nearest ranch house, and asked for a night's lodging. The rancher replied, "Stranger, I'm sorry, but I can't take nobody in, I ain't got enough for my wife and kids." Looking past him, the author saw a one-room shack, lighted by a candle, and furnished with a broken stove, and four bundles of rags; there was nothing more. In later years, the author did social work in the slums of a middle-western metropolis, but never in all his experience did he again encounter such utter destitution as in that forlorn farm-home.

During the summer of 1925, representatives of the United States Department of Agriculture visited 300 white farm families in a representative county of the Piedmont section of the Southeastern States. The 288 farm families studied, had an average gross income of $591 for the year 1924, and an average net income, available for family expenditures of $424. The families averaged 5.02 "members at home." The average for the "croppers" was 5.33. The "croppers," who constituted about a fourth of the total, had on the average

* C. Booth, *Life and Labor of the People of London* (3rd Ed.), London 1891 Vol. I, p. 63. See also M. F. Parmalee, *Poverty and Social Progress*, New York 1916, p. 101, and J. C. Gebhart, *Funeral Costs*, New York 1928, pp. 69, 71.

† J. C. Gebhart, *op. cit.*, p. 71.

only $310 available for living expenses. They actually spent only $226 per family, using the remainder to pay off their debts and to provide for the future, for this was a "favorable" year! Seven out of ten of the homes of these "croppers" had less than five rooms; four out of ten were in poor or bad condition. In 1917, Sydenstriker and Wiehl studied the relation between income and the incidence of sickness in 24 South Carolina cotton-mill villages, averaging about 900 each in population. As a by-product of their investigation they found that 45 per cent of the 12,500 families, for whom income data were secured, were receiving less than $234 per year per "adult male unit." That is to say, in a family of four, consisting of a father, aged 23, a mother aged 20, and a boy and girl, aged 1 and 3 respectively, the average annual income among 45 per cent of the population in these villages was $546. Moreover, 1917 was a year of high wages and steady employment.*

Hunt, Tryon, and Willits report that the United States Coal Commission found the "all-year-men" in the Appalachian bituminous coal fields to be earning in 1921 from $800 to $1780 per annum. Presumably, these were the highest-paid men in the industry in these areas, otherwise they would not have appeared on the pay rolls as "full-year-men." These authors go on to say that the majority of the workers in company-controlled towns were over five miles distant from any incorporated town of 2500 or more, and from two-thirds to four-fifths were living in these company-controlled "camps" and villages.†

Obviously, poverty is in no sense a distinctly urban phenomenon. It is found in the industrial and mining village as well as in the remote farming community.

It may be that there is *more* poverty in the city than in the country. Such evidence as is available, however, seems to

* H. A. Turner and L. D. Howell, *Condition of Farmers in a White-Farmer Area of the Cotton Piedmont* (U. S. Department of Agriculture, Circular No. 78), Washington 1929, pp. 21–22 and 37-44. D. Wiehl and E. Sydenstriker, "Disabling Sickness in Cotton Mill Communities of South Carolina in 1917" in *Public Health Reports* (Vol. XXXIX, No. 24), June 13, 1924, pp. 1440-1441. E. Sydenstriker and W. I. King, "A Method of Classifying Families according to Incomes in Studies of Disease Prevalence" in *Public Health Reports* (Vol. XXXV, No. 48). pp. 2829–2846.

† E. E. Hunt, F. G. Tryon, and J. H. Willits, (Eds.) *What the Coal Commission Found* (Human Relations Series No. 3), Baltimore 1925, pp. 139–140 and 220.

point to a contrary conclusion. This evidence is of two sorts: (1) comparative agricultural and non-agricultural incomes, and (2) the net loss of population by the countryside. Both sets of data are derived, for the most part, from the study of *Recent Economic Changes*, sponsored by Herbert Hoover, the summary of which was published in 1929.

### AS INDICATED BY INCOME

TABLES XL–XLIV are all derived from the study that has just been mentioned. Their import is all the same — that agriculture is not a lucrative occupation, in the United States at least, and that it is markedly less remunerative than other occupations.

TABLE XL

AVERAGE DISPOSABLE INCOME OF THE FARMER, DERIVED FROM THE FARM BUSINESS IN THE UNITED STATES, 1919–1928 *

| *Crop Year* | *Income* † |
|---|---|
| 1919–1920 | $1246 |
| 1920–1921 | 684 |
| 1921–1922 | 514 |
| 1922–1923 | 682 |
| 1923–1924 | 766 |
| 1924–1925 | 854 |
| 1925–1926 | 922 |
| 1926–1927 | 862 |
| 1927–1928 | 886 |

The estimate embodied in Table XL does not include house rent, but even without this item, a net income for the farmer and his family that varies from $500 to $1250 a year *on the average,* and is, therefore, considerably below this figure for

* Table XL and Tables XLI–XLIV following, are taken from Conference on Unemployment, Washington, D.C., 1921, Committee on Recent Economic Changes, *Recent Economic Changes in the United States*, McGraw Hill Book Company, New York 1929. This volume is published under the direction of the National Bureau of Economic Research. The table appears in the chapter prepared by L. Wolman, entitled "Consumption and the Standard of Living" (Vol. I, p. 76).

† Includes interest on capital investment. House rent is *not* included.

a large fraction of the agricultural population of the country, cannot — in terms of urban incomes — be accounted as prosperous.

Tables XLI–XLIV throw into relief the income of the American farmer as compared with that of other classes in the country at large.

TABLE XLI

PROPORTIONAL DIVISION OF NATIONAL INCOME, IN THE UNITED STATES, 1913 AND 1926 *

| *Income-Receiving Group* | *Proportional Distribution* | |
|---|---|---|
| | 1913 | 1926 |
| Total Realized Income | 100 | 100 |
| Agriculture | 14 | 10 |
| Mines, Quarries, etc. | 3 | 3 |
| Manufacturing | 21 | 21 |
| Construction | 4 | 4 |
| Transportation and Public Utilities | 9 | 8 |
| Commercial and Saving Banks | 1 | 1 |
| Merchandising | 13 | 15 |
| Governments | 6 | 8 |
| Unclassified Industries and Occupations | 20 | 20 |
| Miscellaneous Income | 9 | 10 |

Bearing in mind the fact that in 1920 about one-fourth of all the gainfully-occupied persons in the United States were engaged in agriculture, it can readily be seen from Table XLI that, in receiving from 10 to 15 per cent of the country's national income, this element was in a relatively depressed economic situation.

Table XLII, which takes up the relative purchasing power of the farmer, as compared with the groups from whom he purchases the articles that he uses, indicates clearly that the farmer possesses no special advantage in this respect. The contrary appears to be more generally the case. His relatively low money income, therefore, probably repre-

* See footnote for Table XL. This table appears in the chapter prepared by M. A. Copeland, entitled "The National Income and its Distribution" (Vol. II, p. 775).

## TABLE XLII

INDEX OF PRICES RECEIVED BY FARMERS COMPARED WITH PRICES PAID BY FARMERS, IN THE UNITED STATES, 1910–1925 *

| *Year* | *Index* |
|---|---|
| 1910 | 106 |
| 1915 | 95 |
| 1920 | 99 |
| 1925 | 92 |

sents a correspondingly low real, or commodity, income, in that this money income has no higher purchasing power than do the incomes of non-agricultural portions of the population, and, in some years, has a smaller purchasing power.

## TABLE XLIII

PRODUCTION, DISBURSEMENTS, AND INCOME IN AGRICULTURE AND THE COUNTRY AT LARGE, FOR THE UNITED STATES, 1913–1927 †

| *Date* | *Index of Agricultural Production* | *Index of Money Income Disbursed by:* | | *Per Capita Current Income:* | |
|---|---|---|---|---|---|
| | | *Agriculture* | *The United States* | *Agriculture* | *The United States* |
| 1913 | 100 | 100 | 100 | $143 | $368 |
| 1914 | 111 | 97 | 99 | 141 | 360 |
| .... | ... | ... | ... | .... | .... |
| 1918 | 112 | 233 | 165 | 328 | 579 |
| 1919 | 114 | 258 | 181 | 356 | 628 |
| 1920 | 123 | 254 | 208 | 319 | 695 |
| 1921 | 103 | 137 | 177 | 196 | 585 |
| 1922 | 114 | 155 | 187 | 212 | 601 |
| 1923 | 117 | 175 | 213 | 239 | 667 |
| 1924 | 115 | 182 | 221 | 251 | 680 |
| 1925 | 118 | 203 | 236 | 281 | 712 |
| 1926 | 121 | 199 | 247 | .... | 736 |
| 1927 | 122 | 196 | 253 | .... | 742 |

* See footnote for Table XL. This table appears in the chapter prepared by E. G. Nourse, entitled "Agriculture" (Vol. II, p. 548).

† See footnote for Table XL. This table appears in the chapter prepared by M. A. Copeland, entitled "The National Income and its Distribution" (Vol. II, p. 784).

It is true that many of the country-dweller's necessaries of life are produced for direct consumption, and do not enter into computations of money income. Of particular importance in this connection is food, which at present accounts for about a third of the expenditures of the average middle class urban family in the United States.* Table XLIII, however, makes allowance for " rental value of owned homes and value of agricultural produce consumed at home," and still shows the farm population to be distinctly worse off than the population of the country at large. The value of housewives' services is not evaluated. But it should be remembered that, even if a city housewife must pay out more for domestic service than the farmer's wife, it is another city-dwelling woman who receives this wage.

Table XLIV reduces the absolute figures of the preceding table to relative figures, and serves to show even more strikingly the discrepancy between the agricultural and the non-agricultural — or, generally speaking, between the rural and the urban — portions of the population of the United States.

TABLE XLIV

PERCENTAGE OF ESTIMATED PER CAPITA ANNUAL INCOME OF AGRICULTURAL POPULATION OF THE UNITED STATES, TO ESTIMATED PER CAPITA ANNUAL INCOME OF THE UNITED STATES, 1913–1925 †

| *Date* | *Income Percentage* |
|---|---|
| 1913 | 39 |
| 1914 | 39 |
| .... | .. |
| 1919 | 57 |
| 1920 | 46 |
| 1921 | 34 |
| 1922 | 35 |
| 1923 | 36 |
| 1924 | 37 |
| 1925 | 39 |

* See articles in *Monthly Labor Review*, Aug., Sept., Oct., Nov. 1929, on "Cost of Living among 504 Families of Government Employees in 1928."

† See footnote for Table XL. This table appears in the chapter prepared by W. C. Mitchell, entitled "A Review" (Vol. II, p. 883).

Mitchell's comment on this table provides an introduction to the portion of the discussion that follows:

> The not unfavorable income comparison which 1925 makes with pre-war years is due to the use of shrinking per capita figures for farmers and swelling per capita figures for the whole population. An industry which keeps up with its per capita quota of the national income because thousands of workers withdraw from it can not be regarded as flourishing.*

AS INDICATED BY THE TREK TO THE CITY

RURAL depopulation may generally be interpreted as indicative of a higher degree of prosperity in city than the country. This is not to say that certain individuals or entire classes in the country may not be more prosperous than other individuals or classes in the city. The introduction of machinery undoubtedly makes it possible to pay fewer cultivators higher returns. But it also deprives other cultivators of remunerative employment, and, forces them to seek opportunities elsewhere, e.g. in the city. Moreover, it might properly be argued that the "industrialization" of agriculture and the consequent displacement of many cultivators is primarily due to the large-scale production of staple crops that city life necessitates. That is, farm machinery follows the demand for large-scale, and crop-standardized agricultural production, and this, at least in part, follows urbanization. On the other hand, certain types of agricultural economy are ascribable merely to industrialism. Thus cotton cloth would continue to be manufactured on a large scale, and cotton would continue to be a staple agricultural product, if there were not a single city over 50,000 in existence — provided always that there were cotton mills in some of these cities and transportation and marketing facilities sufficient to keep them in operation. Here as elsewhere, it is seen that the fruits of *urbanism* and of *industrialism* are well-nigh inextricably entangled.

There is such a wide disparity between the economic level of rural-dwellers, in general, and city-dwellers, in general,

* W. C. Mitchell, "A Review" in Conference on Unemployment, Washington, D.C. 1921. Committee on Recent Economic Changes: *Recent Economic Changes in the United States*, New York 1929, p. 883.

that the former are constrained to join the latter in such large numbers as partially to denude the countryside of its inhabitants. Other factors in the situation there undoubtedly are. The "lure of the city" — whatever may be implied in that vague but significant phrase — probably induces large numbers of men and women to desert the farm and the village for the city, even though their well-being may not be bettered, and may, in fact, become worse. Others may go to improve their condition, but may be disappointed. And very many others may sacrifice in comfort, in health, and in quietness of mind, what they gain in wealth. Nevertheless, it seems scarcely likely that a widespread and long-continued mass phenomenon, such as the country-to-city migration is, could continue unless the larger part of the migrants were in search of economic betterment, for their children, if not for themselves, and, what is more to the point, were finding it.

### ENGLAND

PARTICULARLY pertinent at this point is the urban-rural situation in England, where rural depletion is now going forward more extensively than in most countries. Turner says, "There are fewer people in rural districts than there were 60 or 70 years ago. . . . In 1921 . . . there were 700,000 fewer cultivators than in 1870. Incidentally, there are fewer cultivators per 1000 acres than in any other European country." * This drastic curtailment of rural population, be it noted, has occurred in the face of a general increase of population for the same interval of from 23,700,000 in 1870 to 37,800,000 in 1921.* Approaching the same subject from a different viewpoint, Bowley concludes that, in 1920, even when the "allowances" made to the English agricultural laborer were taken into account there was "an excess of real wages in the town . . . if work was regular." In that year, agricultural wages, including "allowances," averaged 46*s* 9*d* (about $11.16) as against 63*s* 11*d* (about $15.27) and 89*s* 4*d* (about $21.41) for laborers in the iron and steel (engineer-

* *Encyclopedia Britannica* (14th Ed.), article: "Rural Population and Urbanization." See also A. L. Bowley, *Prices and Wages in the United Kingdom*, 1914–1920, Oxford 1921, pp. 128 and 172.

ing) and longshore (dockers') trades, respectively. Here, in other words, is a country in which there has been a steady and extensive exodus from the country to the city, and in which the available statistical material points to a definite superiority in the earning power of the laborer in the city as compared with the farm laborer.

### THE UNITED STATES

IN VIRTUALLY every other urbanized country the city is drawing heavily upon the countryside for the increase in its population. Particularly striking is the experience of the United States. During the decade of 1900–1910, the rural population increased at the rate of 9.2 per cent as contrasted with 38.8 per cent for the cities. During the next decade, the corresponding figures were 3.2 per cent and 28.8 per cent. Rossiter, from whom these percentages are taken, moreover, shows that in the three decades ending in 1900, 1910, and 1920, those communities in New York numbering more than 25,000 increased at the rate of 57.8 per cent, 53.4 per cent, and 24.2 per cent respectively, whereas those of less than 25,000 *decreased* at the rate of 1.3 per cent and 1.0 per cent for the first two of these decades, and increased by only 1.4 per cent for the third decade. Analyzing in detail the population changes in states that have had a low rate of increase or a positive decrease, Rossiter finds, further, that it is the rural sections which have borne the brunt of population diminution. Thus, Vermont, which decreased in population by 1.0 per cent during the decade 1910–1920, has witnessed a steady decrease in its rural population for several decades. Some communities have been declining in population since 1830. In fact "outside the 10 large towns and cities in Vermont the population was smaller by approximately 30,000 in 1920 than in 1850." *

The 1929 Report of the Secretary of Agriculture of the United States estimates that, in the year 1928, there was a net movement of 598,000 from farms to cities. This compared, according to Galpin, with 193,000 for 1927, with

* W. S. Rossiter, *Increase of Population*, 1910–1920 (Census Monograph, No.1) Washington 1921, pp. 48–52 and 75.

649,000 for 1926, and with 441,000 for 1925, making a total net migration from farm to city of 1,881,000 for the four-year period.*

Poverty is, then, in no sense a distinguishing concomitant of city life. On the other hand, such data as have been presented suggest that the general level of prosperity is higher in the city than in the country, so much so that the country-to-city migration observable in urbanized societies is to be interpreted largely as a quest for economic betterment.

### THE SIGNIFICANCE OF THE DISTINCTION BETWEEN URBANISM AND INDUSTRIALISM

FINALLY it is necessary to call attention to the fact that the distinction between urbanism and the phenomena which for the time being are found in association with urbanism is of especial moment in this connection. Industrialism is responsible for many of the more spectacular features of poverty. Unemployment, "sweated" wages and working conditions, occupational illness, accidents, premature cessation of earning power through occupational superannuation — these are all associated with industrialism and not with urbanism as such. The author well remembers a conversation with a deputy superintendent in a Yorkshire, England, mining community:

"Who works on the breakers?"

"Oh, the lads and the old men."

"And how old are the old men?"

"Forty-five, or thereabouts."

This colloquy took place in the schoolyard of a remote village, which, except for the mine-dump and the pit-head workings, was as typically a part of the English countryside as was ever a landscape celebrated by Wordsworth or Coleridge.

As for unemployment, the following description of the Prince of Wales's visit to the English mining districts in 1929 testifies to the extent to which a characteristic form of in-

* *Report of the Secretary of Agriculture*, 1929, Washington 1929, p. 27. L. Wolman, "Consumption and the Standard of Living" in Conference on Unemployment, Washington, D.C., 1921, Committee on Recent Economic Changes, *Recent Economic Changes in the United States*, New York 1929, Vol. I, p. 72.

dustrial impoverishment can be visited upon the countryside:

> The Prince of Wales . . . visited Durham coal fields today and saw for himself the stark realities of their misery and poverty. . . He was brought face to face with privation in its most grievous shape. In one case he saw a household of ten persons, with an income of $7.00 in cash and kind to feed them all, including the mother who had just given birth to her eighth child, and the father who had been unable to find work for three years. In another instance, husband, wife, and seven children were doing their best to keep body and soul together and look cheerful on $5.20 a week.
>
> The Prince saw children pale-faced and ill as the result of cold and underfeeding. Their legs were as thin as sticks. This was in the village of Pelton . . . whose coal pit has been closed for twelve months, so that hardly any wages are being earned in the place. . . He left the muddy roads to enter cottages so dark that he had to grope his way through the doorways and about the rooms. What he saw there seemed to make the Prince heartsick. "This is positively ghastly," he exclaimed.*

### CHARACTERISTICS OF POVERTY IN THE CITY

POVERTY is probably, then, no more widespread among city-dwellers than among the inhabitants of the countryside. However, there seem to be certain characteristic features relating to such poverty as occurs in the city. They are three in number: *first,* the relative frequency of those forms of dependency that are associated with the absence of family ties; *second,* the relatively common association of poverty with physical destitution; *third,* the multiplicity of agencies for the prevention and relief of poverty, and the abundance of their resources.

### DEPENDENCY ASSOCIATED WITH THE LOSS OF FAMILIAL CONNECTIONS

THE frequency with which pauperism is linked with the absence of familial connections is made clear by Table XLV, which is derived from Groves and Ogburn's study of marital conditions in the United States. These writers point out that this situation is probably to be accounted for chiefly by

* *New York Times,* Jan. 30 and 31, 1929.

the inability of aged and infirm persons to get aid from close relatives, and their resultant dependence. Chapter VII has developed the fact that there is a relatively large number of non-family individuals in the city, since marriages are less frequent, and divorces more frequent there than elsewhere. It follows that there is likely to be among the poor of the city a greater number of elderly and helpless persons, without relatives from whom they might receive aid, than there would be in other population groups.

TABLE XLV

PER CENT DISTRIBUTION OF PAUPERS IN ALMSHOUSES IN THE UNITED STATES IN 1910, COMPARED WITH A SAMPLE OF THE GENERAL POPULATION OF THE SAME AGE DISTRIBUTION ACCORDING TO MARITAL CONDITION *

| *Marital Condition* | *Male Paupers 15 Years of Age and over in Almshouses* | *Sample of the General Male Population with the Same Age Distribution as the Paupers* |
|---|---|---|
| Never Married | 54.4 | 17.7 |
| Married | 17.2 | 69.1 |
| Widowed | 23.4 | 11.3 |
| Divorced | 1.7 | 0.6 |
| Unknown | 3.2 | 1.2 |

PHYSICAL DESTITUTION

A SECOND distinguishing feature of poverty in the city is its liability to break down into actual physical destitution. The primary necessities of existence, such as food, fuel, clothing, and shelter, are, generally speaking, to be obtained only by purchase in the city. If an individual lacks money, or has little of it, he must perforce go without one or another of these requisites, unless he begs or steals them. This is not true to so great a degree in a rural community. One can find dwellings whose rental value is virtually *nil*, or may make shift to find shelter in sheds and outbuildings. Firewood can be obtained with relatively little difficulty, and it is a desolate countryside indeed which does not provide some

* Derived from E. R. Groves and W. F. Ogburn, *American Marriage and Family Relationships* (American Social Science Series), Henry Holt and Company New York 1928, p. 147.

patch of ground on which an individual can raise at least a part of his provender. Moreover, since the typical rural community is also agricultural, there is a relative abundance of cull, waste, and surplus foodstuffs which can be had almost for the asking.

The author spent the summer of 1929 in the city of Paris. He occasionally took an evening walk around the Luxembourg Gardens, and past a group of government buildings with wide, deeply-recessed entries. On his first walk, he was shocked to find an old woman, fantastically shabby, sound asleep in the entry of one of these buildings. But when he found her the next night and the next, he realized that all the home which that feeble old derelict could claim was the stone step on which she lay. She represented, to an extreme and spectacular degree, the special sort of old-age poverty that accompanies city life.

During periods of economic depression such as have visited the United States in 1893, 1907, and 1930–31, the establishment of soup-kitchens and bread-lines for the relief of physical destitution becomes a commonplace, and the spectacle of men, women, and children foraging for scraps of food in the garbage cans of their more fortunate fellow-townsmen is not at all infrequent.

It may be suggested that famine sometimes overtakes a rural community. This is demonstrated by the recurrent famines in the agricultural areas of Russia, China, India — not to mention drought-stricken sections of southwestern United States in the year 1930. On the other hand, any city which derives its food from a famine-stricken countryside is likely to be equally famine-stricken and even more so. It may also be suggested that the city, because of its greater wealth and more elaborate social organization, is better organized than the rural community for the prevention and relief of destitution. This is true, and it is not likely that there is much actual starvation in any fairly prosperous, normally-organized modern city. But that something very close to starvation may be found in a European and an American city, even when conditions are not particularly abnormal, has been made clear by the studies of Booth and Rowntree.

ENGLAND AND THE UNITED STATES

THE following excerpts from budget studies of unemployed families studied by Rowntree and Lasker in the city of York, England, serve to show how near to actual starvation a city family which is without funds may be brought:

*Friday in Third Week* — Nothing in house till Lilly got 2*d* given which bought a penny lump [of bread] and half a pound of treacle. Father ate nothing through the day, leaving what there was for us. Breakfast — none; dinner — bread and treacle for mother and children; tea — a "mash" given by a neighbor and the rest of the penny lump; supper — a neighbor brought a cup of Quaker Oats.

*Saturday* — Breakfast — a penny lump given by neighbor, and the scrapings of the treacle; dinner — none.

---

*Monday* — Got up at 5 A.M., went round to several places to see if I could find any work, but did not get any; back at noon, no breakfast, dry bread for dinner; went out again at 2, walked about until 7 — nothing, went to bed at 8:30.

*Tuesday* — Up at 5:30 A.M., usual walk round and back at noon, nothing doing. No breakfast, dry bread for dinner, no tea, bed at 8 P.M.

*Wednesday* — Went out at 5:30 A.M., walked round to W's and L's, came back at 8:30, had breakfast — a cup of tea and bread and margarine; went out again and walked about until 6 o'clock; came back home, had a cup of tea and dry bread, and then went to bed. [On this day the family had neither breakfast nor dinner. The wife gave her husband the last crust, and he thought there was a loaf left; but at night a neighbor brought 2*d.* and a bowl of Quaker Oats, which the children ate.]

*Thursday* — Went out at 6 A.M., walked to N— to meet boats for W's wharf, waited there until 12, then walked home at 2. Dinner — bread and tea; tired out, so went to bed; got up at 7 P.M., had tea and bread, went to bed at 9:30.

*Friday* — Up at 5, walked round and round the town until 12, nothing doing anywhere, so I was fairly sick of walking about. For dinner I had bread and kipper and a drink of tea; no breakfast, no tea, and no supper; went to bed at 7:30.

*Saturday* — Up at 4, went round Market Place, got a job to carry some baskets for 3*d*, went round to W's wharf and L's, but nothing doing, came home at 11, had some bread and cheese, then went round and got threepence from a friend, came back home, had a drink of tea and some dry toast, went to bed at 8.

*Sunday* — Got up at 3, had a walk around the town, did not find anything, came home at 7, had a drink of tea, then went to bed until I had my shirt washed, got up at 3 P.M., had some potatoes, then set in the house the rest of the day; went to bed at 9.*

During the winter of 1930–1931 items such as the following have been of frequent occurrence in the urban newspapers of the United States:

Of eight shop-lifters arraigned, one was a man who identified himself as E. A., age 62, of —— Street. He asked Judge W. for a sentence in the penitentiary because he was out of work and had no home. Judge W. offered to oblige with a thirty-day sentence, but at E.'s request made it sixty days.

### BIBLICAL PALESTINE

MENTION has previously been made of famine. When such a vicissitude descends upon a country, whether by crop failure, war, revolution, or a breakdown in the organization of transport and supply, it is the city which suffers most intensely. Indeed, the most extreme manifestation of poverty — starvation — may be the lot of large sections of its inhabitants. The scribes and the prophets of ancient Palestine knew full well the meaning of this hazard of city life.

And it came to pass that Ben Hadad, king of Syria, gathered all his hosts and went and besieged Samaria. And there was a great famine in Samaria: and behold, they besieged it until an ass's head was sold for four score pieces of silver, and the fourth part of a cob of dove's dung for five pieces of silver.

And as the king of Israel was passing by upon the wall, there cried a woman unto him saying, "Help, my lord king!"

And he said, "If the Lord do not help thee, whence shall I help thee, out of the barn floor or out of the wine-press?"

And the king said, "What aileth thee?"

And she answered, "This woman said unto me, Give thy son, that we may eat him today, and we will eat my son tomorrow. So we boiled my son and did eat him. And I said to her on the next day, Give thy son that we may eat him, and she hath hid her son!"

And it came to pass, when the king heard the words of the woman, that he rent his clothes. . . [II *Kings* VI:24–30]

* B. S. Rowntree and B. Lasker, *Unemployment*, London and New York 1911, pp. 233–234. By permission of The Macmillan Company, publishers.

The author of the book of *Lamentations* gives a less matter-of-fact but equally moving account of the repercussions upon the population of Jerusalem of a famine period.

> The tongue of the sucking child cleaveth to the roof of his mouth for thirst; the young children ask for bread, and no man breaketh it unto them.
>
> They that did feed delicately are desolate in the streets; they that were brought up in scarlet embrace dunghills. . .
>
> Her Nazarites were purer than snow, they were whiter than milk, they were more ruddy in body than rubies, . . . their visage is blacker than coal; they are not known in the streets; their skin cleaveth to their bones; it is withered, it is become like a stick.
>
> They that be slain with the sword are better than they that be slain with hunger; for these pine away, stricken through for want of the fruits of the field.
>
> The hands of the pitiful women have sold their own children, they were their meat. [*Lamentations* IV:4–10]

These narratives are, to be sure, derived from the ancient world of walled cities and primitive transport. Nevertheless, it is necessary only to review the events of the decade beginning with the outbreak of the World War to perceive that the modern city, for all the elaborateness and plenitude of its supplies in normal times, is not at all immune from the rigors of famine, or, at least, of acute food shortage.

### GERMANY — RUSSIA

THE lean years that Germany and Austria endured during the later years of the World War visited suffering upon both city-dwellers and countrymen, but the former felt the worse hardships. From 1913 to 1918, the tuberculosis mortality of the German Reich as a whole increased by 55.5 per cent, but for the 46 largest German cities it increased by 72.6 per cent. Since these increases were preceded by a long period of declining tuberculosis mortality, it would seem that Möllers is correct in interpreting them as due to "food difficulties during the war period." It would further seem that the greater rate of increase in the cities as compared with the country at large denotes that such "food difficulties" — in other words semi-starvation — were very much more intense

in the urbanized than in the non-urbanized portions of Germany.*

In the Soviet Union, during the disorganization and famine that followed the Communist Revolution, it was in the cities, such as Moscow and Odessa, that there appeared hundreds of half-clad, half-starved children, living in abandoned buildings, in catacombs, and sewers, and roaming the streets in bands as predatory as wolf-packs.

### URBAN AGENCIES FOR THE RELIEF OF POVERTY AND THEIR RESOURCES

THE third distinctive feature of poverty among city-dwellers is the number of facilities that are available for its prevention and relief. Urban society is quintessentially an organized society. Activities which, in less complex social groups, are left to the individual or to spontaneous cooperation are taken over by specialized agencies, some of them employing an extensive personnel and disbursing large sums of money. This observation has previously been made with reference to the recreational and religious activities of city-dwellers; it will be made later in connection with other activities. In charity and in social service, the tendency of city life to develop such special-function organizations is notably exemplified.

Moreover, the relative wealth of urban populations, *as a whole,* to which reference has been made earlier in this section, makes it possible for city populations to engage in social welfare activities on a more generous scale than rural populations can do. In this latter connection, it may be pointed out that many of such welfare enterprises as are to be found in the rural portions of any urbanized country are financed to a considerable degree out of urban resources. Such, for example, are mothers' pensions in certain states of the United States which are disbursed in both rural and urban communities, but which are disbursed out of state funds derived from taxes paid largely by city-dwellers.

An idea of the extent of organized charity in the modern

* B. Möllers, "Germany" in League of Nations: *Health Organization in International Health Yearbook,* 1924, Geneva 1925, p. 17a.

city may be derived from this instance: In one moderately large metropolitan area, Buffalo, the budgets for three groups of privately-supported social service agencies for the year 1929 amounted to nearly $1,450,000.

The very comprehensiveness and thoroughness of organized relief work in the city carries with it, however, a risk analogous to that involved in the failure of urban services of supply and transport. If, by any unfortunate concatenation of circumstances, the welfare organizations of a city should break down, then those individuals who were dependent upon these organizations would be immediately plunged into stark misery. In the early weeks of 1930, thousands of the sick and the poor in the City of Chicago suddenly found themselves confronted with just such a condition. A collapse in the financial structure of the City of Chicago and of Cook County made for awhile a shutdown of public charitable institutions throughout the city and county seem imminent.

> Thousands of the sick, the poor, the blind, the deaf, who have been wards of the community, will be thrust in the streets . . . unless immediate financial relief is forthcoming. . . At the Oak Forest Infirmary, where hundreds of the aged poor are cared for, 295 attendants have received no pay since December 20. A payroll of $16,807 is due tomorrow, but like other county departments, the infirmary must get along without funds. Superintendent Frank Venecek expressed doubt concerning how long this would be possible.*

It is seen, therefore, that poverty is probably no more extensive in the city than elsewhere — and that, indeed, the general level of prosperity would seem to be greater within the city than outside of it. When, however, poverty does come to the city-dweller it is more likely to cause actual want than would be the case in the country. On the other hand, the agencies for the prevention and relief of poverty are better organized and better supported than in other communities. Finally, the city-dweller is confronted with a greater hazard than the inhabitant of the countryside of experiencing what might be called absolute poverty, that is to say, the

* *New York Herald-Tribune*, Jan. 22, 1930.

lack of the physical necessities of life, in times of war, famine, and technological or governmental breakdown. This last point has a significance to the whole range of city life, as well as to that phase of it here being discussed, and is considered at greater length in the last three chapters of this work.

## BIBLIOGRAPHICAL NOTES

J. G. Thompson, *Urbanization,* New York 1927, includes a suggestive chapter on "The Moral Consequences of Urbanization," although it tends to minimize the extent and significance of urban social pathology. The chapter on "The Pathology of City Life" in N. Anderson and E. C. Lindeman, *Urban Sociology,* New York 1928, is valuable.

Discussions of some of the special topics taken up in this portion of the work are as follows: *Poverty and Income* in C. Booth, *Life and Labor of the People of London,* (3rd Ed.), London 1891, and Conference on Unemployment, Washington, D. C. 1921. Committee on Recent Economic Changes, *Recent Economic Changes in the United States,* New York 1929.

# CHAPTER IX

## *THE DEBIT SIDE OF CITY LIFE* (Continued)

### CRIME AND VICE

"THE WICKED city" is a universal *cliché*. In some respects, such as recreation, it seems to express the country-dweller's distrust and disapproval of the novelty and sophistication of the city man's way of life rather than its depravity. When applied to crime, however, the phrase would seem to denote a real sociological fact.

### CRIME

#### THE EXTENT OF CRIME

THE statistics of crime are at best of limited value. Not only are they incomplete, particularly in respect to the sort of data that interests the social scientist; they are also difficult to compare because of the variations between different areas and countries regarding the apprehension and punishment of offenders, and even the definition of crime itself. To take a single example, the theft of an automobile is a felony in New York State, and if committed after three previous convictions for felony, must be punished by life imprisonment, while in Kansas City, Missouri, three youths who had been found guilty of such an offense are recently reported to have been "sentenced" to . . . 25 successive Sunday School attendances.*

* W. E. Farbstein, "Whimsies of the Bench" in *The New Yorker*, Vol. V (No. 49), Jan. 25, 1930, p. 21. For a thoughtful discussion of the difficulty of interpreting statistics of crime and delinquency, see two articles by Michels in *Archiv für Sozialwissenschaft und Socialpolitik* (Vol. LVII) 1927, entitled "Altes und Neues zum Problem der Moralstatistik."

Such data as are available, however, point towards a higher rate of criminal behavior among city-dwellers than among other types of population. Sorokin and Zimmerman have collected statistics from sixteen different countries which agree in ascribing a higher crime rate to urban than to rural areas.*

More recent data appear to confirm these findings. For the fiscal year 1924–1925, there were sent to penitentiaries from the three metropolitan counties of New York, Queens, and Kings, 49.1 per cent of all the prisoners admitted to the penitentiaries of the state for that year, although these counties contained only 40.3 per cent of the population of the state for the year 1925.

Glueck and Glueck, in their study of 510 youthful offenders in the Massachusetts State Reformatory found that nearly two-thirds of them came from cities of 50,000 or over, as contrasted with about half of the general population.

TABLE XLVI

RESIDENCE OF 510 "GRADUATES" OF MASSACHUSETTS STATE REFORMATORY AND OF GENERAL POPULATION †

| *Community* | *Residence — Per Cent* | |
|---|---|---|
| | *Reformatory Group* | *General Population* ‡ |
| Under 2,500 | 6.1 | 7.2 |
| 2,500–50,000 | 31.4 | 42.3 |
| 50,000–500,000 | 33.6 | 30.6 |
| 500,000 and over | 28.9 | 19.9 |

To understand the etiology of urban criminalism, it is necessary to examine in some detail certain of the phenomena connected with it. They are (1) the most characteristically urban types of crime; (2) the relative number of migrants and their children among urban criminals; (3) fluctuations

* P. A. Sorokin and C. C. Zimmerman, *Principles of Rural-Urban Sociology*, New York 1929, Chap. XVI.

† Reprinted by permission from *Five Hundred Criminal Careers*, p. 131, by S. S. Glueck and E. Glueck, published by Alfred A. Knopf, Inc.

‡ United States Census, 1910.

in the volume of urban crime and; (4) urban juvenile delinquency.

### TYPES OF CRIME

IN VIEW of the widespread notice which the daily press gives to crimes of violence perpetrated by city gangsters and footpads, it is difficult to realize that such crimes are more characteristic of the countryside than of the city. Yet this is the case.

### CRIMES AGAINST PROPERTY VERSUS CRIMES AGAINST THE PERSON

CRIMES against the person constitute a smaller proportion of the total volume of crime in the city than outside of it; more than this there are certain countries in which the rate for crimes of violence is higher in the country than in the city communities.* Thus Table XLVII shows that in Massachusetts, for the fiscal year 1920–1921, the two metropolitan counties of Middlesex and Suffolk were responsible for a much smaller proportion of the arrests for crimes against the person than the proportion that their inhabitants composed of the state's population, while the arrests for crimes against property constituted a slightly larger proportion. When reduced to indices based on the percentage of the total population of the state coming from these two counties in the Boston area, the index for crimes against property rises to 103.5; indicating that there is a slightly higher rate for such crimes in this area than in the state at large, whereas the index for crimes against the person falls to 71.0, indicating that the rate for such crimes is very much less than in the general population of the state.

Tönnies, in a study of criminals in Schleswig-Holstein during the period 1874–1898, states that the city-born criminal is likely to be one who goes in for criminal activities "as a regular means of livelihood," whereas the rural-born criminal is apt to be one whose crime "originates in occasional passion . . . and wild desire," as distinguished from "calculated self-interest." Whereas about *two-thirds* of all the

* Sorokin and Zimmerman, *loc. cit.*

## TABLE XLVII

ARRESTS FOR CRIMES AGAINST THE PERSON AND FOR CRIMES AGAINST PROPERTY IN THE METROPOLITAN COUNTIES OF SUFFOLK AND MIDDLESEX, MASSACHUSETTS, AS COMPARED WITH THE TOTAL POPULATION OF THE STATE, 1920–1921*

| *Population and Arrests* | *Per cent in two Metropolitan Counties* | *Index of Per cents, counting Total for the two counties as* 100 |
|---|---|---|
| Population | 41.8 | 100 |
| Arrests for Crimes against the Person | 30.0 | 71.0 |
| Arrests for Crimes against Property | 71.0 | 103.5 |

major sex offenses for which males were convicted in this period were committed by men born in the rural districts, *eight-ninths* of the thefts were committed by men born in the cities.† Glueck and Glueck's study which has been seen to be concerned chiefly with urban criminals, shows that, of 453, who had been sentenced for major crimes, 416 or 92 per cent had committed property crimes, and 37 or 8 per cent for other crimes, (including sex crimes, and homicides).‡

## TABLE XLVIII

HOMICIDE RATE PER 100,000 POPULATION, ACCORDING TO SIZE OF COMMUNITY, BELGIUM 1924§

| *Community* | *Homicide Rate* |
|---|---|
| 2,000 and less | 3.14 |
| 2,000–5,000 | 3.54 |
| 5,000–25,000 | 1.47 |
| 25,000 and above | 2.16 |

* Computed from *Annual Report of the Massachusetts Commissions of Corrections for the Year ending November* 30, 1921 (Public Document, No. 115), p. 166.

† F. J. Tönnies, "Verbrechertum in Schleswig-Holstein (Zweites Stück)," in *Archiv für Sozialwissenschaft und Sozialpolitik* (LVIII) 1927, pp. 608–628.

‡ S. S. Glueck and E. Glueck, *Five Hundred Criminal Careers* (American Trials), New York 1930, pp. 149–150.

§ Reprinted by permission from *Principles of Rural-Urban Sociology*, p. 377, by P. A. Sorokin and C. C. Zimmerman, published by Henry Holt & Company, Inc.

Sorokin and Zimmerman present a striking tabulation of homicides in Belgium for the year 1924, which shows that it is in the small cities and the rural districts that the homicide rate is the highest.

In the United States there is not, to be sure, such an inverse ratio between urbanization and crime. The Director of the Census in 1910, however, felt that the facts justified his making the statement: "The more serious the offense the greater is the proportion of farmers and farm laborers among the total number of males committed for it." Moreover, there is no regular progression in the homicide rate with the increase in the size of the city, as would be expected if crimes of violence were a particularly characteristic expression of urban criminality. On the contrary, Memphis, Tennessee, with a population in 1920 of only 162,000 has led the country in homicides for a number of years. As Table XLIX indicates, none of the high-homicide-rate cities are particularly large, while the great metropolitan areas — Chicago not excepted — have relatively moderate homicide rates. Moreover if coefficients of correlation * between homicide and population are computed for these cities, these coefficients are found to be negative.

It is true that most of these cities with high homicide rates have large Negro populations, and Negroes have a high homicide rate, but there does not seem to be any clear-cut correlation between the percentage of Negro population and the homicide rate. For example, Philadelphia, with a homicide rate of 8.8, has over three times as high a percentage of Negroes as Chicago, with a rate of 15.8. On the other hand, there is at least a suggestion that rate of growth is correlated with crime, the case of Detroit being particularly noteworthy in this respect. Moreover, the only coefficient of correlation

* The Spearman Rank Coefficients of Correlation between the variables in Table XLIX are as follows:

Homicide and Population — 10 cities — $R = -.18$
Homicide and Population — 6 cities — $R = -.31$
Homicide and Per cent of Population Negro — 10 cities — $R = +.20$
Homicide and Per cent of Population Negro — 6 cities — $R = +.41$
Homicide and Per cent of Growth 1910–1920 — 10 cities — $R = +.51$
Homicide and Per cent of Growth 1910–1920 — 6 cities — $R = +.07$

The formula for this coefficient is $R = 1 - \frac{6\Sigma d^2}{n(n^2 - 1)}$.

## TABLE XLIX

HOMICIDES PER 100,000 IN TEN CITIES HAVING THE HIGHEST RATE IN THE UNITED STATES, AND IN SIX CITIES WITH 1,000,000 OR MORE INHABITANTS, 1928 *

| *CITIES* | *Population* 1928 † | *Homicide Rate per* 100,000 | *Per cent of Population Negro* | *Per cent of Growth* 1910–1920 |
|---|---|---|---|---|
| | (*Ten Cities with Highest Rate*) | | | |
| Memphis | 190,200 | 60.5 | 37.7 | 23.8 |
| Birmingham | 222,400 | 54.9 | 39.3 | 34.8 |
| Jacksonville | 140,700 | 52.6 | 45.4 | 72.8 |
| Atlanta | 255,100 | 45.1 | 31.1 | 29.6 |
| Little Rock | 79,200 | 37.9 | 26.8 | 41.8 |
| Macon | 61,200 | 35.9 | 43.6 | 30.3 |
| Savannah | 99,900 | 31.0 | 47.1 | 28.0 |
| Nashville | 139,600 | 27.9 | 30.1 | 7.2 |
| Houston | 275,000 | 26.2 | 24.6 | 75.5 |
| New Orleans | 429,400 | 25.9 | 26.1 | 14.2 |
| | (*Cities of* 1,000,000 *or more*) | | | |
| Detroit | 1,375,900 | 16.5 | 4.1 | 113.3 |
| Chicago | 3,157,400 | 15.8 | 2.0 | 23.6 |
| Cleveland | 1,010,300 | 13.3 | 4.3 | 42.1 |
| Philadelphia | 2,064,200 | 8.8 | 7.4 | 17.7 |
| New York City | 6,017,500 | 6.7 | 2.7 | 17.9 |
| Los Angeles | 1,500,000 | 4.7 | 2.7 | 42.1 |

derived from Table XLIX that appears to be at all significant is the one (+.51) which indicates the degree of relationship between homicide and rate of growth for the 10 cities showing the highest homicide rate.

Later in this section it is pointed out that immigrants and their children, as well as city-to-country migrants are more likely to become criminal than other population elements. This being the case, it is only to be expected that those cities which are growing rapidly — which, in other words, have attracted a large number of migrants — would have a disproportionate number of criminals within their borders.

* Computed with the assistance of Mary Sarbaugh, from F. L. Hoffman, "The Homicide Record for 1928" in *The Spectator*, 1929 (Vol. CXXII), March 14, 1929, 14th U. S. Census, Vol. I, Tables 46 and 48, Vol. II, Chap. I, Table 17.

† Estimated Population for 1928.

## URBAN CRIMINALS — THE RÔLE OF THE MIGRANT AND HIS OFFSPRING

As JUST stated, immigrants and their children, as well as migrants within the boundaries of a country (intra-national migrants; country-to-city migrants) appear to have a relatively high crime rate. Hacker, indeed, goes so far as to say: "Criminal statistics show that the greater distance between the earlier place of residence of the immigrants and their present place of residence, the greater and more varied is their criminality in comparison with that of the native population." *

### THE UNITED STATES

TABLE I. indicates that in the United States, which until a few years ago was one of the greatest immigrant-receiving countries on the earth, there is indeed a close relation between immigration and crime, even when some allowance is made for the fact that most immigrants are young men in the prime of life, and, accordingly, in the age-group from which most criminality comes.

TABLE L

COMMITMENTS OF PRISONERS 18 YEARS OF AGE AND OVER IN THE UNITED STATES, 1910 AND 1923 †

| *Color or Race and Nativity* | *Commitments per* 100,000 *of Population 18 Years of Age and Over* ‡ | | | | | |
|---|---|---|---|---|---|---|
| | *Both Sexes* | | *Male* | | *Female* | |
| | 1923 | 1910 | 1923 | 1910 | 1923 | 1910 |
| All Classes | 527.5 | 819.4 | 946.2 | 1421.8 | 85.8 | 164.7 |
| Native White | 404.1 | 609.2 | 758.4 | 1120.5 | 44.6 | 82.3 |
| Foreign-Born White | 517.5 | 794.9 | 890.9 | 1273.4 | 57.1 | 163.5 |

The relation of migration to crime does not appear to cease with the migrating generation itself. The children of migrants appear also to show a comparatively high degree

* E. Hacker, "Criminality and Immigration" in *Journal of the American Institute of Criminal Law and Criminology* (Vol. XX, No. 3), Nov. 1929, p. 429.

† From B. Mead, *Prisoners* 1923 (United States Census Publication), Washington 1926, p. 64.

‡ Compared with 1920 population figures.

of criminality. Sutherland states that in 1920 the prison group per 100,000 persons 15 years of age and over in each major nativity group was as follows:

| | |
|---|---|
| Native White of Native Parentage | 120 |
| Foreign-Born White | 143 |
| Native White of Foreign and Mixed Native and Foreign Parentage | 226 |

In other words, the children of immigrants exhibited a higher criminality than the immigrants themselves.

Glueck and Glueck, indeed, find the native-born of native parents to be more numerous among the young offenders studied by them than were the foreign-born, but the age constitution of their group is such that the foreign-born would be under-represented among them. The fact, however, that the children of immigrants in this group were 53 per cent, compared with 22 per cent for the general population * of the state — were, indeed, more numerous than both the foreign-born and the native-born of native parents combined, appears to be highly significant.

In Table LI is shown the relative number of interstate migrants in the prison population of the United States and in the general population, aged 15 years and over. For both

TABLE LI

PERCENTAGE OF PERSONS COMMITTED TO PRISONS AND REFORMATORIES BORN OUTSIDE OF STATE IN WHICH THEY WERE COMMITTED, 1923, COMPARED WITH PERCENTAGE OF PERSONS 15 YEARS OF AGE AND OVER BORN OUTSIDE OF STATE OF RESIDENCE, 1920 †

| *Nativity Group* | *Percentage of Interstate Prisoners Committed Jan. 1 to June 30, 1923* | *Migrants among General Population 15 Years of Age and over, 1920* |
|---|---|---|
| Native White | 45·7 | 35·1 |
| Native Negro | 54·3 | 30.1 |

* From E. H. Sutherland, *Criminology*, Philadelphia 1924, p. 101. Published by J. B. Lippincott Company. Used by permission. See also S. S. Glueck and E. Glueck, *op. cit.*, p. 119.

† From B. Mead, *Prisoners* 1923 (United States Census Publication), Washington 1926, p. 80.

Native Whites and Negroes the percentage of such migrants is distinctly higher for prisons than for the general population.

It has been shown in an earlier chapter that country-to-city migrants constitute a substantial proportion of the inhabitants of the typical city. In this chapter, it has been further shown that a large proportion of crimes are committed in the city. This being so, it seems likely that the evidence which has just been advanced of a high proportion of intra-national migrants among criminal offenders is to be taken as indicative of a correspondingly (though not identically) high rate of criminalism among country-to-city migrants.

### SCHLESWIG–HOLSTEIN

More direct testimony to this effect comes from the recent study of Tönnies, cited earlier in this section. This author shows that the majority of the criminals imprisoned and executed in Schleswig-Holstein during the period 1874–1898 were country-born, and furthermore that small cities produced more criminals than large cities, and small villages more than large villages. As would be anticipated from what has been said concerning the type of crime committed in the country and the city, it is in crimes against the person that the greater criminal activity of the country-born is most noticeable. Some of Tönnies's results are summarized in Table LII.

### A SPECIAL STUDY OF BUFFALO FELONS

A special study made by the author in collaboration with Haenszel, corroborates the findings of Mead and Tönnies. One hundred male felons, convicted in the Superior Court of Buffalo, in 1929, were compared, in respect to nativity, with 220 high school students. It was found that, whereas 69.6 per cent of the high school students were born in Buffalo, only 27 per cent of the felons were Buffalo-born. On the contrary, 73 per cent of the felons were born outside of Buffalo, as contrasted with 20.4 per cent of the high school students. More than this, only 8 per cent of the migrant felons were foreign-born. It seems clear that, in this par-

## TABLE LII

PERCENTAGE DISTRIBUTION BY NATIVITY OF VARIOUS TYPES OF CRIMINALS IMPRISONED AND EXECUTED IN SCHLESWIG-HOLSTEIN, 1874–1928 *

| *Type of Criminal* | *Origin — Per cent Distribution* | | | |
|---|---|---|---|---|
| All Criminals | Native-Born | 44% | Foreign-Born | 56% |
| All Criminals | Native City-Born | 36 | Native Country-Born | 64 |
| All Criminals | Foreign City-Born | 50 | Foreign Country-Born | 50 |
| Criminals Offending against Property | Native City-Born | 41 | Native Country-Born | 49 |
| Criminals Offending against the Person | Native City-Born | 28 | Native Country-Born | 72 |
| Criminals Offending against Property | Native-Born in large cities | 42 | Native-Born in small cities | 58 |
| Criminals Offending against the Person | Native-Born in large cities | 40 | Native-Born in small cities | 60 |
| Criminals Offending against Property | Native-Born in large Villages | 28 | Native-Born in small Villages | 72 |
| Criminals Offending against the Person | Native-Born in large Villages | 20 | Native-Born in small Villages | 80 |

* From F. J. Tönnies, Verbrechertum in Schleswig-Holstein (drittes Stück) in *Archiv für Sozialwissenschaft und Sozialpolitik* (LXI) 1929, pp. 322–359.

ticular group, the factor of migratoriness was significant, far more significant than immigration in itself.*

### ECONOMIC CONDITIONS AND FLUCTUATIONS IN THE VOLUME OF URBAN CRIME

THE understanding of the social life of the city is aided not only by comparing it with rural life, as has been done in the preceding paragraph, but also by observing and elucidating its year-to-year fluctuations. This method is particularly valuable in relation to crime, for it serves to establish a number of relationships between urban crime and economic conditions.

#### THE UNITED STATES

ONE of the most complete studies of fluctuations in urban crime that has been undertaken is that of Phelps, dealing with the two counties of Rhode Island situated in the metropolitan region of the city of Providence.† Phelps has computed coefficients of correlation for the period 1898–1926 between the indictment and docket record of the superior courts in these counties, and various indices of poverty with the following results: After making statistical correction for the increment and decrement of trend, he found a moderately large positive correlation between total poverty and total crime (+.41, 1901–1926; +.33, 1898–1926). For crimes against property, however, the correlation was higher (+.436, 1901–1926; +.357, 1898–1926), while it was considerably smaller for sex offenses (+.247, 1898–1926), and so small as to be lacking in significance for other crimes against the person and for miscellaneous delinquencies.

When the poverty index was broken up into its constituent components, a second and very striking set of correlations was revealed. "Outdoor" Relief, that is relief given to families in their homes, showed a moderate degree of cor-

* Further analysis of the data for the felons showed that most of the migrants had come from rural areas or from small towns, but since comparable data could not be secured for the high school students, this fact — important as it is for the subject under discussion — cannot be adequately evaluated. This material is presented *in extenso* in *Social Forces*, Vol. IX. No. 2, December 1930.

† H. A. Phelps, "Cycles of Crime," *Journal of the American Institute of Criminal Law and Criminology* (Vol. XX, No. 1) May 1929, pp. 119–120.

relation with crimes against property (+.326) but very little with sex crimes or other crimes against the person (+.12; —.004). On the other hand, fluctuations in "Indoor" Relief, which betokens the rise and fall in the number of the "unemployed, casual labor, generally single men" in this urban area, were correlated positively with both sex crimes and other crimes against the person (+.30; +.30) but not at all with crimes against property (+.005). In connection with this last-noted point, Phelps points out that Schmid's study of homicides in Seattle during the period 1914–1924 showed that they varied directly with periods of "influx of migratory workers and . . . periods of unemployment." *

These two studies in sum reveal a correlation between crime in general and poverty in general. But they also suggest that, whereas the settled city-dweller resorts to crimes against property when he is economically distressed; the migratory worker, who drifts into the city at times of economic stress, tends towards crimes of violence.

### EUROPE

HOPLER arrives at generally similar conclusions. He finds that throughout Europe an increase in crime is associated with the sudden rise in food prices that accompanied the World War, and that crimes against property in particular were responsible for the bulk of this increase. As a matter of fact, data covering Sweden, supplied to Hopler by Heindl, indicate that crimes of violence and sex offenses *decreased* during the war period, while crimes against property increased.†

One further set of data concerning the relationship between crime and economic conditions relates to juvenile delinquency in the city of Berlin. Von Liszt has tabulated the incidence of juvenile delinquency in that city for the years 1923–1925. The results of this compilation appear in Table LIV.

* C. F. Schmid, "A Study of Homicides in Seattle, 1914–1924" in *Social Forces* (IV) 1926, pp. 745–756.

† E. Hopler and R. Heindl, "Wirtschaftslage Bildung Kriminalität" in *Archiv für Kriminologie* (Vol. LXXVI) 1924, pp. 87–88.

## TABLE LIII

FLUCTUATIONS IN CRIME IN STOCKHOLM AND IN SWEDEN, 1913, 1918, 1920 *

| *Crimes* | *Year* | | |
|---|---|---|---|
| Sweden | 1913 | 1918 | |
| Country | | | |
| All Crimes | 13,158 | 8,986 | |
| Crimes against Property | 790 | 4,143 | |
| Cities | | | |
| All Crimes | 57,525 | 25,891 | |
| Crimes against Property | 11,748 | 5,927 | |
| Stockholm | 1912 | 1918 | 1920 |
| Theft "Simple and Qualified" | 5,098 | 13,319 | 4,864 |
| Fraud | 275 | 1,164 | 458 |
| Assault | 288 | 147 | 300 |
| Offenses against Morals | 51 | 18 | 25 |

Table LIV shows a drastic decline over the three-year period, but an abrupt halting of this decline, followed by an increase during the second and third quarters of 1925. Von Liszt's comments on this sequence of phenomena are significant. The general three-year decrease in juvenile crime is coincident with the stabilization of the German mark,† and

## TABLE LIV

COMPLETED CRIMINAL CASES OF JUVENILE OFFENDERS IN BERLIN, 1923–1925 ‡

| *Year* | *Offenders* | | | | |
|---|---|---|---|---|---|
| | *Total* | *First Quarter* | *Second Quarter* | *Third Quarter* | *Fourth Quarter* |
| 1923 | 8355 | 2428 | 2215 | 2043 | 1669 |
| 1924 | 5278 | 1815 | 1465 | 1108 | 890 |
| 1925 | 2902 | 836 | 663 | 664 | 739 |

* Derived from Hopler and Heindl, Wirtschaftslage Bildung Kriminalität in *Archiv für Kriminologie* (Vol. LXXVI) 1924, pp. 87 and 111.

† The mark reached its lowest point in August 1923. The mark was stabilized in November, and the Dawes Plan was drawn up in April of the following year.

‡ From E. R. von Liszt, "Die Kriminalität der Jugendlichen in Berlin" in *Zeitschrift für die gesamte Strafrechtswissenschaft* (Vol. XLVII) 1927, p. 459.

the consequent fall in the cost of living and betterment of the total economic situation. "Theft was no longer profitable; the disposal of stolen goods became more difficult; it now required more effort and greater resolution to turn criminal." The cessation of the decline in Berlin's juvenile delinquency, on the other hand, coincided with the onset of a period of unemployment.

There is no need to descant upon the fact that the inverse correlation of crime in the city — particularly of crimes against property — with fluctuations in prosperity dovetails with the observation made in the previous chapter to the effect that poverty in the city means an absolute lack of the necessities of life. It may further be observed that, even in the absence of an absolute deficiency of the necessities of life, there may be a connection between relative poverty and crime — that is to say, the city-dweller who lacks the wherewithal to secure the goods and services (including recreation) that he considers necessary to his happiness can generally obtain them only by taking them — or the money with which to buy them.

### JUVENILE DELINQUENCY IN THE CITY

THE leader of a gang . . . took me under his wing. . . During the course of this friendship I learned all the lessons this gang could teach me in making myself a nuisance to the community. . . The result was that I lost interest in school, my grades dropped, I began to play truant, I became sullen and disrespectful at home. I preferred the approval of this gang to the approval of my parents. Then my parents moved to a suburb where I found entirely different sentiments prevailing. . . Every man in the gang which I left is now a "gun-toter"; every one has a police record, and most of them have served prison terms. *

This narrative gives point to the generalization that is suggested from the data cited in the foregoing paragraphs, that in the city juvenile delinquency often serves as an apprenticeship to adult criminalism. Healey and Bronner find this to be the case. Fifty-six per cent of the 675 juvenile offenders studied by them in the period 1909–1914 were classed by them as "failures" in 1920, most of them having definitely

* Quoted in E. H. Sutherland, *op. cit.*, pp. 155–156.

embarked upon a career of crime, or other anti-social behavior. With the boys, the percentage of such "failures" was even higher, amounting to sixty-one per cent. Glueck and Glueck found that nearly sixty per cent of their group of young offenders, who averaged only 20 years of age, had been arrested before their seventeenth birthdays, while over seventy-five per cent had been delinquent before that age.*

It is, therefore, of interest to examine into the background of juvenile crime in the city, for thereby may be revealed some, at least, of the roots of urban crime in general.

### RELATION TO POVERTY

ONE factor in urban juvenile delinquency has already been indicated — poverty, both absolute and relative. The following quotation from the *New York Times* (January 30, 1930) strikingly illustrates the relationship between economic lack and crime in the experience of at least one city youth:

> Because investigation had shown that 16-year-old G— D—'s brief career as a burglar was due to parental neglect and the need of food, Judge L— in General Sessions, suspended sentence yesterday on the boy who had pleaded guilty to unlawful entry.
>
> "It is the most concrete case of parental neglect leading to crime in my experience on the bench," declared the court after reading a report from E— J. C—, head of the Probation Bureau, that the boy had to be attended by an ambulance surgeon for starvation after his arrest when robbing a grocery at 135 West —th Street of $450 in goods early last Christmas morning. . .
>
> The boy had been roving the streets for two weeks when he and four other boys started to rob the grocery. His confederates escaped, but he was too weak to run from the policeman. Five days ago he was placed on probation in the Children's Court as a neglected minor.

### RELATION TO RESTRICTED OUTLETS FOR NON-CRIMINAL BEHAVIOR TENDENCIES

ANOTHER, and probably a more significant factor in the city youth's initial criminal experience is the fact that, on the one

* W. Healy and A. F. Bronner, *Delinquents and Criminals* (Judge Baker Foundation, Pub. No. 3), New York 1926, p. 28. See also S. S. Glueck and E. Glueck, *op. cit.*, pp. 143 and 153.

hand, the typical city provides a restricted scope for socially-approved expression of normal play tendencies, and, on the other hand, offers extensive opportunities for indulging with relative impunity in socially disapproved forms of such play tendencies, and in pathological perversions of them. In less formal terminology, city boys and girls have a hard time in finding wholesome ways to play, but it is very easy indeed for them to have a good time in ways that bring them into conflict with the law and are inimical to their own well-being.

The genesis of the criminal gang, according to Thrasher, is to be found largely in this situation.

> The fundamental fact about the gang is that it finds in the boys who become its members a fund of energy that is undirected, undisciplined, and uncontrolled by any socially desirable pattern, and it gives to that energy an opportunity for expression in the freest, the most spontaneous and elemental manner possible, and at the same time intensifies all the natural impulses by the processes of cumulative stimulation.

Thrasher lists such relatively normal behavior tendencies as the following in explaining the development of gang life: The Quest for New Experience, Movement and Change, Loafing, The Rôle of the Romantic, Imaginative Exploits, Wanderlust.*

In a non-city environment, and in an urban community which is properly equipped to provide its youth with adequate recreational activities, such interests as these can find expression with relatively little violation of the social order, but in a congested or badly-organized urban neighborhood, it is difficult to engage in any but the most anæmic of play activities without running the risk of conflict with the law. The author vividly remembers taking a group of slum boys for a hike through a Chicago park, and being roundly rebuked by an irate policeman for permitting them to " block the pathway " with a game of leap-frog!

How easy it is for a relatively innocent boyish adventure to eventuate in behavior that is classified as criminal may

* F. M. Thrasher, *The Gang* (University of Chicago Studies in Urban Sociology), Chicago 1927, p. 101 and *passim.*

be inferred from the following from the *New York World* (January 20, 1930):

Three would-be Little Americans from Yorkville went to bed at home last night fairly convinced that Rear Admiral Byrd deserves all his glory and perfectly satisfied to let him keep it from now on. If they are still of the same mind this morning their arraignment on charges of juvenile delinquency in Children's Court may result in nothing but a reprimand.

The intrepid explorers, who before last week had never ventured farther than Coney Island are William S——, 14, Thomas D——, 15, and Marvin L——, 14.

The boys, who go to the same school, decided Tuesday to discover a lost continent or two. William drew his entire capital, $5.00, from the bank and the other two managed to scrape together $1.00 each.

With tightly rolled blankets slung over their shoulders, the boys set out early Wednesday morning in the subway. They rode to the Pennsylvania Station, where they invested $3.24 in tickets for Lake Ronkonkoma, L. I.

Lake Ronkonkoma isn't exactly the South Pole, but plenty of excitement lurks in that summer resort even in the winter. The boys arrived there safely after nightfall and struck out for a place to sleep.

They found a roadhouse, shuttered up for the winter. In they crawled. The next morning they rolled out of their blankets hungry but resourceful. In the cellar they discovered half a bag of potatoes and some canned goods. They hunted assiduously through the woods for the rest of the week, but the game apparently had fled and the explorers had to live out of the cans.

It got awfully cold on Long Island Saturday night. It got so cold yesterday morning that the imaginations of the explorers froze and they became homesick.

As they trudged stiffly back to the village the boys came across a driverless truck parked in the road. Marvin's big brother is a taxi chauffeur.

"Hop in, boys," he suggested, "and we'll drive home."

Patrolman Priore of Traffic Squad E, stationed on Queensboro Bridge, noticed the tool-loaded truck with three boys squeezed into the driver's seat last evening. He halted it at First Avenue and East ——st Street, learned that the boys were not employed by the D—— Construction Company of Lake Ronkonkoma, and took them to the East 67th Street Station.

There were painful scenes enacted there when angry parents arrived.

This Tom-Sawyeresque exploit is thus seen to have ended only after its participants had been guilty of breaking-and-entering and grand larceny, not to mention truancy and driving an automobile without a license.

### RELATION TO RELATIVE EASE OF ENGAGING IN CRIME AND OF ESCAPING DETECTION

IF IT is difficult to find ways to indulge in violent physical activity and adventure such as youth naturally craves without lapsing into behavior generally considered criminal, it is easy to engage in anti-social pursuits with relative impunity. As pointed out in the previous chapter, there are well-marked areas of deterioration in every city, and — as Shaw's studies have been seen to show — it is in these areas that juvenile crime flourishes. This may be ascribed in part to the absence of any general group feeling against socially-repudiated activity in such districts (in fact, it may find positive encouragement) but also to the point noted by Thrasher that such areas often constitute veritable "city wildernesses" where something approaching the disorganization and the inaccessibility of the frontier of Jesse James and the Blue Mountain Boys exists. The water front of New York City; the labyrinth of narrow streets, warehouses, and dock-slips of London's Limehouse; the maze of railroad tracks, of vacant lots, and of indifferently-guarded factories of Chicago's southwest side — all these offer as fruitful opportunities for ambuscade, for flight, and for concealment as does the forest or the mountain fastness.

More, the very essence of city life, its crowds, its disintegrated neighborhoods, its anonymity — all these make it relatively easy for the urban offender, juvenile or adult, to commit a crime and to escape detection. "The bandit escaped in the crowd"; "The police are without a clue to the identity of the slayer"; these are commonplace *clichés* in present-day newspaper accounts of crime. In Buffalo, New York, a youthful criminal held up one after another of the neighborhood branches of a chain store company for a number of weeks, each one on a Monday morning. Eventually, a policeman was stationed in every unit of the corporation,

and the "Monday morning bandit" found it expedient to shoot (and kill) the policeman who interrupted his eleventh robbery. Following the shooting, he walked out of the store, entered his automobile and drove away. Not until a half-year later was he shot and killed, while attempting to steal an automobile.

Possibly there are other more recondite relationships between city life and delinquency. In view of the relative instability of the urban family it is interesting to observe that Glueck and Glueck find that 25 per cent of their entire group of youthful criminals come from homes broken by separation, divorce, or desertion.*

### GENERAL COMMENT ON CRIME IN THE CITY

A REVIEW of the material in this section brings out a number of salient facts. City-dwellers appear to engage in criminal activity more frequently than rural-dwellers, but to be more given to crimes against property than the latter. Immigrants and country-to-city migrants, together with their children, seem to be more criminalistically inclined than established urbanites. Crime increases during "hard times," particularly crimes against property. An increase in the number of crimes of violence, including sex-offenses, sometimes accompanies an increase in unemployment among unattached, casual laborers and in their consequent drifting citywards. Adult criminals in the city are largely recruited from the ranks of juvenile delinquents, and juvenile delinquency, in turn, is correlated with broken homes, with deteriorated intra-urban areas, and especially with the absence of adequate outlets for normal juvenile recreation together with the relative immunity with which anti-social conduct may be undertaken in the typical city. Certain interpretive generalizations are suggested by this material.

* S. S. Glueck and E. Glueck, *op. cit.*, p. 117.

### RELATION TO PECUNIARY BASIS OF URBAN ECONOMIC LIFE AND CHARACTERISTICALLY URBAN TYPES OF POVERTY

THE fact that urban crimes are so largely related to property, and that in times of economic stress property crimes are most numerous appears to be correlative to the fact that, as a result of the pecuniary basis of urban society, most of the necessities and conveniences of life are privately-owned in the city and must be purchased or stolen. If the city-dweller desires food, clothing, shelter, or transportation, recreation, or any one of a host of goods and services, he must (save when he is a recipient of largess) either pay for them or take them, or their money equivalent. And, under stress, especially at times when he has difficulty in securing money by socially-approved means, he often resorts to taking, either by direct theft, or by fraud, extortion, and similar expedients.

Moreover, such activities can be carried on with relative impunity. As already pointed out, it is easy for an individual to escape following the commission of a crime, and to avoid observation afterwards.

Finally, there is an abundance of "stealable" property in every city. Unlike that of the countryside, a large part of urban wealth is in the form of movable and disposable commodities, the most important of which is money. This fact should be emphasized, for it probably has a great deal to do with the excess of property crimes, and, by the same token, of crime in general in the urban community. The prospective thief or robber in the countryside has little in the way of spoils to attract him, save an occasional small bank, or an individual hoard of money. Only rarely, and in frontier communities is he able, by means of livestock "rustling," to engage in stealing on a profitable scale. But in the city, he has the opportunity, not merely to take any one of a number of valuable articles from stores and warehouses, freight-cars, and the like, but to secure actual money, in lots mounting up to the thousands, or negotiable securities worth tens of thousands.

When urban crime is considered from this point of view,

it appears to be related not so much to criminalistic traits in the city-dweller, as to the much greater weight of tempting inducements to criminalism, as compared with the inhabitant of the rural community.

All urban crimes are not, however, crimes against property. It has been seen that, in many cases, the rate for crimes of violence in the city outruns that for the country, although this is not universally the case. A large proportion of the crimes of violence committed in the city are, however, incidental to crimes against property, or at least to terroristic activities, with the securing of money as their objective. The author has secured information from the wardens of four state prisons (New York, Connecticut, Massachusetts, Illinois) concerning the criminals executed in those institutions during the last year in which executions took place, as to the place in which the crime was committed and the circumstances surrounding the crime. Of 20 men executed for homicide committed in a city or its periphery, 15 were engaged in robbery at the time of the homicide, were resisting arrest for crimes against property, or were quarreling with associates in such crimes. Of the other five, two were resisting arrest, for causes not stated. Of two executions for crime committed in rural areas, one was for homicide in connection with robbery. The following are typical of the records of the majority of urban homicides: "Shot and killed a policeman who came upon him while burglarizing a warehouse"; "Entered a store armed with a revolver, and shot the proprietor who refused to give him the money in the cash register." If, therefore, one were to subtract from the sum total of homicides, bombings, and assaults that occur in the city, those connected with robbery and racketeering, one would probably find that the net total of crimes of violence, properly so-called, crimes of revenge, anger, sex, etc., are not particularly numerous. In fact, it is possible that they would be found to be relatively no more numerous than such crimes in the country.

RELATION TO CULTURE-SHOCK

WHATEVER the special conditioning influences are, however, the fact remains that the city-dweller engages in crime more extensively than the inhabitant of the small town or the open country, and that at least some measure of delinquency must be accounted as being related to a predisposition towards such behavior on his part. The urban resident must be, in other words, somewhat more readily inclined to respond to inducements towards crime than the rural-dweller. One of those influences is suggested by the material that has been presented. It is that of culture-shock. Immigrants and their children, as well as country-to-city migrants have been shown to be particularly liable to criminal behavior. It may, of course, be that it is the potential criminals who migrate, but this assumption would appear to be negatived by the fact that the children of immigrants show a considerably higher degree of criminality than their parents, thereby indicating that in many cases criminally-inclined offspring are produced by law-abiding immigrant parents. The more reasonable explanation appears to be that the process of moving from a rural to an urban environment, particularly when it is superadded to immigration from one country to another, evokes a considerable degree of anti-social behavior, that is to say, criminalism.

Just how the personality stress resulting from the culture-shock involved in migration eventuates in the development of criminal trends is difficult to say. Healy makes a fruitful observation when he notes that mental conflict often results in criminal behavior, and in types of crimes that are quite remote from the forms of conflict.* It is obvious that the mental life of the migrant, as is that of his child, is replete with conflicts born of the contrasts between their traditional modes of thinking and acting and those thrust upon them by their new environment. As Burgess puts it, "Disorganization . . . of attitudes and conduct is almost invariably the

* W. Healy, *The Individual Delinquent*, Boston 1915, Part II, Chap. X. See also W. Healy and A. F. Bronner, *Judge Baker Foundation Case Studies*, Boston 1922, Study No. 1. Also E. W. Burgess, "The Growth of the City" in R. E. Park, E. W. Burgess, and R. D. McKenzie, *The City*, Chicago 1925, p. 54.

lot of the newcomer to the city, and the discarding of the habitual, and often of what has been to him the moral, is not infrequently accompanied by sharp mental conflict and sense of personal loss." In the case of the child of the migrant — more particularly of the immigrant — mental conflicts of this sort are heightened by being enmeshed in the difficulties to which the parent-child relationship gives birth. A point of view somewhat similar to this was presented to the American Sociological Society at the twenty-fifth annual meeting held in Cleveland, Ohio, in a paper read by Professor L. Wirth of the University of Chicago.

The development of mental deficiencies and abnormalities, as the result of glandular disturbances associated with the adjustment process, is stressed by Schlapp and Smith. They place particular emphasis upon the production of defective offspring by mothers — particularly by immigrant mothers — who are having difficulty in adjusting themselves to their environment.*

Sutherland calls attention to the confusion of standards confronting the migrant family, and to the difficulty it experiences in choosing modes of conduct that are in all respects acceptable to the social group in which it finds itself.†

It is the author's belief that such causative sequences as there may be between city-to-country migration, immigration, and urban criminality operate with somewhat less specificity than the foregoing interpretations indicate. Later in this work, it is shown that urban-dwellers show a relatively high degree of mental disease, as do also immigrants. When this is considered in conjunction with the further fact that mental disease, and various types of psycho-neurotic tendencies are widespread among criminals,‡ it seems reasonable to conclude that the shock of sociological acclimatization to the urban environment carries in its train a considerable

* M. G. Schlapp and E. H. Smith, *The New Criminology*, New York 1928, pp. 143–145.

† E. H. Sutherland, *op. cit.*, pp. 145–147.

‡ W. Healy, *op. cit.*, pp. 90–91. Healy finds that, out of 823 juvenile delinquents, 152 were "aberrational"; 95 had "peculiar mental characteristics"; 58 were suffering from "mental conflict"; and 16 had "defective or unsatisfied" interests, and "misuse or non-use of special abilities."

amount of personality breakdown and that criminality is one of the expressions of such breakdown.*

This generalization is seen to dovetail with the observation made in the previous chapter to the effect that it is probably the culture-shock involved in migration to the city which is at the root of much of the religious indifferentism of the modern city. In this connection it was pointed out that the Jewish people — a thoroughly city-indurated group — did not show any strongly-marked irreligious tendencies, but were, on the contrary, deeply devoted to their religious traditions. At this point it may be observed that the Jewish group appears also to manifest considerably less criminality than the population at large. Glueck and Glueck discovered that the Jews among the 500 young Massachusetts offenders studied by them were distinctly less numerous in proportion to the Jewish population of the state at large than were Roman Catholics and Protestants. They found that only 3.9 per cent of the Reformatory Group as opposed to 6.7 per cent of the general population were Jewish. Simon states that the number of Jewish children brought into the Juvenile Court of Washington, D. C., *decreased* from 31 in 1914 to 14 in 1929, while the total number of children brought into the court *increased* from 852 to 1051 in the same period.† In other words, the Jewish group, having been urbanized for a score of generations, exhibits a smaller amount of criminality than other elements in the city's population.

The crime occurring in the city may thus be interpreted as being, to some extent, one of a number of manifestations of the impact of city life upon the steady stream of recruits which the city draws from outside its borders, and upon their children — and mayhap their grandchildren.

* S. S. Glueck and E. Glueck, *op. cit.*, p. 157. Glueck and Glueck find that 30 per cent of the 500 young offenders studied by them were "psycho-neurotic or unstable"; 17.7 per cent had "psychopathic personality"; and 11.1 per cent were epileptic, suffering from major psychoses, or mentally deteriorated by alcohol or drugs.

† Quoted in *The Pathfinder*, Jan. 25, 1930.

### RELATION TO JUVENILE DEMORALIZATION

THE relative excess of crime in the urban community has, thus far, been interpreted in terms of the reactions upon the individual of city life as such. But is this interpretation adequate? Are there not to be found in the city influences that are directly inimical to orderly and honest living, and productive of those ways of life that tend towards crime? Is not the city, in other words, truly "wicked"? To this, it must be replied that certain elements in the city, *as it is now known*, appear to operate towards the development of criminal behavior among the boys and girls — and, eventually, the men and women — who are reared there. They have already been described — deteriorated and vicious areas; inadequate opportunities for individual and group play; ease of escaping and remaining undetected after initial criminal exploits. Others might be added, particularly the obvious fact that the existence of commercialized vice acts as a powerful incentive to crime, not only as offering an allurement for the expenditure of large sums of money, but also as being, with all its ramifications, an important form of criminal activity.

### POSSIBILITIES OF CORRECTION AND PREVENTION

IT MUST, however, be questioned whether all of these influences are inherently and invariably correlated with city life. It is possible that organized vice can never be completely eliminated from the city; certainly it never has been. But it may at least be asked whether an adequately-administered city could not so order its police activities, its playground and recreational program, and its city planning, as to reduce, if not eliminate, a number of the demoralizing influences surrounding the lives of many city children today. It is at least suggestive that Thrasher reports the criminal activities of Chicago's youthful gangs to be sensibly diminished in those deteriorated areas into which intelligently conducted boys' "clubs" have been introduced.* Moreover, the findings of Shaw establish the existence of certain urban

* F. M. Thrasher, *op. cit.*, p. 520.

residential districts in which juvenile crime is virtually non-existent. It does not seem unreasonable, therefore, to assume that enlightened administration may succeed in bringing it about that every city youth may be reared in an environment relatively free from crime-inducing influences. The *maladministration* of the city, in fine, rather than city life itself, would appear to be the underlying factor in many of the elements making for juvenile delinquency in the modern urban community.

In conclusion, it should be pointed out that this section makes no pretense of presenting a complete account of the etiology of crime in general. It seeks only to single out those influences tending to differentiate urban crime from other forms of criminal behavior.

## ORGANIZED VICE

"THERE is no valid reason to think that morally the rural population is better than the urban population." * This quotation from Sorokin and Zimmerman runs directly counter to the widely-held myth of the "wickedness" of the city, yet there are few careful observers who will not subscribe to it.

### "IMMORALITY" VERSUS COMMERCIALLY-ORGANIZED VICE

THE only available objective measure of "immorality" is the number of births of illegitimate children. For obvious reasons, however, this is highly unreliable as an indication of comparative degrees of sexual delinquency. The illegitimacy rate is influenced by the extent to which contraception, abortion, and infanticide are practiced; by the completeness and accuracy of birth registration, and by familial *mores* — all of these factors being independent of "immorality" as generally understood. Moreover, as Thompson observes, none of the existing statistics take into account the presence in city populations of a disproportionately large number of young men and women.†

* P. A. Sorokin and C. C. Zimmerman, *Principles of Urban Sociology*, New York 1929, p. 401.

† J. G. Thompson, *Urbanization*, New York 1927, p. 486.

Without regard to these considerations, the data relating to illegitimacy are inconclusive. It is true that the majority of those countries which provide data covering illegitimacy show a higher rate for their urban than for their rural sections. But on the other hand, in two of the most highly-urbanized countries on earth, Great Britain and Germany, the opposite is the case.* Again, many urbanized countries, such as England and Wales, have a distinctly lower rate than relatively nonurban countries, such as Finland (43 and 89 per 1000 live births respectively in 1921–1925). Certain countries, furthermore, which have been undergoing urbanization at a rapid rate during the past half-century exhibit a declining illegitimacy rate. Table LV makes these facts clear.

TABLE LV

ILLEGITIMATE BIRTHS PER THOUSAND LIVE BIRTHS IN VARIOUS COUNTRIES, 1881–1885 AND 1921–1925 †

| *Country* | *Illegitimacy Rate* | |
|---|---|---|
| | 1881–1885 | 1921–1925 |
| Sweden | 102 | 145 |
| Germany | 92 | 110 |
| Denmark | 100 | 106 |
| France | 78 | 90 |
| Finland | 70 | 89 |
| Scotland | 83 | 68 |
| Norway | 81 | 66 |
| Italy | 76 | 47 |
| Australia | 39 | 47 |
| New Zealand | 29 | 45 |
| England and Wales | 48 | 43 |
| Netherlands | 30 | 19 |

* The rural rate is higher than the city rate also in the United States, but the situation in this country is obscured by the fact that the Negro population, which exhibits a very high rate, is predominantly rural. P. A. Sorokin and C. C. Zimmerman, *op. cit.*, pp. 338–339. For England see S. de Jastrzebski, "Illegitimacy" in 14th Ed., *Encyclopedia Britannica*, Vol. 12, pp. 84 85. For Germany see A. Schreiber, quoted in *Social Hygiene* (Vol. XII) 1926, p. 552.

† From S. de Jastrzebski, "Illegitimacy" in *Encyclopedia Britannica*, 14th Ed., Vol. 12, p. 84.

Obviously, it cannot be said that there is any necessary correlation between urbanization and illegitimacy. Much less can it be said that socially-unsanctioned sexual behavior is more prevalent in one type of community than the other. The records of social case-workers abound with accounts of widespread sexual license in rural districts. For instance, Healy and Bronner tell of "a village in central Massachusetts" where "most of the high school girls and the girls in the junior high school are immoral" and where "some of them [are] evidently quite promiscuously immoral." *

Sutherland quotes the following report of the Illinois Department of Public Welfare concerning a rural county in that state:

> It was found that many 16- and 17-year old girls had become professional prostitutes. . . Every night boys and girls in most of the towns loafed in front of motion-picture theaters, smoking, swearing, scrambling for half-smoked cigarette ends. . . In some towns, the authorities stated that it was impossible to keep obscene writing rubbed off the walls of the schools. . . In two towns there were epidemics of venereal disease in the schools.

It is probable that these conditions are exceptional, but there is no reason to believe that they are any more so than are similar situations in the city, particularly when allowance is made for the relatively large number of young persons and adults at the height of their physical vigor to be found in the city. In the words of Thompson, "The city kettle may be as black as it has been painted. But the rural pot is much too nearly the same hue to justify any invidious comparisons in its favor." †

### COMMERCIALIZED VICE

WHATEVER the situation may be concerning the relative frequency in city and country of irregular sex behavior *in general,* there appears to be little doubt that commercialized vice is a distinctly urban phenomenon. Prostitution is not unknown in the countryside, as the foregoing quotation from Sutherland suggests. There is also some evidence that pros-

* W. Healy and A. F. Bronner, *Judge Baker Foundation Case Studies,* Boston 1922, Case Study No. 5.

† J. G. Thompson, *op. cit.,* p. 490.

titutes frequented the highways and the small towns along them in Old Testament times. [Genesis XXXVIII: 14 and Ezekiel XVI: 25.]

On the whole, however, prostitution appears to occur principally in the city, and this statement applies as truly to the ancient as to the modern city. The Deuteronomaic code [Deuteronomy XXIII: 17–18] in the Old Testament inveighs against the utilization of "the daughters of Israel" for such purposes. The Book of Proverbs [VII:6–27] contains an account of the activities of a clandestine courtesan, "now in the streets, now in the broad places, now . . . at every corner," which might have been culled from the notebook of a present-day vice investigator. Apparently, an international "white slave traffic" existed at this early date. Every history of prostitution confines itself almost exclusively to accounts of organized vice in the city, as does modern social hygiene literature.*

### EXTENT OF COMMERCIALLY-ORGANIZED VICE IN THE CITY

THE extent of commercialized vice in the present-day city may be inferred from such figures as the following: In Paris, despite the official recognition of commercialized vice, in 1924 an average of 200 women were arrested every day for violation of the police and sanitary regulations.† There were, in 1927, 2100 registered prostitutes in this city, and 6000 in Berlin, and the League of Nations' Experts on the Traffic in Women and Children estimate that these numbers represent only one-third of the total for each city.‡ Michels goes so far as to say that in Paris the clandestine and "controlled" or registered prostitutes are in the proportion of ten or twenty to one.§

* *Inter alia*, see P. Dufour, [pseudonym for Lacroix, P.], *Histoire de la Prostitution*, Paris 1851; A. Flexner, *Prostitution in Europe* (Bureau of Social Hygiene Publications), New York 1914; H. B. Woolston, *Prostitution in the United States* (Bureau of Social Hygiene Publications), New York 1921.

† C. Owings, "The Morals Bureau of Paris" in *Social Hygiene* (Vol. X) 1924, p. 144.

‡ Report of the Special Body of Experts on Traffic in Women and Children, Geneva 1927, quoted by A. Shadwell, "Prostitution" in 14th Ed. of the *Encyclopedia Britannica*, Vol. 18.

§ R. Michels, "Altes und Neues zum Problem der Moralstatistik" in *Archiv für Sozialwissenschaft und Sozialpolitik* (Vol. LVII) 1927, pp. 714–715.

Moreover, in the modern city at least, commercialized vice occurs not only on a wide scale, but often appears as an organized form of business enterprise. "Prostitution in this city," reported the Chicago Vice Commission in the "wide-open" days of 1911, "is a commercialized business of large proportions with tremendous profits of more than $15,000,000 per year." Similar reports come from other cities. Thus Hichborn states that in San Francisco in the period preceding the reform movement of the second decade of the present century, assignation houses representing an investment of $400,000 apiece were "not unknown." * Further than this, the fact that commercialized vice is an extensive and profitable business, conducted on a considerable scale is testified to by the drafting of two international conventions (1904; 1910) on the traffic in women and children, and by the setting-up of a Special Advisory Committee (1923) of the League of Nations, for dealing with this traffic.

It is unlikely that an equal degree of commercial integration was to be found in this field in the medieval and the ancient city, since large-scale business enterprise is, by and large, a modern development. Nevertheless, something of the sort has probably been a feature of city life for a very long time. The Old Testament contains injunctions against the presentations in the Temple of "the hire of a harlot," [Deuteronomy XXII:18] and the oriental city, whose economic and social activities are relatively untouched by modern ways of life, still contains extensive and elaborate institutions devoted to vice. In Peking, according to Gamble, the traffic is so highly organized that the business of recruiting is a recognized occupation. The same is true in Japan, where the women and their employers enter into a formal contract that is recognized by the police.

In 1918 a large number of buildings especially designed for houses of prostitution were erected by the Board of Police directly east of the New World [Amusement Park]. . . However, the proprietors of the houses objected to moving, being very well

* F. Hichborn, "The Anti-Vice Movement in California, I, Suppression," in *Social Hygiene* (Vol. VI) 1920, pp. 214–215.

satisfied with their present location close to the business and hotel districts, and their influence was so strong, many of the officials having a financial interest in the houses, that the police had to abandon their scheme and rent their houses for commercial purposes.*

In 1911, the taxation collected in the city of Peking from brothels and prostitutes amounted to $10,967.00 per month.

It is clear that commercialized vice is characteristic of city life; that it is extensive, and that, in the modern city, and probably also in the ancient and medieval city, it has been organized as a business enterprise. Why? A review of certain of the material that has appeared earlier in this work provides the background for the answers to this query. They are chiefly four: (1) the presence in the city of a large proportion of visitors and of young adults and (2) of individuals who are unmarried or whose family life is less close-knit than in rural areas; (3) the relatively large number of mentally unstable individuals in the city; (4) the pecuniary basis of city life and of the organization of leisure activities; and (5) the mobility and anonymity of city life.

### FACTORS FAVORING THE COMMERCIALIZATION OF VICE IN THE CITY: YOUNG ADULTS

THE accounts of sexual irregularity in rural communities that have appeared earlier in this chapter relate chiefly to more or less spontaneous relations between young adolescents. In the city, on the other hand, the population structure is such that there are relatively few adolescents, but instead, there is a large proportion of young adults.

### THE PRESENCE OF VISITORS AND OF INDIVIDUALS WHO ARE UNMARRIED OR LOOSELY ATTACHED TO THEIR FAMILIES

MOREOVER, many of them, as already seen, are unmarried and living in lodging-houses, hotels, and the like. If married, or members of families, their family life is less cohesive and less exclusive than would be the case outside of the city.

* S. D. Gamble and J. S. Burgess, *Peking: A Social Survey*, New York 1921, pp. 246–249; E. C. Hennigar, "The Fight Against Licensed Prostitution in Japan" in *Social Hygiene* (Vol. XII) 1926, pp. 533–534.

Most cities, moreover, contain a large number of men who are temporarily absent from home and therefore cut off from the normal sexuality of married life.

There are, then, in the urban community a relatively large number of young and early middle-aged men, who because of the absence of family life, or the tenuousness of such family ties as they have, or their temporary residence in the city, are potentially seekers after socially-disapproved sex experience. Very likely many of them do not actually seek such experience, but those who do probably constitute the bulk of the demand for commercialized vice.

### THE PRESENCE OF PERSONALLY-DISINTEGRATED INDIVIDUALS

IT IS possible that an additional factor in the demand for the type of sex relations provided by prostitution springs from the more or less extensive personality disorganization which appears to be experienced by certain migrants to the city and their offspring. It is a commonplace of the literature of psychiatry that sexual maladjustment often accompanies mental disturbance. Indeed, the distortion or the exaggeration of the sex impulse is often one of the most prominent features in the psycho-neurotic clinical picture. To the extent that city-dwellers are affected by such conditions they would naturally swell the number of the prostitute's potential patrons.

### THE PECUNIARY BASIS OF URBAN ECONOMIC LIFE — THE COMMERCIALIZATION OF PLEASURE

WHY is this demand met through commercial channels? In the previous chapter, it was shown that city life is pecuniarily organized: any commodity that is desired must be purchased — or provided at community expense. In ancient times, prostitution was, in fact, occasionally publicly purveyed in connection with religious rites, as in the Temple of Venus at Corinth. The existing state of public opinion, however, forces the institution back upon the other alternative, that of individual purchase. Limitation of space and specialization of function encourage the commercial exploitation of this socially-reprehended but none-the-less wide-

spread form of interest. An additional factor of incidental but of more than minor significance is the requirement of privacy, which in the city, involves the renting of rooms, often in buildings specially set aside for such purposes.

### THE MOBILITY AND ANONYMITY OF CITY LIFE

STILL another reason why sex relations of this sort are consummated *via* the cash-nexus, why they are not entered into spontaneously, as they appear to be in rural societies is that the anonymity of city life leaves the seeker after irregular sex experience little other resource. Informal sex unions on a basis of mutual agreement, partaking little, if at all, of the nature of a commercial transaction there are in abundance in the city. Many of these unions must, moreover, be classed as informal or transient families. But there are many individuals who, because of the relative recency of their arrival in the city, their mobility, or their occupational limitations, are unable to achieve sufficiently-intimate acquaintanceships to make such relations possible. To this number, moreover, must be added the very large group of men who desire only casual and occasional sex-contacts. For such as these some definite and recognized market, comparable to that by means of which any commodity is purveyed, is clearly indicated. Commercialized vice offers such a market.

### THE QUESTION OF SUPPRESSION

IN THE light of this discussion, the question is immediately raised as to the practicability of the policy of suppression of commercialized vice, such as is common in the United States, and in some European countries. The answer is that, unless the fundamental character of city life and of human bio-psychology is radically altered, there probably will always be found a considerable degree of commercialized vice in any urban community. A policy of suppression, if honestly and intelligently administered, may minimize this traffic and may prevent its assuming the prominence that it has in "unregulated" cities. Nevertheless, it can never completely extirpate prostitution. This is not to say that such efforts are misguided. The minimization of

commercialized vice is a highly salutary form of public prophylaxis. The fact that the average prostitute is infected with venereal disease in a contagious form is only one of the most obvious justifications for such a policy. Table LVI serves to show how close the relation is between the institution of prostitution and the incidence of venereal disease.

TABLE LVI

INCIDENCE OF SYPHILIS AMONG RECRUITS IN ENGLISH ARMY AND GOVERNMENT CONTROL OF PROSTITUTION *

| *Year* | *Rejections per* 1000 *for Syphilis* | |
|---|---|---|
| 1866 | *Slight Regulation* | 16.5 |
| 1869 | *"Regulation" at its Height* | 16.4 |
| 1870 | | 15.8 |
| 1882 | *"Regulation" Suspended* | 10.7 |
| 1883 | | 9.8 |
| 1885 | *Abolition* | 9.7 |
| 1886 | | 8.2 |
| 1896 | | 3.7 |
| 1906 | | 2.7 |

* Quoted from *Army Medical Reports* by A. Flexner, *Prostitution in Europe*, The Century Company, New York 1914, pp. 372–373 footnote. By permission.

## *BIBLIOGRAPHICAL NOTES*

CRIME: P. A. Sorokin and C. C. Zimmerman, *Principles of Urban Sociology*, New York 1929, contains a careful analysis of the pathology of city life. See especially Chapter XVI. See also E. H. Sutherland, *Criminology* (Lippincott Sociological Series), Philadelphia 1924; S. S. Glueck and E. Glueck, *Five Hundred Criminal Careers* (American Trials) New York 1930; F. M. Thrasher, *The Gang* (University of Chicago Study in Urban Sociology), Chicago 1927; W. Healy, *The Individual Delinquent*, Boston 1915.

VICE: A Flexner, *Prostitution in Europe* (Bureau of Social Hygiene Publications), New York 1914; H. M. Woolston, *Prostitution in the United States* (Bureau of Social Hygiene Publications), New York 1921; W. I. Thomas, *The Unadjusted Girl* (Criminal Science Monographs, No. 4), Boston 1923.

# CHAPTER X

## *THE DEBIT SIDE OF CITY LIFE* (Concluded) — *MENTAL DEFICIENCY — MENTAL DISEASE — SUICIDE*

### MENTAL DEFICIENCY AND MENTAL DISEASE

THE SITUATION concerning the insane and the mentally deficient in the city can be described in a sentence. Mental disease or insanity is more common than in the country; mental deficiency, or feeble-mindedness, is less so.

#### MENTAL DEFICIENCY

THE most recently assembled data relating to the incidence of mental deficiency come from England, and are based on an examination of school children aged 7 to 14 years. Since children of these ages are not generally institutionalized, except in cases of extreme defectiveness, the data are not, in the opinion of the experts making the study, influenced by the differences in the rate of institutionalization between country and city. In other words, the figures as they appear in Table LVII may be taken as typical of the actual territorial distribution of mental defect in England.

Sorokin and Zimmerman * show that a similar situation exists in other countries, although in few of them have such clear-cut data been gathered as in England. These authors also point out that the official data for the United States are not amenable to interpretive use because they relate only to institutionalization. As the author of this book has shown elsewhere, there is such a wide diversity over the

* P. A. Sorokin and C. C. Zimmerman, *Principles of Urban Sociology*, New York 1929, Chap. XII.

## TABLE LVII

INCIDENCE OF MENTAL DEFICIENCY PER 1000 AMONG SCHOOL CHILDREN 7–14 YEARS OF AGE IN CERTAIN ENGLISH URBAN AND RURAL AREAS *

| *Community* | *Mentally Deficient Children per 1000 School Children 7–14 Years of Age* | | | |
|---|---|---|---|---|
| | *Feeble-Minded* † | *Imbeciles* | *Idiots* | *Total* |
| Urban | 18.21 | 3.49 | 0.90 | 22.60 |
| Rural | 34.92 | 5.55 | 1.56 | 42.03 |

United States in the degree to which institutional care is provided for the feebleminded, that data based on institutional population alone are of very little use for comparative purposes. The data are particularly unsuited for a comparison of urban and rural communities, for it is the rural states — more especially the southern states — that provide little if any institutional care for this type of defective.‡

The opposite situation obtains in respect to *mental disease* as indicated by a large body of data, of which Table LVIII is typical.

## TABLE LVIII

FIRST ADMISSIONS PER ONE HUNDRED THOUSAND POPULATION TO NEW YORK STATE HOSPITALS FOR MENTAL DISEASES FOR THE YEAR ENDING JUNE 30, 1928, ACCORDING TO URBAN OR RURAL RESIDENCE OF PATIENTS §

| *Residence of Patient* | *Total Admissions* | *Types of Mental Disease* | | | | | |
|---|---|---|---|---|---|---|---|
| | | *Senile and Cerebral Arterio-sclerosis* | *General Paralysis* | *Alcoholic* | *Dementia Præcox* | *Manic-Depressive* | *Other* |
| Urban | 78.1 | 16.8 | 9.0 | 4.8 | 21.8 | 10.7 | 15.0 |
| Rural | 49.1 | 14.0 | 2.1 | 2.1 | 9.8 | 7.6 | 13.5 |

* Report of the Mental Deficiency Committee, London 1929, p. 186.

† Equivalent to *Moron* in American terminology.

‡ N. Carpenter, "Feeble-Minded and Pauper Negroes in Public Institutions" in *The Annals of the American Academy*, Nov. 1928, pp. 65–77.

§ Computed from H. M. Pollock, *Annual Statistical Review of Patients in the State Hospitals and Private Institutions for Mental Disease for the Year Ended June 30, 1928*, Albany 1929, pp. 174 and 237.

It is significant that, of the five major types of mental diseases, every one shows a distinctly higher incidence among city-dwellers than rural-dwellers. This result is particularly remarkable when it is remembered that senility and its associated condition, cerebral arteriosclerosis, is a distinct characteristic of elderly people, who are more numerous in the country than in the city.

Sorokin and Zimmerman and Anderson and Lindeman present extensive data, showing that throughout the United States, as well as in other countries, the city shows excess of mental disease as compared with the country.*

### COMMENT ON THE EXCESS OF MENTAL DEFICIENCY IN RURAL COMMUNITIES AS COMPARED WITH URBAN COMMUNITIES

A POSSIBLE interpretation of the greater prevalency of mental deficiency in the country is that in the process of urban-rural migration the less competent individuals are attracted to the country, or left behind there while their abler neighbors move cityward.

#### ECONOMIC OPPORTUNITY

TREDGOLD finds support for this assumption in the greater ease with which the higher grades of feebleminded, that is to say, the "moron" and the "borderline" types obtain remunerative employment in the rural than in the urban community. In the Manchester area, he found less than one-fourth of those who had been discharged from institutions to be "usefully employed," whereas, in rural districts the number rose to two-thirds. Since one of the earmarks of mentally deficient individuals is "the inability to compete on equal terms with normally-minded people and to manage their affairs with normal prudence," † it is obvious that such individuals will, generally speaking, find it easier to get along in the country than elsewhere. Not only is agricultural labor more routinized as well as less subject to alteration in method than city labor — particularly industrial labor —

* See P. A. Sorokin and C. C. Zimmerman, *loc. cit.* and N. Anderson and E. C. Lindeman, *Urban Sociology*, New York 1928, Chap. XV.

† A. F. Tredgold, *Mental Deficiency* (3rd Ed.), London 1920, p. 476. See also E. S. Conklin, *Principles of Abnormal Psychology*, New York 1927, p. 390.

but, as Tredgold shows, competition is less keen. As repeatedly pointed out earlier in this work, the city is more pecuniarily organized than the country. Hence, in the stress of the competition born out of every city-dweller's need of money income and of income-yielding employment, the non-efficient is more ruthlessly pushed to the wall in the city than in the country.

Again the mentally deficient individual makes a better economic and social adjustment when he is looked after by someone who is continuously and disinterestedly concerned in his welfare. Obviously such a rôle is best filled by a member of his immediate family. For example, out of 250 mentally deficient males who had made tolerably successful social adjustments after discharge from the Waverley, Massachusetts, School for the Feebleminded, only 28 were "earning a living without supervision" and, of these 28, many were being "looked after" by their wives or employers. Out of the remainder, 86 were "working for wages, supervised at home"; 77 were "working at home, no wages"; and 59 were "living at home, unable to work." * The greater stability and cohesiveness of the rural as compared with the urban family probably contribute in no little measure to the mentally defective rural-dweller's easier adjustment. In other words, he is more likely to find relatives who will look after him, find him employment, handle his money, protect him from exploitation, and keep him out of mischief, than if he were in the city.

Parenthetically, it may be observed that the growing mechanization and industrialization of agriculture may considerably alter this situation. The more nearly farming becomes a capitalized industry, operated in large-scale units, as an impersonal business enterprise, the less will be the advantages in the way of economic adjustment which the countryside offers to the mentally defective individual.

* Quoted in S. P. Davies, *The Social Control of the Feeble-Minded*, New York 1923, pp. 93–95.

NEUROPATHIC INHERITANCE

THIS is not, however, the whole story. The data presented for the low age-groups in Table LVII shows that in only a limited degree can the excess of mental deficiency in the country be assigned to selective migration. Relatively more deficient individuals apparently *are born* in the country than in the city. Tredgold accounts for this as the result of "a lessened neuropathic heredity in the town-dwellers." * That is to say, he believes that the types of individuals who are likely to produce defective offspring appear, on the whole, less frequently among urbanites than among country-folk. To the extent that such individuals are themselves mentally deficient, it accords well enough to what has been said in the preceding paragraph. For, if defective individuals do not succeed in the city so easily as in the country, they would (either by death, institutionalization, or migration) assume a less prominent rôle as progenitors of potentially defective offspring. In other words, fewer of the defectives already in the city would survive, and consequently fewer would be born there.

Moreover, there is at least one piece of evidence which suggests that the rural districts, or rather the more remote and inaccessible rural sections, produce those types of mental deficiency which can definitely be interpreted as hereditary. This evidence comes from Potter's report on the inmates of Letchworth Village.†

On the other hand, Schlapp and Smith ‡ believe that such mental deficiency as is a result of glandular disturbances in the mother prior to parturition is more common in the city than elsewhere. They also ascribe a substantial proportion of urban mental disease to this same causation. Their belief is that there are disintegrating elements in city life which physically and emotionally disturb the expectant mother in the city to such an extent that her glandular balance is seriously disturbed and her offspring rendered either

* A. F. Tredgold, *op. cit.*, p. 66.
† Quoted in S. P. Davies, *op. cit.*, p. 79.
‡ M. G. Schlapp and E. H. Smith, *op. cit.*, pp. 143–144.

mentally unstable or mentally deficient. Such an influence, however, does not appear to be sufficient to offset those other influences which operate towards the production of feeble-minded individuals in the country.

### MENTAL DISEASE

THE relative excess of mental disease in the city is no less clearly marked than is the excess of mental deficiency in the rural community, and it seems easier to explain. At various points in this, and earlier chapters, it has been shown that the city acts as a disturbing influence upon those who are unused to it, and that this shock-effect is extended at least to the second generation of migrants in the city. This being the case, it is to be expected that a certain proportion of those who find their wishes thwarted, their habit patterns disrupted, and their idea-systems shattered by the city would suffer personality disintegration. Criminality, religious indifferentism, sex irregularity have all been interpreted as partial and masked expressions of such processes. Mental disease — particularly, mental disease that has progressed to the point of frank psychosis — would represent an advanced and overt stage of the same process.

### MIGRATION

EARLIER in this work, it has been indicated that urban migrants and their children — most especially immigrants from foreign countries and their children — show a relative excess of criminal behavior. Immigrants also exhibit a high rate of mental disease. Pollock and Malzberg show that the foreign-born in New York State have a distinctly higher "rate of expectancy" of entering an institution for mental diseases than do the native-born. Their data are, moreover, corrected both for sex and age. Table LIX is an excerpt from one of their tabulations.

In commenting on the great increase of mental disease among foreign-born women for the later age groups, the authors call attention to "the difficulty that the older foreign-

TABLE LIX

FIRST ADMISSIONS, PER 100,000 GENERAL POPULATION, TO HOSPITALS FOR MENTAL DISEASES IN NEW YORK, 1911–1921 INCLUSIVE *

| Age | *Admissions per* 100,000 *of General Population* | | | |
|---|---|---|---|---|
| | *Native-Born* | | *Foreign-Born* | |
| | *Male* | *Female* | *Male* | *Female* |
| 15 | 29.2 | 18.2 | 86.1 | 51.7 |
| 20 | 68.4 | 42.2 | 131.8 | 71.3 |
| 25 | 83.4 | 61.9 | 129.2 | 94.1 |
| 30 | 91.4 | 76.9 | 123.4 | 106.8 |
| 35 | 98.1 | 85.1 | 124.0 | 107.5 |
| 40 | 102.1 | 92.5 | 123.4 | 108.5 |
| 45 | 96.7 | 94.3 | 114.2 | 117.1 |
| 50 | 94.0 | 95.7 | 108.9 | 122.0 |
| 55 | 101.2 | 98.2 | 116.0 | 119.9 |
| 60 | 117.1 | 101.2 | 131.8 | 124.8 |

born female finds in adjusting herself to different patterns of culture and behavior." †

It is clear that the process of adjustment constitutes a personality shock which is more than many immigrants can stand. Their new environment is, in most instances, an urbanized one as contrasted with the rural environment from which most immigrants to America come. The heavy incidence of mental disease among the foreign-born inhabitants of this country, then, may be interpreted as correlated with (1) general culture-shock and (2) the special sort of culture-shock involved in initial acquaintance with the city and its ways of life.

Although no evidence bearing directly on the relation between country-to-city migration and mental disease is available, it seems probable that such a relationship exists. The transition from country to city is, in many respects, an experience scarcely less trying than that involved in emigration to a new country. If the contrast in cultures is not

* From H. M. Pollock and B. Malzberg, "Expectation of Mental Disease," in *Mental Hygiene* (Vol. XIII) 1929, p. 138.

† H. M. Pollock and B. Malzberg, *op. cit.*, pp. 132–163.

so great, the degree of adaptation that takes place is much greater, for the immigrant can retain many of his Old World folkways relatively unmodified behind the sheltering barriers erected by the segregated ethnic colony in which he settles. On the other hand, the native-born country-to-city migrant must needs plunge into the full tide of urban life and swim with it. It seems reasonable, therefore, to assume that, just as the immigrant from abroad goes to pieces under the stream of cultural acclimatization to this country, and especially to its cities, so does the country-to-city migrant break down under the strain of a similar adjustment process.

It would be difficult to present a complete catalog of the way in which the contrast between urban and rural ways of life might serve to thwart and confuse the country-born city-dweller. Cavan in discussing suicide, which may be regarded as being, by and large, related to personality disorganization, gives an excellent brief statement of the contrast between city and country as it affects the individual:

> Rural areas . . . have settled ways of living, established moral codes, a narrow range of interests, but fairly adequate ways of caring for the interests they have. There are few newcomers, few transients, only a small degree of mobility, and consequently little disturbance to the rigid social control of the family, neighborhood, and institutions. People do not commit suicide without a cause, and in the rural areas there is less of the disturbance to accustomed way of living, which constitutes a major cause of personal disorganization in urban centers.*

Cavan also points out that suicides tend to increase in periods of social change, when the "break-up of stable customs and institutions makes it difficult for people to obtain satisfactory adjustments." Such periods of increased suicide were the Renaissance, the decline of the Greek city, and the decline and fall of Rome.

It is to be noted that Cavan lays special stress upon the factor of change from accustomed ways of life, a factor which — as far as city life is concerned — would be of greatest significance to the migrant to the city, and, in a lesser degree to

* R. S. Cavan, *Suicide*, Chicago 1928, p. 54. Reprinted by permission of the University of Chicago Press. See *op. cit.*, p. 329 for citation in following paragraph.

his offspring. Simmel * emphasizes the same sort of differentiation, calling attention to the contrast between the "accustomed regularity" of country life and "the swift concatenation of shifting images" of city life.

In this connection, it may be remarked that the war neuroses (commonly called *shell-shock*), seem to be somewhat analogous to the type of shock-effect involved in the transition from a rural to an urban environment. The change was more complete, and the new environment was infinitely more trying. Nevertheless, the general process of sudden change from relative certainty and security to a life of intense mobility, insecurity, and stress would seem to be essentially similar. Certain of those who gave way would probably have done so in any circumstances, but in a large number of cases it seems that no breakdown would have occurred if the individuals affected had been able to continue in their accustomed round of activities. Moreover, it is noteworthy that, according to Conklin, an essential feature of the war neurosis is the contrast between the mental patterns of the sufferer's previous way of living and his present situation: "The man is left with only his old reactions, totally unsuited to the demands made upon him." †

May this shock-effect be continued for more than the migrant generation? Schlapp and Smith believe that it can be continued at least into the second generation, through embryonic and fœtal injuries following upon maternal glandular disturbances. And where ideational conflicts are involved, as in contrasting notions of parental authority, familial solidarity, sexual behavior, religious belief, and the like, such personality-disintegrating influences might be continued for two or three generations, before there would take place what might be termed complete psychic urbanization.

### LONG-RUN EFFECTS OF CITY LIFE ON PERSONALITY ADJUSTMENT

And here a further question may be asked: Can complete psychic urbanization ever take place? Is not the urban en-

* G. Simmel, "Die Groszstädte und das Geistesleben" in Bücher *et al.*: *Die Groszstadt*, Dresden 1903, p. 188.

† E. S. Conklin, *op. cit.*, p. 166.

vironment so full of thwartings and blockings of normal impulses; so charged with new and intense stimuli; so phantasmagorically unstable, as to be a continuing source of mental strain and — for those of less sturdy personality structure — of mental breakdown? No categorical answer can be given to such a question. On the one hand, there is no agreement among psychologists as to the nature of the human individual's instinctive drives or as to the kind and degree of satisfaction that they require. Neither is there any agreement as to the extent to which the human individual may, after two or three generations of exposure, adapt himself to urban conditions.

### OVER-STIMULATION

LAIRD, for example, finds clear-cut evidence of deleterious psycho-physical reactions of urban noises upon the individual, but inclines to the belief that, after a lapse of some generations, a sort of acclimatization might take place, after which he would become relatively immune to noises.*

### INSECURITY

TO THE extent that Thomas's assumption is correct that the desire for security represents a fundamental human wish,† it might be held that city life involves a continuous assault upon the personality. For the lower economic strata, there is the recurrent risk of deprivation of the elementary requirements of existence. Insecurity is a threat no less real, moreover, to the members of the comfortable and well-to-do classes. The changes and chances of the city's economic life can seriously impair the fortunes of the wealthiest, even if he be not actually brought down into penury. Again the constant shifting in social and economic class levels, together with the ease with which any given individual may rise (or fall) from one class to another, brings about an intense degree of what Sorokin and Zimmerman denominate as vertical mobility,‡ and a corresponding degree of insecurity.

* D. A. Laird, "Noise" in *Scientific American* (Vol. CXXXIX) 1928, pp. 508–510.

† W. I. Thomas, *The Unadjusted Girl* (Criminal Science Monographs, No. 4), Boston 1923, Chap. I.

‡ P. A. Sorokin and C. C. Zimmerman, *op. cit.*, pp. 37–44 and 279–280.

Again, Plant states that the relative instability of family life in the city is also indicative of insecurity, and — as Groves and Ogburn demonstrate — is definitely correlated with mental disease.* Possibly, however, long induration to city life, extending over a number of generations, builds up a sort of habituation to insecurity.

### "DEGENERACY" VERSUS INDURATION TO CITY LIFE

WHETHER or not this supposition is sound, it is probable that a certain degree of psychic urbanization takes place, after two or more generations in respect to at least some of the personality-disturbing elements in city life. If this is true, then the generalization previously put forward would still hold true, namely that it is probably the migrant to the city and his immediate successors who bear the brunt of the shock of city life upon the individual personality, and contribute the bulk of the mental disease attributable to such an influence.

There remains to be considered the question as to whether urban populations tend to be "degenerate" to such a degree that they undermine the whole structure of city life. This topic is discussed at length in Chapter XIII and must accordingly be passed over here. At this point it may only be said that at present certain portions of the world appear to be undergoing a more intensive degree of urbanization than any society has ever known. If urbanization were likely to bring about such widespread "degeneracy" as to weaken the structure of city life, it would seem that this process would already be well under way in these highly-urbanized societies. As a matter of fact, no such catastrophe is apparent. While crime, vice, mental disease, and the like are widespread in these societies, nevertheless the vast majority of their inhabitants appear to be sufficiently law-abiding and well-balanced to permit these societies to expand and prosper.

The author is personally inclined to answer affirmatively

* E. R. Groves and W. F. Ogburn, *American Marriage and Family Relationships* (American Social Science Series), New York 1928, pp. 145–148; and J. S. Plant, "Sociological Factors Challenging the Practice of Psychiatry in a Metropolitan District" in *American Journal of Psychiatry* (Vol. VIII) 1929, pp. 706–710.

the question propounded by his colleague, Professor D. B. Leary, as follows: "Shall we then come to the conclusion that we are all potentially psychotic and that most of us are saved from becoming definitely so only through the chances and vicissitudes of the particular environment vouchsafed us?" *

## SUICIDE

In an earlier chapter data were presented pointing to the existence of a suicide rate distinctly higher in the urban than in the non-urban community. Of the mass of additional material to the same purpose which might be presented, one tabulation is of particular interest. It comes from Germany and is reproduced in Table LX. The table shows that suicide appears to be only partially correlated with the degree of urbanization.

### TABLE LX

Suicide Rate per 100,000 and Degree of Urbanization, in Germany, 1926 †

| *Size of Community* | *Suicides per* 100,000 *Inhabitants* |
|---|---|
| 100,000 and over | 31 |
| 50,000–100,000 | 23 |
| 30,000–50,000 | 23 |
| 15,000–30,000 | 23 |

### PARTIAL CORRELATION WITH URBANISM

In other words, a high suicide rate is a concomitant of city life in general, but, unlike most truly urban phenomena — such, for example, as the incidence of mortality — it does not appear to increase regularly with the size of the city. Cavan cites American figures which establish an even greater degree of disparity between degree of urbanization and suicide, while Hiranuma ‡ shows that, taking various countries,

* D. B. Leary, *Modern Psychology, Normal and Abnormal*, Philadelphia 1928, p. 237.

† From Deutsches Statistisches Reichsamt, *Wissenschaft und Statistik* (Vol. VII) 1928, p. 330.

‡ K. Hiranuma, "Der Selbstmord in Japan" in *Archiv für Kriminalogie* (Vol. LXXX) 1927, p. 246.

there is a total lack of correspondence between urbanization and suicide. For the first five years of the present century, the five countries with the highest rates were: Switzerland, France, Denmark (each with a rate of 23 per 100,000), Germany (21), and Hungary (18). Of these countries only Germany can be considered as highly urbanized. England (10) and Belgium (12) both showed lower rates than the United States (14), although they are both much more densely settled. Clearly, as Cavan * puts it, "It must be concluded that, while urban rates tend to be higher than rural rates, there are conditions which affect both urban and rural rates."

These conditions are denominated by Cavan as "regional." It may be observed that the suicide situation is much like that of homicide — its prevalence is determined in part by urbanization, but in part by other social forces which do not appear to be directly related to urbanism at all.

### RELATION TO PERSONALITY DISINTEGRATION

To THE extent that suicide is an urban phenomenon, it seems related to much the same factors as those which have already been adduced in the discussion of mental disease. Indeed suicide may be considered a species of "mental illness," as Gordon puts it, † even if it cannot always be related

TABLE LXI

APPARENT CAUSES OF SUICIDES IN PRUSSIA AND BAVARIA, 1924 ‡

| *Apparent Causes* | *Per Cent Distribution* | |
|---|---|---|
| | *Prussia* | *Bavaria* |
| Mental Disease, Nerve Disease, and Other Bodily Pathologies | 40.0 | 39.6 |
| Grief and Anxiety | 33.0 | 22.6 |
| Economic Need | 7.2 | 6.2 |
| Unknown | 19.8 | 31.6 |

* R. S. Cavan, *op. cit.*, pp. 48, 51.

† R. G. Gordon, "Certain Personality Problems in Relation to Mental Illness with Special Reference to Suicide and Homicide," in *British Journal of Medical Psychology*, May 14, 1929, pp. 60–66, abstracted in *Social Science Abstracts* (Vol. I) Dec. 1929, No. 11015, p. 1546.

‡ From Albrecht, "Der Selbtsmord in Deutschland," in *Archiv für Kriminalogie* (Vol. LXXX) 1927, p. 244.

to a recognized form of mental disease. The effect of mental factors on the suicide rate is indicated by Albrecht's study of the apparent causes of suicide in Prussia and Bavaria, for the year 1924. In Bavaria nearly two-thirds of all the suicides are ascribed to neuropathological conditions, and, in Prussia, over seven-tenths, as appears in Table LXI.

### THE MIGRANT AND CULTURE-SHOCK

THESE disintegrating influences have been seen to relate largely to the shock-effect of city life, or, as Durkheim puts it "isolation." * Cavan shows how much more frequently one type of migrant, the immigrant, turns to suicide than does the average city-dweller. In Chicago, Philadelphia, and Boston, the foreign-born have a much higher suicide rate than the native-born.

TABLE LXII

SUICIDES PER 100,000 IN THREE AMERICAN CITIES, FOR FOREIGN- AND NATIVE-BORN †

| *Nativity* | *Suicides per* 100,000 | | |
|---|---|---|---|
| | *Chicago* 1919–1921 | *Philadelphia* 1916–1920 | *Boston* 1911–1915 |
| Native White | 9.4 | 9.3 | 12.7 |
| Foreign-Born White | 28.8 | 20.1 | 21.3 |

Thus in suicide, no less than in criminality and mental disease, the stress of urban life lays a heavier toll upon those who have migrated from abroad than upon the generality of city-dwellers. It is probable that the same is true of the migrant from the city to country, who does not cross national boundaries; certainly Cavan appears to think so.

Inquiry into the regional differences in the incidence of suicide is beyond the province of this work. However, it is at least suggestive to note that in the United States suicide is most frequent on the Pacific Coast, and also that in this re-

* E. Durkheim, *Le Suicide* as summarized in P. A. Sorokin and C. C. Zimmerman, *op. cit.*, p. 176.

† From R. S. Cavan, *Suicide*, p. 34. Reprinted by permission of the University of Chicago Press.

gion, on the whole, cities have sprung up most quickly and have grown most rapidly — where, in short, the element of contrast with other ways of life is probably most intense.

## CONCLUDING COMMENT

A GENERAL discussion and interpretation of the various pathologies of city life is unnecessary. Of the major types of social maladjustment, only mental deficiency and poverty have been found not to be relatively more prevalent in the city than elsewhere, and when poverty does visit the city-dweller, it is likely to involve a greater liability to physical want than when it comes to the inhabitant of the countryside.

When an effort is made to account for the relative excess of criminality, commercialized vice, mental disease, and suicide among city-dwellers, we find that explanations fall into two general categories: (1) certain essential characteristics of city life, and (2) the impact of city life upon those who are unused to it, including the children, and possibly the grandchildren of those whom the city recruits from the country and from other countries. It might be objected that this distinction is of little more than academic importance, since those forms of breakdown that can be accounted to the second category of influences would constitute a significant feature in the life of any city so long as it continued to expand. But just this fact — that urban growth is tied up with a great deal of the personal and social disorganization of the city — is of capital importance to the understanding of city life.

In the first place, it means that city-dwellers as such are not necessarily inclined to anti-social behavior and personality disintegration. A considerable portion of the "degeneracy" that some observers find among city-dwellers is, in other words, to be interpreted as related to the shock of urbanism upon those who are unused to city life rather than to the effects of city life as such. And here reference may once more be made to the fact that the Jewish group, which by and large represents a more long-continued experience of urbanism than any other population element in Europe or

America, seems to exhibit a less marked tendency towards one form of personality deterioration — criminality — than do city populations in general.

In the second place, the apparent correlation between crime, mental disease, and insanity, and migration to the city leads to the paradoxical conclusion that the pathological processes of city life increase directly with urban expansion. That is to say, when the city is at the full-tide of prosperity and growth, the forces undermining the stamina of its inhabitants are most widely effective. And it may be that this circumstance constitutes at least one of the factors that turn the tide of city life — that bring about that transition from abounding activity to hesitation, stagnation, and decay which is one of the basic phenomena of city life.

Finally, it must not be forgotten that certain of the disintegrating features of city life are — or appear to be — essentially and inextricably part of it. Such are, in particular, the relative excess of crimes against property, the ease with which more or less normal juvenile play impulses become transmuted into delinquency and crime, and the commercialization of vice.

## *BIBLIOGRAPHICAL NOTES*

P. A. Sorokin and C. C. Zimmerman, *Principles of Rural-Urban Sociology,* New York 1929, contains a careful analysis of the pathology of city life. See especially Chapters VII (Suicides) and XII (Mental Disease).

MENTAL DEFICIENCY AND MENTAL DISEASE: A. F. Tredgold, *Mental Deficiency* (3rd Ed.), London 1920; E. S. Conklin, *Principles of Abormal Psychology,* New York 1927 (Mental Disease and Mental Deficiency).

SUICIDE: R. S. Cavan, *Suicide* (University of Chicago Sociological Series) Chicago 1928. Valuable journals are *Mental Hygiene, Social Hygiene,* and *Archiv für Kriminalogie.*

# CHAPTER XI

## *THE ECONOMY OF CITY LIFE*

### SOURCES OF SUPPLY – SERVICES OF WASTE-DISPOSAL

IN THE chapters immediately preceding, the city has been envisaged as an agglomeration of people whose whole gamut of experience from birth to death in some measure is colored by their special environment. From another and quite different point of view, the city may be considered as a congeries of functions, upon the smooth performance of which the life of its inhabitants depends. Earlier chapters have treated a number of these activities of the city, such as its expansion, its territorial differentiation, and its traffic and communications. Here attention is given to what might be termed *the economy of city life* — that is, to the operations necessary for the maintaining of the city's existence. These vital functions are of four general sorts: (1) services of supply; (2) services of waste disposal; (3) public utilities and public enterprises, and (4) government and administration. The first two are considered in this chapter.

#### THE SUPPLY SERVICES OF THE CITY

AN ESSENTIAL element in the life process, both of the human organism and of the urban community, consists in the ingestion of energy-producing substances, and in the elimination of residual matter. If either process is blocked, life cannot long continue. The first portion of this statement is generally recognized, but the second portion is not — particularly in its application to city life. Most observers can readily see that the city would not long survive if it should be

starved of food, water, fuel, building materials, and the like. Many of them, however, fail to realize that it would be choked and inundated by its own waste-products if its services of sewerage, and of garbage- and refuse-disposal should fail. Thompson * observes that there was probably a definite limit upon the growth of cities in the pre-industrialist era because of the limitations in any transport system depending upon "the use of the pack-saddle, the cart, and the canal." In the modern metropolitan community, the margin of safety between successful functioning and breakdown in these services of supply and elimination is often perilously narrow. As Thompson puts it, "one cannot help wonder whether the modern great city is not fast approaching the degree of complexity which will render it readily liable to sudden and overwhelming catastrophe."

The supply services of the city fall into five general groups: (1) food and water, (2) fuel, (3) clothing, (4) building materials, (5) miscellaneous. They vary widely among themselves in both their economic significance and their technological features. Respecting their underlying import to the city they have, however, certain features in common, as follows: (1) the distance and specialization of their sources of supply; (2) the length and intricacy of the lines of communications necessary for their supply; (3) the costliness of procuring and transporting them; (4) the precariousness of the supply system of an urbanized society.

### DISTANT AND SPECIALIZED SOURCES OF SUPPLY

THE bulk of the raw material required for the maintenance of the city and its inhabitants must, obviously, come from afar off. Such materials come from extractive enterprises, from agriculture, fisheries, forestry, mining, and the like, which are normally conducted at a distance from the city and from its surrounding region. Moreover, the larger the city, the more remote must be its sources of supply. Not only does the increasing urban population require the tapping of more distant producing areas, but the existence and expan-

* W. S. Thompson, *Population Problems*, New York 1930, pp. 271–273. The next reference is found on p. 320.

sion of the city tend to diminish the supplies coming from nearby sources. Agricultural lands are built over, or so cut off as to be difficult to cultivate, or show signs of soil depletion.*

Again, water-supplies become contaminated; so that, for example, ground-water wells become dangerous. Yet again, local fisheries become so polluted as to be dangerous, or even non-existent. The oxygen content of the water in New York Harbor is so reduced by sewage pollution that fish life has been destroyed throughout most of its area, while the taking of shell-fish has been prohibited in places as far distant as Jamaica Bay.†

### RELATION TO LAW OF COMPARATIVE ADVANTAGE

THE expansion of the city's radius of supply is accompanied by an increased degree of specialization in the areas from which these supplies are secured. In any case, a considerable degree of specialization in productive areas would take place. Indeed, some would be inevitable, since virtually all mineral deposits are unequally distributed throughout the earth's crust, and since the range of many agricultural products is narrowly limited by soil and climate. As urban society expands, however, even those commodities which might otherwise show a fairly wide dispersion tend to become concentrated in those regions which, by virtue of natural endowment, or strategic location in reference to markets, transportation lines, or — nowadays — freight rates, possess some special advantage over other regions. Under the operation of what Black ‡ designates as *the principle of comparative advantage* wheat, apples, lettuce — all of which crops could be produced in fair abundance throughout the United States — are grown in specialized areas. The bulk of the wheat consumed in New York City and Boston comes from northwestern United States and Canada; more than 75 per cent of

* The nearby provinces of Rome began to show exhaustion before the end of the Republican period. See F. F. Abbott and A. C. Johnson, *Municipal Administration in the Roman Empire*, Princeton 1926, p. 210.

† H. M. Lewis and others, *Physical Conditions and Public Services* (Regional Survey of New York and its Environs — Vol. VIII), New York 1929, p. 56.

‡ J. D. Black, *Production Economics*, New York 1926, Chap. VII.

all the apples shipped to Boston come from the states of Washington and California. According to Hedden,* nearly 65 per cent of all the car-lot shipments of lettuce made throughout the United States came in 1924 from the three states of Washington, Oregon, and California; 30 per cent coming from one small district, the Imperial Valley of California.

### RELATION TO SPECIALIZATION IN PRODUCTION AND VOLUME OF CONSUMPTION

THE reasons for this development are twofold. *First*, the widening of the area from which the city derives its required materials makes possible a greater freedom of selection of these materials out of the regions from which they are drawn. Consequently, those districts best suited for the production of one commodity will be developed to the maximum, while other districts will devote their best efforts to some other commodity. In this connection, it must be remembered that the differential advantages enjoyed by any district include not only soil, climate, mineral resources, and the like, but also assembling, transportation and storage facilities, leadership, and — at present — favorable freight rate structures. In the *second* place, the city consumes commodities in such enormous volume that large-bulk shipments are made, and, therefore, large-scale production becomes possible. Consequently, those regions possessing some differential advantage in respect to one commodity undertake to produce that in the largest possible quantity, to the minimization, if not the exclusion, of other commodities.

In the modern world this tendency has been accelerated by long-distance transport and by refrigerated carriers. Without steam railroads and refrigerator cars, it would be impossible for the Imperial Valley of California to send cantaloupes, watermelons, lettuce, asparagus, and tomatoes

* W. P. Hedden, *How Great Cities are Fed* (Agricultural Commerce and Administration Series), Boston 1929, pp. 22 and 27. The reference in the next section to the use of refrigeration in the long distance transportation of food supplies comes from the *Report of the Federal Trade Commission on the Wholesale Marketing of Food*, June 30, 1919, quoted in F. E. Clark, *Principles of Marketing*, New York 1922, p. 40 footnote.

to markets 3000 miles away, and without ocean steamships with artificially-cooled holds the shipping to New York City of eggs from China, pineapples from Hawaii, cabbages from Belgium, and strawberries from Cuba would be out of the question. Nevertheless, even in the ancient world, there was a very intensive degree of territorial specialization in production. Abbott and Johnson assert that one of the factors related to the decay of agriculture in the older provinces of the Roman Empire was their inability to compete with the enormously productive and easily-reached grain fields of Egypt,* much as the farms of western Massachusetts and Vermont were abandoned after the development of the virgin grain lands of the Mississippi Valley.

### CONSEQUENCES

THE consequences of this tendency of the city to promote the development of distant and specialized supply areas are of far-reaching importance to the urban society.

### UNBALANCED RURAL ECONOMY

THE most important consequence is that the rural and small-town community tends to develop a highly-unbalanced economy, to depend almost exclusively upon one, or two, or three commodities, and to prosper or decline with the fluctuations in the fortunes of the industries concerned with those particular commodities. A mining village flourishes when coal is in demand and prices are high, but slumps into abject penury when the coal industry is depressed. Those rural areas to which summer holiday-seekers resort feel the effects of business depressions in cities which most of their inhabitants have never seen. An agricultural community devotes virtually all of its energies to wine-grapes, and finds itself ruined when a parasite or an untimely frost blights the vines, or when there is a falling off in the demand for its product. For instance, San José, California, is situated in the heart of the grape-growing district of that state. It is one of the few cities that "voted" against the repeal of the 18th (Prohibition) Amendment in the *Literary Digest* Poll of

* F. F. Abbott and A. C. Johnson, *op. cit.* p. 213.

1930. Whole states in the northwestern section of the United States have faced economic collapse because of the decline of wheat prices; similarly, certain portions of Southwest United States were reduced to direst distress, at the end of the third decade of the twentieth century, by the twin catastrophes of a succession of poor crops and the falling off in the demand for their one great staple crop, cotton. In the same way, large sections of the Roman Empire were impoverished when the break-up of transportation and the collapse of currency accompanying the Empire's decay, in the fifth and sixth centuries, made it difficult for them to market their grain.

### LOSS OF RURAL SELF-SUFFICIENCY AND DEPENDENCE ON THE CITY

As a corollary of this development, the traditional self-sufficient economy of the countryside tends to disappear.* The dairy farmer buys canned goods and neglects his vegetable patch; the truck farmer sells his cows, and pours condensed milk into his coffee. The farmer who "accommodates summer boarders" neglects his grain and his livestock to raise the fresh vegetables his guests demand and to help his wife prepare them. The rural and semi-rural communities are far less dependent for their necessities of life upon goods procured from outside sources — and upon the pecuniary tokens wherewith they may be obtained — than is the city, but they are very much more dependent upon these sources of supply than they would be in a non-urban society.

It follows that the countryside becomes inextricably entangled in the fortunes of city life. It ceases to stand aloof from the city, relatively untouched by the ebb and flow of its affairs. Instead, the most of its production — not its surplus production merely — is destined for the city. Moreover, unless its products reach the city, and are exchanged through the mechanism of commerce for other products that are shipped back to the countryside, the latter suffers hardship, if not actual want. Where the rural community is non-agricultural or semi-agricultural, as in the coal-mining vil-

* F. E. Clark, *op. cit.*, p. 30.

lages of Great Britain and the United States, its dependence upon the city becomes particularly marked.

### EXTENDED, INTRICATE, AND CONGESTED LINES OF COMMUNICATION

THE countryside becomes partially dependent upon the city as urbanism develops. The city — as pointed out above — becomes almost totally dependent upon the country. Furthermore, as the city taps even more distant and more specialized sources of supply, its communication system becomes constantly more extended, more intricate, and more heavily burdened. The effectiveness of an army in the field is limited by its lines of communication. Pierce its supply lines, and it quickly degenerates into a helpless demoralized mass. The city is in a similar case.

### EXTENSION

THAT the city's lines of communication are long has already been indicated. It is impossible for a city to draw its supplies from far-distant sources without establishing extended lines of communication between itself and those supplies. Modern transportation has served greatly to lengthen the average city's supply lines. The fruit and vegetables consumed in New York City are brought from an average distance of 1500 miles, and its milk — a bulky and highly perishable product — travels an average of 200 miles.*

The greater part of the same city's water-supply is carried a distance of 92 miles,† and efforts are being made to develop other and more distant sources. The city of Los Angeles, being situated in a semi-arid climate, is forced to go even a greater distance in search of water. The Owens River water-supply is located 260 miles from the city and is connected with it by an enormous aqueduct.

The communication systems of the ancient world were, moreover, surprisingly long. Virtually all of the Roman Empire furnished tribute in kind to the city of Rome, use

* Regional Plan of New York and its Environs — Newspaper Release, April 14, 1929.

† The Merchants' Association of New York, *Facts about New York* (Pamphlet), New York 1929, p. 9.

being made of both water and overland transportation, the far-flung network of Roman roads being utilized for the latter purpose.

As for Rome's water-supply, the aqueduct system of that city was a more extensive engineering enterprise than many modern cities possess. Munro estimates that they totaled nearly 360 miles in length, and yielded about 50 gallons per day per capita.* London now consumes about 45 gallons per capita per day.

### INTRICACY

THE intricacy of the supply system of any urbanized society is manifested in various ways.

In the first place, many materials are put through one or more intermediate processes in as many different places before being available for use. Wheat is stored in a terminal elevator at Duluth; shipped by boat to Buffalo; milled into flour there and dispatched by rail or by barge to New York; made up into bread; delivered to a chain-store in the Bronx; sold over the counter to a housewife, who carries it to her kitchenette apartment and serves it. And yet, this process, complicated as it seems, is simple in comparison with others. Consider the transmutations through which a shearing of wool or a cow's hide passes before it finally appears as a city-dweller's suit of clothes or pair of shoes.

### PROCUREMENT AND PROCESSING

TWENTY years ago the author encountered in a southern Colorado village a trader from the Navajo Reservation in Utah, and bought from him a Navajo blanket. The trader was carrying a load of wool to the nearest railroad shipping-point, some eighty arid miles from his log-cabin trading post on the banks of the San Juan River. He had secured the wool from the Navajos in barter for supplies. The blanket, which the author bought (the trader was using it as a seat cushion), represented the direct utilization at the point of production of the wool raised by the Indian tribesmen. The

* W. B. Munro, *Principles and Methods of Municipal Administration*, New York 1916, p. 123.

wool, which the trader had so painfully hauled, represented these same tribesmen's contribution to the clothing of city-dwellers in Chicago, in London, or in Budapest. The author has often asked himself about the ultimate fortune of the load of wool. Through how many hands did it pass before it was dumped into the receiving-room of a textile mill in New England, or in Manchester, or in the Rhineland? Whither was the cloth shipped to be made up into clothing, and whither was the clothing shipped to be sold, first to a wholesaler, then to a retailer, and finally to the man or the woman who wore it? For all the author knows, that load of wool eventually traveled half the circumference of the earth, stopping a half-dozen times on the way for sorting, cleaning, carding, spinning, weaving, cutting and sewing, and re-working into shoddy.

### TRANSPORTATION AND DISTRIBUTION

A SECOND way in which the city's communications are rendered intricate is by the tedious and roundabout processes of transporting, assembling, and distribution. Something of this has just been suggested. Additional examples could be adduced almost indefinitely. One will suffice. A crate of celery raised near Norfolk, Virginia, was sold to a nearby commission merchant. It passed through the hands of four other commission men before it finally reached the Bronx district of New York City to be purchased by a jobber. He sold it to a retail grocer who ultimately disposed of it in small quantities to the final consumers — at, be it noted, a rate of $2.60 as against the 40 cents which the farmer received for it. It is possible, by means of chain-store integration, co-operative selling, and governmental intervention to eliminate the number of middle-men involved in such a transaction. But, the number of *processes* involved cannot be greatly reduced. There must be a shipping-point, where grading and packing often take place, and in addition, one or more points of assembly. When the city is reached, the goods must be unloaded at a terminal (The Detroit Union Produce Terminal cost $5,000,000),* and go through the

* W. P. Hedden, *op. cit.*, pp. 140 and 275.

hands of a half-dozen distributing, hauling, and assorting agencies before it finally gets into the hands of the individual city-dweller. In Table LXIII the estimate of the cost elements involved in getting a quart of milk from the farmer to the urban consumer, shows that, even if " private trading " were reduced or altogether suppressed, a number of separate transactions would be involved in the process.

TABLE LXIII

COST ANALYSIS OF A BOTTLE OF "GRADE B" MILK IN NEW YORK CITY, 1926 *

| *Cost Items* | *Cents per Quart* |
|---|---|
| The farmer receives | 6.0 |
| Cost of operating country receiving station | 0.8 |
| Freight 200 miles to city | 1.1 |
| *Total cost before reaching city* | 7.9 |
| Trucking from terminal to city pasteurizing plant | 0.5 |
| Pasteurizing plant expense | 1.5 |
| Trucking from pasteurizing plant to retail sales branch | 0.6 |
| Retail branch cost, including delivery to doorstep | 4.2 |
| Milk Company's net profit | 0.3 |
| *Total Cost* | 15.0 |

In Table LXIV Clark presents a similar tabulation relating to the marketing of wheat.

Be it noted, the wheat, even at the end of the many transactions involved in the following tabulation, is still many stages removed from a form in which it is available for consumption. It must still be milled into flour, baked into bread, and brought around by the retail groceryman's delivery boy to the city-dweller's apartment house.

With the development of urbanism, moreover, it is likely that the process of bringing supplies into a city will increase, rather than decrease in complexity. As cities increase in number and in size, the scope and the elaborateness of the distributive agencies required to serve them increase also.

* Adapted from F. S. Tisdale, "From Dairy Farm to Door-sill" in *Nation's Business*, Feb. 1926, p. 22.

TABLE LXIV

TRANSACTIONS INVOLVED IN SHIPPING WHEAT FROM FARMER TO URBAN RECEIVER *

| *Cost Items* | *Cents per Bushel* |
|---|---|
| Price received by farmer in Kansas | 87.0 |
| Margin taken by country elevator | 3.0 |
| Freight rate to Kansas City | 6.2 |
| Inspection, weighing, etc. | 0.25 |
| Commission merchants in Kansas City | 1.0 |
| Freight Rate, Kansas City to Philadelphia | 15.6 |
| Mixing in Kansas City elevator | 0.25 |
| Exchange | 0.20 |
| Overhead expense of shipper | .375 |
| Net profit of shipper | .625 |
| Price, delivered in Philadelphia | 114.5 |

INTER-CITY COMPETITION

IT ALSO becomes necessary to provide, not for one or two, but for dozens of urban areas, and the fluctuation of conditions of demand and supply in any one of them may affect the provisioning of all the others. Thus, the " f. o. b. auction " has recently been devised to meet the competing requirements of different cities. It is described by Hedden:

The f.o.b. auction is a nationwide organization with a chain of offices in the loading markets connected up by private telegraph wires, so that instantaneous communication is possible. Shipments of lettuce, cantaloups, and grapes are offered in carload units to bidders assembled simultaneously in the far-flung chain of salesrooms. The offerings are knocked down to the highest bidder whether in Pittsburgh, New York, Boston, or Chicago. Sales prices are f.o.b. shipping point, buyer to pay freight charges and to order diversion en route to the desired market.†

* Adapted from L. D. H. Weld, as quoted in F. E. Clark, *Principles of Marketing*, New York 1922, p. 277. By permission of the Macmillan Company, publishers.

† W. P. Hedden, *op. cit.*, p. 107.

### "FRICTION OF SPACE" AND MULTIPLICATION OF SMALL-SCALE DISTRIBUTIVE PROCESSES

AGAIN, as the typical city expands, the "friction of space" and the rental values of land increase. The result, as already shown, is that the amount of space available for the storage and processing of food, clothing, and the like, becomes progressively smaller, and that the ultimate consumer is forced to procure his supplies in constantly-diminishing units. Instead of a barrel of apples or a sack of flour, the housewife buys a pound of apples, and a half-dozen rolls. Instead of a "piece" of dress-goods, she buys a ready-made frock, while her husband buys his handkerchiefs or his collars, one or two at a time, instead of by the dozen. This tendency to break down purchases into small and constantly-diminishing units greatly complicates the task of distributing them. It necessitates the establishment of an enormous number of small retail outlets, and of an elaborate system of distributing and assembling agencies for supplying them. It was estimated by the New York City Department of Health that there were in 1923 over 40,000 retailers in that city, engaged in the handling of food products alone. They were distributed as follows:

| | |
|---|---|
| Groceries | 18,532 |
| Delicatessen | 4,634 |
| Fruit and Vegetables | 6,538 |
| Meat | 11,758 |

### CONGESTION

THE development of city life lengthens and complicates the lines of communication to the city. It also congests them. Naturally, this must be so, for the growth of the city increases the bulk of the materials that it requires, whereas the possible routes by which they can be carried are relatively limited. Barring the development of air-borne freight, virtually every city has developed all of its major channels of supply by the time it has passed through its initial period of expansion. Hence further growth for such cities means an increase in the load that these channels must carry.

A few random figures will serve to indicate the immense load that is placed upon the supply mechanism of any large city. Paris was receiving in 1929 over 300,000 kiloliters (79,200,000 gallons) of water per day for drinking only.* The New York Metropolitan Region was consuming about 1,275,000,000 gallons per day in 1925, and its requirements for 1940 are estimated at 1,793,000,000 gallons per day.†

In the year 1910, the city of Paris received through one single railway line, the *Chemin de fer du Nord,* 85,500 metric tons of fuel, 12,400 tons of grain, 89,400 tons of building materials and 29,600 tons of foodstuffs. (A metric ton is equal to 2200 pounds.) In the same year there were handled through the markets of Paris a total of 483,978,700 kilograms (2.2 pounds) of foodstuffs, including 68,112,900 kilograms of meat, 23,606,600 kilograms of poultry and game, 293,412,700 kilograms of fruits, vegetables, and garden produce, and 17,775,000 kilograms of eggs.‡

The New York Metropolitan Region was, in 1929, consuming about 15,000 tons of food each day. Most of it came from distant sources, and by rail; 75 per cent of the fresh fruit and vegetables, 90 per cent of the dairy products, and 98 per cent of the fresh milk being transported by this means. During the year 1928, a total of over 125,500 cars of fresh fruits and vegetables was unloaded in the New York market area. New York City's annual consumption of coal at the same time was 27,000,000 tons, exclusive of 2,000,000 tons for bunkering ships in New York Harbor.§

Additional illustrative data could be presented almost indefinitely. Enough has been given, however, to show how tremendous a burden must be borne by the supply channels of any city, particularly of a large and growing city, if its daily needs of water, of food, of clothing, of building materials, and of all the other necessities of its own and of its inhabitants' existence are to be filled.

* G. M. G. Beaume, "L'Eau à Paris" in *La Liberté,* July 22, 1929.

† H. M. Lewis and others, *op. cit.,* p. 50.

‡ *Annuaire Statistique de la Ville de Paris* 1910, pp. 285 and 376–377.

§ H. M. Lewis and others, *op. cit.,* p. 125. See also The Merchants' Association of New York, *op. cit.,* p. 4, and Bureau of Railway Economics, *Unloads of Fresh Fruits and Vegetables at Sixty-six Important Consuming Markets in the United States,* Washington 1929, p. 7.

### THE COSTLINESS OF THE CITY'S SUPPLY SYSTEM

THE service of supply of the city is enormously expensive. Moreover, many elements in its cost increase as the city grows and as urbanism in general expands.

The first of these two propositions scarcely requires demonstration. It is obvious to the most superficial student of the costs of marketing or of transportation and communication. Reference has already been made to the toll taken by the various processes required for the distributions and marketing of foodstuffs, and it has been shown that most of these charges would have to be levied, in some way or another, whether these services were left in the hands of private enterprise or not. Attention has also been given to the tremendous cost of some of the terminal facilities involved in the distribution of food products in the modern city. To these costs must be added at least two other types of expenditure, namely, the public works required to keep the city's central supply services in operation, and the inevitable waste that such services involve.

### RELATION TO SCALE OF OPERATIONS

MERELY to catalogue, much less to calculate the scale and cost of the public works required to maintain the city's service of supply is a task beyond the competence of this author. It must suffice to make use of one single illustration: water-supply. Something has already been said of the magnitude of the water-supply systems of both ancient and modern cities. The Catskill water supply system of New York City involved the construction of an aqueduct 160 miles long, a part of it consisting of a "deep-level crossing," that is, a 3000-foot tunnel, cut through the rock, at a depth of 1000 feet below the surface of the Hudson River.* The city of San Francisco is engaged in a ten-year water-supply project, which will bring water from the high Sierra Nevada Mountains in "closed pipeline-conduits, tunnels, and under-bay crossing." Los Angeles, already anticipating the inadequacy of its enormous Owens Valley water-supply system, is plan-

* H. M. Lewis and others, *op. cit.*, p. 38.

ning to tap the Colorado River at Boulder Dam, lifting the water 1400 feet by electric power.*

Such enterprises cannot but be costly. The Catskill System cost $188,000,000 and a proposed addition to it, together with a new auxiliary deep-level aqueduct will cost over $400,000,000 more. Nor is this all. It is calculated that "the normal figure for extensions to the distribution system" of New York City "would be in the neighborhood of $4,000,000 per year," while "the maintenance charges upon the distribution system are approximately $1,250,000 per year" — a total of $5,250,000 annually, or $52,500,000 every decade for routine extensions and maintenance of the distributing system within the city proper. The San Francisco enterprise is to cost $300,000,000. The city of Springfield, Massachusetts, without any of the climatic handicaps encountered by San Francisco and Los Angeles, has, nevertheless, invested (as of 1927) $7,835,000 in its municipal water system. Munro, writing in 1923, estimated that "the amount of money invested in the public water-supply systems of the United States is well in excess of a billion dollars," and that "annual expenditures for improvements, equipment, and new construction, are at the rate of more than fifty millions per year." † Without doubt the figure would have to be substantially increased at the present time.

It can readily be seen that, if the cost of all the supply services of the modern city were to be added together, the sum would be staggering. This fact by itself, however, is not particularly significant. Any human activity involves costs. Yet, so long as the activity yields a comfortable margin of satisfactions, the costs may be more or less ignored. To go back to the metaphor of human metabolism, any vital function such as eating or breathing involves a considerable expenditure of energy, but so long as this energy-outgo is more than offset by the energy-intake, the vital power of the organism is not impaired. But suppose that, by some malign

* R. M. McDonnell, "The Cash Value of Pure Water" in *The American City* (Vol. XXXVIII, No. 1) Jan. 1928, p. 171.

† H. M. Lewis and others, *op. cit.*, pp. 43–49. Also *American City* (Vol. XXXIX, No. 2) August 1928, p. 11, and W. B. Munro, *Municipal Government and Administration*, New York 1923, Vol. II, p. 155.

circumstance, any one of these functions should require the consumption of more and more energy-outgo without any corresponding increase in energy-intake, obviously, the organism would quickly become enfeebled, and, if this process were to continue, would collapse. Nevertheless, an essentially similar process overtakes any city that expands beyond a certain point, or that is a part of a society whose degree of urbanization has passed beyond such a point.

### RELATION TO LAW OF DIMINISHING PRODUCTIVITY

THIS stage is known, in terms of formal economics, as the *point of diminishing productivity*, and it is related to the *law of diminishing productivity*. Deibler * states the law as follows: " Whenever the quantity of any one or more factors of production is held constant, and the quantity of the other factor or factors combined with it is varied, the product received may increase absolutely and, for a time, even relatively, but after a certain point has been reached, the increase will not be in the same proportion as the varying factor." In non-technical language, if increasing amounts of labor and capital are expended on a fixed amount of land, the added crop yielded will — after the point of diminishing productivity has been reached — not be proportional to the additional amount of labor and capital required to produce it; in other words, each added unit of crop will be secured at a greater expenditure of labor than the last one. If, instead of land, some other factor, such as capital, or labor (whether manual or managerial) be limited, the law of diminishing productivity still holds. Thus, when capital — that is to say, tools and implements of production — is limited in supply, increasing amounts of labor and land will, in the long run, result in diminishing increments of product; or, to put it another way, once the point of diminishing productivity is passed, additional units of product will cost more and more in labor and land. Again, if labor or managerial skill is limited, even if land and capital are unlimited, the point will eventually be reached when each addition to production means an increase in costs.

* F. S. Deibler, *Principles of Economics*, New York 1929, p. 125.

The universal applicability and the fundamental significance of the law of diminishing productivity may be recognized when it is remembered that there is never, in any economic situation, an unlimited supply of *all* the factors of production. Land is by nature limited, greatly so when such factors as accessibility, fertility, climate, and mineral- or water-yielding capacities are considered. Labor, in general, is perhaps in the long run relatively unlimited, but skilled and managerial labor is not. And, if the definition of managerial labor is broadened so as to include all of the training and techniques required for the executive control of large-scale enterprises, then it is clear that this commodity is very restricted indeed. Capital, finally, is limited by the surplus production of any given society; so that, unless an indefinite increase in such a society's surplus production is to be envisaged, an indefinite expansion of capital is impossible. In sum, no society can expect to increase indefinitely its stock of land, *and* labor, *and* management, *and* capital all together, and must, therefore, look forward to the time when it can gain added productivity only at the price of steadily-rising costs, and finally to the time when the cost of the product will be greater than the product itself. When such a time comes, then the force of the biological metaphor suggested earlier in this section is perceived; for such a society is spending more and more economic energy for the securing of less and less product.

There is one circumstance which can call a halt to this limitation upon the expansion of a society. It is human ingenuity. The discovery of a new fertilizing agent, the invention of a locomotive, the devising of a technique for the widening of the range and effectiveness of managerial control — such fruits of the mind of man can offset the law of diminishing productivity, for a time, and permit a great expansion in number and activities of a society. In fact, urban society, as the present generation knows it, could scarcely have arisen without the agricultural, technological, and managerial inventions and discoveries of the eighteenth, nineteenth, and twentieth centuries. This has been most strikingly the case during the past 150 years, but the in-

definite continuance of this Aladdin's lamp cycle of inventions and discoveries can be anticipated only by the most incorrigible optimist. In fact, as is shown in Chapter XIII, if the whole three-quarters of a million of years of human history be taken into account, it is seen that significant contributions to man's stock of tools and of skills are made infrequently and spasmodically. It would seem, therefore, that in the long run the law of diminishing productivity holds the field in human affairs.

The application to the supplying of the city of the general principles elucidated in the foregoing discussion is obvious. It makes itself felt in at least three ways.

### LAND

IN THE *first* place, as a city grows, it puts a constantly greater burden upon the land from which it draws its food and water and the rest of its necessaries of life. It may send out its lines of communication in the uttermost corners of the accessible portions of the earth, like early Rome, and like London and New York, but sooner or later it will find that it can obtain more of its requirements only at steadily-increasing cost — that it can, in other words, grow only at the price of its inhabitants' finding themselves forced to devote more and more of their wealth and labor to getting the things they need to live.

When the city is set in the midst of an increasingly-urbanized society, moreover, the effects of this process are felt with double force. Other cities are reaching out after the same farm lands, mineral resources, and water supplies that it is seeking, and each is adding to the burden of costs attached to the products yielded by them. Indeed, a city that is not itself growing, so long as it is part of an expanding urban society, must eventually encounter increasing difficulty in securing the food, water, and the like that it requires.

The United States Department of Agriculture in a preliminary report on meat production and consumption presents some statistics that are of interest in this connection.

The tabulation indicates that there has been a slight

TABLE LXV

PER CAPITA ANNUAL CONSUMPTION OF DRESSED MEATS IN UNITED STATES, 1900–1929 *

| *Product* | *Per Capita Consumption (Pounds)* | | | | |
|---|---|---|---|---|---|
| | 1900 | 1910 | 1920 | 1925 | 1929 |
| Beef and Veal | 71.3 | 77.9 | 70.7 | 70.9 | 58.2 |
| Lamb and Mutton | 6.8 | 6.4 | 5.5 | 5.2 | 5.8 |
| Pork † | 64.7 | 57.1 | 60.5 | 67.6 | 72.8 |
| *Total Meat* | 142.8 | 141.4 | 136.7 | 143.7 | 136.8 |

diminution of total meat consumption in the United States during the first third of the present century, and that there has been a marked change-over from beef, veal, lamb, and mutton, on the one hand, to pork, on the other. Several interpretations of this shift are possible, but the most probable one appears to be that suggested by Wolman and Taylor — that the growing intensity in the utilization of land in this country has pushed up the cost of maintaining grazing animals, such as cattle and sheep, to a point where some consumers find it expedient to substitute meat derived from a non-grazing and relatively economical animal, namely swine. Moreover, since pork contains a high proportion of waste, Wolman and Taylor believe that the net *ingestion* of meat, as distinguished from gross *consumption* or purchase has declined even more than the statistics suggest. This change, moreover, has taken place in the face of a general increase in the purchasing power of the population at large, more especially of its urbanized component.‡

In other words, the tabulation suggests that the increasing urbanization and growing population of this country have already restricted the amount of land available for grazing to a point where the law of diminishing productivity has begun to make itself felt.

* Adopted from United States Department of Agriculture, *Statistics of Meat Production, Consumption, and Foreign Trade of the United States* — 1900–1929 (Mimeographed Preliminary Report), Washington 1930, p. 10.

† Excluding lard.

‡ L. Wolman, "Consumption and Standard of Living" in Conference on Unemployment, Washington, D.C. 1921, Committee on Recent Economic Changes, *Recent Economic Changes in the United States*, New York 1929, Vol. I, pp. 33–35.

### TRANSPORTATION

A SECOND aspect of the law of diminishing productivity, as applied to the city is the increased toll of transportation costs involved in urban expansion. It has been pointed out that urban growth necessitates a longer and more intricate system of communication. Here it may be observed that this development is in reality a part of the working of the law of diminishing productivity, as it becomes operative through the scarcity of land, and that it makes itself felt in a constant increase in the proportion of the cost of the products chargeable to transportation. Hedden estimates that 16 per cent of the retail price of a box of Pacific Coast apples delivered in New York City is devoted to transportation charges. Rostovtsev states that the cities of the Roman Empire were frequently forced to stint themselves on food, because of the high transportation costs that were involved.* Further data bearing on this point are presented in Chapter XIV.

### MANAGERIAL AND TECHNICAL ABILITY

THE *third* way in which the law of diminishing productivity affects the city's supply services is not so obvious as the first, but is none the less important. It relates to the limited quantity of managerial ability and of administrative and technical skills available for such purposes. In a word, as the city — or urbanism in general — expands, the task of supplying it gets out of hand, and waste ensues. The waste is, moreover, enormous. About one-fourth of all the freight claims paid by the railroads of the United States are for damage on food products. In 1921 they amounted to over $23,000,000. Upson states that, in some cities, as much as half of the water-supply is lost through "bad plumbing, flow to prevent freezing, leaky mains, and carelessness on the part of consumers." Some of this loss is inevitable; some is due to wanton wastefulness; but much must be set down to inadequacy of supervision of the distribution and use of

* M. I. Rostovtsev, *Social and Economic History of the Roman Empire*, Oxford 1926, pp. 137–139.

the water.* To the extent that these costs of wasteful operation are correlated to the difficulty of securing adequate supervision, moreover, they are likely to increase as the size of the city increases.

### OFFSETTING ECONOMIES OF LARGE-SCALE OPERATION

IT MAY seem paradoxical to conclude this discussion of the cost factor in the city's supply services with an account of the manner in which very large cities are enabled to enjoy certain economies in this respect. Nevertheless, the city, like any other economic unit, may enjoy the savings of large-scale production, and these savings often bring it about that the final unit cost of a component element in the process of supplying a commodity decreases as the size of the city increases. For example, the cost of *distributing* water in a city (without reference to the cost of *bringing* it to the city) is smaller for a large city than for a small one. The pumping stations are more continuously and more completely utilized; there is a greater intensity of use of water-mains; and the costs of administration and supervision are spread over a larger volume of output. As a result each gallon of water produced carries a smaller burden of overhead costs. A recent tabulation of metered rates for water in Canadian cities shows a clear-cut inverse ratio between the size of the community and the water-rates.†

| *In cities of* | *the average maximum rate per* 1000 *gallons was* |
|---|---|
| less than 10,000 | $0.427 |
| 10,000 to 25,000 | $0.301 |
| 25,000 to 50,000 | $0.280 |
| 50,000 to 100,000 | $0.234 |
| more than 100,000 | $0.170 |

### THEIR LIMITED RANGE

ON THE other hand there are at least three limitations on such economies. *First*, no productive unit can expand in-

* A. Hobson and R. Horner, *Waste, Breakage, and Deterioration in Quality as an Element in Food Marketing Task* (U. S. Department of Agriculture Mimeographed Bulletin) 1924 quoted in W. P. Hedden, *op. cit.*, p. 211. See also L. D. Upson, *The Practice of Municipal Administration* (Century Political Series) New York 1926, p. 487.

† J. C. Keith, "Determination of Equitable Water Rates," *Journal of the American Water Works Association* (Vol. XVIII) July 1927, p. 106.

definitely without meeting the inefficiency of control and difficulty of adjustment to changing conditions that are involved in the limitation of managerial skill discussed above. *Second,* as pointed out previously, the cost of procuring the city's supplies increases directly as the distance required to transport it. This being the case, it is inevitable that any very great urban expansion would eventually reach a point where, regardless of the factor of inefficiency, the cost of *transporting* the commodity would offset whatever economies of large-scale production were effected in the *distribution* of that commodity. *Third,* the increasing costs related to the expansion of urban society as a whole are influenced little, if at all, by the economies of large-scale production.

It must be said, however, that at the present time the economies of large-scale production are so great in certain supply services, such as water, that the large city still has the advantage over the medium-sized city or the small one.

This extended examination of the tendency for the costs of the city's supply services to increase with the expansion of the city, or of the urban society in which it is located, may seem to be a work of supererogation. Is it not so obvious as to need only passing and casual mention? Obvious it may be, but deserving of casual mention it is not. It involves the whole problem of the future of the city. The city cannot exist without a continuous supply of the food, water, and other necessities, *and it cannot pay for them more than its inhabitants can afford.* When these services cost more than the generality of the city's inhabitants can pay, then that city must needs cease growing. More than this, if the cost factor brings about a slackening of growth in a number of cities, then the rate of advance of the whole urban society in which it is situated is affected.*

And if it should happen that — by virtue of the enormous momentum which its previous expansion has engendered — a city, or the society in which it is located, should continue to grow beyond the point set by the cost of its supply services, and by other economic considerations — if it should,

* W. S. Thompson, "On Living in Cities" in *The American Mercury* (Vol. XX) June 1930, pp. 193–195.

in other words, grow to the point of bankruptcy and beyond, then a drastic and possibly a catastrophic process of adjustment would be inevitable. That one urban society, the Roman Empire, has been overcome by such a fate is suggested at the close of this work.

### THE PRECARIOUSNESS OF THE SUPPLY SYSTEM OF AN URBANIZED SOCIETY

IT HAS been shown that the supplying of a city is a difficult and costly business. To this observation one might obviously retort, "What of it? So long as it works, are not the difficulty and the cost worth while?" This query might, however, be met by a further one, "Does it work, and if it does, will it continue indefinitely to do so?"

Chase has grave doubts on this score, particularly because of what he terms the "technological tenuousness" of the entire supply mechanism.

> An engineer once explained to me how one hundred key technicians in power houses, flood-gate stations, and signal towers could bring the entire life of Megalopolis to an abrupt conclusion. A tiny piece of carelessness in a Springfield generating station shut off all light and power from the city for many hours. — A short circuit in a power house at Fiftieth Street [New York City] started a tiny fire, but a smoky one. Almost instantly all the power left the Grand Central Station. Throughout the night no train could move in or out — *

In the early spring of 1930, a sudden and heavy blizzard descended upon the city of Chicago. The next morning, "the city's milk supply was sharply reduced, while suburbanites subsisted on canned goods."

Such vicissitudes as these might be put down as merely annoying disturbances of the city's course of life. They are, in reality, much more. They are symptoms of the thin margin on which the city's supply services are forced to operate — danger signals denoting that the modern "megalopolis" can continue to feed, clothe, shelter, and heat its inhabitants only if its railroads, its water-ways, its tunnels, its pipe-lines,

* S. Chase, "The Future of the Great City" in *Harper's Magazine* (Vol. CLX) Dec. 1929, p. 87.

and its aqueducts can operate at top speed without interruptions.

### THE ANCIENT WORLD

Nor is this situation at all new, except in the technical devices that are involved. The cities of the ancient world were scarcely able to provision themselves from the *territoria* in their immediate neighborhoods, even though these areas were usually owned outright by them. Rostovtsev goes so far as to say that none of the cities of the Roman Empire was permanently self-sufficient, but that all of them "depended more or less on a regular or emergency import of foodstuffs." The elaborate system of Roman roads was designed, in part, to aid in keeping supplies moving to the cities, but, nevertheless, "almost all the cities of the Empire, even those situated in the most fertile districts, and still more those lying in the mountainous districts of Italy and the provinces, had from time to time very bad periods of dearth" and often "years of real famine." Later, when the military anarchy that accompanied the decline of ancient civilization caused the collapse of the Empire's system of exchange and transportation, hunger and famine in the cities became chronic. In fact, as Pirenne observes, during the final break-up of the Roman Empire and afterwards, it was in the east, where the Mediterranean Sea continued to furnish a tolerably dependable means of intercommunication, without reference to overland transport, that city life was able to maintain itself, while elsewhere it was all but snuffed out.*

### CONTEMPORARY SOCIETY — THE WORLD WAR

The World War provided a spectacular and memorable modern instance of the disaster that waits upon the interruption of the urban community's service of supply. During the conflict, two countries, England and Germany, were partially blockaded — England by periodic submarine onslaughts upon shipping; Germany by the systematic throttling of her foreign trade. Austria was, of course, also in-

* M. I. Rostovtsev, *loc. cit.*, and H. Pirenne, *Medieval Cities*, Princeton 1925, pp. 3–5.

cluded in the blockade, but for the sake of simplicity this discussion is confined to Germany.

### ENGLAND

ENGLAND was kept on short rations during the greater part of the war, and, during the height of the great submarine offensive of 1917, came perilously near to starvation. Admiral Sims says of this episode, "Could Germany have had fifty submarines constantly at work on the great shipping routes during the winter and spring of 1917 nothing could have prevented her from winning the war." As it was, England lost one out of four of the ships that left her shores, during two weeks of 1917, and a total of 900,000 gross tons of shipping during one month.*

This destruction of commerce did, to be sure, affect the whole of England, Scotland, and Wales, and not merely her cities, but this country — England in particular — is so highly-urbanized that a blockade of the whole island was tantamount to the beleaguering of her cities. Much of England is, in short, little more than a coalescence of a number of cities and their surrounding urbanized regions. Without a continuous stream of overseas traffic the inhabitants of England — the dwellers in her cities first of all — would starve in anywhere from a few weeks to three months.†

### GERMANY

BUT the submarine blockade was smashed in time; the threat of starvation which hung for a time over the people of England was banished. In Germany, starvation was more than a threat; it was a haunting reality. "To say that Germany was really emaciated in 1918 is no figure of speech, but an actual statement of fact, as there was hardly anything to take the place of bread, meats, and fats." ‡ In 1917, the German bread ration consisted of 55 per cent rye flour, 35 per cent wheat flour, and 10 per cent "substitutes." By June

* J. Buchan, *A History of the Great War*, London 1922, Vol. III, p. 554.

† J. Buchan, *op. cit.*, Vol. I, p. 101. D. M. Vaughan, *Buyers and Makers* (Longmans' Introductory Books on Science), New York 1929, p. 39.

‡ L. Guichard, *The Naval Blockade* (English Translation), New York 1930, pp. 286–294.

1918 this meager provender was being doled out at the rate of 1500 grammes per person per week; in July of the same year, it was cut to 1250 grammes. Fats were rationed at the rate of 120 grammes weekly per person in 1916. In 1917, the ration was cut to 75 grammes, and, in 1918, to 62 grammes. During the terrible "turnip" winter of 1916–1917 the potato ration was but three pounds a week per head.*

It is clear that to many German people, the war-time blockade must have meant extreme privation. Yet, Germany — while highly urbanized — raises a very substantial quantity of agricultural products. The last census taken before the World War showed that 30 per cent of the German people were still engaged in agriculture.†

Moreover, Germany was not altogether cut off from the outer world, for she was in constant contact with Switzerland, Scandinavia, and Holland — all agricultural countries. It seems that the failure of Germany to feed herself was due not only to the blockade in itself, but to a number of special factors related to the food supply of an urbanized area, which, under the pressure of the blockade and the stress of the nation's war effort, resulted in a high degree of demoralization.

### DIMINISHING PRODUCTIVITY IN GERMANY

To be specific, German agriculture was maintaining its production only with the aid of extensive fertilization of the soil, and forced feeding of livestock. Before the war, Germany imported 7,000,000 tons of hay, and 1,730,000 tons of oleaginous cakes for livestock feeding. She was using enormous quantities of nitrate and phosphate fertilizers, importing half of her supply of the former and two-fifths of the latter.‡ With the curtailment of imports which followed the outbreak of the war, the supply of these aids to agriculture was drastically reduced, and production fell off sharply. In other words, Germany's expanding urbanization had placed an increased burden upon her agricultural resources — so great a burden, in fact, that the law of diminishing pro-

* L. Guichard, *op. cit.*, pp. 286–294.
† *Statesmen's Year Book*, 1914, p. 890.
‡ L. Guichard, *op. cit.*, pp. 283 and 291.

ductivity was being approached if it had not already been reached. At any rate, agricultural output was being maintained only with the aid of elaborate supplementary measures, and when it was no longer possible to continue such measures, an immediate shortage supervened.

### DISTANT AND SPECIALIZED SOURCES OF SUPPLY IN GERMANY

AGAIN, Germany exhibited in a marked degree the effect of the tendency towards the development of distant sources of supply, and intensive specialization in production areas, under the operation of the law of comparative advantage. Germany imported many food elements — some of them from great distances — but produced a sufficiency and even a surplusage of others. In 1912, she was exporting rye, and raising her own potatoes, but was importing one-third of her total stock of wheat, a half of her barley, and over one-fourth of her oats. The acreage in wheat and barley had shrunk by 200,000 acres in the interval 1900–1912, but the acreage in potatoes had increased by 100,000 acres; in oats by 400,000 acres and in rye by 400,000 acres. The situation was even more unbalanced in the matter of animal products. Germany imported about one-tenth of all the meat consumed by her population, and — what eventually proved to be most disastrous — nearly two-thirds of all her requirements of animal fats, such as milk, butter, and lard.*

Two further facts illustrate the degree to which agricultural specialization had been carried by Germany. Sugar production had been increased from 211,000 tons per year in 1866–1870 to 2,116,000 tons in 1906–1910. And immediately before the war her potatoes amounted to nearly twice the gross weight of all the bread-grain crops combined.†

Thus, it is seen that in Germany the tendency of an urbanized society to specialize in agricultural production was well advanced. Some products were yielded in abundance close at hand; others had to be secured from a distance, some from a great distance. So long as her lines of communication functioned continously such an arrangement was emi-

* L. Guichard, *op. cit.*, pp. 290–291.

† J. H. Clapham, *The Economic Development of France and Germany*, 1815–1914, Cambridge 1921, p. 217.

nently satisfactory. It was indeed more efficient than a more balanced productive program would have been. *But once let any single thread in Germany's intricate network of communication be snapped,* and her whole supply system would be set awry. The World War snapped, not one, but many such threads, and chaos and suffering were the result. It must not be forgotten that Germany's own interior transport system, in addition to her external communications, was crippled by the war. Worn out rolling stock, loss of personnel, diversion of equipment for military purposes — all these reduced its efficiency.

### CITY VERSUS COUNTRYSIDE IN GERMANY

FINALLY, attention should be called to a point suggested in an earlier chapter, and implied in much that has been said here: the cities suffered under the blockade far more keenly than did the rural districts. Guichard puts the matter as follows:

> . . . the peasant, in spite of innumerable inspections and requisitions, succeeded in retaining for himself and his family a very large proportion of the harvest; and all the efforts of the Imperial Food Office to discover the hiding places where the peasants had hidden their sacks of potatoes were unsuccessful. . . It was the middle class citizens and the working class inhabitants of the industrial centers which felt the whole weight of the measures of restriction. The blockade, indeed, may be said to have borne with scandalous severity upon the town dweller and the inhabitant of the industrial West, as compared with the country dweller and the inhabitant of the agricultural East.* (See Chapter VII.)

In point of fact, the hostility between city and country over the food question became so acute that on one occasion, a Minister of Food who was aggressively trying to secure from the rural districts larger quantities of food for the urban districts was forced out of office by the representatives of the farmer. The food crisis thus served to throw into relief the latent and apparently fundamental cleavage between city and country in times of economic stress. In the

* L. Guichard, *op. cit.*, pp. 299–301.

final chapters this phase of urban-rural relationships will be treated at greater length.

The net import of this analysis of the service of supply of the urban community can be briefly summarized. The growth of the individual city and the expansion of urban society in general multiply the difficulties which the city must overcome before it can give its inhabitants what they need.

Its system of procurement and distribution becomes increasingly intricate. Its sources of supply become specialized and remote. Costs accumulate out of proportion to the supplies secured; so that the point must ultimately be reached where it is no longer economically practicable to permit further urban expansion. And, despite all of this — nay, partly because of it — the dependability of the whole system decreases as urban society grows. The highly urbanized society is always just around the corner from inconvenience, and, even as the history of the past generation all too plainly shows, from serious hardship.

## WASTE DISPOSAL IN THE CITY

THE importance in urban economy of adequate provision for the disposal of human and other residues has already been suggested. Three additional points may be noted. They are (1) the nature and magnitude of the task of waste disposal in the city; (2) its cost; and (3) its inter-urban and inter-regional aspects.

### THE NATURE AND MAGNITUDE OF THE TASK OF WASTE DISPOSAL IN THE CITY

THE waste products of which the city must dispose may be placed in five categories: (1) Sewage; (2) Street Wastes, including snow; (3) Garbage, including market refuse; (4) Ashes; (5) Rubbish. Each of these involves its own set of sanitary and technological problems, but they all possess one common characteristic; their disposition cannot be long neglected without causing the urban community serious inconvenience, and, in some cases, grave risk.

Sanitarians maintain that bubonic plague ("the plague"

of antiquity, of the Middle Ages, and of the modern Orient) owes its spread chiefly to the rats, mice, and vermin that flourish in a city whose kitchen and household wastes are not adequately removed and disposed of. In the sixth century "the plague" killed 5000 persons daily during an epidemic in the city of Constantinople, and in the seventeenth century, it was responsible for 69,000 deaths in London and for 180,000 in Milan.

### SEWAGE

A FAULTY sewage disposal system not only gives rise to offensive odors, unsightly sludge banks, and polluted beaches and water-ways,* but also entails serious consequences for the public health. The waters of New York Harbor are so impregnated with sewage that the normal dissolved oxygen is reduced by anywhere from 60 per cent to 87 per cent, and at times by 95 per cent to 100 per cent. In other words, there are parts of New York Harbor where sewage pollution occasionally is so great as completely to rob the water of its dissolved oxygen.

The water in New York Harbor is not potable; so that, except for its destruction of fish life and its infection of shell-fish, the pollution of its waters has no directly untoward effects on the healthfulness of the New York Metropolitan Region. Many urban communities are not similarly situated, however, and are forced to consume water that is polluted from their own wastage or that of other communities. In the absence of elaborate and costly filtration and purifying measures, such water is a constant source of infection. Occasionally it becomes a positive scourge.

* "At London the Thames — and its chief tributaries — were turned into open septic tanks, and the broader reaches of the river had their banks covered with accumulations of offensive mud which was exposed at Low Water, and in warm weather, under the influence of the sun gave forth exhalations of a most objectionable character.

"The Seine below Clichy at Paris was described by Dunbar as formerly 'a stream of black water, covered with grease, corks, hair, carcasses, and other filth,' with a gray sludge on the right bank giving rise to foul smelling islands." — Quoted from K. Allen, "The Sanitary Condition of New York Harbor" in H. M. Lewis and others, *op. cit.*, p. 54. See also p. 55.

The author remembers, as a small boy, being hustled over the bridge crossing the Chicago River, in order to escape the "terrible smells" bubbling up from the putrefying scum filming its sluggish waters.

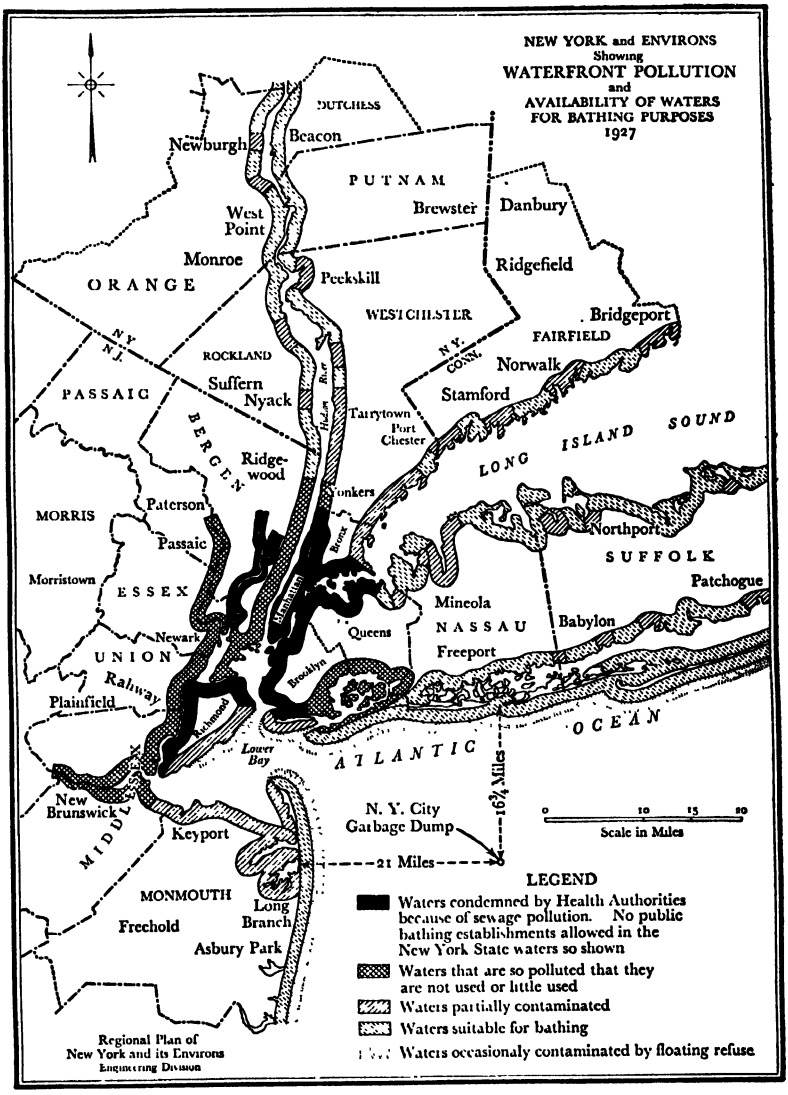



FIG. 25. HOW A CITY POLLUTES ITS OWN WATERFRONT

From H. M. Lewis, *Physical Conditions and Public Services*

The city of Cincinnati, Ohio, had a typhoid fever death rate of from 40 to 80 per 100,000 before it installed a water filtration plant and a modern system of sewage disposal. Following these two improvements, the rate fell to 7 per 100,000 and, when, in addition, the universal pasteurization of milk was required, it fell further to 3 per 100,000. In the fall of 1891, Asiatic cholera was introduced into the part of Hamburg which made use of the Elbe River both for its water supply and for sewage disposal. Cholera, like typhoid fever, is a sewage-borne disease, and within a few weeks after the outbreak of the plague, an epidemic was raging, which swept away nearly 9000 lives in the twin cities of Hamburg and Altona. Hamburg did not filter its wastes, while Altona did. The former had a cholera mortality of 134 per 1000 as against 21.3 for the latter.*

The volume of the sewage of a great city is astounding. In New York Harbor, in 1910, there were discharged 765,000,000 gallons daily. It is anticipated that this amount will rise to 1,719,000,000 gallons by 1940. In 1926, the sewerage system of Berlin included 4500 kilometers of underground channels, and disposed of 226,000,000 cubic meters of matter per year.†

### GARBAGE, ASHES, RUBBISH

DIFFICULT as it is, sewage disposal is immensely aided by the fact that the average flow of sewage is over 99 per cent liquid, and that it is amenable to about the same sort of treatment as water. The same is not true of ashes, garbage, and other forms of rubbish. They are mostly solid, and are, in the aggregate, enormously bulky. In the year 1925, the five boroughs of New York had to get rid of 15,302,900 cubic yards of garbage, ashes, and rubbish (ashes — 6,786,000; garbage — 2,074,000; rubbish — 6,443,000). Considerations of health and convenience to one side — no city can long continue to function unless some provision is made for removing this great quantity of waste matter. The primitive

* L. D. Upson, *op. cit.*, p. 491. See also F. G. Turneaure and H. L. Russell, *Public Water Supplies*, New York 1916, p. 196.

† H. M. Lewis and others, *op. cit.*, pp. 64 and 97. See also *L'Administration Locale* (No. 50) June 1929, p. 796.

nomad can, and does, pick up his dwelling and move, when his refuse heap grows too large. The city-dweller must get rid of it if he is to avoid having his activities literally swamped by his own left-overs and residues.

### THE COST OF WASTE DISPOSAL IN THE CITY

Two countervailing tendencies are to be noted in connection with the disposition of the city's sewage, garbage, and other residues. On the one hand, certain cost factors are increased by the expansion of city life, much as in the case of the supply services of the city. But, on the other hand, under present technological and managerial conditions, large-scale operations in these various activities are so great that the total unit-cost of waste disposal may be smaller in a large city than in a small one.

As just indicated, all of the city's residues are bulky and many of them are noxious and dangerous. They have either to be carried away to a considerable distance, or to be reduced and rendered unobjectionable. Sometimes, as in sewage disposal, both long-distance carriage and treatment are required. A very brief summary of the expedients that have been devised for freeing the city of its wastage will suffice to suggest the expense involved in such processes.

### SEWAGE

In those cities which do not have a water-borne sewage-disposal system, kitchen and general household drainage is usually allowed to soak into the ground or run down the streets. Human residues, however, are carried away, either directly, or through periodic cleanings of vaults and catch-basins. Gamble states that, in Peking, the "Fertilizer Guild," made up of the official collectors of night-soil, numbers 5000 men. Where a sewer system is in operation, as has been the case in many cities since several hundreds of years before Rome converted a brook into the *Cloaca Maxima*,* the sewage is generally conducted to some body of water. But some

* S. D. Gamble and J. S. Burgess, *Peking: A Social Survey*, New York 1921, p. 122. See also M. Merriam, *Elements of Sanitary Engineering* (4th Ed.), New York 1918, p. 140.

cities do not have such a body of water available, or, if they have, they dare not discharge their sewage into it without some form of treatment. For these purposes, sanitary engineers have devised a variety of expedients, including sewage irrigation works, screens, sedimentation tanks, filters, activated sludge tanks, and chemical treatment. All of these works are extensive and costly. A recently completed plant in Chicago, designed to serve the North Side area of that city, covers 97 acres. The proposed Ward's Island plant, intended to provide for a part of upper Manhattan Island and the Bronx, of New York City, will have an estimated cost of $18,500,000 exclusive of $12,500,000 which will be required for interceptors and tunnels to the island. Some sewage residue is utilized for fertilizer, but its value is slight, and there is seldom any income yielded by it.*

### GARBAGE

With garbage, the case is different. In some instances, garbage has been fed to hogs with considerable economic success. In others, it has been rendered into grease which has been sold for a substantial sum, when marketing conditions were favorable. Generally, however, it is buried, dumped in bodies of water (as is the case in New York), incinerated or chemically destroyed with no thought of financial return. The outlay required for collecting it and hauling it is also substantial. Upson † estimates that about 200 pounds of garbage are produced a year by each urban-dweller, and that the cost of its collection alone ranges from $200 to $800 a ton, "with a tendency towards the higher figure." A reduction plant costs about $2000 per ton of daily capacity and about $2.50 per ton for operation. Some revenue may be anticipated from grease and tankage. An incineration plant costs $1000 per ton of daily capacity and can be operated at about $2.25 a ton. It yields no revenue. A few moments with a pencil and paper will suffice to indicate the cost that is involved in garbage removal in a city of 50,000 or 100,000.

* *The American City* (Vol. XXXIX, No. 5), Nov. 1928, p. 7. See also H. M. Lewis, and others, *op. cit.*, p. 67.

† L. D. Upson, *op. cit.*, pp. 457–461.

### ASHES AND RUBBISH — SALVAGE

SIMILAR cost factors are involved in the removal of ashes and rubbish, except that their disposal is not so difficult. Ashes may be dumped, or even utilized as "fill," as is done extensively by Chicago in creating "made land" along its lake shore. Much rubbish can be burned fairly easily and the remainder dumped. Some of it can be salvaged and sold for substantial sums. The "Goodwill Industries" of Buffalo sold about $100,000 worth of salvaged materials during the year 1929. The following table, relating to the city of Baltimore, shows that, out of the 83,000 tons of refuse collected during the year 1928, sufficient paper, cloth, bottles, glass, and metal was reclaimed to yield a revenue of over $80,000.

TABLE LXVI

SUMMARY OF SALVAGE OPERATIONS, RUBBISH DISPOSAL PLANTS OF BALTIMORE, 1928 *

| *Article* | *Amount* | *Value* |
|---|---|---|
| Papers and Magazines | 14,172,203 lbs. | $40,903.05 |
| Rugs, Carpets, burlap, etc. | 833,306 lbs. | 14,260.23 |
| Bottles | 1,071,636 pieces | 7,459.88 |
| Broken glass | 2,990,756 lbs. | 5,573.94 |
| Baled tin cans | 10,218,290 lbs. | 8,644.00 |
| Iron, metals, rubber, etc. | 624,687 lbs. | 5,654.95 |
| *Total* | | $82,496.05 |

### DIMINISHING PRODUCTIVITY VERSUS ECONOMY OF LARGE-SCALE OPERATION

JUST as is in the city's services of supply, however, the trend of the costs of waste disposal is of chief significance. The law of diminishing productivity, or rather its alternative aspect, the law of increasing cost, applies with particular emphasis to this phase of urban economy. Since they all originate in the city, urban residues must be disposed of there, or at least their initial gathering and assembly must take place there. And, as repeatedly stated earlier in this work,

* From W. Viessman, "Reclaiming and Disposing of a City's Trash" in *The American City* (Vol. XLII, No. 1) Jan. 1930, p. 110.

the more thoroughly urbanized any area is, the more congested it is, and the less space there is which is available for this or any other set of functions. In short, the limiting factor in the removal of city wastes is area, and this is limited to the point of almost incredible crowding. At a single street intersection, 26 feet by 26 feet, in Philadelphia, the official city diagrams show the following sub-surface works:

> Nearest the north side of the intersection are the tubes of a telegraph company. Then toward the south come a gas-service main, another gas main, a water main, and an electric conduit. Next the plan shows a large egg-shaped sewer, another water-pipe, a second electric conduit, a third gas pipe, and a street-railway power conduit.
>
> In order from west to east there are, first, the pneumatic mail tubes, not now in use, then a city electric conduit for police and fire boxes, the conduit of a telephone company, a water main, a larger high-pressure fire-service main, and a larger sewer. These are followed by an electric conduit, an abandoned gas main, a street-railway power conduit, and another telephone conduit.*

Other additional and accumulating expense factors are related to the limited space available for waste removal. More and more elaborate measures of sewage treatment, of garbage incineration and the like, and more intensive utilization of existing plants are required.

> In the congested areas, where land had already reached high values before the necessity of treating the sewage arose, the difficulty of acquiring land and the possibility of creating a nuisance on adjoining highly developed property has complicated the problem. Modern methods of fine screening offer considerable advantage over tank treatment under such conditions, provided that they will furnish an affluent satisfactory for the particular location.†

In Baltimore, it was found impossible to secure rentable sites for the three additional rubbish incinerator plants called for by the expansion of the city. Instead, one additional plant was acquired, and the existing one enlarged and put on a 24-hour schedule.‡ Possibly no loss in efficiency and increase in cost was involved in this particular expedient,

* *The American City* (Vol. XXXIX, No. 2), Aug. 1928, p. 11.

† H. M. Lewis and others, *op. cit.*, p. 62.

‡ W. Viessman, "Reclaiming and Disposing of a City's Trash" in *The American City* (Vol. XLII, No. 1), Jan. 1930, p. 109.

but it is clear that additional intensity of utilization of this plant could not long continue before the point of diminishing productivity and consequent increasing costs would be reached.

Where it is necessary to carry the city's garbage, sewage, etc., away from the congested area before finally disposing of them, the length of haul and the costs incident thereto increase directly as the city grows in size. The great city has to send for hundreds and even thousands of miles for its required food, and it has to carry the residues left by those foods for many miles before it is rid of them. New York City ships its garbage 20 miles out to sea, and is under constant pressure from neighboring communities to carry it still further out. It is an interesting commentary upon the life of the city that the traveler on an incoming transatlantic liner may have, as one of the first harbingers of his approach to land, the sight — and smell — of a string of New York City garbage scows.

All of the cost factors in waste-disposal are not, however, increased by the expansion of the city. In certain respects, unit costs *decrease* as the city increases. This circumstance is related to the element of diminishing costs incidental to large-scale enterprises, to which reference has already been made. It has been seen that in connection with the city's supply services these economies are largely offset by the increase in transportation costs as the city grows in size and is forced to seek farther and farther afield for its requirements. The situation is not the same with waste disposal, however, for the transportation factor, although important, nevertheless constitutes a proportionately smaller share of the total cost of waste disposal than of supply procurement. It may be necessary to convey garbage, refuse, or sewage a dozen or a score of miles, but food, water, or fuel may have to be transported for hundreds or even thousands of miles. Consequently, the economies of large-scale operations exert a very significant influence upon many waste-disposal activities, particularly at present when the introduction of machine processes creates very favorable conditions for such economies.

Nevertheless, it seems likely that — barring the continuation of revolutionary changes in technique and management — a point in urban expansion must eventually be reached when the economies of large-scale operation of a city's waste-disposal enterprises begin to be offset by the increasing costs inhering in the unwieldiness of very large enterprises, and in the difficulty of giving them adequate management.

### INTERURBAN AND INTER-REGIONAL ASPECTS OF WASTE DISPOSAL

IN THE preceding section, incidental reference was made to the possible effect of the removal of one city's waste products upon another city. Sewage discharges may pollute the water supply of another community; a garbage disposal plant may constitute a nuisance for the community near which it is located; refuse dumped in a river or in open water may ruin bathing beaches and shore property in communities a dozen miles away. In this connection mention may be made of the municipal piggery by means of which Buffalo disposed of its garbage. It was closed by a court order following a lawsuit brought by the town of Cheektowaga, in which the piggery was located. A few years later, Buffalo took action against Cheektowaga for polluting with its sewage the waters of Scajacadwa Creek which flows through the former city and supplies the water for a large lake in its principal park.

Considerations such as these force urban communities to act together in the matter of waste-disposal, and also induce larger territorial units to interpose their authority between the conflicting claims of different cities. For example, in the West Riding district of Yorkshire, England, a joint board representing a number of local authorities operates 413 separate sewage disposal plants. Moreover, the National Ministry of Health exercises important regulatory powers over the sewerage projects of these, as well as of other local bodies in England.*

Similarly, inter-community and inter-state co-operation in regard to waste-disposal has proceeded at a rapid pace in the United States during the past decade. In 1922, the health departments of the States of Pennsylvania and New Jersey

* G. W. Fuller and J. R. McClintock, *op. cit.*, p. 30; W. B. Munro, *The Government of European Cities* (Rev. Ed.), New York 1927.

inaugurated a co-operative agreement for the control of stream pollution, and in 1925 a similar agreement was consummated by New York and Pennsylvania. In the same year, after being prompted by the United States Surgeon General, most of the states in the Ohio River basin, including New York, in collaboration with representatives of industrial plants in the same area, entered into an agreement for the control of stream pollution by industrial wastes. Within less than three years the number of plants discharging phenol wastes into streams had been reduced from 21 to 1.*

There are other forms of civic activity which often involve inter-community co-operation and the interposition of central governmental agencies. The procurement of a water supply is one such activity. At times, indeed, the claims of various urban communities upon certain bodies of water in the United States are so numerous and so conflicting that resort has been had to the Federal Government. For example, the diversion by the Chicago Sanitary District of large quantities of water, for the purpose of disposing of its sewage *via* the Des Plaines, Illinois, and Mississippi Rivers has been drastically curtailed by a United States Supreme Court order, following complaints by representatives of states bordering on the Great Lakes, and of Canada.

In the next chapter attention is called to other ways in which central governments tend to participate in urban administration.

* C. A. Holmquist, "Discussion of the Manual of Water Works Practice" in *Journal of the American Water Works Association* (Vol. XIX) 1928, p. 430.

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# CHAPTER XII

## *THE ECONOMY OF CITY LIFE* (Continued) — *PUBLIC UTILITIES — PUBLIC SERVICES — GOVERNMENT AND ADMINISTRATION*

### PUBLIC UTILITIES AND PUBLIC SERVICES

MOST OF the waste-disposing functions of the city are carried on by the public authority, and are, accordingly, classifiable as public services. Some of the city's supply services, such as the provision of water, are occasionally operated as private enterprises endowed with public functions, and are therefore regarded as public utilities. The related groups of functions represented by public utilities and public service extend far beyond the bounds of the city's supply and waste-disposal undertakings. Their especial significance to the urban community does not, moreover, relate to the material basis of city life as do the supply and waste-disposal functions, but rather to its economic, political, and administrative aspects.

#### DEFINITIONS

THERE are many points of difference between a public utility and a public service. Public services are those enterprises that are governmentally administered, usually as public monopolies. Public utilities, on the other hand, are economic enterprises administered by private interests, but under governmental authorization and under governmentally-fixed conditions.

Yet these two types of activity have many important characteristics in common. They are, in legal parlance, " affected

with a public interest." As Mulert puts it, they have "a capital importance from the economic viewpoint as well as from the viewpoint of the mass of the public." * Moreover, any single enterprise or type of enterprise may slip from one to another category without materially altering the nature of their services. Witness the way in which electric power plants in a given community may pass from private to public ownership and *vice versa* without materially affecting their operations.

The ease with which the public utility may move from private to public ownership suggests the one characteristic of public utilities and public services that is of greatest moment for the purposes of this discussion — the tendency towards the increase in public control over economic enterprise in an urbanized society.

### URBANISM AND THE EXTENSION OF PUBLIC OWNERSHIP AND OF PUBLIC CONTROL OF ECONOMIC ACTIVITIES

THE two principal ways in which the public interest makes itself felt in economic enterprise have already been indicated. They are, *first,* direct public operation, and, *second,* public regulation. A *third* type of public intervention that has recently received attention is public participation in what are known in Europe as *mixed undertakings.* In some cases, the principal motivation for such enterprises appears to be the utilization of the public authority's taxing and borrowing powers for the raising of capital. In other cases, the chief objective seems to be the combining of the economies and other advantages of private enterprise along with the safeguarding of the public interest. Most characterizes the mixed economic undertaking as "the conversion of the public enterprise into the form of a private corporation." †

These mixed economic undertakings assume two general forms: (1) investment by a city or a group of cities in a private corporation, and (2) delegation of the management

* O. Mulert, *L'Activité Économique des Communes dans les Divers Pays* (IV^e^ Congrès Internationale des Villes et Pouvoirs Locaux — Vol. II), Brussels 1929, p. iv.

† O. Most, "Zur Frage der Kommunalisierung" in P. Mitzlaff and E. O. Stein, *Die Zukunftsausgaben der deutschen Städte,* Berlin 1925, p. 931. See also H. Lindemann, "Kommunalisierung und Entkommunalisierung" and F. Elsas, "Gemischtwirtschaftliche Unternehmungen" in the same volume.

of a municipally-owned enterprise to a private corporation, or to a managing group representative of both public and private interests. An example of the first form of mixed enterprise is the corporation for the establishment of underground public garages in the city of Paris. The city contributes 40 per cent of the capital stock, and shares proportionately in the profits of the undertaking, besides having certain special privileges as an original underwriter of the project.* The so-called "dual system contracts" between New York City and the Interborough Rapid Transit Company and the New York Municipal Railway Company for the construction and operation of subways are of a somewhat similar nature.† The second type of mixed undertaking is exemplified by the German Gas Association (*Deutsche Gasgesellschaft*) of Berlin. Its total capitalization is 82,750,000 marks, of which the two suburbs of Wilmersdorf and Schöneberg and three smaller communities have contributed 68,250,000 marks. The remainder is furnished by a private gas company, whose properties are included in the combined organization. These various interests have organized a holding company (*Besitzgesellschaft*) and have entered into a management agreement with a separate operating company (*Betriebsgesellschaft*) which is a purely private enterprise. It is worth noting that five separate governmental units are linked together in this project. In fact, the German Association of Cities (*Deutscher Städtetag*) has called attention to the peculiar advantages that an enterprise of this sort has in a situation where a number of communities desire to participate jointly in an economic undertaking.‡

It is necessary only to observe contemporary society to note the degree to which the spread of urbanization goes hand in hand with the extension of public control over economic activity.

* F. Felix, "Les Enterprises ou Services municipaux et intermunicipaux de nature mixte en France" in *L'Administration Locale* (No. 53), January–March 1930, pp. 938–965.

† M. G. Glaeser, *Outlines of Public Utility Economics* (Land Economic Series), New York 1927, p. 689.

‡ H. Lindemann, *op. cit.*, p. 912. Also F. Elsas, *op. cit.*, p. 933.

THE UNITED STATES

THE rise of the American city has been paralleled by a steady increase in the degree of control exercised by municipal, state, and federal governmental agencies over public utilities, and in the number and scope of the economic activities carried on directly by municipal bodies.

Prior to the later decades of the nineteenth century, effective control of urban utilities was virtually non-existent. Franchises were loosely drawn, were granted for long terms, or in perpetuity, and were indifferently observed. Regulatory bodies were ineffective, and their activities were strictly limited by statutory and judicial regulations. Public opinion was apathetic and ill-informed. Since that time a revolutionary change has taken place. Franchises are carefully drawn and generally are limited in term or are indeterminate. Recently they have included provisions for public recapture at expiration. Sporadic and usually ineffective local control has been replaced by state and federal control which, while less effective than many sections of the public demand, nevertheless represents a far more extensive degree of control over rates, service, labor conditions, etc., than would have been considered administratively or legally possible a generation ago. The public interest is aroused to such a pitch that the control of public utilities, the decisions of commissions and of courts on rate cases, the pros and cons of public ownership — all these provide front-page news stories and burning campaign issues.

In common with other public utility companies throughout the country [complains the president of a great public utility holding company] Federal Agents and State Investigators have spent months making examinations of our books. We have been required to answer numerous questionnaires seeking information on every phase and detail, material or immaterial, of utility management and operation. Our officers and employees have been interviewed both privately and on the witness stand. Contracts and papers in which the public could have no conceivable interest [sic] have been demanded and any unwillingness on the part of the management to produce them has at times been met with suspicion and the unwarranted assumption that the company had something to conceal.

However — the directors and officers have endeavored — wherever possible — to co-operate with those having such investigations in charge even though literally months of the valuable time of the officers and employees have been consumed in the process.*

There has been a substantial although by no means spectacular increase in the public operation of municipal services as urbanization in the United States has progressed. In 1915, out of 4440 communities having waterworks 30.15 owned their own plants. In 1920, of the cities with 30,000 or more population 77.5% owned their water-supply systems. In 1902, there were only 815 municipal electric light plants in this country, as compared with 2805 privately-owned plants. By 1917, the number of municipally-owned plants had risen to 2318, as compared with 4224 privately-owned plants. The kilowatt capacity of the privately-owned plants had, however, increased more rapidly than that of the publicly-owned systems — partly because the latter devote relatively little attention to the industrial uses of electricity.†

Relatively few street railways and gas plants are publicly owned but it is significant that some of the most conspicuous accessions to municipal ownership in these fields have come in recent years. Thus San Francisco took over a street railway in 1912, Seattle in 1919, Ashtabula in 1922, and Detroit in 1923.‡ The state and national elections of 1930 were interpreted by some observers as indicating a shift in popular sentiment towards public ownership and control of public utilities. In most cases where a clear-cut campaign issue was made on this question, candidates favoring the extension of public ownership and control were elected. At the same time, there has been a rising tide of protest against such an extension of governmental functions, particularly those based on the blighting effect of "politics" upon economic activity. It is interesting to observe here the same

* *Annual Report of Associated Gas and Electric Company for the Year Ended December* 31, 1929, Ithaca 1930, p. 20. See also M. G. Glaeser, *op. cit.*, Chaps. II, III, VII, VIII, IX, X, XI, XII, XIII, and XXI; also W. B. Munro, *op. cit.*, Chaps. XLI and XLII.

† M. G. Glaeser, *op. cit.*, pp. 50 and 686, and W. B. Munro, *Principles and Methods of Municipal Administration*, New York 1916, p. 420.

‡ W. B. Munro, *op. cit.*, p. 421; M. G. Glaeser, *op. cit.*, p. 687.

sort of cleavage in popular opinion and in economic change as is described later in this chapter. Alarm is already being exhibited concerning the political and economic disadvantages that often are associated with governmental encroachment upon economic activity. At the same time, for better or worse, public opinion and economic pressure seem to be operating towards the continuation of this encroachment.

### EUROPE

In the cities of Europe, public operation and control of economic activities are carried to a far higher degree than in the United States. It may be that the longer experience of Europe with city life is in large measure responsible for this difference. Mulert, at any rate, calls attention to the widespread public participation in business enterprise in those districts where the influence of medieval city life is the strongest, that is to say, where city life is long-established.*

Not only are the public utilities of European cities (such as water-supply, gas, electricity, and rapid transit) under public control to a far greater extent than in this country, but many other forms of economic enterprise are taken over in whole or in part by the public authorities. They include housing; the sale of food, including restaurants; funeral services; laundries; abattoirs, banks, loan funds, and insurance; and theaters, including moving pictures.

Table LXVII serves to give some idea of the variety and extent of the economic activities that are carried on directly by public authorities, or by public authorities in collaboration with private enterprise, in one country — Germany.

### THE EXAMPLE OF HOUSING

Special interest attaches to the recent development of publicly-supported housing projects in Europe, since the motives underlying this new departure cast light upon the factors controlling the extension of governmental intervention in economic enterprises in the city. Since the World War virtually every European city has experienced an acute housing shortage — *La Crise du Logement,* in the words of Sellier.

* O. Mulert, *op. cit.*, p. ii and *passim.*

## TABLE LXVII

### Publicly-Owned and Mixed Public and Private Enterprises in 159 German Cities — 1920 *

| *Type of Enterprise* | *Number of Cities* | *Per cent of Cities* | *Number of Establishments* |
|---|---|---|---|
| Transportation | | | |
| Street Railways | 82 | 51.6 | 106 |
| Motor Buses | 32 | 20.1 | 63 |
| Carting and Trucking | 12 | 7.5 | 13 |
| Harbor works | 57 | 35.9 | 295 |
| Water, Gas, Electricity | | | |
| Water | 151 | 95.0 | 159 |
| Gas | 146 | 91.8 | 153 |
| Electricity | 136 | 85.5 | 152 |
| Waste Disposal | | | |
| Drainage | 139 | 87.4 | 141 |
| Sewage | 138 | 86.8 | 229 |
| Industrial Waste | 121 | 76.1 | 121 |
| Salvage | 21 | 13.2 | 22 |
| House Wrecking | 41 | 25.8 | 41 |
| Necessities of Life | | | |
| Food Supply | 89 | 56.0 | 229 |
| Fodder Supply | 30 | 18.7 | 40 |
| Assistance in Procuring Food | 61 | 38.4 | 61 |
| Workshops | 84 | 52.8 | 302 |
| Abattoirs | 136 | 85.5 | 143 |
| Health Activities | | | |
| Warm Baths | 107 | 67.3 | 253 |
| River Baths | 106 | 66.7 | 211 |
| Disinfection | 127 | 79.9 | 131 |
| Cemeteries | 106 | 66.7 | 318 |
| Undertaking | 46 | 28.9 | 50 |
| Pharmacies | 20 | 12.6 | 28 |
| Housekeeping Aids | | | |
| Fuel | 71 | 44.7 | 79 |
| Clothing | 61 | 38.4 | 64 |
| Furniture | 26 | 16.4 | 27 |
| Notice Posting | 84 | 52.8 | 84 |
| House Construction | 91 | 57.2 | 254 |
| Home Registration Agencies | 118 | 74.2 | 127 |
| Employment | | | |
| Agencies (Servants) | 123 | 77.4 | 135 |
| Banking and Miscellaneous | | | |
| Savings Banks | 147 | 92.5 | 157 |
| Deposit Banks | 57 | 35.9 | 67 |
| Theaters | 83 | 52.2 | 96 |
| Moving Picture Theater | 10 | 6.3 | 10 |
| Legal Aid | 83 | 52.3 | 88 |
| Chimney Cleaning | 1 | 0.6 | 1 |
| Miscellaneous | 72 | 45.3 | 182 |

* From F. Elsas, "Gemischtswirtschaftliche Unternehmungen" in P. Mitzlaff and E. O. Stein, *Die Zukunftsausgaben der deutschen Städte*, Berlin 1925, p. 938.

The fundamental situation in each country has been essentially the same — the costs of building, including taxation and the cost of the provision of capital, have become so high that it has been economically inexpedient to construct habitations within the reach of the lower-income economic groups. For example, Sellier, writing in 1921, calculated that the most simple three-room apartment, if constructed after the war, could not be rented for less than 3450 francs per year by a private builder obtaining his capital through ordinary channels, and paying the regular taxes, while the average worker could not possibly pay more than 1500 francs. He concludes: "The investment of private capital in new construction is impossible, and will remain so until costs have been reduced by 60 per cent." * The devices which have been adopted in various parts of Europe for relieving this crisis vary considerably. In England, the central government has loaned money at low rates of interest to municipalities and to various co-operative associations. In France, also, public funds have been made available in the same fashion, but in addition, governmental agencies have been established, of which the most extensive is *L'Office Public d'Habitations à Bon Marche du Departement de la Seine,* which has been organized and administered by Sellier. This office has constructed eight "*cités jardins*" in the suburbs of Paris. The most extensive public housing enterprises have been constructed in Vienna, where public funds have been used to aid in the building of enormous collective dwellings, each one of which has its own gardens, playgrounds, kindergartens, and gymnasiums.†

### THE ANCIENT WORLD

THE ancient world, particularly the Roman Empire, experienced a similar linking-up of urban growth and the expansion of public participation in economic activity. Under the Republic no less than in the Principate and the early Empire cities grew apace. Cities were, in fact, consciously established

* H. Sellier, *La Crise du Logement*, Paris 1921, pp. 168–169. See also *Ibid.*, "L'Effort Française pour l'Habitation Populaire" in *L'Illustration*, March 30, 1929.

† *L'Administration Locale* (No. 53) January–March 1920, p. 76. See also O. Mulert, *op. cit.*, pp. 38–56; also *Das Neue Wien*, Vienna 1826–1927, Vol. I.

and sedulously encouraged, for the administration and prosperity of the whole Roman structure rested on its cities. Indeed, the Roman state was, in essence "an aggregate of locally self-governing communities." * For a while it was a singularly peaceful and flourishing urban society.

"The world," wrote Tertullian, "is every day better known, better cultivated, and more civilized than before. Everywhere roads are traced, every district is known, every country opened to commerce. Smiling fields have invaded the forests; flocks and herds have routed the wild beasts; the very sands are sown; the rocks are broken up; the marshes drained. There are now as many cities as there were formerly cottages. . . Wherever there is a trace of life, there are houses, human habitations, and well-ordered governments." While the rhetorical exaggeration of this panegyric of the Roman world under Aurelius may be readily discounted, and exceptions to the general happiness and content may be granted, the prosperity of the empire is everywhere apparent. In the long era of peace, trade and commerce developed unhindered, and agricultural or industrial communities were free from the wastage of foreign wars and internal strife. Municipal institutions spread far and wide until the empire became in great part an aggregate of city-states.†

In the midst of this golden age of urbanism, the public authority began to take over the control of various economic activities. The emperors undertook to organize certain essential trades into "colleges or guilds; exacted public services from them; and gave them a quasi-official status. Before the end of the third century, the state, with the object of maintaining organized industry and commerce, placed upon the various colleges in Rome and in the municipalities the burden of maintaining the work of these corporations; a burden which soon came also to be laid upon the individual members thereof." ‡ Diocletian and his successors caused the process of nationalization and municipalization to go further. The members of the more necessary trades, e.g. transportation, baking, cloth-making, were practically impressed into the public service. They were not permitted to leave their

* A. E. R. Boak, *A History of Rome to* 565 A.D. (Rev. Ed.) New York 1929, pp. 305 and 308.

† F. F. Abbott and A. C. Johnson, *Municipal Administration in the Roman Empire*, Princeton 1926, p. 197. The quotation is from Tertullian: *De Anima*, 30.

‡ A. E. R. Boak, *op. cit.*, p. 310.

trades, and their children were forced to follow in their footsteps. A curious by-product of this was the effort of members of the trading and craftsman classes to avoid the obligations attached to their professions. They tried to evade the burden of their callings by "escaping" into the army, the clergy, or the bureaucracy. They even ran away into the wilderness. Rostovtsev poignantly exclaims, "Under Diocletian and after him, the empire did indeed establish equality among most of its subjects in the sense that all alike were beggars and slaves." *

Rostovtsev's remark is given point by the fact that the public authority was extended not only over urban trade and manufacture, but over agriculture. Landholding became a virtually compulsory obligation, devolving upon certain hereditary classes, and was used as an instrumentality for the payment of taxes, and for performing various services. Only the very powerful and wealthy were able to escape, in part, the obligations involved in land ownership. As for the agricultural workers, they gradually regressed from the status of small-holders and tenants to serfs.

The last days of the Roman Empire thus presented the curious spectacle of a state in which virtually an entire population — high and low, rich and poor, bond and free, farmer, craftsman, trader, merchant, soldier, and magistrate — was enrolled as servants of the city or of the Empire.

It is not suggested that this process is to be related exclusively to the urbanization of the ancient world. Nevertheless, it accompanied and followed the most rapid and widespread expansion of city life that the world has known until the past 150 years, and must to a considerable degree have been significantly correlated with it.

### FACTORS UNDERLYING THE EXTENSION OF GOVERNMENTAL PARTICIPATION IN ECONOMIC ACTIVITY IN AN URBANIZED SOCIETY

To ACCOUNT for this correlation between urban expansion and the increase of governmental encroachment upon pri-

* M. I. Rostovtsev, *A History of the Ancient World* (English Translation) Vol. II, p. 331. See also A. E. R. Boak, *op. cit.*, pp. 370–375, and F. F. Abbott and A. C. Johnson, *op. cit.*, Chap. XIV.

vate economic enterprise is not easy. The correlation may be purely fortuitous. For example, the experience of the Roman Empire may, as Boak implies, merely represent the efforts of an inefficient military autocracy on the one hand, to achieve personal aggrandizement, and, on the other hand, to bolster up a disintegrating social system.* And it may be that the present-day tendency towards public ownership and control is essentially related to the efforts of the community to recapture the highly concentrated wealth and power which has accompanied the rise of industrialist capitalism.

### ECONOMIC FACTORS

ANOTHER explanation offers itself, however. It is implied in much of what has appeared in this chapter. It has been seen that increased urbanization makes certain features of urban economy progressively more costly and less dependable. It has also been seen that the urban-dweller is almost completely dependent for the bare necessities of life upon the facilities for transporting these commodities to the city and for distributing them therein. For these two motives, therefore — (1) to insure the continuous operation of essential public services and (2) to procure these services at rates which he can afford — the city-dweller comes to demand that they be put under the control of the public authority or directly operated by it. (3) Finally it has been seen that certain economic advantages attach to public ownership and control, such as the use of the taxing power and the public credit for the raising of capital; the granting of exclusive franchises; and the representation of the public interest in the fixing of prices, and the giving of service.

### POLITICAL FACTORS

ANOTHER motive for public ownership or control is the fact (4) that it permits the use of the state's police powers to insure the adequacy and security of necessary public services. Powers of eminent domain may be invoked to secure reservoir or power sites. More or less openly coercive measures may be used to procure labor and materials for the maintaining

* A. E. R. Boak, pp. 297–298 and pp. 373–375.

of public services: witness the governmental control of the transport guilds in ancient Rome; and the limitation of the right to strike of railway employees in modern society. In a word, the whole power — economic and coercive — of the city or of the state of which it is a part, can be called upon to guarantee the efficient operation of those economic activities which are considered essential to the comfort and welfare of the city-dweller and, to a lesser degree, of the country-dweller in an urbanized society.

### OFFSETTING DISADVANTAGES OF GOVERNMENT CONTROL OF PUBLIC SERVICE

WITHOUT doubt there are serious drawbacks to the extension of governmental participation in economic enterprise. They include the inflexibility and unwieldiness of bureaucratic control. They include also the confusion of economic with political concerns, and the consequent injury of both. They include finally arbitrariness, corruption, and extortion by office-holders, high and low. In the long run, as is suggested in the final chapters of this work, these drawbacks may go a long way towards canceling the advantages of governmental operation and direction of economic undertakings. Certainly they can nullify most of the purely fiscal economies. Nevertheless, the advantages to be derived from the placing of the collective weight of the whole urban society — as exemplified by its government — behind those economic functions which are considered necessary, make it seem likely that the extension of governmental activity into the sphere of economic enterprise will continue as urban expansion goes on. This policy is rooted in the growing imperativeness of the continued operation of such enterprises in such a society — their economical and continued operation if possible, but their continued operation at any cost.*

## GOVERNMENT AND ADMINISTRATION

GENERALLY speaking, the discussion of city government lies outside the scope of this work, belonging rather to the field of political science. It is nevertheless impossible entirely to

* See M. G. Glaeser, *op. cit.*, pp. 80–86.

exclude the administration of city life from a discussion of urban sociology. Not only are many vital functions of the city bound up with public administration, but there are a number of ways in which the whole process of urban life is influenced by the political and administrative concomitants of city government. With these latter this portion of the discussion is concerned. There is at least one way in which city life as a whole is affected by government and administration. It is *the encroachment of centralized administrative and governmental bodies upon the control of city life.*

### CENTRALIZED ENCROACHMENT UPON LOCAL GOVERNMENT AND ADMINISTRATION

URBANIZATION means centralization. Thus briefly may be epitomized one of the most widely significant administrative and political correlatives of city life. It is true that, in its initial phases, an urban society produces a relatively autonomous city government. This was the case with the city-states of the Hellenic world; the free cities of the Medieval period, and, in a diminishing degree, the cities of the United States. Nevertheless, when city life expands so as to involve the urbanization of an entire society, then the pendulum swings the other way, and a steady process of centralized control over the individual city commences.

### IN EUROPE

THERE are many ways in which this process may be noted. The most obvious is the much more extensive development of administrative centralization in Europe, which has known city life for centuries, than in America, where the frontier is still a vivid memory, and where a predominantly urban type of society has only just emerged. France, Belgium, Germany, Italy, England — in all these countries central administrative control is carried to a point that would be considered intolerable in most American communities. Wallace asserts that the official of a French commune on one occasion had to wait two years before he could procure permission from Paris to purchase a box of pins. Munro says

that in pre-Republican Germany, the central government dictated to the city of Berlin the place where public monuments, paid for by the city, were to be erected.* The chairman of a rural school board in England once confided to the author that he had paid for a new water-bucket out of his own pocket, rather than wait for authorization from London. These are extreme examples, but they arise out of a situation in which a very wide degree of central administrative control over local government has been developed.

It is particularly noteworthy that centralized control has in recent years gone forward rapidly in England, which has a strong tradition of local autonomy. Authoritative control, of the sort that is found in France, is relatively rare, it is true, but indirect control through "advice," through inspection and reporting, and through grants-in-aid has gone a long way towards bringing local administration into conformity with the standards of central authorities.†

### IN THE UNITED STATES

WHEN the attention is turned to the United States, it is found that administrative centralization has proceeded apace, and, taking the country as a whole, has accompanied urbanization. The situation is obscured by the fact that the "home-rule" movement has to some degree emancipated the city from one type of central interference — special legislative enactments. While this is true, nevertheless a steady encroachment on the part of both federal and state authorities has proceeded over many departments of local self-administration. Only occasionally is there a frontal assault upon the powers of the municipality — as in the Prohibition Amendment. More often, the English practices of setting down general rules, of requiring reports and making inspections, and of giving of grants-in-aid with administrative strings attached, are followed.

* S. C. Wallace, *State Administrative Supervision over Cities in the United States*, (Studies in History, Economics, and Public Law, No. 304), New York 1928, p. 12. See also W. B. Munro, *Municipal Government and Administration*, New York 1923, Vol. I, p. 163.

† S. C. Wallace, *op. cit.*, pp. 24–35.

Whatever the form of control, its substance is considerable. In thirty-five states local tax assessments are subject to review and equalization. Thirty-five states have state inspection and auditing of municipal accounts. Forty-four states permit their health officers entirely to supersede the local authorities when they consider such action necessary. Thirty-one states require certified approval of all plans for the construction of local water-supply systems. An equal number have a similar provision concerning sewage disposal works. Central control over education has gone ahead by leaps and bounds. Forty-four states require state examination and certification of all school teachers. In more than thirty states, the state departments of education prescribe the courses of study for local schools. In about half of the states of this country municipally-owned public utilities fall under some form of state supervision. Further illustrations of the centralizing tendencies in American municipal administration could readily be adduced. The existence of the tendency cannot be doubted.*

### IN THE ROMAN EMPIRE

One further example may be given — that of the Roman Empire. It has already been seen that the history of the later Empire was in large measure the history of the supersession of private by public enterprise. It was also the history of the displacement of local by central administration. Rome was, in its inception, a city-state. As the Empire developed, it became, in the words of Abbott and Johnson, "an aggregate of city states." † The formal status of these cities varied (*Colonia, Municipia, Civitates, Fœderata, Civitates liberae et immunes,* etc.), and there were important individual differences in their original constitutions. But administrative developments, on the one hand, and senatorial and imperial enactments, on the other, eventually brought about an approximate equivalence between them. Rome itself eventually sank to the level of a member-city of the Empire, as the power of its own civic institutions declined

* S. C. Wallace, *op. cit.*, Chap. IX, *passim.*
† F. F. Abbott and A. C. Johnson., *op cit.*, pp. 185 and 197.

before the growing ascendancy of the Emperors. Although all the cities of the Empire were, in a sense, subject communities, they had, nevertheless, a large measure of freedom and independence.

But, after the first century of the Empire, the situation rapidly and steadily altered so that, by the time of Diocletian, the city had become little more than an administrative segment in a vast bureaucracy.

The manner in which this transformation took place is illuminating. (1) Many of the cities conquered by Rome had already lost a large measure of independence, particularly in that they paid tribute and were subject to a certain degree of bureaucratic oversight. This was especially the case in Egypt, Sicily, and Asia Minor. Moreover, many of the administrative devices which the Roman conquerors took over in these regions came eventually to be followed throughout the Empire. (2) The Roman administrators found that the city constituted a convenient local unit for administration and for the collection of revenue. Indeed they deliberately fostered the growth of cities, Pompey being credited by Plutarch with the founding of thirty-nine. (3) The central government found, or at least believed, itself forced time and again to interpose itself in municipal affairs for the sake of good government and fiscal security. Extravagance, inefficiency, and graft appear to have been no less familiar in Rome and Nicea and Fidena than in New York, Chicago, or San Francisco. Magoffin and Davis describe the excavations of a temple in the city of Rome, in which the outer courses of stone were found to be "tied" together with copper, but in which the inner courses were left unsecured, although the stones were provided with slots for the purpose. Evidently, a local contractor had "skimped" the specifications and given a "rake-off" to the proper officials, quite in the modern manner. Abbott and Johnson describe Pliny's perplexities in discovering that the city of Nicea had spent 10,000,000 sesterces (about $500,000) for a structurally defective theater; and they quote the account in Tacitus of "Atilius of Fidena, who gave a gladiatorial show from motives of sordid gain, when, by the col-

lapse of the flimsy stands which he had erected, fifty thousand people were killed or injured." *

At first, the central government interfered only in exceptional circumstances, as when Pliny, who was a provincial governor, ordered the Niceans to stop work on their rickety theater. Later, a regular régime of supervision, of inspection, and eventually of complete direct administration was established. The titles of some of the functionaries who came into being are highly significant for they show that — at least in the first instance — they were not so much concerned with the aggrandizement of power as with the securing of administrative competency. Thus, the *curator rei publicae,* was "a regular official for managing those communities whose internal officers had become so entangled that the local authorities were incapable of solving their problems" — a sort of public receiver, in fact. The *corrector* had similar, but broader powers. Finally, the *defensor civitatis* "was especially charged with the protection of the lower orders against illegal taxation and other abuses." By the fifth century *"he appears to have exercised the sole authority in many cities."* †

### FACTORS UNDERLYING CENTRAL ENCROACHMENT IN LOCAL GOVERNMENT

It is easier to describe the correlative relation between the progress of urbanization and centralized authority over the control of city life than it is to account for this phenomenon. There seem, however, to be four other phenomena that are associated with it, and to be in some sense causally related with it. They are (1) the merging of the interests of the city with those of other cities and of the country at large; (2) the rise of the state, whether national or imperial; (3) the overshadowing of political interests by those which are mainly administrative, economic, and technological; and (4) the lack of administrative competence in the locally selected and controlled city government.

* R. V. D. Magoffin and E. C. Davis, *The Magic Spades: the Romance of Archæology,* New York 1929, p. 29. See also F. F. Abbott and A. C. Johnson, *op. cit.,* pp. 150 and 187.

† Italics not in original. F. F. Abbott and A. C. Johnson, *op. cit.,* pp. 93, 188, 201.

MERGING OF THE INTERESTS OF THE CITY WITH THOSE OF OTHER CITIES AND OF THE COUNTRY AT LARGE

THE merging of the interests of the city with those of other cities and with larger territorial units has already been noted in the discussion of the city's functions of supply and waste-disposal. Many other municipal functions carry their influence beyond the borders of particular municipalities. Fire prevention and fire-fighting; crime prevention and criminal administration; the construction of roads; education; public health supervision * — all of these are clothed with more than a local interest. This is particularly true in densely-urbanized areas, where the boundaries of one urban community and its surrounding area often intersect those of another.

There is no need to examine at length the influences underlying this interlocked relationship of urban functions. They arise logically out of the nature of the functions themselves, and out of the characteristics of urbanization, especially of extensively-urbanized areas. It may be proper, however, to call attention to the rôle played by transportation and communication in this regard.

Transportation and communication are the attending genii of urban development. They help to make the city possible and aid in its support and control. They serve also to link up its activities with those of its neighbors. Long-distance water-supply systems carry with them the possibility of infringement upon the water reserves of other communities; long-distance waste-disposal pollutes their water-supply. Ease of transportation enables the communicable diseases of one community to be carried to others. For example, it was generally noted by public health officials that the influenza epidemic of 1928–1929 spread from west to east in the United States at about the rate required for travelers to move from one part of the country to the other, plus the incubation period for the infection. Facility of communication and of travel permits the criminals of one city to prey upon other

* "Disease germs are no respecters of political boundaries." — S. C. Wallace, *op. cit.*, p. 12.

cities throughout a wide area. Witness the national and even international liquor, drug, and commercialized vice organizations of the present day.

In sum, to quote White,* "[There] has come a new society of which the parts . . . are so enmeshed each with the other that matters which by common consent were formerly of local concern alone have now come to be of concern to the state or even to the nation. . . . The general tendency inherent in the present evolution of society is constantly to diminish the area of these matters (which are) of local concern . . ."

The result of these tendencies is obvious. The administrative functions of urban communities have been linked up as these communities have expanded. Administrative areas have been widened, and special inter-community bodies, such as sewage-disposal and water-supply boards have been established as described earlier in this work. Voluntary co-operation between municipalities has taken place, particularly in France,† where special regulation has favored such enterprises. Most important of all, administrative centralization has developed. It is called into play as arbitrator between the conflicting interests of different cities. Moreover, its sovereignty must be invoked for the preservation of those broader public interests — regional and national in scope — which are affected by many of the activities which the city undertakes, and by the manner in which it performs them.

### THE RISE OF NATIONALISM AND IMPERIALISM

THE association of urbanism with the rise of nationalism and imperialism has been pointed out in another chapter. Without the unified government and general tranquility promoted by large territorial sovereignties, urbanization cannot achieve any considerable development. Individual cities, it is true, may be established and maintained in a society that is split up into small political units and is disturbed by

* L. D. White, *Introduction to the Study of Public Administration*, New York 1926, p. 82.

† See N. Carpenter, "The Nature and Origin of the French Regionalist Movement" in *Publications of the American Sociological Society* (Vol. XXIV, No. 2), Chicago 1930, pp 23–32.

warfare and brigandage. They may even owe their existence, in part, to the necessity of providing security in the face of such situations. Nevertheless (see Chapter I), only when a region comes under a unified government which can guarantee a substantial degree of peace and good order over a wide area can the individual cities within it achieve any considerable expansion, or can city life as a dominant social force make its appearance.

Conversely, urbanization promotes the rise of the state. It gives to the governing forces an abundance of easily tapped resources of both wealth and man-power. This the Roman emperors discovered early in their career, as did later the Capetians, the Tudors, and — to their undoing — the Stuarts. City life, again, favors the development of transportation, and transportation greatly facilitates centralized administration. Brunhes and Vallaux, in fact, go so far as to say that the Departments of France were laid out so as to place every portion of each department within one day's horseback ride from its capitol.* The city, above all, promotes such a wide degree of trade and inter-communication that parochialism breaks down before sentiments of solidarity that become national and imperial in their scope.

Nationalism and imperialism, then, favor urbanization and are in turn favored by it. But in the long-run they are hostile to urban autonomy. Local self-government of small towns and rural areas may perhaps be permitted, but anything approaching independence on the part of the city constitutes a formidable and intolerable challenge to the sovereignty upon which such governments rest. Therefore the free cities of Europe, one by one, fell before the advancing power of English and Spanish and French monarchs. The Capetian monarchs favored the liberties of the cities at first, but destroyed them when they had made the royal power supreme. "By the 18th century," writes Esmein, "the majority of the cities had ceased to represent any local liberty." †

* Quoted in N. Carpenter, *op. cit.*, p. 24. See F. F. Abbott and A. C. Johnson, *op. cit.*, p. 185; A. Esmein, *Course Élémentaire d'Histoire du Droit Française*, Paris 1892, pp. 282–284; J. R. Green, *A Short History of the English People*, London 1875, pp. 287, 531–533; also L. D. White, *op. cit.*, pp. 78–79.

† A. Esmein, *op. cit.*, p. 337.

Any other course, from the viewpoint of the governing groups, would be suicidal, for unless they could count on the continued and complete submission of the great cities within their domains, they could scarcely hope to continue in power.

If the rise of large territorial sovereignties makes the encroachment upon the self-government of the city expedient, the condition of the city itself, as it expands, gives such action at least the color of justification. The city becomes diminishingly less interested in governmental questions, as such, and increasingly less competent to deal with them.

### OVERSHADOWING OF POLITICAL INTERESTS BY ADMINISTRATIVE, ECONOMIC, AND TECHNOLOGICAL INTERESTS

THE preceding chapter has served to show how the city's administration comes to be preoccupied with questions of economics, of technology, and of administrative procedure, rather than with governmental questions as generally conceived. When a candidate for mayor in a great American metropolis based his central campaign appeal upon hostility to the King of England (and won the election by a large majority) he was not merely trying to divert popular attention from other more important issues; he was seeking to fill the vacuum caused by the almost complete absence of any vital issues, in the sense of broad public policy. Honest government, low taxes, efficient police protection — there can be no disputing their importance. Every citizen wants them. The question is how to get them. In the last analysis, they depend upon technical, economic, and administrative questions, and these questions can scarcely ever be settled by political means. Small wonder that the average citizen votes for the man who promises him most plausibly low taxes or honest government, in the desperate hope that the candidate may keep some of his promises, or that the citizen casts his ballot for the man who meets his approval in matters of national or international policy, regardless of his fitness to fill the office for which he is chosen.

In other words, the city is concerned chiefly with its internal economy, with streets and sewers, and traffic control,

and education. And, as the pressure of circumstance forces it to take over an increasingly large number of economic activities, it tends more and more to become *not a government, but an administration,* and a vast, intricate administration to boot. It is concerned very little with *policy* — which is the chief interest of political bodies — but is preoccupied with *efficiency,* and the technique required to obtain it. This being the case, it makes little difference whether the city is democratically or autocratically administered, whether it is locally or centrally administered, so long as it is *well* administered. But locally-directed administration becomes increasingly less easy to secure. So the way is paved for centralized administration.

Before considering the administrative incompetency of the typical city, some mention should be made of the way in which the city's preoccupation with non-political concerns is enhanced by the rise of the national or the imperial state. As the city becomes merged into the larger political unity, its political interests merge with those of this larger unity. Virtually all major questions of political policy — war and peace, tariff and free-trade, slavery and free-labor — must be decided for the state-at-large, rather than for the city. Even questions of primary local concern, such as taxation or the control of public utilities, must be settled with a view to other than local considerations. This is particularly true in a highly complex economic structure, such as characterizes an advanced stage of urban society. For such reasons as these, the citizen of the urban community turns his eyes outward at the state-at-large, and not inward at his own community. His political self is, in other words, abstracted from the city to the state.

For these two reasons, therefore — the non-political nature of most elements in urban polity and the transference of the chief theater of political action from the city to the state — the city is left as primarily an administrative rather than a political unity.

### THE ADMINISTRATIVE INCOMPETENCE OF THE CITY

EARLY in the year 1931 the Auditor of the State of New York reported that the finances of one of the cities in the state were so badly muddled that, "The only conclusion that can be drawn from a study and examination of the treasurer's ledgers is that the work has been sadly neglected and that the existing records are valueless." A news despatch dated January 3d, coming from that city, lists the more glaring instances of mis-administration as follows:

Although the 1930 tax rate on the sworn assessment roll was listed as $232,824,643, the rate on a city-wide assessed valuation was fixed at $234,029,060, or $1,204,417 more than the first-named amount.

The controlling record of cash receipts from water rents was lacking and there was no record of uncollected rents.

Changes in assessed valuation of property were made arbitrarily and without legal authority in the office of R. J. L., city commissioner of taxation and assessment.

L. J. E., city comptroller, failed to observe the law requiring periodical examinations of the city treasury accounts.

City Treasurer J. J. M. should be held "personally liable" for failure to collect proper interest and property tax redemption moneys.

The city treasurer failed to observe the legal requirement to deposit all cash receipts daily in the banks.

Errors were made of totals of tax rolls in every city ward except the fourth.

There were irregularities in the bonding of city officials as required by law.

City Comptroller E. allegedly failed to operate a current surplus account as required for a second class city.

In addition to a shortage of $37,764.10 caused last summer by manipulation of tax books, as reported last month by the state comptroller, yesterday's report listed an additional sum of between $1200 and $1300.

It should be repeated that this report does not cover a rural village or small town, but a city whose population in 1930 was reported at more than 100,000.

Such circumstances as these serve to call attention to the inability of many large cities to handle their own affairs with even tolerable efficiency. Many observers set these

shortcomings down to the weaknesses of modern democracy. Thus Bryce says:

> There is no denying that the government of cities is the one conspicuous failure of the United States. . . In great cities the forces that attack and prevent democratic government are exceptionally numerous, the defensive forces that protect it exceptionally ill-placed for resistance. Satan has turned his heaviest batteries on the weakest part of the ramparts.*

Reference to history suggests, however, that there are deeper forces at work than the weakness of democracy. The Roman cities were very far from democratic. They were, in fact, little more than oligarchies of wealth and rank. Yet they were, as has been seen, corruptly and inefficiently administered. The English borough was, down to the second third of the eighteenth century, "the patrimony of a closed corporation. The government was very generally in the hand of councils, self-elected, irresponsible, and corrupt." †

And, when in 1835 the Municipal Reform Act was passed:

> Exclusive trading privileges were broken up, and measures were devised to prevent robbery and thieving. For example, much business, formerly in the hands of small committees, was transferred to the whole council whose meetings were to be made public and whose accounts were to be audited annually.‡

Obviously, the hereditary municipal oligarchies of England in the eighteen-thirties were quite of a piece in inefficiency and graft with the popularly-elected city officials of the United States in the nineteen-thirties.

If the forms of government as such cannot be held as particularly significant to the administrative ineptitude of the city, the human material that constitutes it can. Generally speaking, and with many notable and honorable exceptions, city governments appear to consist largely of venal and second-rate men. The reason is fairly obvious, and it cuts deep into the whole nature of city life. *The city is the most highly specialized social-economic structure that society has developed.* The division of labor is carried to the highest

* J. Bryce, *The American Commonwealth* (1st Ed.), London 1888, Vol. II, pp. 281 and 288.

† W. B. Munro, *op. cit.*, Vol. I, p. 152.

‡ A. L. Cross, *A History of England and Greater Britain*, New York 1914, p. 925.

pitch, partly because industry is there found in an advanced stage of development, but chiefly because the city is so big and so complex that human activities must be in the greatest degree specialized. Interdependence is brought to too high a pitch to make anything but extreme specialization possible. The humblest broker's clerk cannot make a twenty-minute subway ride from his Brooklyn flat to his Broad Street desk, unless an army of men, from power-house stokers to electrical engineers, continually devote all of their working time each to his own particular and separate task. In an earlier chapter, it has been seen that a variety of tasks which, in a less complex society, are left to spontaneous arrangement or to spare-time effort, are taken over by specialists. Commercialized vice itself has been seen to owe its existence largely to this fact. So it is with municipal government. As indicated above, it is an arduous, intricate task, the mere externals of which the average citizen cannot hope to comprehend. Consequently, it is left to a special class, who work principally in the dark, as little known and little heeded by the generality of their fellow-citizens as the members of any other specialized calling.

Moreover, because their work, of necessity, involves little opportunity for large gain, except by illegal and more or less hazardous sources, their calling is shunned by the abler and more scrupulous, and is left to the mediocrities and the jobsters.

In sum, the business of government in the city is turned over to a set of specialists, as in every other major activity, who are left largely to their own devices. For the most part the men who take up this specialty are not particularly well-endowed as to either brains or consciences. If they blunder and bully and embezzle, they do no more than most men with their limitations would do in the same situations. "We find able citizens absorbed in their private businesses, cultivated citizens unusually sensitive to the vulgarities of practical politics, and both sets therefore especially unwilling to devote their time and tastes and comfort in the struggle with sordid wire-pullers and noisy demagogues." *

* J. Bryce, *loc. cit.*

A less important but not altogether insignificant factor in the administrative incompetency of the typical local city government is its inability to produce and to retain first-rate technical experts. City administration has called for the highest degree of technical skill from the days of Virtruvius and Ulpian down to Thomas Addams and Arthur Woods. Yet it is a very large city, indeed, which can offer an attractive career to a really first-class architect, or sanitary engineer, or public-health officer. It may, in time of emergency, call in an "outside expert," but it tends to get along with such service as its own local technicians can furnish, often with disastrous results. It is likely that the structurally-defective theater which Pliny found in Nicea had been designed by a rising local architect, possibly the son-in-law of somebody of importance!

The city then fails so often to produce, on its own initiative, adequately competent and honest administrators that some sort of interposition from above is to be anticipated. In times of prosperity much in the way of maladministration may be tolerated with impunity. But when any sort of emergency comes — and, as the city expands and as urbanization increases, the possibility of such an emergency's coming grows steadily greater — then the city must perforce submit to the administration of the *correctores* and their modern counterparts. Governments being what they are, national and imperial governments in particular, the centralized administrative authorities will avail themselves of every opportunity for superseding local administration that is offered, and, perhaps occasionally create opportunities.

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# CHAPTER XIII

## *THE URBAN PROSPECT: SHORT-RUN TRENDS — THE URBAN OUTCOME*

TO SPECULATE upon the future course of any social process is hazardous. It is particularly so in the case of the city, for present-day city life is associated with a number of elements that are new to social history. In point of fact, one of the tasks which confronts the student of urban sociology is to appraise, as best he can, the degree in which these new factors are likely to make the trends in city life different from those indicated by the study of earlier phases of urbanism.

These difficulties do not, however, apply with such great force to the proximate, or short-run future of the city as they do to the long-run urban prospect. There are, indeed, a group of forces now at work, which are modifying the character of city life to such an extent that a number of changes, or, more accurately speaking, developments in the city of the immediate future may be anticipated with a considerable degree of confidence. It is with them that the first portion of this chapter deals.

### SHORT-RUN TRENDS IN CITY LIFE

THROUGHOUT the preceding portions of this work, there have been emphasized two major groups of the social and economic forces which are now moulding the character of urban life, and may be expected to continue to do so in the immediate future. (1) The urbanizing tendencies in present-day society may be expected to continue. (2) The speed and range of transportation and communication may be expected

to increase, with the result that the dispersion or decentralization of the city will probably also continue.

### THE INCREASE OF URBANISM

THE returns from the Fifteenth (1930) United States Census show that the urbanizing tendencies which have been in force for the past several decades are still operating with little, if any diminution. In the face of a falling-off in the rate of increase for the country as a whole, New York City appears to have had a greater population gain (23.8 per cent) during the decade just passed, than in the one preceding (18 per cent). Chicago has increased by 24.8 per cent; Detroit, by 57.4 per cent; Los Angeles, by 113.6 per cent.

Of those counties in New York State which have not increased in population, all but one are rural, while the greatest rate of increase is reported for the counties adjoining New York City.

There are now 93 cities in the United States with a population of 100,000 or more, as against 68 in 1920. The combined population of these cities is about 36,393,000, or something more than one-fourth of the entire estimated population of the United States. A very low rate of increase for certain New England cities is, to be sure, observed, and two of them, New Bedford and Fall River, show actual decreases, but this situation appears to be related to the depressed condition of the textile and shoe industries in this region, rather than to any slackening in urbanization as such.

It would then appear that, in the United States, the tide of urbanization is still in full spate, and that it will continue to run strongly for a number of years. Moreover, reference to the data on the population of the city, contained in Chapter V, indicates that in Europe the trend towards city life, while not so marked as in this country, is nevertheless so strong that it is not likely to be reversed in the immediate future.

Unless, therefore, some sudden and catastrophic social change supervenes, the next few years may be expected to witness, at least in Europe and America, a continued expansion both of individual cities and of urban society in general.

Whether the existing disorders in China, India, and the Near East do not involve a sufficiently marked regressive force to put a stop to the urbanizing tendencies in those regions is a question that can not be answered until recent and reliable population data are available. As suggested at the close of Chapter XIV, it is likely that the disturbed conditions of these countries will be accompanied by a regression towards a lesser degree of urbanization. It must be remembered, however, that the introduction into these countries of western modes of commerce, industry, and transportation may very well serve to offset such de-urbanizing influences; so that a net increase in city life may still take place.

### THE DISPERSION OF URBANISM IN RELATION TO TRANSPORTATION AND COMMUNICATION

URBANIZATION is, to a certain degree, a function of transportation and communication. Earlier portions of this work have provided the facts upon which this generalization rests. On the one hand, as Le Corbusier shows, any increase in the range and speed of intercommunication widens the field of commerce and industry, and *pari-passu* broadens the economic base of city life.* On the other hand, as Poëte puts it, "The urban condensation, being dependent upon the possibility of supporting a number of people in a restricted area, expands with the development of . . . the means of transport." In short, it is chiefly by increasing the range and facility of its transportation and communication that the city can look for that expansion in economic activities from which the most of its inhabitants derive their income, and that increase in the supplies without which they cannot subsist.

There is another and less obvious relationship between city life and transportation and communication. It has been discussed in Chapter III. The degree of dispersion of city life, within the urban region and throughout the country at large, depends largely on the nature of its sources of

* Le Corbusier (pseudonym of C. E. Jeanneret-Gris), *The City of Tomorrow and its Planning* (English Translation of *L'Urbanisme*), New York 1929, pp. 166–167. See also C. M. Poëte, *Introduction à l'Urbanisme*, Paris 1929, p. 14.

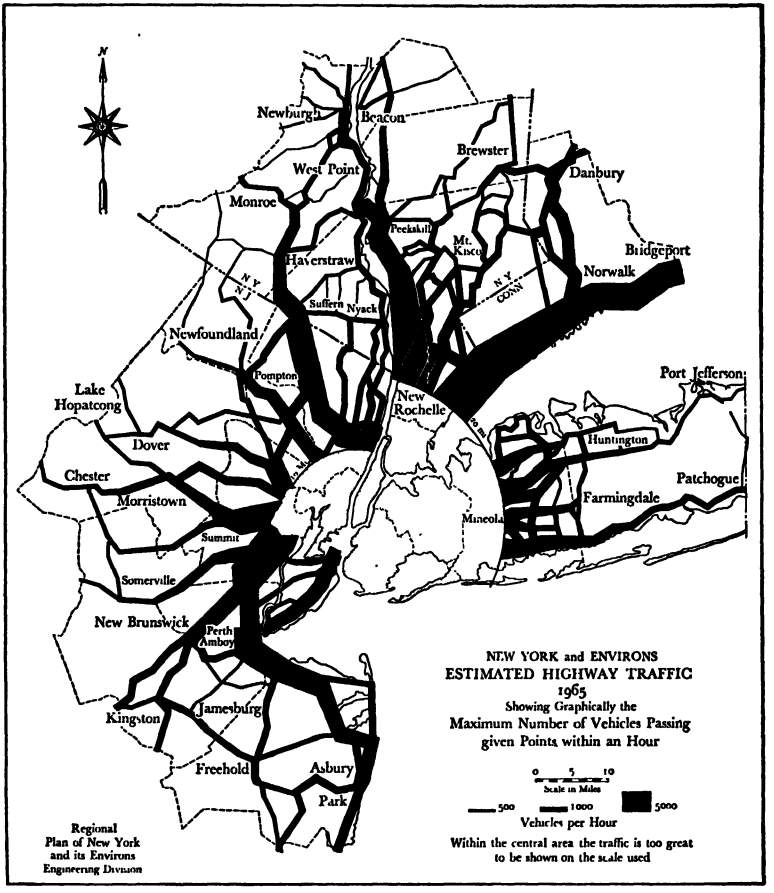



FIG. 26. THE CITY PENETRATES THE COUNTRYSIDE
Estimated Highway Traffic in the New York Area in 1965*

transportation and communication. The reasons that this is so may be summarily recapitulated:

### THE EXTENSION OF THE URBAN REGION

IN THE first place, ease of transportation and communication permits the city to expand its region as well as to diffuse its subordinate elements within that region. The periphery of its influence can be extended with each successive extension

* From H. M. Lewis and E. P. Goodrich, *Highway Traffic.*

in the range and facility of intercommunication. The urban region of the days of pack-saddles and horse-back traveling was very much smaller than in the days of steam railways and electric trams; and smaller yet than in the present epoch of motor-vehicles, subways, and high-speed electric transport. The telephone, the telegraph, the radio, the daily newspaper — all these serve still further to widen the limits of the urban region, so that today the zone of direct influence of a large metropolitan area has a radius of at least 100 miles. Furthermore the city sets up its own characteristic subsidiary areas with increasing frequency within its region, as the scope of its transportation and communication services is widened. The advent of the motor-vehicle — particularly the motor-bus — for example, permits the planting of residential suburbs in localities previously unavailable for such development. The transmission of electric power, the building up of motor-truck transport, the perfection of long-distance telephonic communication — such developments as these make possible a greater degree of industrial decentralization than would otherwise be possible. The city, in a quite literal sense, spreads itself out more widely, and scatters itself more thickly with every addition to its *armamentarium* of transportation and communication.

## "RURBANIZATION"

IN THE second place, the development of these utilities facilitates the penetration of the city into the countryside. In a dozen different ways, the development of intercommunication operates to break down the lines of demarcation between the urban and the rural area. The most important of these have already been suggested. The widening of the city's zone of influence — through newspaper circulation, radio-broadcast, distribution of goods, etc. — inevitably causes a penetration of urban ideologies and urban products into rural areas. The community which reads the city's "society notes," listens to its jazz orchestras, and wears its city-made clothes, is to that extent participating in its life. Again, the planting of residential and industrial and special-service suburbs throughout the urban region is tantamount to set-

ting up local *foci* of urbanizing influences for the rural or semi-rural areas surrounding them. The farmer who delivers fresh eggs to the commuter's home; the village boy who sells groceries to the weekend cottager; the district school teacher, whose pupils include the children of laborers employed in a glue factory on a railroad siding two miles away — all these are bound to absorb something of the urban way of thinking and doing. Finally, the city's characteristic institutions invade the farm lane and the village street. The newspaper, the delivery wagon, the branch bank, the chain store, the motion-picture theater are all segmentations of city life and help to impart some share of the urban way of life to the countryside.*

There are other, less pervasive and less steadily-maintained media, of rural urbanization, which are stimulated by the facilitation of movement and intercourse. For example, the country-dweller will occasionally forsake the town or village to which he customarily resorts, and will journey to the city, to enter a hospital,† or to consult a physician, or to purchase a new set of furniture. Again, certain rural areas become so over-run with city vacationists during the summer months that their entire economic and social life is affected by them.

These and other influences operate towards the building up of what Galpin aptly calls a "rurban" society.‡ Such a phenomenon is not, of course, altogether novel. Horace's Sabine farm was probably not so very different from the Long Island weekend cottage of the present-day New Yorker. There have always been sociological no-man's lands, where

* "The whole nation will be citified, Professor Ogburn said. Developments in transportation and communication will make every new thing, that the city man is now first to get, just as quickly available to the farmer. Farmers will, therefore, tend to become like city people not only in the mechanics of their daily lives but also in their folkways, their philosophy, their religion, and everything else.

"Due to increased efficiency in farming, only a fraction of the people will be needed on the farm and the rest will have to be absorbed into industry." — Quotation from a newspaper summary of a paper read before the American Association for the Advancement of Science at Cleveland, Ohio, Jan. 1, 1931, by Professor W. F. Ogburn of the University of Chicago.

† The citizens of Buffalo were recently startled to see a number of cases of typhoid fever included in the local public health statistics. It developed that every one of them represented patients from a town 30 miles away, where an epidemic was in progress.

‡ C. R. Galpin, *Rural Life*, New York 1918, p. 64.

urban and rural ways of life contend for mastery. It is likely, however, that no period has ever seen so widespread or so extensive a permeation of the country by the city as does the present one.

### TENDENCIES TOWARDS INCREASE IN THE RANGE OF TRANSPORTATION AND COMMUNICATION

MOREOVER, this permeation bids fair to go forward, for transportation and communication appear to be increasing in both range and efficiency. It may or may not be true that a continuation of the revolutionary inventions in the instrumentalities of intercommunication is not to be anticipated in the immediate future. Whether this is true or not, city life may continue for some time to profit by an expansion in these services, since there are several ways in which the existing facilities can be very largely increased. (1) Well-established means of transportation and communication are capable of a much wider degree of utilization than at present. (2) Certain newly-developed media of transportation and communication are almost sure to undergo sufficient improvement and adaptation to permit their more widespread use. (3) The techniques of co-ordination and management are only beginning to be developed.

### ESTABLISHED MEDIA OF TRANSPORTATION AND COMMUNICATION

THE possibilities of expanding the degree of utilization of a number of standardized modes of intercommunication can be readily inferred from comparative statistics. North America, for example, in 1924 had 22 miles of railways per 10,000 of population, as compared with 8.4 for South America, 5.8 for Europe, 3.5 for Africa, and 0.8 for Asia. China had 0.2 per 10,000; the United States, 23.6.*

In 1928 the telephones in the United States averaged 15.8 per 100 persons. The corresponding figures for Germany were 4.4; for Great Britain (including Northern Ireland) 3.6, for France, 2.2., and for Italy, 0.7. Of the 31,000,000 telephones in service at that time, there were

* C. E. R. S. Sherrington, "Railways" in *Encyclopedia Britannica*, 14th Ed., Vol. XVIII, pp. 916–933.

only 1,042,000 in Asia, three-quarters of them being in Japan.*

Germany, in 1927, had 561,200 miles of telegraph wire; France had 441,600, and Italy, 70,000. Japan had 183,500 miles, as contrasted with 85,000 for all of China.†

Such mechanical instrumentalities of movement and intercourse, as have been discussed are well standardized, but are, nevertheless, relatively recent in origin. Some irregularity in the degree to which they have been developed in various countries is, therefore, no more than would be expected in view of the unevenness with which culture processes are diffused. The same is not, however, true of road transportation. The building of roads is an art that is at least as ancient as the kingdoms of Egypt and Persia. It has had more than ample time to be diffused throughout Europe, Asia, and the Americas, at least. Yet there is surprising inequality in the degree to which road transportation is available in different portions of the world. Epstein shows that there is one square mile of area for every linear mile of road in the United States; but that in Europe, there are about 8 square miles; in Australia, 28, and in Mexico, 111.‡

The foregoing data indicate that there is a most disproportionate distribution throughout the world of such standardized means of movement and intercourse as the telephone, the telegraph, the railway — even the road. Moreover, low rates of utilization are found in many countries that are already thickly populated and that are, by virtue of their climate and resources, capable of further development. It seems likely, therefore, that those countries which now are relatively under-supplied with these facilities will in the near future make up at least a part of their arrears — that they will, in other words, materially add to their equipment of railways, telephones, etc.

* W. S. Gifford, "Telephone" in *Encyclopedia Britannica*, 14th Ed., Vol. XXI, pp. 894–905.

† N. Carlton, "Telegraph" in *Encyclopedia Britannica*, 14th Ed., Vol. XXI, pp. 890–891.

‡ R. C. Epstein, *The Automobile Industry*, New York 1928, p. 321.

### NEWLY-DEVELOPED MEDIA OF TRANSPORTATION AND COMMUNICATION

As for the less well-established modes of inter-communication, such as the motor-vehicle, the wireless telegraph and telephone, and the airplane and dirigible, a very rapid expansion may be anticipated, in "advanced" no less than in "backward" countries. Rapid technological progress is still under way in all of these devices, such as the revolutionary auto-gyro in aviation.

Even if no important mechanical improvements were to be made in these fields (an almost impossible assumption) they are, in their present stage of development, undergoing such a very rapid expansion that a continued growth in the degree of their utilization for the next few years seems certain.

The number of motor-vehicles registered in the United States in 1895 was 4. Five years later, in 1900, it was 8000. Further increases are indicated in Table LXVIII.

TABLE LXVIII

Motor Vehicle Registration in the United States, 1895–1929

| *Year* | *Number of Registrations* |
|---|---|
| 1895 | 4 |
| 1900 | 8,000 |
| 1905 | 78,000 |
| 1910 | 468,000 |
| 1915 | 2,445,666 |
| 1920 | 9,231,941 |
| 1925 | 19,937,274 |
| 1929 | 26,501,443 |

Such an exceedingly rapid rate of acceleration does not seem likely suddenly to change its trend. Accordingly, considerable expansion of motor-vehicle transport in the United States may be expected; if not at so rapid a rate as in the past few decades, yet at a rate sufficiently rapid significantly to affect economic and social activity.

As for other countries, a similar sort of development may be looked for. The amount and distribution of purchasing power in some of them may be such that as great a per capita utilization of private motor-cars as in this country may not be possible. Nevertheless the rapid development of the export business of American motor-car producers indicates that a process of expansion, similar in nature, if not in volume, to that which is going on in this country, is occurring in other countries also.*

A similarly rapid rate of growth is to be observed in the wireless telegraph and telephone industries.

In 1906, there were 627 wireless telegraph stations in operation. The number had increased to 2619 by 1912. In 1915, came the first practical demonstration of wireless telephony — the radio of the present day — and by 1916, there were 9976 wireless stations in operation. The number had swelled to 17,404 by 1920, and 33,003 by 1924. Radio broadcasting stations in the United States increased from a single station in 1920 to 700 stations in 1928. Sarnoff estimates that the retail value of receiving sets, parts, and accessories sold in 1920 was about $2,000,000, as contrasted with $500,000,000 in 1927.†

As for aviation, it is still in what might be termed the dramatic stage of development. For example, the world's record for speed was set at 41 m.p.h. in 1906, at 203 m.p.h. in 1913, and at 448 m.p.h. in 1924. The world's duration record (without refueling) was 21 seconds in 1906; 21 hours in 1914; and 52 hours in 1927.‡ It is only within the last

* R. C. Epstein, *The Automobile Industry*, New York 1928, p. 319. The export business in passenger cars of American producers was as follows for the period 1919–1926:

| *Year* | *Cars* | *Valued* |
|---|---|---|
| 1919 | 67,145 | $73,700,527 |
| 1920 | 142,508 | 165,255,921 |
| 1921 | 30,950 | 32,533,725 |
| 1922 | 66,790 | 51,049,816 |
| 1923 | 127,035 | 90,692,272 |
| 1924 | 151,379 | 112,531,154 |
| 1925 | 252,124 | 190,869,665 |
| 1926 | 245,443 | 182,094,181 |

† H. L. Jome, *Economics of the Radio Industry*, New York 1925, p. 69. See also D. Sarnoff, "The Development of the Radio Art and Radio Industry since 1920" in *The Radio Industry*, New York 1928, p. 99.

‡ *L'Année Aéronautique* (9th year), Paris 1928, pp. 129–133.

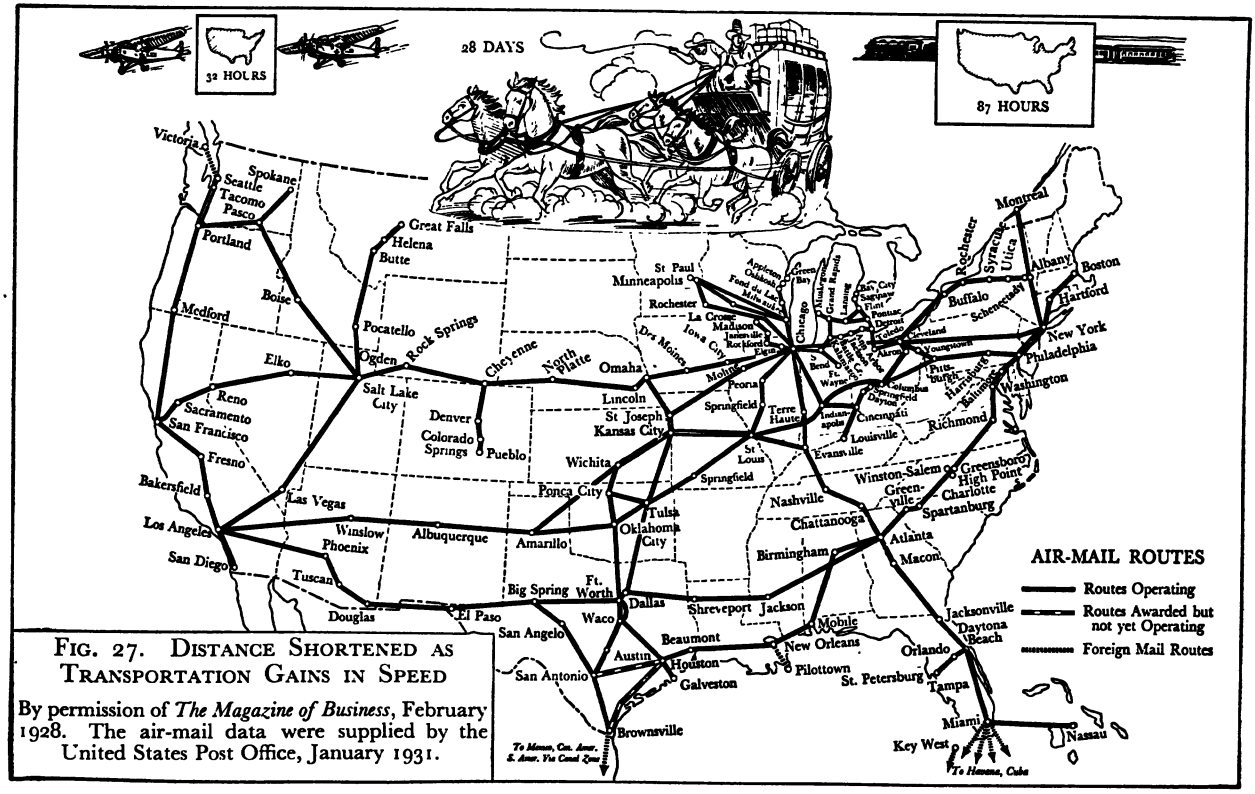



FIG. 27. DISTANCE SHORTENED AS TRANSPORTATION GAINS IN SPEED

By permission of *The Magazine of Business*, February 1928. The air-mail data were supplied by the United States Post Office, January 1931.

decade that regular air-transport has become established, but in that short period it has expanded enormously.

TABLE LXIX

MILES FLOWN IN REGULAR AIR-TRANSPORT, IN EUROPE AND THE WORLD, 1919–1926 *

| *Year* | *Miles Flown* | |
|---|---|---|
| | *Europe* | *World* |
| 1919 | Not recorded | 1,170,000 |
| 1921 | Not recorded | 4,300,000 |
| 1923 | 4,450,000 | 6,430,000 |
| 1926 | 11,470,000 | 16,920,000 |

In the United States, regular air-transport was not definitely established until the inauguration of the air-mail service in 1926. At the end of 1927 there were 30 lines in operation, with an average daily distance flown of 27,986 miles. By 1929, the number of lines in operation had, according to Bennett, increased to 67, and the daily average flight, to 54,000 miles.†

### CO-ORDINATION AND CONTROL OF TRANSPORTATION AND COMMUNICATION

A THIRD way in which the transportation and communication facilities of the modern city are being extended is in the field of co-ordination and control. Statistical data bearing on this phase of the discussion are not easily procured. Some idea of the extent to which transport — particularly motor-vehicle transport — is being expedited by means of co-ordination and control may be gained by noting the increase in the use of traffic police, automatic traffic lights, and similar devices in various cities. In the State of Massachusetts, 550 traffic-light installations were approved from July 5, 1928 to July 8, 1930. Of these, 90 were installed between August 1, 1929 and July 8, 1930.‡

* From L. J. Maitland, "Aviation" in *Encyclopedia Britannica*, 14th Ed., Vol. II, p. 807.

† R. R. Bennett, *Aviation* (Ronald Aeronautical Library), New York 1929, p. 12.

‡ Unpublished manuscript furnished by Maxwell Halsey, Traffic Engineer, Department of Public Works, Commonwealth of Massachusetts.

The manner in which various means of intercommunication are being adapted to the needs of the modern city is also noteworthy. The underground railway, or subway, is a familiar feature of city life in at least a half-dozen great cities — London, New York, Berlin, Paris, Philadelphia, Boston. There is a freight subway in Chicago. The pneumatic mail-tube has been in operation in Paris for over a decade, and is being developed in the United States. Specially constructed motor-traffic highways are being developed, permitting unobstructed, straight-line locomotion for which, as Arntz * shows, the motor-vehicle is peculiarly suited. Particularly striking examples are the two-level roadways in New York and Chicago. Indeed, there is beginning to emerge the type of city presaged by Le Corbusier — one wherein, by virtue of the building of the main traffic arteries so as to give the vehicles using them the greatest possible efficiency, and by virtue of the classification of traffic, particularly through multi-level roadways and railways, transportation may be expedited to a degree that seems today to be unattainable.

The city of the future — the immediate future, at all events — may, then expect that its facilities of transportation and communication will be increased and improved. In many areas, standardized modes of intercommunication will be more widely used than they are at present. In all countries the use of the newly-developed techniques will be very greatly increased, and the principle of co-ordination and control will be more widely applied. Accordingly, a continuation may be anticipated of those tendencies in city life which depend upon the continued growth in range and effectiveness of movement and intercourse — urban expansion, urban diffusion, and urban penetration of the countryside, or *rurbanization.*

How long will this process go on?

* W. R. Arntz, "Die Städte und der Automobilverkehr" in P. O. Mitzlaff and E. Stein, *Die Zukunftsausgaben der deutschen Städte,* Berlin 1925, p. 679.

## THE URBAN OUTCOME

THERE are too many ways in which the future structure of society may be altered to permit of more than the most tentative and generalized discussion of the long-run outcome of city life. Nevertheless, there are now at work certain tendencies which, with the aid of historical research, make it possible to sketch in broad outlines some features of the probable evolution of the city. They are related to: (1) the discrepancy between the economic, the cultural, and the social-psychological rates of urban growth; (2) the overextension of systems of transportation and communication; (3) the centralization and aggrandizement of governmental institutions; (4) the "degeneration" and the loss in competence of the city-dweller; (5) urban-rural conflict; (6) population attrition and migration, and (7) the outcome of industrialism. These various factors lead to (8) a number of alternative possibilities for the city of the future, which may, however, be (9) offset or indefinitely postponed by technological change.

### THE DISCREPANCY BETWEEN CULTURAL AND SOCIAL-PSYCHOLOGICAL AND ECONOMIC FACTORS OF URBAN EXPANSION

AT VARIOUS points in this work it has been pointed out that city life is, to a considerable degree, a culture product, and that city growth is, in some degree, to be interpreted as a part of the process of culture change and culture diffusion. This point has been emphasized particularly in the chapter dealing with the origin and spread of city life. As brought out in this earlier discussion, there is no necessary connection between cultural and economic processes, and this is a fact of fundamental importance to the future of city life. It means that, to the degree that city growth is influenced by cultural factors, such growth may proceed without regard to economic factors, and may even go on, for a time, in spite of them.

CULTURAL AND SOCIAL-PSYCHOLOGICAL FACTORS

THERE is good reason, furthermore, for assuming that such a situation is likely eventually to arise in the urban society now in process of development. The city of today, still more the city of the immediate future, exerts so great an influence over the lives of so many individuals that they will, under the impulsion of their psychological conditionings, do all that they can to promote the continuance and the development of city life.

This point may be briefly elaborated. One of the commonplaces of modern psychology (see Chapter VI) is the dominating influence of the conditioned response * — that is to say, the habitual pattern of responses to a given stimulus-situation — over human behavior. Now the city constitutes, in the words of Simmel, a vast, "social-technological mechanism," with which the individual personality is forced to "come to terms." It conditions his way of living at a score of points with the result that he is unhappy, inefficient, and in some respects, almost unable to function, if he is removed from an urban environment. Moreover, the larger the city, and the more intense the degree of urbanization, the greater will be the number of points at which the individual's life becomes conditioned to city life; and the larger will be the proportion of such city-habituated individuals in the population. In short, as urban life expands, a constantly-growing number of individuals become conditioned to it and this conditioning covers a larger and larger area of each of these individuals' behavior. As a result, city life becomes increasingly more indispensable to a growing group of individuals. In short, the social-psychological influences which reinforce the cultural factors in urban growth become constantly more significant, as urbanism increases.

Urbanism has proceeded to a point never before attained in human history, and at the present rate its momentum of growth is probably also greater than it ever has been. The probabilities are, therefore, that the city and the urbanized

* F. H. Allport, Social Psychology, Boston 1924, pp. 39–40; 96–97; 394–395, etc. The next reference is to G. Simmel, "Die Geistige Bedeutung der Groszstädte" in Bücher *et al.* *Die Groszstadt*, Dresden 1903, pp. 187–188.

society in which it is located are likely to continue expanding for a considerable period, even after economic factors have ceased to favor further increase. If this takes place, a reaction from this over-extension back to a less intensively-urbanized society is, of course, to be anticipated.

### ECONOMIC FACTORS

THE nature of the economic factors upon which the growth of the city ultimately depends has already been discussed. They resolve themselves ultimately into three elements. The first is commerce and industry, and the general public tranquility and extensive and complex system of transport and communication upon which they both depend. The second is a steady supply of raw materials and of the necessaries of life, which also depends largely upon transportation. The third is the ability to defer the operation of the law of diminishing productivity, particularly as it affects the cost of producing and transporting food and other necessities, and the disposal of waste. From the foregoing, it is clear that transportation occupies a most significant relation to urban growth. It affects the city's industry and commerce, and its services of supply and waste-disposal. It enters also into the city-dweller's cost of living.

As already shown, there is every reason to suppose that the city's facilities for transportation and communication will continue to increase for a considerable period. To the extent that this is so, therefore, the economic limitations upon urban growth are being extended.

### DIMINISHING PRODUCTIVITY AND LIMITATIONS ON ECONOMIC FACTORS IN URBAN EXPANSION

NEVERTHELESS, one qualification must be made to this general statement — that in the absence of important technological changes there cannot be any very great extension of the facilities for intercommunication before they reach the point of diminishing productivity. Once this point is reached, furthermore, it is only a question of time before the cost of transport and the costs of all the products affected

by transport will be too great to permit of any further expansion.

Indeed, there is some evidence that such a process of the increase of costs, because of the lengthening of the lines of transportation, has already begun to be operative. Where the extension in the city's facilities of transportation is mainly *linear* — that is, when it consists chiefly in adding on more mileage to existing lines — it is likely to be accompanied by an increase of costs. Thus, the author, in collaboration with Haenszel,* has tabulated the cost, as of 1929, of various categories of food items, in the budget of the average family in different sections of the United States.† It was found that the cost of fresh and dried fruits, which originate mainly in the Pacific Coast area, the Southwest, and the South Atlantic area, was roughly proportional to the distance of the cities studied from one or another of these points of supply. That is, the cost, as a rule, was lowest in the Pacific Coast, in the Southwest, and in the South Atlantic areas, and highest in those points farthest away.

It seems likely, therefore, that at present the city is to some degree extending its transportation facilities, only at the price of rising transportation costs. Further than this, it appears probable that, barring important technological improvements, most extensions of transportation facilities will before long involve increasing costs, and hence eventuate in a situation where continued extensions, and the urban growth predicated upon them, cease to be economically feasible.

The principle of diminishing productivity applies to other aspects of urban economy than to transportation and to the sources of supply and raw materials. The principle applies in particular to the production of food-products, for there is available only a limited portion of the earth's surface accessible and suitable for the raising of food. Once any considerable portion of this land is brought to the maximum point of

* Unpublished material.

† Cost figures as given in the United States Bureau of Labor Statistics tabulations of actual food prices. Weights as given in the National Industrial Conference Board's studies of The Cost of Living in Twelve Industrial Cities for 1927, pp. 16 and 17.

productivity, then, in the absence of important technological changes, the effects of the law of diminishing productivity are bound to be felt; the costs of food, to rise; and economic pressure upon further urban expansion, to be exerted. The relation of this principle to urban growth is direct and significant. City growth, and the population growth upon which it rests, places an ever-increasing burden upon the food-producing resources of the earth, at the very time that the encroachment of the city upon the countryside reduces the area of arable land. Sooner or later, a point must be reached when it is not economically feasible to produce sufficient food to meet the requirements of further urban expansion.

The application of the principle of diminishing productivity to the commercial and administrative activities involved in supplying and otherwise maintaining city life has been discussed at some length elsewhere, and need not be further considered here. It should only be said that such cost items are important, whether measured in terms of the prices of food, clothing, and the like, or in the cost of government. The following tabulation of the per capita debt of cities in the United States, according to the size of the cities, undoubtedly reflects other factors than the tendency of administrative costs to rise with the expansion of city life, but it probably does at least in part reflect the operation of this factor.

TABLE LXX

PER CAPITA NET DEBT IN CITIES OF 30,000 AND OVER IN THE UNITED STATES ACCORDING TO SIZE, 1927 *

| *Classes of Cities* | *Per Capita Net Debt* |
|---|---|
| 500,000 and over | $162.03 |
| 300,000–500,000 | 139.80 |
| 100,000–300,000 | 103.86 |
| 50,000–100,000 | 79.78 |
| 30,000–50,000 | 73.14 |

* From United States Census, *Financial Statistics of Cities*, 1927, Washington 1929, p. 61.

Those economic limitations upon city growth, which are related to the maintaining over a wide area of public tranquility and the commerce that cannot go on without it, are not affected by the principle of diminishing productivity. They are, therefore, not directly related to urban growth although, as indicated later, they may be indirectly and adversely affected by extensive urbanization. The other economic conditions upon which city growth depends, do, however, appear to be in the long run related to the principle of diminishing returns. Accordingly, they constitute a group of limiting factors upon urban expansion. At present they have scarcely begun to make themselves felt. Nevertheless, always provided that no fundamental technological developments supervene, they are likely to assume significant proportions within the measurable future.

It appears therefore that, whereas the *economic* factors favoring urban expansion appear to be approaching a limit, the *cultural* and *social-psychological* factors are still in full spate and seem likely to gain, rather than to lose momentum in the future. If this should, in fact, prove to be the case, then urban growth may eventually be expected to overpass the bounds of economic expediency, and even those of economic solvency.

The sequelæ of the outstripping of economic by cultural and social-psychological factors of urban growth can be readily foreshadowed.

### BOLSTERING-UP EXPEDIENTS

For a while, the city could maintain itself, and possibly even continue to grow by means of various bolstering-up expedients. Non-essential functions could be discontinued. Accumulated capital could be drawn upon both from private and from public enterprise, the former in the form of confiscatory taxation, and the like.

### PRESSURE ON THE COUNTRYSIDE

Reference is made later in this discussion to the way in which the city and its dwellers can overreach and oppress the countryside. In such a situation as is presupposed here,

such practices might be pursued up to the limits of expediency, particularly as the country would have in its possession many of those commodities of which the city was in great need.

### GOVERNMENTAL ENCROACHMENT ON PRIVATE ENTERPRISE

THERE probably would also be a great increase in the number of economic functions administered or controlled by the city, or the central governmental agencies dominating the city. Public necessity would take precedence over all claims to private gain, and the present emergency would override all fears as to the long-run inadvisability of substituting collective administration for individual initiative.

### LOWERING OF STANDARD OF LIVING

EVENTUALLY, the standard of life in the city could be steadily whittled away. During the period of urban expansion, the level of public and private consumption would probably have gone somewhat beyond the minimum of necessity. Consequently, on the eve of a period of decline, substantial deductions in the scale of expenditures both for public enterprises (such as schools and public buildings) and for individual requirements could be made before any distress was felt. Even after the distress level was reached further reduction might continue if only because large numbers of city-dwellers would not, or could not, find any other means of livelihood.

### DEPOPULATION

ULTIMATELY, however, misery, disease, and death would appear, and a definite period of decline would begin. It would also be manifested in other ways. The trade and industry which gave occupation to the generality of city-dwellers would cease to be profitable and would decay. The services of supply, and other public and quasi-public services would become increasingly expensive, and would decline in efficiency and in scope, some being altogether given up. Population would fall away, partly by migration, partly by a dwindling in the birth rate, and partly by a rise in the death rate (or perhaps an interruption in its decline).

EXAGGERATION OF REGRESSION FROM URBANISM

FINALLY, it is possible that the regressive process, once set in motion, would carry society back to a less intensive degree of urbanization than that indicated by the economic situation at the time the process began. Not only might the recessive forces acquire sufficient momentum to proceed farther than economic conditions justified — but the economic conditions would themselves be altered in the course of this process. As pointed out repeatedly elsewhere, urbanization implies important social and economic changes in the countryside, chief among them the bringing of the countryside into a state of more or less complete economic dependence upon the city. Therefore, the rural portion of an urbanized society would, for awhile, at least, be involved in a regression of city life, and correspondingly disorganized. During the course of this rural economic break-up, the production of food and other raw materials would be reduced, and the economic resources correspondingly depleted. Other secondary factors tending to accelerate urban decline are discussed later.

In brief, this analysis points to the probability (*a*) that city life will, under the dual impulsion of cultural and economic forces, continue to expand; (*b*) that the cultural forces, allied with the social-psychological effects of urbanism, will continue to promote further expansion, even though the economic forces, under the impulsion of the law of diminishing productivity, will have ceased to do so; (*c*) that eventually a state of economic disequilibrium and even economic bankruptcy will be reached, which will be followed, (*d*) after the exhaustion of various artificial resources for the bolstering up of the urban structure, by (*e*) a regression back to a less urbanized type of society; and (*f*) that this regression may result in a less urbanized state of society than that indicated by the economic situation existing at the peak of the period of expansion, partly because of the momentum of the regressive forces, partly because of the disorganization of rural life and other secondary de-urbanizing forces.

### THE OVER-EXTENSION OF THE CITY'S SERVICES OF SUPPLY AND COMMUNICATION

THE foregoing summary presents an epitome of those processes which appear to the author to be of greatest significance to the future of the city. Nevertheless, important as these forces are, they by no means comprise all of the influences bearing upon the future of city life. One of these other sets of forces has to do with the extent and intricacy of the city's services of supply. In Chapter XI, attention has been called to the fact that the growth of the city is necessarily accompanied by the establishment of increasingly more lengthy and more complex services of supply — for food, water, and raw materials generally. Moreover, the development of urbanism in general further complicates the situation. It reduces the available close-at-hand sources of supply, and thereby forces the whole urbanized society to go farther afield for its supplies. It also necessitates the devising of a mechanism of supply sufficiently intricate and delicate to meet the needs — not of a few isolated urban communities — but of scores of them.

Urban expansion means, then, increased extension and complexity of supply services. This latter spells decreased security, for the longer the lines of communication the greater is their liability to interruption, and, the more intricate they are, the more easily they can be thrown into disorganization. The city's economic life in general, moreover, is largely dependent upon an uninterrupted and efficient source of transportation. Its industries cannot secure their raw materials nor hold their markets; its merchants can neither buy nor sell to advantage if communications break down.

It is true that there is some compensating advantage in the wider range of alternatives provided by an extended and complex system of communications. This advantage is, however, not very substantial. So long as transportation costs compose a significant portion of total costs, no city is likely to build up a communications-system extensive enough to provide for very much more than its normally anticipated

requirements. Provision can be made against normal interruptions, such as those arising from local crop failures, or local water-shortages, but it is very unlikely that unusual or prolonged interruptions can be safeguarded against in this way.

### POSSIBLE INTERRUPTIONS DUE TO LOSS OF PUBLIC TRANQUILITY

UNLESS, therefore, the city can be assured of such complete domestic tranquility, such a softening of the acerbities of international relations, and so perfect an adjustment of conflicting economic interests as to render unlikely any prolonged interruption of its supply lines, then its continued growth cannot but be dogged by increasing insecurity. And this must indeed be the case, for war, revolution, strikes, and large-scale economic conflicts — each of these is an all-too-familiar feature of the modern scene. Reference has already been made to the extent of the havoc wrought by four short years of warfare upon the city life of Germany, even though that nation's interior lines of communication were scarcely touched. Reference has also been made to the serious threat upon the urban life of the British Isles which was made by the "intensive" submarine campaign

TABLE LXXI

POPULATION OF VIENNA, BEFORE AND AFTER THE DISMEMBERMENT OF THE AUSTRO-HUNGARIAN EMPIRE *

| *Date* | *Population* | *Per cent of Decrease from* 1910 |
|---|---|---|
| 1910 | 2,031,498 | ... |
| 1920 | 1,841,326 | 9.3 |
| 1922 | 1,866,147 | 8.1 |

during a few weeks of 1917. At this point, one additional piece of evidence may be noted — the marked decline in population of the city of Vienna, following the break-up of

* From Census Enumerations as cited in *The Statesmen's Year-book.*

the old Austro-Hungarian Empire, and the consequent interruption and disorganization of that city's lines of communication by new national frontiers.

Here is a city that, in the face of increasing urbanization throughout Europe and America, shows a population that is 8 per cent less than it was 12 years earlier. The city's supply services as such may be relatively intact, but its commerce is disorganized, and its industries shorn of both raw materials and markets.

### ADMINISTRATIVE AGGRANDIZEMENT AND CENTRALIZATION

IN THE closing section of the preceding chapter, the relations between the growth and the administration of the city were discussed at considerable length. It was pointed out that, as urbanization spreads, central governmental agencies tend to assume an increasing degree of control over city government. Elsewhere in this work, attention has been called to the fact that urban growth also endows an increasing number of economic activities with a public interest, so that they fall under governmental ownership or supervision. The joint effect of these two tendencies is plain: *as city life expands, governmental functions broaden out in their scope — particularly as regards economic affairs — and local government gives ground before centralized administration.* The city, in its governmental phase, in other words, tends to become incorporated in a centrally controlled administrative machine, and an increasingly large proportion of city life falls under the dominance of this centralized administrative machine.

### POSSIBILITY OF LOSS OF INITIATIVE AND FLEXIBILITY

SO LONG as such an administrative scheme functions effectively, it is no particular concern to the long-run progress of city life. But can it do so? At the very best such a centralized régime might be deficient in initiative, and flexibility. It is likely, as White puts it, " to become an independent center of authority," whose officials, whatever their official status, acquire enormous power, by reason of their familiarity with administrative routine no less than by virtue of the powers

with which they are formerly endowed.* So long as the functions of government do not touch many phases of social and economic life, such a régime can be tolerated, burdensome though it be. But when any considerable number of the vital economic activities of a society fall under its control, then it can prove to be a serious handicap upon social and economic life.

### POSSIBILITY OF INEFFICIENCY, CORRUPTION, AND OPPRESSION

IF, MOREOVER, such an administrative machine should ever fall into the hands of the unfit, the ruthless and the venal, then it would become a burden and a scourge. The blunderer, whose mistakes might spell irreparable disaster; the autocrat, who might use the coercive powers at his disposal with devastating results; the corruptionist, who by extortion and plunder could leave economic paralysis and impoverishment in his train — such administrators as these would be given an opportunity to inflict enormous damage upon a society. Nor is there any more probability that they would be shut out of the public office in the future than in the past, or the present.

### POSSIBILITY OF STRUGGLE FOR CONTROL

IN THIS connection, one further observation may be made. As pointed out above, the control of such an administrative machine, or any considerable portion of it, would offer a prize of such proportions that the unscrupulous and the corrupt might be more than willing to fight for its possession, while the high-minded and the able might, from quite lofty motives, feel equally impelled to do so as well.

In short, such a régime as this might be expected, at best to act as an impediment upon social and economic life. At the worst it might become a paralyzing and crushing burden. It might even be a source of conflict, and thus put an end to the general public tranquility without which urban life on a large scale is impossible. As suggested at the close of the preceding chapter, the existing situation in China would seem to be a case in point.

* L. D. White, *Introduction to the Study of Public Administration*, New York 1926, p. 96.

### "DEGENERACY"

OF THE devising of theories of urban "degeneracy" there is no end. From Tacitus and Horace down to Nordau and Spengler, thoughtful observers have looked upon the city as working its own destruction by undermining the physical, mental, and moral stamina of its inhabitants.

> This then is the conclusion of the city's history; growing from primitive barter center to culture city, it sacrifices first the blood and soul of its creators to the needs of its majestic evolution, and then the last flower of that growth to the spirit of Civilization – and so doomed, moves on to final self-destruction.

Thus writes Spengler. Nordau is more matter-of-fact. He finds insanity, crime, vice, hysteria, to be the results of the polluted atmosphere, the "stale, contaminated, and adulterated food," and, above all, the "constant nervous excitement" and the mental fatigue of city life, and of the speed of transportation and communication with which it is associated.*

Sorokin and Zimmerman,† however, sound a somewhat different note. They point out that even if it should be true that city life is wasteful of "the best human material" and disruptive of socially essential institutions, nevertheless the processes of rural-urban "selective selection" leaves a sufficient reservoir of ability and balance in the population of the countryside to enable it to conserve such human and institutional elements as are essential to sound stability.

### "DEGENERACY" IN RELATION TO ABILITY

IT IS not the author's intention to discuss in any detail these various theories. Many of them rest upon æsthetic and mystical presuppositions which have no place in a work of this sort. Others rest upon doctrines of human heredity which fail to accord with the findings of modern biology.

* O. Spengler, *The Decline of the West* (English Translation), New York 1926, *passim*, and Vol. II, p. 103; See also Tacitus, *Germania*, Books XVIII–XXVII; M. Nordau, *Degeneration* (English Translation of 2d German Edition), New York 1895, Chap. IV.

† P. A. Sorokin and C. C. Zimmerman, *Principles of Rural-Urban Sociology*, (American Social Science Series), New York 1929, pp. 583 and Chap. XXVII.

Concerning this second point, a brief explanation may be necessary, since the significant phases of recent biological research are still imperfectly appreciated by many observers.

Jennings,* in summarizing the results of recent investigations in the field of genetics, shows that the hopes (and fears) of many eugenists cannot be fulfilled for very many years, if ever. The mechanism of bi-parental reproduction is much more complicated and uncertain than early experiments in this field of biology seemed to indicate. There are not many adult human characteristics that are the direct result of "single-pair gene defects," and even where they exist, the wide variety of alternative possibilities resulting from human matings makes it all but impossible to predict the results of any given union. Thus, Jennings, following Fisher, estimates that if *every single feebleminded individual in the United States* were sterilized or otherwise disabled from producing offspring (assuming that all feeblemindedness is of the inherited type), there would still be so much recessive feeblemindedness in the germ plasm of apparently normal "carriers" that it would take 68 generations, or 2000–3000 years, before the proportion of feebleminded individuals was reduced from one per 1000, as at present, to one per 10,000. This calculation applies to one of the very few socially significant individual traits that is inherited through a single gene-pair. As for that vast range of generalized abilities and disabilities which the geneticist assumes to be due chiefly to inheritance, they are associated with *supplementary groupings* of different sets of gene-pairs, and are almost incapable of any prediction or control, except over very long periods. The fundamental genetic background of superior and inferior individuals is, according to Jennings, largely similar; it is the combination in which particular gene-pairs appear that is chiefly significant. Therefore, Jennings concludes, such changes "in the level of intelligence, or stability, or leadership of any population is naturally affected by differences in birth-rates between social classes, only after very long lapses of time; changes

* H. S. Jennings, *The Biological Basis of Human Life*, New York 1930, Chaps. I and X and *passim*.

brought about in this way will be enormously slow, measurable in *thousands of years.*" (Italics not in original.)

Therefore, assuming that all or most of the sociologically significant differences in human capacity are hereditary in character — an assumption that many observers, including Jennings, cannot accept — and assuming that city life does tend to breed out the abler strains in its population, such a process could not have a sufficiently deleterious effect upon that population to bring about its decay for thousands of years, which is longer than any urban society has ever endured or is ever likely to endure.

If to all this is added the fact that any city, up to the point of stagnation and decline, constantly recruits fresh streams of population from outside its borders, and the further fact that — as Sorokin and Zimmerman point out — these fresh population elements are certainly not on the whole inferior to the level of the existing city population, then it seems unlikely that whatever urban decline the future may see will be brought about by changes in the character of city populations.

### "DEGENERACY" IN RELATION TO MORBIDITY AND MORTALITY

INDUBITABLY, the urban death rate is relatively high; so presumably is disease. It has been shown, however, that urban death rates are dropping more rapidly than rural rates, particularly for the infectious diseases. But in the case of the so-called degenerative diseases there is not any general diminution of urban mortality, at least not in the United States. Winslow's comments on the recent appearance of a declining mortality from some of these diseases in New Haven, suggest, however, that the advances of medical and sanitary science — in which the city clearly outstrips the country — may eventually lead to a reversal of the situation in respect to them also. It may, therefore, fairly be anticipated that urban sickness and death rates, in general, will continue to drop, the extent of their drop depending on the degree of success that they attain in dealing with "degenerative" disease. It is, indeed, not unlikely, as Sorokin and Zimmerman suggest, that before so very long, urban and

rural rates will be approximately equal. They may be equalized on a high level or on a low one, and the significance of this alternative is discussed later. At this point it must suffice to observe that the future will probably not see any increase in the decimation of urban populations by death or in the disabling by the illnesses preceding death. It probably will see a diminution of each. Consequently it is to be anticipated that city life will suffer less, and not more than at present from these causes, which means that it has doubtless already experienced a greater degree of "degeneration" from this source than it will be called upon to do in the future.

Homicides, since they are related to urban criminalism, and accidental death; insofar as they follow traffic congestion and not industrialism, will probably not greatly decrease in the city of the future. They may increase. Moreover, for every fatal accident there are a number of non-fatal accidents, many of which result in long-standing and costly injury. To this extent, accidents constitute a true undermining influence in city life. Whether they will ever, however, assume such proportions as to threaten city life as such is to be doubted.

### "DEGENERACY" IN RELATION TO CRIME, MENTAL DISEASE, MENTAL DEFICIENCY, AND "IMMORALITY"

THERE remain to be considered more specific forms of "degeneracy," such as crime, mental disease, mental deficiency, and "immorality." One of these — mental deficiency — can be quickly disposed of. As Chapter X shows, the city at the present time is certainly not disadvantaged, relative to the country, in this respect. On the contrary, there seems to be a relative excess of mental deficiency in the rural portions of contemporary society.

As for "immorality," a verdict of "not proved" is indicated by such data as are available. Chapter IX has shown that the data concerning illegitimacy are not conclusive, while the relative preponderance of commercialized vice in the city does not at all betoken the absence of spontaneous and unorganized vice outside of it. Moreover, it is yet to be

proved that sexual irregularity — however repugnant it may be to the moral sense of an advanced civilization — is, in and of itself, of direct significance to the survival, or non-survival, of a society. It may weaken family life, it may indirectly impede population growth. And the venereal disease that frequently accompanies it is of undoubted deleterious effect. Yet, even if all of these were necessarily and always correlated with sexual delinquency, which they are not, they could scarcely assume sufficient importance to undermine the stability or vitality of city life. It must, furthermore, be repeated that the "evils" of city life are often evil only in the sight of the rural, or rural-biassed moralist. The city is the center of innovations in standards of conduct as in other concerns, and the "sins" of yesterday's city often become the accepted commonplaces of the town and village of tomorrow.

The same cannot be said of mental disease, suicide, and crime — all of them reflecting, in one form or another, the disintegration of personality. They are a greater burden upon urban than upon rural life and, to put it mildly, they are not decreasing as urbanism expands; on the contrary. There is a possibility that one of the factors antecedent to urban criminality — the paucity of normal recreational outlets — may to some extent be ameliorated. The reduction in the number of delinquency areas and a more enlightened treatment of criminal offenders may also serve to diminish urban crime rates. Nevertheless, it is unlikely that the city will ever fail to have a relatively high degree of criminality. The pecuniary basis of urban economic life, and the consequent inducement offered by it to crimes against property is a feature of city life that is likely to become accentuated rather than otherwise. Moreover, as just suggested, criminal behavior is only one of a number of manifestations of personality disorganization and, in this, there seems to be no good reason for supposing that city populations will ever show other than a relatively high rate of incidence.

### THE ELEMENT OF CULTURE-SHOCK

THE suggestion has been made that these types of breakdown are, in large measure, to be related rather to the *shock of the initial impact of city life upon the country-to-city migrant and his immediate descendants* than to the deleterious effects of city life, as such. It was, indeed, suggested that such groups as had become sociologically and psychologically acclimated to the city, such as the Jewish group, were relatively immune to any particularly marked personality effect. That this assumption is at least plausible is indicated by the data presented in connection with its discussion.

If this assumption as to the relatively short-run nature of urban personality breakdown is a sound one, then the degree of "degenerative" effects that it can exercise upon urban populations is self-limited. At any given time, the population of a city would contain a certain number of recent migrants and their descendants of, say, one or two generations. This group, while large, would not constitute more than a moiety of the total urban population and the disorganizing effects of city life would, in the main, be confined to it. At times when this group was particularly large, or when urban life was particularly trying,* there might be a sufficiently large number of personally unsettled individuals to constitute a very significant feature of the population. During periods of very great stress and disorder, indeed they might become sufficiently numerous and sufficiently disturbed to accelerate those forces of social disintegration that were already in operation, as, for instance in the Boston Police Strike of 1919. But their rôle would probably be auxiliary, or rather accelerative, to other more far-reaching influences.

Nevertheless there is no assurance that the author's analysis in this particular respect furnishes a completely accurate interpretation of the personality disorganization in the city. Certainly *some* cases of breakdown occur among well-estab-

* Note the "siege madness" (*folie obsidieante*) in Paris during the siege of 1870. — M. Nordau, *op. cit.*, p. 39.

lished members of city populations. What it is important to know is whether any significant proportion of them are so affected, and whether their numbers tend proportionately to increase as urbanism expands. So far as the author knows, there are no data available that would permit even a tentative answer to these critically important questions. It may be, as Nordau implies (but as Watson does not *) that the intensity and variety of stimuli to which the individual is exposed in the city, plus the frequency with which new situations are encountered and decisions required, builds up a volume of demands upon the human organism which is greater than that organism can tolerate. As shown in Chapters VI and X, experiments on noise seem to give some confirmation to such a proposition.† If this should prove to be the case, however, it must be noted that all city-dwellers do not react in the same way to the overstimulation of their environment, nor in the same degree. As has frequently been observed throughout this work, the present moment is witnessing the greatest and most intensive development of urbanism known to human history, yet there are relatively few instances of breakdown. The criminals, the insane, the potential suicides are, after all, only a small fraction of the total population of any city. The remainder may deviate from absolute normality in one or another respect, but the overwhelming majority of them are at least stable enough to go about their daily round and to live out their lives without exhibiting any striking aberrancies of behavior.

In sum the city of today is the end-product of the most intensive process of urban growth known to history, and the proportion of delinquent and unstable individuals within its population is still so small as not seriously to interfere with its vital activities. It does not, therefore, seem likely that these classes — whether limited to the migrant group or not — will in the future grow numerous enough to constitute a threat to the continuance of city life.

* J. B. Watson, *Psychology from the Standpoint of a Behaviourist*, Philadelphia 1919, p. 309.

† D. A. Laird, "Noise and the Homemaker," *Journal of Home Economics* (Vol. XXI) Nov. 1929, pp. 810–813. *Ibid.*, "Noise," *Scientific American* (Vol. CXXXIX) 1928, pp. 508–510.

### THE LOSS OF ALL-AROUND INDIVIDUAL COMPETENCE

RELATIVELY few city-dwellers become personally demoralized or unbalanced. Virtually all of them become more or less unable to provide for their own needs in case of emergency. Specialization is of the essence of city life. Like every other large-scale organization, the city must divide and subdivide the functions of its working population in order to obtain the efficiency necessary to its continuance. As the city expands, the subdivision of functions goes on, with the result that in an intensively urbanized society the scope of any particular individual's range of activities grows steadily narrower. In the course of this process, the individual city-dweller gives over to other individuals — most of whom are utterly unknown to him and completely beyond his orbit — the operation of many activities which are in the highest degree essential to his own safety and welfare. Food, drink, warmth, shelter, all these are provided for him by someone else. Transportation and communication are furnished by instrumentalities so complex that he could not begin to operate them even if they were given into his charge. His very personal safety is left to the care of specially appointed guardians, and, in many cities, he is unable without special permission even to provide himself with weapons of self-defence.

So long as city life flows along smoothly, this state of affairs entails no particular hardship for the city-dweller, but once let any vital function of the city fail for the briefest period, then he is reduced to inconvenience and even hardship, and *he is helpless to better his situation.*

Herein lies an important difference between urban and rural life. The latter is relatively undifferentiated, and the rural-dweller, if put to it, can make shift to provide for most of his elementary needs, including self-protection. The city-dweller cannot. If those of his fellows who are charged with food- or water-supply, transportation, or police, or fire protection fail to carry on their functions, or are unable to do so, then the city-dweller goes hungry and thirsty; is cut off from contact with his business and his friends; must

helplessly stand by and let his home be burned, his property plundered, or his own life threatened.

But need such emergencies as these arise? They have in the past, and there is no reason to suppose that they will not in the future. As shown in an earlier chapter, war, revolution, technological failure, industrial upsets — these have visited inconvenience and distress upon city-dwellers within the past two decades, and will presumably do so in the future.

The significance of this discussion to the future of the city may be readily perceived: *Any situation or event that tends to undermine city life derives added force from the loss of individual competency of the city-dweller to provide for himself.* In other words, the helplessness, to which the specialization of functions reduces the city-dweller, accelerates and aggravates any disturbing influence by reason of the confusion, distress, and disorder that follows immediately in its train. The matter may be put in another way; any given vicissitude might not be of very serious import to a rural or quasi-rural society, yet might be disastrous to an urban society because of the inability of the vast majority of city-dwellers to meet it. Thus it is that cities have time and again fallen victims to pillage and massacre at the hands of relatively small numbers of invaders or bandits. So it was in the later Roman Empire; so it is in contemporary China. Dill * points out that, at the height of the " barbarian " invasions of Gaul, the city-dwellers of that period sat supinely behind their walls passively awaiting the outcome of the battles between the invaders and their mercenary armies. Yet, a few hundred years later, in the Merovingian period, after an extensive de-urbanizing process had taken place, the inhabitants of these same cities had regained enough all-around competence to put considerable fighting forces into the field.

Rostovtsev † quotes a Scythian jibe at the city-dwellers of the ancient world, as given by Petrus Patricius, which is

* S. Dill, *Roman Society in Gaul in the Merovingian Age*, London 1926, p. 265.
† M. I. Rostovtsev, *The Social and Economic History of the Roman Empire*, Oxford 1926, p. 445.

apropos to this discussion: "The Scythians jeered at those who were shut up in cities, saying, 'they live a life not of men but of birds sitting in their nests aloft; they leave the earth which nourishes them, choosing barren cities; *they put their trust in lifeless things rather than in themselves.*'" (Italics not in original.)

In an earlier portion of this analysis, the suggestion was made that the partial dependence of the country upon the city might introduce a cumulative factor into urban decline by reducing the supply of food and raw materials upon which the city — before the beginning of the decline — could depend. In somewhat the same way, the consequences of the specialization of city life may introduce another cumulating influence into such regressive processes as may eventually overtake the city, in that, once such a process is initiated, it sets off a series of related vicissitudes which serve still further to disorganize the life of the city. Later in this chapter, attention will be called to other ways in which the contraction of city life — once begun — is likely to be accelerated and intensified by the secondary processes which it sets in motion.

### URBAN-RURAL CONFLICT

THERE is little need to elaborate upon what has already been said concerning the probable future course of urban-rural relations. The most important of them has just been mentioned. By reason of the process of "rurbanization" and of specialization in production, the country is involved in the fortunes of the city, particularly if these fortunes turn downward. Eventually, the countryside can return to a more primitive but more self-dependent economy, and when this occurs, it can live its own life relatively indifferent to the ups and downs of city life. But, until it has reverted to this condition, it is likely, in the case of any extensive and prolonged disturbance of urban society, to become the seat of secondary disturbances sufficient to add to the economic burdens of the city itself..

Again, it has been pointed out that the city tends to exploit the country either by getting the better of the bargain in

such economic transactions as take place between city-dweller and countryman, or by placing the country as a whole under various political-economic disadvantages. It is true that in the long run a general economic equivalence between city and country must obtain; otherwise economic relations between the two sections of society cannot continue. But it is impossible to fix any precise time limit upon the "short-run" period in which a lack of equality may continue to exist, or upon the degree to which deviations from equality can proceed before any material rupture in economic relations will take place.

In the study of wage relations, economists have found that there generally is at some point in the labor market a situation in which wages are substantially below their theoretical competitive level, where inequality of bargaining power, lack of labor mobility, racial discrimination, etc., make it possible for a sub-competitive wage to persist for some time. Similarly it is likely that in the economic relations between city and country there will always be found some area, or some special sort of relationship, in which the country is at a disadvantage with the city, or with individuals or groups identified with it. Moreover, certain special circumstances, such as the social and political ascendancy of the city, the sophistication and knowledge of the city-dweller and the countryman's inability to shift his economic activities to meet changed economic conditions make it likely that he will continue to deal with the city under greater conditions of economic inequality extending over a longer period of time than would be the case in other types of economic relations. This being the case, it is hardly to be doubted that such instances of urban exploitation of the countryside as do occur, together with the non-economic elements of rural-urban antagonism, operate to build up a body of resentment towards the city whose ultimate consequences are likely to be far-reaching.

### THE UNITED STATES

REFERENCE has already been made to the contemporary American scene. Farm relief, the tariff, prohibition — these

are issues in which the country and the city are sharply aligned against each other, and in two of them, the country is animated by a burning sense of economic injustice.

### CONTEMPORARY EUROPE

SUCH cleavages are not confined to the United States. Elsewhere in this work reference has been made to the German peasant's refusal to meet the demands put upon him on behalf of the cities, during the World War, and of the drastic measures to which the Government resorted in its efforts to collect food. The situation in Russia is equally illuminating. The "War Communism" of 1919–1920 amounted to the forcible seizure of food-products from the peasants for the benefit of the urban industrial worker. The official Soviet *Guide to the Soviet Union* comments on the episode as follows:

> The peasants felt no stimulus for the raising of large crops, because they were not able to sell. Their surplus stocks were taken away from them by the "*Food Levy.*" In reply, the peasants reduced their tillage to the smallest possible dimensions. . . The peasant supported only those branches of his economy which he needed, and produced only for his own consumption. Production for the market was reduced to a minimum. Thus the cultivation of cotton and tobacco was reduced tenfold, that of sugar-beets fourfold, and that of flax twofold. . .*

This régime was modified by the "New Economic Policy," but was followed by a new period of urban-rural conflict in 1929–1930, during the State's effort to "collectivize" peasant holdings, and to eliminate the so-called "rich peasant."

A not very different situation appears to be developing in Italy. Wilcox† quotes an official statement to the effect that: "The state takes precedence over the individual — the [agricultural] proprietor who for any reason fails to carry out the government program must give way to those who are in a position to increase land production. Land owners must realize that henceforth private ownership de-

* U. S. S. R. Society for Cultural Relations with Foreign Countries, *Guide to the Soviet Union*, Moscow 1925, pp. li–liv.

† E. V. Wilcox, "Ruthless Farm Relief" in *Country Gentleman*, Jan. 1930, p. 14.

pends on capacity and good conduct from the point of view of agriculture." The provincial governor has authority to take over a farm which is not up to "standard" and turn it over to another individual, who is given 30 years in which to pay for it. A farmer is forbidden to settle in a city, without special permission.

### THE ANCIENT WORLD — MEDIEVAL EUROPE

SOME brief reference may finally be made to those occasions in history when rural resentment against the city has broken out into serious violence. The "Barbarian" invasions of the Roman Empire were occasionally reinforced by bands of disaffected peasants, and derived much of their ferocity from them. Rostovtsev goes so far as to assert that much of the anarchy and subsequent tyranny that overtook the ancient world in the third, fourth, and fifth centuries is to be interpreted as based on the hatred of the peasantry (as represented by the Army) for the city-dwellers. He cites instances when Roman armies were with difficulty dissuaded from pillaging the very cities they were supposed to protect.

The medieval period offers at least one instance in which a city was sacked by a peasant army, the "Great Revolt" of 1381, in England. The grievance of the rebels was chiefly against taxation and landlordism, but it was in London, and in the royal court where they sought redress, and it was also in London where they chiefly pillaged and murdered.

### CONTEMPORARY CHINA

THE present day provides another example of violence on the part of country-dwellers towards the city. It is a news dispatch from China, dated August 4, 1930, where, as has been seen, city life is undergoing a number of catastrophic vicissitudes.

China's alleged Communists, originally viewed as merely isolated bands of thieves and robbers and disgruntled militarists, today number thousands.

China's Communists have ceased to be merely roving bands of thieves and lawless soldiery. Instead they are genuine converts to Russia's Communism. No longer are they roving brigands vic-

timizing helpless farmers. Instead, poverty-stricken farmers by thousands are joining China's Communist ranks, waving Red flags and resorting to unparalleled looting, burning, and killing of foreigners and Chinese alike, in the belief that by such a blood bath they will achieve social equality and material prosperity.

No alarmist or over-simple interpretation of the foregoing material is sought. All that is intended is to point out that the relations between city and country tend to build up a feeling of hostility of the latter towards the former; that this hostility often is predicated upon real or imagined acts of economic exploitation of the country by the city, or by social and economic groups living in the city or depending upon it for their power; and that this hostility from time to time manifests itself in the refusal of the country-dweller to provide the city with food and raw materials and even in his wreaking violence upon it.

Here, as elsewhere in this discussion, it is seen that, once the city begins to lose its prestige and security, a number of secondary vicissitudes may overtake it, and add to the primary disorganizing influences already at work. The possibility that the dwellers in the countryside may cut the city off from its supplies or openly attack it must be added to the potential vicissitudes involved in the city-dweller's inability to meet emergencies and the involvement of the countryside in the disorganization of city life.

## *BIBLIOGRAPHICAL NOTES*

For selected readings for Chapter XIII, see Chapter XIV, p. 485.

# CHAPTER XIV

## *THE URBAN OUTCOME — AN HISTORICAL POSTSCRIPT*

### POPULATION ATTRITION

THE GENERAL trends of population in an urbanized society have already been traced in an earlier chapter. The population of the city generally has a relatively low birth rate and a relatively high death rate, as compared with the population of the countryside. While urban death rates are falling rather more rapidly than rural rates, birth rates are not rising. The prospect is, therefore, that the city of the future — leaving migration out of account — will have a slowly-increasing or possibly a stationary or declining population.

When attention is directed to the countryside, it is found that both death rates and birth rates are tending to fall, although in most countries the rate of natural increase in the country is still substantially ahead of that of the city. Yet it has been found that there are certain countries where there is a *generally diffused low birth rate,* both in the city and country, and it has been suggested that the cultural factor of the initiation and spread of contraceptive techniques and of the *mores* permitting their use, is in part responsible for the penetration into the countryside of a trend towards a low birth rate.

It remains to appraise this material in terms of the future of the city, and to present certain additional data bearing on this particular point.

ECONOMIC, PHYSIOLOGICAL, AND CULTURAL FACTORS

FIRST of all it seems that there are now at work three distinct forces making for a low birth rate; economic, physiological, and cultural. The *economic factors* have been discussed in Chapter VII. Briefly, in the countryside, particularly on the farm, a young child is an economic asset, or, at the least, not a serious liability, whereas the opposite is the case in the city. Consequently urban birth rates are generally lower than rural rates.

The *physiological* factors affecting the birth rate also seem to operate towards a lower rate in the city than in the country, particularly since sedentary occupations and high incomes seem to be correlated with low rates of reproduction.

The *cultural* factors have to do with the limitation of births, particularly by contraception, and the social-ethical attitudes permitting its use. Contraception is of course the principal means by which birth rates are reduced, but not the only one. Abortion, infanticide, and the avoidance or postponement of marriage have the same effect. But cultural forces have no necessary connection with economic or physiological ones. Hence the diffusion of the cultural forces making for a reduced birth rate has, to some degree, not corresponded with the spread of the economic influences tending in the same direction. Such overlapping of the zones of operation of the cultural forces, on the one hand, and the economic and physical ones, on the other, that does exist, is moreover, as Thompson * points out, probably related to the fact that a fourth factor, namely industrialism, which acts as a general stimulus to cultural change, is usually associated with urbanism.

Reference to Table LXXII and the material contained in Chapter V serves to show how extensively cultural forces favoring the fall of the birth rate have operated in regions relatively unaffected by the economic and physiological factors, e.g. the urbanized regions. Thus Austria, Germany, and the United States have about the same birth rates, although the latter is much less urbanized than the former.

* W. S. Thompson, *Danger Spots in World Population*, New York 1929, p. 330.

According to Thompson, Germany has .81 acres of cultivated land per capita, and the United States, 2.85 acres.* France, with 41.8 acres of cultivated land per capita, has a distinctly lower birth rate than urbanized Germany. Switzerland (.249 per square mile) with barely a third of the population-density of England and Wales (.649 per square mile) has only a slightly higher birth rate, while Sweden (35.1 per square mile) with a twentieth of its population-density has a lower birth rate.

It is evident that — presumably through the spread of contraception — rural as well as urban localities are beginning to become low-birth-rate areas. When this fact is considered

TABLE LXXII

BIRTH RATES OF 1926 †

| *Country* | *Rate* |
|---|---|
| Russia (1925) | 43.6 |
| Bulgaria | 37.2 |
| Poland | 35.2 |
| Roumania | 35.1 |
| Japan | 34.9 |
| India | 33.6 |
| Spain | 29.9 |
| Italy | 27.2 |
| Hungary | 26.7 |
| Canada | 24.8 |
| Czecho-Slovakia | 24.4 |
| The Netherlands | 23.8 |
| Australia | 22.0 |
| New Zealand | 21.1 |
| United States | 20.6 |
| Germany | 19.5 |
| Austria | 19.2 |
| Belgium | 19.0 |
| France | 18.8 |
| Switzerland | 18.2 |
| England and Wales | 17.8 |
| Sweden | 16.9 |

* W. S. Thompson, *op. cit.*, p. 11.

† From W. S. Thompson, *Danger Spots in World Population*, Alfred A. Knopf, Inc., New York 1929, pp. 295–297.

in conjunction with the point made by Sorokin and Zimmerman, to the effect that the " rurbanization " of the countryside is likely to bring about a lowering of the birth rate along with other characteristically urban phenomena, it can readily be perceived that a general tendency towards a reduced birth rate *in both rural and urban sections* is probably to be anticipated in many portions of the world. Insofar as urbanized societies are those in which cultural change takes place rapidly, and in which the cultural effects of " rurbanization " are to be found, it is likely that, in the long run, it will be in such societies that the lowering of the rural birth rate will go farthest.

As a matter of fact, this situation is already approaching in certain areas. Kuczinski's * calculations for Northwestern Europe show that, when correction is made for the exceptional age-structure of existing populations in these areas, a period of declining population is now beginning, not for urban regions only, but for whole nations. He shows that on the basis of the 1926 birth and mortality records, there are now being born only 93 future mothers for every 100 existing mothers. He allows for the anticipated mortality before reaching child-bearing age, of infants now being born.

More than this, Dublin and Lotka,† using similar (but not identical) methods, show that even in the United States, which ranks in fertility above such countries as Germany, Austria, Belgium, and England, the population is coming startlingly close to a stationary point. Much of the increase in population of this country has been attributable to immigration. When the natural increase of the population by births alone is taken into account, corrections in birth rates and death rates being made to provide for the present abnormal age distribution of the population, it amounts to only 5.5 per 1000 per year.

Probably other areas for which calculations have not yet been made are also approaching, or actually entering upon a period of declining population.

* R. R. Kuczinski, *Balance of Births and Deaths*, Vol. I, Western and Northern Europe, New York 1929. Reviewed by A. B. Wolfe, in *The American Economic Review*, June 1930, pp. 346–349.

† L. I. Dublin, (Ed.), *Population Problems in the United States and Canada*, Boston 1926, pp. 11–12.

LIMITED POSSIBILITIES OF REPLENISHMENT BY MIGRATION

THE significance of this situation to the future of the city can be readily perceived. It means that in those countries where population becomes stationary or declines, the human reservoirs of the city are dried up; further growth is checked, and some shrinkage of urbanism is to be anticipated. For a time, the city may continue to grow by draining the countryside, or by attracting immigrants from countries having a high rate of increase. The first possibility could hardly be of any long-run significance; since prolonged drainage of population from rural areas would eventually deplete their productive capacity and so reduce the city's supplies and raw materials as to weaken its entire economic structure.

The same cannot be said of immigration. In certain circumstances, immigration from high-birth-rate countries to low-birth-rate countries might go a long way towards offsetting the low rate of increase of the latter. This would be likely to take place, however, only where high- and low-birth-rate countries were adjacent or close together, as is the case with Italy and France, Poland and Germany, and Russia and Scandinavia. It has been seen that the migration which peoples cities is, generally speaking, of the *short-distance* variety: The nearer an area is to the city — factors of transportation being taken into account — the greater the proportion of migrants which it contributes to the city. Long-distance migration exists, but it is to be doubted whether it would be of sufficient volume for long to maintain urban growth. It would seem necessary, therefore, to have two large areas with widely discrepant birth rates fairly close together, in order to have the deficiencies in the population of the one made up by the surplusage from the other. Even here it would seem likely that the cultural element in the diminution of birth rates would before long spread from the one area into the other, since culture tends to spread by territorial diffusion. To the extent that this took place, the difference between the two areas would be reduced, and the capacity of the one to replenish the population resources of

the other would be diminished. In this connection, it is to be noted that in Europe those high-birth-rate countries that are adjacent to low-birth-rate countries are now experiencing a very rapid drop in their birth rates and in their rates of natural increase.

TABLE LXXIII

CHANGES IN BIRTH RATES IN VARIOUS COUNTRIES *

| Country | *Birth Rates per* 1000 | |
|---|---|---|
| | 1908–13 | 1927 |
| Italy | 32.4 | 26.4 |
| France | 19.5 | 18.1 |
| Poland * | 33.9 | 31.6 |
| Germany * | 23.8 | 18.3 |
| Russia | 45.6 | 43.4 |
| Sweden | 24.4 | 16.1 |

Table LXXIII shows that in each "high- and low-birth-rate pair" there has been a drop in the rate for the high-rate as well as the low-rate country — that is, for the immigrant-producing as well as the immigrant-receiving country. In one "pair," namely Italy-France, the immigrant-producing country shows the more rapid rate of decline. Long-distance immigration, it is true, provides a substantial proportion of urban population in certain countries, notably the United States. It has already been mentioned that about 30 per cent of the population of cities of 500,000 or over in this country are foreign-born. The United States, however, has been in the path of long-distance immigration for a number of years, and many immigrants undoubtedly have resided in cities only as "way-stations" on the way to rural areas.† Generally speaking, long-distance migration takes place between heavily-settled and therefore urbanized and lightly-settled or non-urbanized countries, proceeding from the former to the latter. Thus the United States has

* See Table LXXI.

† See N. Carpenter, *Immigrants and their Children* (U. S. Census Monograph, No. 7), Washington 1927, pp. 51–56.

been giving way to the less-settled portions of the Western Hemisphere as an immigrant-receiving country for nearly half a century. In 1881–1885 out of all the immigrants entering the United States, Canada, Brazil, and Argentine, the former received 81.4 per cent. By 1901–1905 its share fell to 76.8 per cent, and by 1916–1920, before "quota" restriction was enforced, to 56.5 per cent.* The experience of the United States is, therefore, to be considered as exceptional, and as representing the overlapping, into the present stage of incipient urbanization, of long-distance immigration originally set in motion by the relatively sparse degree of settlement in this country in the eighteenth and nineteenth centuries. American industry has been the immediate attractive force for many immigrants, but it is probable that the high rate of wages which these industries offer is in large measure related to the country's relatively sparse population and consequent standards of living and remuneration.

In general, then, it may be said that these areas in which population has come to a standstill or is declining might support urban growth for a time out of immigration, especially in certain regions, but that in the long run they probably will experience a cessation of urban growth or even a decline in the degree of urbanization.

Brief reference may here be made to migration on a large scale backed by military power, as, for example, the Italian occupation of Tripoli, or the Japanese occupation of Korea. They would seem to be even more dependent upon a short range of activity than non-violent migrations in that the escorting and protection of large bodies of settlers could with difficulty be undertaken otherwise. To the extent that this would be the case, the observations made above regarding short-distance migrations to urban areas would apply. It should be added, however, that the physical destruction and the rupture of public tranquility accompanying such a movement would tend to bring about an arrest in urban growth, if not an urban decline. It is to be noted that each of the aforementioned aggressive migrations was conducted

* National Bureau of Economic Research, Inc., *International Migrations*, New York 1929, Vol. I, p. 173.

mainly in the interests of agricultural settlers. Mass migrations supported by military force would seem, then, to have little bearing upon city life, excepting as a possible factor in the undermining of the city.

### INDUSTRIALISM AND THE CITY

MANY observers feel that capitalist-industrialism cannot long continue in its present form and upon its present scale. Not all of them are "socialistic" in their outlook, moreover. Such considerations as the exhaustion of raw materials and the loss of foreign markets through the world-wide diffusion of industrialism lead them to doubt whether the intense industrialization which now characterizes such countries as, for example, England, Belgium, and Germany can long continue.

If there should be a decline of industry in any area, or a very drastic realignment in its control and objectives — as is envisaged by the Communistic doctrine — then city life would be profoundly affected. As pointed out elsewhere, urbanism is not identical with industrialism; the two are distinct sociological phenomena. Nevertheless, the present-day city is intimately related to capitalist-industrialism, which has cheapened production to such an extent that large numbers of persons, who could not otherwise do so, can afford city life. More than this, the commerce by which its products are distributed, and the far-flung system of transportation and communication which is built upon it, have gone a long way towards making possible the growth and maintaining of the modern city.

The author is not particularly pessimistic about the future of capitalist-industrialism, as such. Nevertheless it must be pointed out that, should capitalist-industrialism prove to be unable to overcome its difficulties and enter into a period of decline or of protracted and wasteful readjustment, then the city would suffer, and some decline of urbanism would follow as a consequence of such a vicissitude.

## POSSIBLE ALTERNATIVE OUTCOMES OF EXISTING TENDENCIES

A REVIEW of the discussion of the future of the city shows that a number of alternative and more or less unrelated possibilities are envisaged. They are, generally speaking, of two types of influences. The *primary* influences are those which, if developed to their full force would eventually control the destiny of the city. They are (1) the outstripping of economic by cultural and social-psychological factors of growth; (2) the expansion of governmental functions, and the centralization of administration; and (3) the exhaustion of the human resources of the city. The involvement of the city in the future of capitalist-industrialism is of an indeterminate significance, and is not considered further in this analysis.

The *secondary* influences are those which might accelerate the operation of one or another of the primary influences and aggravate their effect. They are (1) the vulnerability of the city's system of transportation and communication; (2) the involvement of the countryside in the vicissitudes of the city; (3) the hostility of the dweller in the countryside towards the city; and (4) the decline in the stamina and the increasing helplessness in the face of emergency of the city-dweller.

These several possibilities are capable of being combined in a wide variety of ways. It is quite impossible, therefore, to undertake any definite description of the future of the city. Indeed, it might with perfect accuracy be said that the city seems to have before it not one *future,* but several possible *futures.* Certainly different futures await different cities. This much can nevertheless be said: *all* of the possibilities discussed above seem to point rather definitely (1) towards an expansion of urbanism in the near future; (2) towards an eventual arrest of urban growth; and (3) towards a regression to a lesser degree of urbanism than that reached at the peak of the phase of expansion.

It should be repeated that *all* of the possibilities discussed above point in this direction. Accordingly, if one or another of them should prove to be based on a wrong reading of the

facts, or should be offset by some unforeseen development, there would still remain other tendencies pointing in the same direction.

There are dozens of possible combinations of the various tendencies that have been outlined above, and it would be fruitless to examine all of them. It would, however, seem that there are three general directions in which the arrest and regression of urban society might go. They may be denominated as (1) internal break-up; (2) external interference; and (3) population attrition.

### INTERNAL BREAK-UP

INTERNAL break-up could come as a result either of (1) the outstripping of the economic by the cultural and social-psychological factors of growth, or of (2) the extension of governmental authority into economic life, and the centralization of its administration. It might be accompanied by both of these factors operating simultaneously. Either or both would be followed by various secondary tensions and cleavages. Either economic depletion or governmental inefficiency would be accompanied by the decline of one or another of the sources of supply, and of the systems of communication and transport, particularly through the failure to make good depreciation and obsolescence. Public disorder would be promoted in a number of ways. Within the city, social unrest would be increased by unemployment and the fall in the standard of living that would accompany such a situation. Again, the government — particularly if it were arbitrary, inept, or corrupt — would be likely to come into violent collision with those social classes which would be adversely affected by such programs of socialization of private enterprise and expropriation of accumulated capital as it might embark upon. Outside the city, there might be *émeutes* attendant upon the rural disorganization accompanying urban decline. There might also be struggles between rival groups seeking to control or "reform" the government, particularly in the form of collisions between urban and rural partisans. Furthermore, within and without the city, crime, extortion, and banditry would be

exacerbated by the general economic depression, as well as by the decline in public order and the partial failure of transportation and communication. Meanwhile, in every city would be found a growing mass of people whose economic condition and personal security were steadily worsening, but who could do nothing to remedy their situation, except to acquiesce in whatever expedients their leaders might propose, and occasionally to break out in futile and desperate violence. Finally, such economic activity as remained relatively unimpaired would find itself increasingly handicapped by taxation, governmental interference, loss of purchasing power, and most of all, by outbreaks of disorder and by the consequent interruption of communications.

This last point requires emphasis, for it cannot too often be repeated that city life on a large scale cannot long endure in a society that lacks public tranquility over a wide area and the far-flung and smoothly-working system of communications dependent upon it. The loss of the first means the loss of the second, and the loss of either means the curtailment of the city's supply system, and the cutting off of the commerce upon which large sections of its population are dependent.

### EXTERNAL INTERFERENCE

THE second group of alternatives, namely external interference, is significant chiefly because it involves the loss of public tranquility and the disruption of transport and communication as discussed in the foregoing paragraph. No society is immune from war, revolution, factional conflict, or wholesale banditry. When any one of them comes, city life is bound to go into an eclipse.

More than this, the city is likely to suffer in a more direct way from such disturbances. It is peculiarly vulnerable to modern methods of attack, such as long-range bombardment and air-raids. The long-range guns which bombarded Paris from distances of from 50 to 70 miles during 1918 landed a total of 367 shells on the city and its environs. One shell alone, striking a crowded church, killed 88 individuals.*

* H. W. Miller, *The Paris Gun*, New York 1930, *passim.*

Then the city offers an irresistible allurement to any army. Not only may food, clothing, and various supplies be obtained, but money tribute can be levied, while the individual soldier's opportunities for robbery, loot, and rapine are limited only by the discipline to which he is subjected and his own individual scruples. The "Communist" raid upon Changsa, China, in July and August 1930, is reported to have resulted in the extortion of $3,000,000 (Mexican) from merchants, the forced payment by property-owners of the equivalent of two months' rent and taxes besides extensive looting.

The various secondary factors of urban decline that have previously been discussed could, of course, be initiated by external interference just as readily as by internal disintegration. Those relating to violence and disorder, such as banditry, urban-rural conflict, and criminalism would probably be particularly likely to occur. Moreover, the helplessness of the average urbanite in the face of emergency would take on especial significance. Lacking both military training and equipment he would have no other recourse than flight or dependence on the mercies of whatever military group should gain the upper hand, as seems to be the case with the present civilian population of the Chinese cities.

### POPULATION ATTRITION

THE third group of alternative possibilities — population attrition — has already been discussed at some length. At this point, it need only be noted that such a sequence of events would be much less catastrophic than the other two. It would, indeed, probably operate so slowly that little, if any, maladjustment would be apparent. Cities would simply cease to grow, and then, if the process continued, they would begin to be de-urbanized. The urban fringe would recede; suburbs would dwindle and revert to country towns; "rurbanizing" tendencies would be checked. So far as the city and its immediate region were concerned, little change at all would be evident. The same general pattern of economic and social life would be maintained, but it would be at once more contracted and more spacious, for congestion — the

constant accompaniment of urban expansion — could at last be overcome. There would, however, be a swing back to a more rural type of life, so far as society as a whole was concerned. Its more remote portions, being no longer involved in the urban systems of supply, would probably revert to an undifferentiated, self-sustaining agriculture, and "marginal," or relatively unproductive areas, might drop out of cultivation altogether.

If this process should continue unchecked, city life would, of course, tend to disappear altogether. Such a contingency would, however, be unlikely to occur — even if the possibility of population replacement from more heavily settled areas is left out of account. Not all contraceptive measures are successful, and not all potential parents desire to be childless. Moreover, at some point along the course of de-urbanization, the economic and physiological influences favoring a relatively high birth rate would be reintroduced into society by the recrudescence of rural life.

### POPULATION ATTRITION DISTINGUISHED FROM POPULATION DECIMATION

A *caveat* should be entered here concerning the significance of the distinction between the gradual process of population attrition, as considered in this portion of the discussion, and the sharp decline of population which often accompanies catastrophic occurrences, such as those enumerated in connection with the first two groups of alternative outcomes of city life. The first, population attrition, is a slow process and is predicated chiefly on the birth rate; the second, *population decimation*, or depopulation, works swiftly, and is a consequence of both a falling birth rate and a rising death rate (or at least an arrest of the expected fall of the death rate). It follows upon war, famine, misery, pestilence, loss of confidence in the future, all of which are correlated with a disordered social situation. Therefore, it is to be regarded as one of those secondary factors of de-urbanization discussed earlier in this chapter, and not as directly related to the phenomenon here under discussion.

Of the three groups of alternatives the third, population

attrition, would be, in many ways, the least destructive of the welfare of individual human beings and of social institutions and cultural values. However, it involves one factor of uncertainty, the possibility that population depletion in one country might proceed so much more rapidly than in an adjacent or near-by country, that the inhabitants of the latter could be tempted to undertake an aggressive occupation of the former, with all the vicissitudes which such a course of events would involve.

## POSSIBLE FUNDAMENTAL CHANGES IN THE NATURE OF CITY LIFE

ALL of the foregoing discussion has been predicated upon two lines of analysis: examination of existing tendencies in city life and historical precedent. Might there not be, however, certain new and unprecedented elements in city life which are of such far-reaching importance as to negative such an analysis? That is to say, are there not now present, or in embryo, factors which are ushering into existence a new urbanism, which may, for all one can tell, continue to expand indefinitely? May not, indeed, the society of the future be one continuous chain of cities interspersed with garden-suburbs and with intensely cultivated, mechanically-farmed agricultural areas, from which ample food and other raw materials could be secured for an indeterminate period through an elaborate system of transportation? Such a development is put forward as a probability by certain observers, such as McMillen.* It is, however, one which the author finds it difficult to envisage.

### AGRICULTURE AND TRANSPORTATION

THE improvement of agriculture, and the development of transportation and communication, are profoundly altering contemporary society. They are reducing the labor-cost factor in agricultural production, and they are making available to the city the products of areas that have hitherto been inaccessible. These forces, however, also facilitate an extensive urban penetration of the countryside which is of

* W. McMillen, *Too Many Farmers*, New York 1929, *passim*.

critical importance. It means that — whatever may take place in remote agricultural regions — those areas that are close to great urban centers are tending to become urbanized, or rather "rurbanized," and thereby to take on to a greater or less degree the economic and other characteristics of the city. In other words, the type of society towards which these forces are tending is not a chain of cities interspersed with farms, but a virtually continuous conurbation, interspersed with semi-urban appendages, such as recreational areas, water-supply reservations, market gardens, and the like. On the edges of such a society, it is true, would be a wider area of truly rural territory than is accessible to the urban society of today, but it would have a larger urbanized, or "rurbanized" population dependent upon it.

Moreover, mechanization, and other devices for increasing agricultural production are, in the absence of radical changes in the knowledge of soil chemistry, plant-breeding, nutrition, and the like, of limited significance. Sooner or later, it is bound to be overtaken by the principle of diminishing productivity, and thereafter to decline in significance as a source of additional production.

Baker * goes so far as to say that a large part of the increased production ascribable to the substitution of farm tractors for draft animals — the most important element in agricultural mechanization — has already taken place. He thinks that in North America such further increases as may be expected will be complete fifteen to twenty-five years hence. He points out further that, except in the production of milk, the possibilities of increased production by improvements in feeding methods are about exhausted. He does, it is true, believe that increased use of fertilizers and increased acreage would greatly increase production, but that this would take place only if higher prices are obtained, which means, of course, only by pushing past the point of diminishing production.

One further point must be noted, the continuation of national boundaries and of international rivalry. Such a

* O. E. Baker, "The Trend of Agricultural Production in North America and its Relation to Europe and Asia" in C. Gini *et al.*, *Population*, Chicago 1930, pp. 266–274.

society as is now being envisaged would eventually overflow national boundaries. In Europe it has already done so and it is beginning to do so in the Western Hemisphere. This being so, it would become increasingly subject to disruption by international conflict, as has already been shown. Even if this possibility be disregarded, there remains the dislocation that can follow nationalistic economic rivalries. The United States Tariff Act of 1930 serves to show that the interposition of political obstacles to the extension of the city's source of supply is a present and substantial reality.*

In sum, neither the wide increase in the range and effectiveness of intercommunication nor the mechanization of agriculture seems likely materially to alter the conditions of urban life. The one serves chiefly to diffuse city life at the center of an urban society and to extend the boundaries of that center, thus placing an increased burden upon its remoter regions, and forcing it to go further and further afield in search of supplies and raw materials. The other provides additional agricultural productivity only up to the point of diminishing productivity — a point which must be reached fairly soon unless far-reaching scientific and technical advances supervene.

### INDUSTRIAL DECENTRALIZATION AND AUTOMATIZATION

THERE is another line of reasoning which leads some observers to expect the radical alteration of city life. It is the decentralization and automatization of industry. These expectations rest chiefly on the possibility of utilizing mechanical power at points remote from its source, particularly through the use of electrical energy. Undoubtedly electrification of industry is likely to work profound changes in industrial organization. The author has seen a tiny, old-world village in southern France, virtually untouched by economic and social change for half a thousand years, in process of an Aladdin-like transformation by reason of the erection of two shoe factories, utilizing electric power generated in the Pyrenees Mountains. In the United States a similar process of industrial decentralization appears to be taking its incep-

* As in the dislocation of the "milk-sheds" of such Canadian border cities as Detroit and Buffalo.

tion. For example, the Endicott Johnson Corporation and the International Shoe Company, two of the largest shoe manufacturers in the country, are organized on diametrically opposed lines. The first is concentrated in the Chenango Valley in south central New York (Binghamton, Johnson City, Endicott, and Oswego). The second is scattered in 39 cities and towns, most of them small towns, in the Middle West.

Industrial decentralization of this sort is quite different from that involved in the moving of industrial establishments into suburbs of a metropolitan region. Such a course affects no fundamental change in city life: it merely diffuses it more widely throughout the urbanized region. If, however, industry could be carried into small towns and villages, then a very pronounced change would come over society. The change would not be so much in the nature of de-urbanization, as of the *de-industrialization of the city*. The city of today has been shown to owe much of its size and growth to industry. Should industry — or any substantial portion of it — be taken out of the city and its environs and into the country, then a large number of city-dwellers would go with it, and the city would correspondingly shrink, or at best, have its growth checked.

How far industry can actually be carried into the countryside cannot now be foreseen. At present, there are certain definite limitations upon the distance that electric power can profitably be carried and this is limiting the electrification of agriculture. Of 324 "electrified farms" studied by Zinder, 284 were 5 miles or less from their market, and — presumably — from the immediate source of their electric power.* It is difficult, moreover, to see how heavy industries, as those requiring mass production, could ever be carried on in other than large-scale units and how they could be located far from such large reservoirs of labor as are provided by cities. Moreover, considerations of administration and the transport of raw materials would seem to make for centralization other than decentralization. However, to the extent that the city could be de-industrialized, one important element

* H. Zinder, "Problems of Rural Electrical Service: The Potential Market" in *Journal of Land and Public Utility Economics*, Vol. IV, 1928, p. 342.

in the population of the present-day city could be diminished.

The same observation applies to the development of automatic machinery. To the extent that it could be introduced by industries located in cities the opportunities for employment would be lessened, and — if other industrial occupations did not arise to make up the deficiency — urban population would, in the long-run, be correspondingly affected.

Thus examination of such technical possibilities as are now observable shows that improved transportation and communication do not seem likely materially to affect the various tendencies discussed earlier in this section; the possibility of the decentralization and the automatization of industry does, however, suggest that some falling off in urban growth, or, perhaps, a shrinkage of urban population may take place. In short, such change in the urban prospect as technological progress does indicate points in the same direction as those tendencies that are already in force and are supported by historical precedent — to wit, the ultimate arrest of the process of urban growth and the possible regression of urbanism.

### REVOLUTIONARY SCIENTIFIC DISCOVERIES AND MECHANICAL INVENTIONS

FINALLY, it must never be forgotten that a series of fundamental scientific discoveries or mechanical inventions could so alter the nature of city life as to postpone the operation of the tendencies that have been discussed. The cheapening of industrial production or transportation might offset such increases in the cost of food and raw materials as were set in motion by the law of diminishing productivity. Revolutionary discoveries in soil chemistry or plant-breeding or animal-feeding might enormously increase agricultural production. Further progress in the knowledge of nutrition might enable a population to be well fed upon a fraction of the bulk of foodstuffs that it now consumes. Synthetic food might even displace agricultural production in certain fields. These and similar inventions might permit an almost indeterminate expansion of urbanism, but only, as Black * observes, to the extent that " an increase in efficiency of produc-

* J. D. Black, *Introduction to Production Economics*, New York 1926, p. 921.

tion faster than the increase in population" continued uninterrupted. Until such a prospect comes within the realm of actuality, moreover, the scholar is not justified in taking them into account — much as his personal predilections might induce him to do so.

## AN HISTORICAL POSTSCRIPT

REPEATEDLY reference has been made to the Roman Empire. This has been done deliberately, for the Roman Empire involved the most extensively urbanized society known to history before the present phase of urbanism took its inception. Yet the end of the Roman urban society was wilderness and manorial feudalism. Its cities disappeared from sight or shrank into towns and villages; only here and there did Marseilles, or Alexandria, or Constantinople keep the torch of city life burning. Why?

The answer to that question has fascinated and tantalized observers from St. Augustine to Rostovtsev and Spengler. The author does not propose to propound a new theory of the fall of Rome, but he suggests that many of the results of recent research can be interpreted as exemplifying the principles set out in this chapter and the one preceding it.

### THE DECAY OF THE URBAN CIVILIZATION OF THE ROMAN EMPIRE

THERE is no need to recapitulate in more than briefest outline the narrative of the closing years of the Roman Empire. From the beginning of the third century governmental corruption and inefficiency increased and public order and prosperity declined. A period of military anarchy in the third century was succeeded by a brief respite of public order, bought, however, at the price of a crushing state-socialistic military despotism. Economic and political decay continued; the public peace was shattered by internal conflict no less than by "Barbarian" invasions. By the sixth century, the Roman Empire was only a memory.

Some notion of the extent to which Roman city government decayed can be gained by reference to the history of the period. Rostovtsev paints a vivid picture of the Empire following the military anarchy of the third century:

Work was disorganized and productivity was declining; commerce was ruined by the insecurity of the sea and the roads; industry could not prosper, since the market for industrial products was steadily contracting and the purchasing power of the population was diminishing; agriculture passed through a terrible crisis, for the decay of commerce and industry deprived it of the capital it needed, and the heavy demands of the state robbed it of labour and the largest part of its products. Prices constantly rose, and the value of the currency depreciated at an unprecedented rate. The ancient system of taxation had been shattered and no new system was devised. The relations between the state and the taxpayer were based on more or less organized robbery: forced work, forced deliveries, forced loans as gifts were the order of the day. The administration was corrupt and demoralized. A chaotic mass of new government officials was growing up, superimposed on and superseding the former administration in *personnel*. The old officials still existed but, foreseeing their doom, strove to avail themselves to the full of their last opportunities. The city *bourgeoisie* was tracked out and persecuted, cheated, and maltreated. The municipal aristocracy was decimated by systematic persecution and ruined by repeated confiscations and by the responsibility imposed on it of insuring the success of the organized raids of the government on the people. The most terrible chaos thus reigned throughout the ruined Empire.*

This was the situation before the "reforms" of Diocletian and Constantine. It was little improved after them, although the Empire enjoyed a brief respite of public order, purchased however at the price of an oriental despotism supported by a rapacious mercenary army. With this new régime, the city, as has been seen, was put "under the command of the agents of the central government," which "made them the servants and slaves of the state . . ." The *curiales,* who represented the wealthier members of the city capitalist classes, were reduced to a sort of hereditary guild of revenue-producers and administrators:

Oppressive and unjust taxation based on the enslavement alike of the tillers of the soil and the city artisans; the immobilization of economic life, which was hampered in its free development by the chains which bound every individual; the cruel annihilation,

* M. I. Rostovtsev, *The Social and Economic History of the Roman Empire,* Oxford 1926, pp. 453–454. By permission.

consciously pursued * and gradually effected, of the most educated class of the Roman Empire, the city *bourgeoisie;* the steady growth of dishonesty and of violence among the members of the imperial administration, both high and low; the impotence of the emperors, despite the best intentions, to check lawlessness and corruption, and their boundless conservatism as regards the fundamental principles of the reforms of Diocletian and Constantine – all these factors did not fail to produce their natural effect.†

Boak succinctly summarizes the ultimate *debacle* of the ancient civilization:

> Private industry languished, commerce declined, the fields lay untilled; a general feeling of hopelessness paralyzed all initiative. And when the barbarians began to occupy the provinces they encountered no national resistance; rather were they looked upon as deliverers from the burdensome yoke of Rome.‡

The whole structure of the Roman world collapsed, but it was the city which suffered the most. Right up to the eve of the "Barbarian" infiltrations there was one social class which enjoyed considerable prosperity. It was the rich land-owning class which gained possession of vast landed estates and was able to defy city tax-gatherers and imperial emissaries alike. In fact, towards the end of the Roman régime, individuals and small communities resorted to their patronage for protection against public disorder and official rapacity.§ In other words, the center of economic gravity shifted from the city to the large, self-sufficing landed estate, which took on most of the characteristics of the typical medieval feudal manor. This fact is of central importance for it indicates, as Rostovtsev points out, that the ancient world was beginning to revert from an urban to a rural economy even before the border of the Empire gave way to the "Barbarian" bands.

The reversion to a rural social structure continued during the "Barbarian" infiltrations and after them. For that matter, most of the ancient Roman Empire remained essen-

* The author does not agree with Rostovtsev that the elimination of the bourgeoisie was the result of deliberate policy.

† *Ibid.*, pp. 469–478.

‡ A. E. Boak, *A History of Rome to* 565 A.D. (Rev. Ed.), New York 1929, p. 375.

§ *Ibid.*, p. 374.

tially rural until the commercial expansion preceding the Renaissance and the Reformation set in motion a renewal of urbanization. Indeed, many regions which were formerly well urbanized — such as Asia Minor, Northern Africa, and portions of Italy, France, and Spain — remain essentially rural to this day. For instance, Aquileia, which was the fourth city in Italy, under the Empire, is today a mere village, while Autun, (Augustodunum), which had, at the height of its prosperity a population of 50,000 and an area of 494 acres, has today a population of less than 20,000, and occupies about a half of the territory covered by the old Roman city.

There is other indirect evidence of the general break-up of urbanism and of the economic and social system on which it was based. Public buildings in the cities began to fall into disrepair as early as the reign of Constantine,* and later special edicts were issued forbidding their destruction for the sake of private building.

Finally, the cities shrank in size, and, archæological evidence indicates that most of them did not reoccupy their abandoned areas for centuries. Bordeaux, for example, remained for 1400 years confined within the same narrow limits into which it retired in the third century. Autun, as already indicated, is today less than half as large in area and population as under the Roman Empire. During the third and fourth centuries, it occupied a bare twentieth of its former area.†

It is true that the disturbances of the third century, particularly the first onset of the "Barbarian" invasions were the primary force leading to the shrinkage of the cities of the Empire. Fortifications had to be built, and some contraction in area was necessary to make such fortification financially and strategically practicable. Nevertheless, the significance of the invasions in this connection appears not to have been primary. There were other disturbances relating to the anarchy into which the Empire itself had fallen, entirely irrespective of "Barbarian" inroads, which made

* M. I. Rostovtsev, *op. cit.*, p. 445.

† E. Lavisse, *Histoire de France* (Vol. I, Part I, by G. Bloch), Paris 1901, p. 358. Also F. Lot, *La Fin du Monde Antique et la Début du Moyen Âge*, Paris 1927, p. 82.

fortification imperative. Brigandage was widespread; armed serfs rebelled; and the struggles of the armies of rival aspirants for political power were a constant menace. Moreover, the Roman armies themselves occasionally sacked cities on their own account, while the inhabitants of the cities seem altogether to have lost the power to fight in their own defence.* The very "Barbarian" invasions were, at times, merged into revolts of escaped slaves and other men made desperate by the oppressive economic and social conditions of the time. It may well be asked whether the dreadful excesses which accompanied the German invasions of Gaul in 275–276 were not accountable rather to these Gallo-Roman adherents to the Germanic tribe than to the tribesmen themselves, whether, indeed, the destruction was not more that of a *jacquerie* than of an invasion.

The disturbances against which the cities of the later Roman Empire had to fortify themselves were, therefore, by no means related entirely to the "Barbarian" inroads. They also grew out of the disorganization accompanying the political and economic deliquescence of the ancient society.

More important than this, however, is the fact that the cities failed to reoccupy their abandoned territory after the invasions stopped. During most of the fourth century, particularly under the rule of Constantine and Diocletian, the Empire enjoyed relative immunity from outside attacks. And later, after the repulse of the Huns in the second half of the fifth century, the invasions came to an end. Yet the cities remained inside their massive walls. Clearly they did so, because their vitality was depleted, and *those conditions of public tranquility and freedom of intercourse without which an urban society cannot exist had vanished.*†

Lot ‡ gives a vivid picture of the low estate to which the French city had fallen in the late Roman and early Frankish periods:

* F. F. Brentano, *The Earliest Times* (English Translation), London 1927, pp. 180–181. See also S. Dill, *Roman Society in Gaul in the Merovingian Age*, London 1926, p. 265.

† H. Pirenne *Medieval Cities* (English Translation), Princeton 1925, Chaps. II and III.

‡ F. Lot, *op. cit.*, p. 40.

The city of the later Empire was a stronghold (*fort d'arrêt*) of an insignificant area, of 10 to 20 hectares [24.7 to 49.4 acres], which held a population of only 3000 to 6000 people. In this narrow space, there was room only for the palace of the count, for the cathedral, which replaced the temple, and for the homes of the clergy and the servants of the bishop. The rest was occupied by the merchants and also by the *curiales*, the men of good family. . . . The feeble activity of the city of the [Merovingian] epoch contented itself with an era equally miserable. The *suburbium* was not only a rural locality [but] an indispensable appurtenance of the material life of the city. There the monasteries were installed, which could not exist inside the walled Roman cities. This so restricted " city " * had, even itself, a rural aspect. One could find there small cultivated plots and animals wandering about loose.

Some cities went further than this. They disappeared altogether. In some cases, as in the virtual extinction of Aquileia, the shock of the " Barbarian " invasions may have hastened this process. But that cannot be said of Silchester and a number of other cities in eastern England, which were abandoned before ever the Saxons set foot on British soil;† or Timgad, in Northern Africa, which was found in the seventh century, by the troops of the Eastern Empire, in a completely abandoned condition.

The urban decline went still further a century or two later, in the Carolingian period. Commerce almost ceased to exist; the great landed-estate became the seat of economic life; the kings themselves lived on their country estates rather than in the towns. The " cities " had ceased to be cities; they were " merely fortified places and headquarters of administration." ‡

In sum, the most completely urbanized civilization known to history — excepting only contemporary Europe and North America — in the space of a few generations, entered upon a period of decline which brought it eventually to a society of open country and fortified strongholds, not so very different

* Poëte estimates the area of Paris in the 4th and 5th centuries at 8 hectares (19.76 acres) and its perimeter at 1600 meters (1746 yards). Even so, it was the 6th largest city in France, Sens, the largest having a perimeter of 2600 meters (2836 yards). — C. M. Poëte, *L'Enfance de Paris*, Paris 1908, p. 61.

† F. J. Haverfield, "Roman Britain" in *Cambridge Medieval History*, Vol. I, Cambridge 1911, pp. 380–381.

‡ H. Pirenne, *op. cit.*, Chap. III.

from that out of which it had emerged more than a thousand years before.

Two preliminary observations should be made before this narrative of the disintegration of the ancient world is discussed. In the *first* place, the Roman Empire was, in many respects, merely the consummation of an urban civilization that was at least as old as the ancient cities of Egypt and Asia Minor. In the *second* place, the whole history of the Roman world was consummated in a period that was relatively sterile of scientific and technological advance.

### THE ROMAN EMPIRE AS THE CONSUMMATION OF A LONG-STANDING URBAN DEVELOPMENT

THE first proposition is easily established. As the first chapter has shown, the Roman Empire was a late arrival on the stage of human history. Civilization — urban civilization — had been in existence for centuries and millennia before ever the seven hills by the Tiber were settled. The very Greeks, from whom the Romans derived large sections of their way of living, were savage nomads when the great Mycenean city-civilization had already passed its prime. This civilization, in turn, was young compared to those of Egypt and Asia Minor. So the record of ancient urbanism goes back, and back beyond recorded history.

More than this, many of the distinctive features of Roman civilization were initiated in these earlier societies. As Poëte shows, the physical structure of the Roman city was borrowed from more ancient models. The same was true of government and administration. Many of the basic elements of Roman city government, particularly the relations between the city and the central government, were taken over bodily from the Greek cities of Sicily, and from the Egyptian Empire.

Finally — and this is a most important point — the very concept of an urban civilization was taken over from earlier models. As Usher * points out, in Asia Minor, Egypt, and

* A. P. Usher, "The History of Population Settlement in Eurasia" in *The Geographical R view* (Vol. XX, No. 1) Jan. 1930, p. 129. Usher's printed publications have been amplified in conversation with the author.

Crete, where a semi-arid climate together with the use of irrigation and an inhospitable soil made congregate-living a normal form of social and economic life, the urban society from which the Roman society was derived appears to have had its origin. Thence it seems to have spread, at least in part, by the processes of culture diffusion to which reference has already been made, to the west. Usher, indeed, has gone so far as to say that the Roman Empire was not geographically fitted to support the same type of civilization as the semi-arid Asia Minor and Egyptian regions. The bearing of this fact is obvious. The Roman civilization was the inheritor of a set of cultural norms which included a high degree of urbanization. Hence, from the very beginning, the ancient civilization of Europe — the Græco-Roman civilization — possessed in a highly-developed form the *cultural*, as distinguished from the *economic*, factors favoring urbanism. These cultural elements of growth had acquired by their millennium-long incubation in Egypt and Asia Minor such a terrific momentum that it would be little wonder that they did not outstrip the economic factors.

### THE TECHNOLOGICAL AND SCIENTIFIC STAGNATION OF THE ROMAN EMPIRE

THE previous sentence leads to the elucidation of the second preliminary observation. There was very little technological and scientific advance during the whole Roman era. Usher has shown conclusively that the ancient world was relatively barren in the field of pure science, and even more so in that of applied science. With the Iron Age, humanity's first great period of technological invention came to a close, to be followed after a lapse of some thousands of years by the ferment of investigation and experiment upon which the civilization of today is founded. Prehistoric man bequeathed to his successors the arts of metal-working, the domestication of plants and animals, textile- and pottery-making, and building. Relatively little was added during historical antiquity. There were, of course, refinements and improvements, so that some of the fine arts were brought to a high degree of

excellence, but the basic processes were altered relatively little. Such development as did take place was in the fields of building and engineering including surveying, and in shipbuilding and navigation. The former made possible not only large-scale and lasting construction within the city, but also aqueducts and roads by which the ancient city's supply-source and commerce could be extended. The latter also widened the field of the city's communications.

Machinery, however, developed scarcely at all. As Usher observes, the ancient world relied almost exclusively upon muscular power, more especially upon human effort. Animals were inefficiently yoked and harnessed, and therefore of little use for power or draft purposes. Certain mechanical appliances were in use, such as the force-pump, the lever, the pulley, the wedge, the drill, and the potter's wheel, but because of the limitations on the use of power, their use was limited. Some notion of the degree to which economic development was impeded by the abscence of mechanical power may be gained from the fact that a modern trans-atlantic liner's engines producing 100,000 horse-power, can, with the aid of a total engine- and fire-room crew of 175 men, equal the propelling power of 3,600,000 galley slaves, pulling oar-sweeps such as were used in the Roman Empire.

Usher * hazards the opinion that the general failure of antiquity to place at its disposal more than "the lowest power units" was an important deterrent upon "the development of more complex mechanism." At any event they were not developed. Only in the fourth century, when Rome was already approaching dissolution, did a device for the utilization of non-muscular power — a water mill — come into general use.

Thus it is seen that the Roman world lived out its life in a period of relative technological stagnation, at least as regards inventions and discoveries affecting the broad outlines of economic activity. Accordingly, there was a definite limit upon the extent to which the *economic,* as distinguished

* A. P. Usher, *A History of Mechanical Inventions,* New York 1929, pp. 119, 136–137.

from the *cultural,* factors favoring urban growth could proceed. Long-distance communication by land and sea was, it is true, possible, and it was utilized to a high degree. But neither in agriculture nor in industry was there important technological change. Consequently, once the point of diminishing productivity was reached in industry or agriculture there was little prospect of its being set aside by technical improvements. The situation of the ancient world was, therefore, quite different from that of modern civilization of the past three hundred years, in which the economic factors favoring increased urbanization have been constantly augmented by technological progress; in the earlier period, they remained virtually fixed for centuries.

### THE DISCREPANCY BETWEEN THE ECONOMIC AND THE CULTURAL AND SOCIAL-PSYCHOLOGICAL FACTORS IN URBAN EXPANSION

THIS fact, taken in conjunction with the further fact that the Roman civilization inherited a powerful cultural impetus to urban growth, is of profound significance. At the very time when the *cultural* and *social-psychological* factors of growth were promoting wider and wider urbanization, the *economic* factors were practically stationary except in the field of communication. It can now be perceived why it was that the Roman world outgrew its economic resources so rapidly and so disastrously as it did. In the circumstances, such a sequence of events was almost inevitable, particularly when it is remembered that the geographical setting of Europe was quite dissimilar from that of Asia Minor and Egypt, and so, even under the best conditions, was less capable of supporting a dense urban population.

The Roman Empire would, therefore, seem to have been doomed from the beginning of its career. It carried with it the seeds of its own undoing from the moment when it became the inheritor of the ancient world and undertook to build a civilization for which much of its territory was not particularly well suited and for the expansion of which its technological resources were inadequate.

In the light of this background, a number of features of Roman history take on added significance. The sedulousness with which city life was fostered, for example, is, at least in part, a reflection of the cultural impulse towards urbanization. Particularly interesting is the examination of the events in the third, fourth, fifth, and sixth centuries which attended the break-up of the ancient civilization. In general, they are capable of explanation as episodes in the decline of an urban civilization that had overshot its economic limits.

Thus the whole story of rising prices, growing misery, and periodical food-shortages which characterize this period are suggestive of a society which has overtaxed its productive capacity. Moreover, such public policies as the giving of doles to the urban proletariat, the wholesale confiscation of private property, the imposition of crushing taxation, the systematic mulcting of the moneyed-classes by the depreciation of the currency, the neglect of public works, and the thrusting of the peasant class down into virtual serfdom, appear not as the arbitrary acts of short-sighted despots, but as desperate efforts to bolster up for a time a civilization that had undermined its own economic foundation.

### GOVERNMENTAL CENTRALIZATION AND ENCROACHMENT UPON ECONOMIC ACTIVITIES

THE almost incredible accession of governmental authority is, in some measure, a part of the same process. But, in addition, it is illustrative of the tendency towards the public administration of economic functions and the centralization of administrative authority that has been seen to be inherent in all urban civilizations. And all the evil consequences of such a policy are illustrated. Every economic function becomes stereotyped into what amounts to forced labor and forced tribute — the quintessence of state socialism. Initiative and energy wither and die under the dual blight of administrative inflexibility and the suppression of private profit. Inefficiency, arbitrariness, corruption, and extortion follow on one another's heels. The high administrative of-

fices lure the greedy and the ambitious to the extent that for their sake men bribe and intrigue, plot assassination, and make war.

### OVER-EXTENSION OF COMMUNICATIONS

OTHER contributing factors in urban decline as described above are also present. The overextension of the system of communications is exemplified in the periodical food-shortages that overtook one city after another. As early as the first century Cicero was able to illustrate an ethical principle with an account of the food speculation attendant upon the non-arrival of food ships. In the later Empire, the task of escorting food convoys to Rome became so hazardous that men dreaded to be entrusted with it. In the reign of Diocletian, two nobles, who were called upon to accompany a load of wine and barley, destined for Rome, down the river Nile, absconded rather than face the responsibility and risk involved. In the fifth century, the delay of the arrival of the food ships at Ostia (the seaport of Rome) caused such distress among the populace that an outbreak of rioting was feared.*

### POPULATION ATTRITION AND DECIMATION

POPULATION attrition appears also to have begun at an early date. Himes and Carr-Saunders † present data indicating that many fairly efficient contraceptive techniques were in use in the ancient world. It is certain that at least one present-day expedient was familiar in early Old Testament times. [Genesis XXXVIII:9]. Moreover, non-contraceptive measures for restricting population growth, such as infanticide and abortion, were of common occurrence throughout the Greek and Roman worlds.

The low rate of population increase was sufficiently marked as early as the first century B.C. to cause comment by the historian Polybius who specifically mentioned voluntary family limitation. By the first century A.D., the population

* M. I. Rostovtsev, *op. cit.*, p. 437. See also S. Dill, *Roman Society in the Last Century of the Western Empire* (2nd Ed.), London 1899, p. 148.

† A. M. Carr-Saunders, *The Population Problem*, Oxford 1922, pp. 256–259. N. E. Himes, unpublished manuscript.

of both Italy and Greece was noticeably declining, partly, however, under the influence of migration.* By the fourth century, depopulation had set in on a wide scale. This last phase is, however, not to be interpreted so much as population attrition as that form of population *decimation* which accompanies the catastrophic decline of an urban civilization. The famine, misery, fighting, and massacres which took place in the third, fourth, and fifth centuries must have been widely destructive of human life and must have been to a considerable degree responsible for the empty cities and feeble armies which greeted the "Barbarian" invaders.

Before this took place, however, that is to say, during the earlier period of population attrition, a steady decline in population seems to have taken place. As early as the first and second centuries, Strabo and Pausanius were describing deserted cities in Greece and Asia Minor. In the second century, the emperor Caracalla had come to look upon Germanic and Persian recruits as the most dependable elements in his army, and from that time on the armies of the Empire became manned and led to an increasing extent by non-Roman elements from the borders of the Empire and beyond. In the third century, the Empire was so empty of population that the whole province of Dacia was abandoned to the Goths, such Roman inhabitants as remained being accommodated with no apparent inconvenience in the neighboring province of Moesia. In the same century, one single body of 100,000 Germanic tribesmen were settled in Thrace.†

During the next two centuries when depopulation by decimation was going on, "Barbarian" settlements were made on an enormous scale, sometimes as peaceful settlements, sometimes as colonies of war-captives, sometimes as concessions to armed force. At the same time, land constantly went out of cultivation for lack of farm labor, and in the last years of the Empire, a major preoccupation of the governing classes was the devising of measures for coercing and cajoling individuals to take on more land for cultivation.‡

* Lot, *op. cit.*, p. 76. See also M. I. Rostovtsev, *op. cit.*, pp. 328 and 424.
† *Ibid.*, pp. 107 and 373. Also S. Dill, *op. cit.*, p. 294.
‡ *Ibid.*, pp. 293–295.

### OTHER SECONDARY FACTORS IN URBAN DECLINE

IN ADDITION to population decimation, virtually every one of the other secondary accompaniments of urban decline that have been discussed earlier in this chapter appear in the later history of Rome. It has been seen that Rostovtsev ascribes the *debacle* of the Empire in large measure to urban-rural hostility. The decline of the countryside, as a corollary of the decay of the city, has already been mentioned. The most fertile region of the whole Empire, Egypt, began to suffer a loss of productivity in the third century.*

The helplessness of the urban population of the time in the face of its difficulties has already been suggested. The city-dwellers of the third, fourth, and fifth centuries appear to have submitted tamely to crushing taxation, to famine, and to massacre. Occasionally they succeeded in buying off a hostile army or otherwise persuading it not to sack their homes. Witness Leo the Great's success in dissuading Attila from taking Rome; the ransom of Rome to Alaric, and its subsequent plunder at his hands. Occasionally also the recklessness of despair drove city-dwellers to purposeless rioting, as in the case of the Thessalonicans who killed the commander of the garrison stationed in their city, later to lose 7000 of their number in a punitive massacre at the order of Theodosius. More often they ran away, the "flight of the *curiales*" into the country — even into the wilderness — being one of the most characteristic features of the city life of the later Empire. Dill describes the desperate plight of the successors of the once prosperous city bourgeoisie:

> Many fled to the solitude and hard fare of the hermitage. Others . . . hid themselves even among smiths and charcoal burners. Still more placed themselves under the protection of a great [landed] proprietor, and were only too glad to bury themselves among the crowd of his cottiers and serfs.†

Many of those who took to flight embarked upon banditry, a calling which became so common that, in Egypt, "robber-chasers" were regularly recruited from the village popula-

* M. I. Rostovtsev, *op. cit.*, p. 485.
† S. Dill, *op. cit.*, pp. 253 and 259.

tions.* On the sea piracy raised its head, as the imperial navy declined.

Bandits and pirates were not the only disturbers of the public peace. Throughout this work, it has been stated that widespread public tranquility is essential to the maintenance of the commerce and system of communications upon which the life of the city depends. From the third century on, public tranquility steadily declined under the combined shock of civil war, invasion, banditry, and the demoralization of public service. The Vandal invasion of Africa, for example, held up the food ships from that region. By the time the Theodosian Code was written, the highways were so ruinous that all classes were required to aid in their repair. Toward the end of the fourth century the right to bear arms was restored to civilians, to aid them in self-defence against brigands. The legislation of the fifth century indicates that the supply of post-horses and pack-mules was being depleted and that communication was suffering correspondingly.† Naturally commerce decayed, and with it industry. Long-distance commerce in necessities went to pieces. Luxury-trading and local retail trade survived, but under increasing difficulty, owing to general impoverishment, and governmental exactions. Industry eventually became confined largely to production for the state. Meanwhile, a self-sufficing economy was growing up in the great landed estates, which became the centers of such power and wealth as remained in the later Empire. Their rise together with the "Barbarian" invasions completed the ruin of commerce in the ancient city. Only in especially-favored localities such as Marseilles did it survive. Over the greater part of the Empire it all but disappeared, and the city with it.

When, at last, the invasions had come and gone, such cities as had not altogether disappeared, or shrunk to insignificant villages, stayed within their narrow walls. They were no longer cities: they were market towns and centers of administration and of worship for a rural population. (To this day, a "city" in England is the place of residence of a bishop.)

* M. I. Rostovtsev, *op. cit.*, p. 437.
† S. Dill, *op. cit.*, pp. 232–242.

The urban society of the ancient world was ended: the rural society of the Middle Age was being established.

One final observation may be made in concluding this discussion of the end of the ancient world. The extent and swiftness of the Roman *debacle* calls attention to the way in which the secondary factors in urban regression can intensify that process once it is set in motion. Although, according to this analysis, there were certain basic influences leading to the collapse of the Roman urban society, notably the outstripping of economic by cultural factors of growth, nevertheless it seems probable that this collapse would not have been so sudden and gone so far, if these influences alone had been present. It was when the secondary factors appeared — particularly those making for population decimation and the disruption of widespread public tranquility — that Rome declined, not from a more urban to a less urban society, but from a highly urbanized society to a rural one.

The author wishes to repeat that he does not put this analysis forward as a complete and inclusive explanation of the termination of the Roman society. He does suggest, however, that inasmuch as this society was in every sense an urban one, at least some of the elements contributing to its decline were those which appear to have undermined the city life of that day.

### THE MAYA URBAN CIVILIZATION

EARLY in January 1931 Dr. A. V. Kidder of the Carnegie Institution of Washington, D. C., read a paper before the American Association for the Advancement of Science, in which he said, in part:

> If the high civilization of the present day is to be saved from following the downward course that overtook the civilizations of Babylon and India and the Maya empire, modern men must begin at once to gain a better knowledge of the causes underlying the rise and decline of a great culture, and to profit by that knowledge.
>
> It is possible that these suggested researches will never adequately explain the phenomena, but even in our present state of ignorance it seems not unreasonable to say that in most cases cultural downfall has been due to a lack of balance between what

might be called social sagacity and material achievement. Man always seems to have advanced faster along practical lines than he has in knowing how to live in proper adjustment with his fellows.

The present unprecedented development of physical as compared to social science appears to be our greatest immediate danger. The lag of social science is due largely to the tremendous inherent difficulties encountered in attempting to interpret so baffling a creature as man and so complex an organism as his society.

These tasks must, however, be accomplished, in my opinion, if we are to work ourselves out of what looks like a somewhat perilous situation.

The author regrets that the absence of documentary and inscriptional evidence makes it impossible to enter into a lengthy analysis of the great urban civilization of aboriginal America, the Maya civilization.* Certain features of this history may, however, be noted, as being, in the light of the foregoing analysis, very suggestive. (1) The degree of urbanization attained was remarkable. Chichen Itza probably had at one time 100,000 inhabitants, which is to be compared with Lot's estimate of 250,000 for Rome at the height of its prosperity. (2) The "Golden Age" of Maya history was apparently one of long-continued and widespread public tranquility, for all the cities built in this period had very similar cultures, and there is an almost complete absence of war-like motifs in their decorative art. On the other hand, the final period of disintegration was one in which the central government had broken down, following a protracted civil war, and in which a number of petty states carried on warfare with one another. (3) The cause of the great migration which ended the "Golden Age" remains an enigma, but Thompson selects as the "most plausible" explanation the decline in agricultural production, or at least its failure to provide for the very large urban population which this civilization must have had. Thompson points out

* The author has drawn upon the following sources at this point:
J. E. Thompson, *The Civilization of the Mayas* (Field Museum Natural History Publications), Chicago 1927, pp. 9–22; P. A. Means, *History of the Spanish Conquest of Yucatan and of the Itzas* (Papers of the Peabody Museum of American Archaeology and Ethnology, Vol. VII), Cambridge 1917, Chap. I; H. J. Spinden, *Ancient Civilizations of Mexico and Central America* (American Museum of Natural History, 2nd Ed.), New York 1922, Chap. II

that agriculture was very primitive and — as in Rome — it changed very little for several hundred years. (4) A slow process of population attrition is suggested by the history of the " Renaissance " or " League Period." Foreign motifs in art appear, important innovations in religious worship are made, and, most significant of all, foreign mercenaries get the upper hand in military power, and eventually in the government. In fact, the period preceding the final disintegration is known as " The Period of the Toltec (Mexican) Mercenaries." (5) Finally, the last period of Maya civilization, beginning with the Renaissance, seems to have been one of increasing centralization of government, and of struggle for its control. It was an inter-city rivalry that led to the domination of the Toltec mercenaries and it was a rebellion against their autocracy that was the beginning of the end.

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# APPENDIX

## SUGGESTIONS FOR DISCUSSIONS AND PROJECTS

### CHAPTER I

#### *TO DISCUSS*

1. Assume that the buried site of New York has been discovered by a party of archæologists of the year A.D. 5000. What remains of the city would be left, and what deductions concerning urban life in the twentieth century would be drawn from them?
2. Debate the following statement: "Every city is an attempt to arrest natural forces and is doomed eventually to destruction."
3. Does modern man need to build cities for purposes of defence; trade; worship; government and administration to the same degree and in the same way as did ancient man?
4. How much truth nowadays is there in Black's statement that "cities . . . grow . . . by multiplication"?
5. Would the typical American city survive if (1) the exhaustion of its fuel supplies would force the abandonment of machine industry? (2) the United States should suffer a generation of civil war and banditry, such as exists in China?

#### *TO DO*

1. Write a history of one of the great cities of antiquity (omitting Rome), giving particular attention to the circumstances attending its origin and rise to a position of influence.
2. Study the accounts of the spread of culture in the works of Dixon, Wissler, Kroeber, etc. Work out a scheme (with maps) showing the spread of urbanism using the same methods, pointing out the extent to which such a scheme does, and does not, account for all of the facts.
3. Trace the rôle of commerce and industry in the rise of any American city, having 100,000 or more inhabitants.

## CHAPTER II

### *TO DISCUSS*

1. Why should the capital of the United States not be moved to New York, as the nation's metropolis; or to Chicago, as also a metropolis and as centrally located?
2. If you had unlimited funds, and leisure, to what city would you first go? What would you do there?
3. In what city's hinterland are you now living? Is your locality attached to the hinterlands of two or more cities, according as one or another type of goods or services is considered?

### *TO DO*

1. Study the history of the city of over 100,000 population with which you are most familiar. (Consult encyclopedias, Chamber of Commerce bulletins, local historical society publications and newspaper files.) Work out the factors that attended: (1) its original settlement, (2) its expansion to urban proportions, (3) its present development.
2. Study the history of a town that was formerly a rival of the city selected for the preceding exercise, and work out the factors that caused: (1) its original settlement, (2) its expansion to urban or near-urban proportions, (3) its subsequent lagging behind the other city.
3. Apply the principles discussed in this chapter to the ten cities of over 100,000 population nearest your home. Make as much use as possible of enlarged maps showing these cities and their immediately surrounding regions. (You may be able to find such maps in automobile road-guides. The real estate boards or the Chambers of Commerce of such cities often publish such maps also. The topographical maps of the United States Geological Survey may be of use.)

## CHAPTERS III AND IV

### *TO DISCUSS*

1. What is the "gayest" area in the city best known to you; the dreariest; the "toughest"; the ugliest; the most beautiful?
2. John Jones is a skilled mechanic with a wife and two children, aged 10 and 4. His younger child is "delicate." His wife is city-bred, and likes to shop, go to the "talkies," and participate generally in the life of the urban center. His job pays him good wages (about $3500 per year) but involves long hours with fre-

quent overtime. John wants to "have a place in the country" where he can "have a home and a little garden of his own" and "where the kids can have some fresh air and sunshine." His wife assents reluctantly to his proposal. Can he find such a home in any city above 50,000 that you know, which is within his means, sufficiently accessible to the city proper to enable him to hold his job, and to give his wife some of the contact with the city life that she desires? If not, what is the best adjustment of the requirements of himself, his wife, and his children that can practicably be made?

3. In what kind of community would you prefer to live? Is there any prospect that you ever will be able to live in such a community?

### *TO DO*

1. Draw a map of the central commercial area of the largest city with which you are familiar, indicating its various appendages. Also indicate the principal integumental sub-centers and areas of transition.

2. Make a map of the urban region nearest to your home or to your college. Indicate (*a*) the city proper; (*b*) the urban fringe; (*c*) satellites; (*d*) industrial, residential, political, and recreational suburbs; (*e*) zones of accessibility, etc.

3. Make a diagrammatic map of the growth of the largest city with which you are familiar. Show (*a*) its original nucleus, (*b*) the lines of growth it has followed, (*c*) its probable future growth.

## CHAPTER V

### *TO DISCUSS*

1. If you had a free choice between (*a*) a farm, (*b*) a village of a few hundred, (*c*) a small city of about 10,000, (*d*) a city of between 25,000 and 100,000, (*e*) a city of about 500,000, and (*f*) a great metropolis such as New York, Philadelphia, or Chicago, which would you choose? Suppose you were a member of the opposite sex? Suppose you were thirty years older than you now are?

2. Why do women prefer city life to the country? If you were going to organize a "back to the farm" campaign, what features would you stress to get the women to return to the country?

3. If you were 40 years old, and living in a large city, what measures would you adopt to insure yourself as long a life as possible?

### TO DO

1. Make a list of ten persons whom you know and who are now living in a city of 50,000 or more inhabitants. Trace the family history of each for three generations, and show how many are native urban stock, and how many migrants of the first, second, or third generation. Make a map, showing the length and duration of the migration of themselves or their families to the cities in which they now live.

2. Consult the following persons concerning the relative "healthfulness" of the city as against the country, and write a digest of their replies: (*a*) a physician, preferably your own family doctor; (*b*) a health officer; (*c*) a hospital administrator; (*d*) a biologist; (*e*) a eugenist; (*f*) a pathologist; (*g*) the mother of a young child; (*h*) a farmer; (*i*) an elementary school teacher; (*j*) a female clerk.

3. Study the death rate of any city or town from typhoid, tuberculosis, diphtheria, scarlet fever, diarrhea, and enteritis (under two years of age), measles, or whooping cough. See how far the record that you find can be related to developments in medical science, to public health organization, to health education campaigns, school health work, the use of toxin-anti-toxin, and the like.

## CHAPTER VI

### TO DISCUSS

1. Just how does a city man differ from a farmer, from the inhabitant of a country town, from the inhabitant of a moderate-sized city? Make a list of the conditioning influences bringing about these differences.

2. Make a list of characteristically urban sounds, sights, smells.

3. The refrain of a popular song of another day ends, "When you leave old New York town, you're only camping out." What would be the principal ways in which the inhabitant of a great city would feel as if he were "only camping out," if forced to live in a small town or in the country?

### TO DO

1. Secure a file of a small-town newspaper and of a large-city newspaper. Compare "personal" and "society" notes in each. Tabulate and classify the differences revealed by them in the activities and interests of urban- and rural-dwellers. Extend the comparison to include obituaries and other accounts of "eminent citizens," — to include advertisements.

2. Analyze 10 or more short stories dealing with romance and adventure, as found in a great city (such as the works of O. Henry and Hugh Walpole). Point out the extent to which the events on which their action rests are, or are not, peculiar to an urban environment.

3. Trace the history over two generations of one or more families that have moved from a rural to an urban environment, showing the principal ways in which their mode of living has been altered by their migration.

4. Make a careful analysis in half-hour units, of the activities of yourself, and as many other acquaintances as you can induce to keep records, over a seven-day period. Study the resulting time-schedules, and determine what, and how large a proportion of the activities listed are materially affected by the fact that present-day American society is urbanized.

## CHAPTER VII

### *TO DISCUSS*

1. Discuss the following statements:
   - "The city is the enemy of the old-fashioned family virtues."
   - "Where there is no neighborhood, there are no morals."
   - "City workers are superficial and unstable, because they work with machines, or follow clerical and commercial pursuits, instead of dealing with the great primary forces of nature."
   - "This is a decadent age because it is a jazz age, and it is a jazz age because it is a city age."
   - "The city church could not survive in the face of the iniquity and infidelity surrounding it, unless it were continuously drawing recruits and spiritual support from the rural church."

2. Can the primary essentials of family life be preserved in the city? What are they?

3. Discuss the following:

> "These final cities are *wholly* intellect . . . their houses are . . . no longer houses . . . but mere premises which have been fashioned, not by blood but by requirements, not by feeling but by the spirit of commercial enterprise. . . The mass of tenants and bed-occupiers in the sea of houses lead a vagrant existence from shelter to shelter, like hunters and shepherds. . ." —O. Spengler, *The Decline of the West,* Vol. II, pp. 99–100.

### TO DO

1. Make a study of the occupations of 100 employed urban women. How many of them could earn a living in the same way in the country?
2. Compare an equal number (not less than 25 each) of urban and rural families as to (*a*) size; (*b*) length of residence in their communities and in their dwellings; (*c*) number of persons gainfully occupied and their types of occupation; (*d*) number of rooms in their dwellings, the types of these dwellings, and the functions carried on therein.
3. Make a study of the forms of recreation that have spread from the city to the country, in a given region, during the past twenty-five years. Study newspapers, programs, diaries and letters, biographies, and reminiscences, and interviews with elderly and middle-aged people. (See Lynd and Lynd: Middletown.)
4. Study the news columns and the advertisements of one or more city newspapers for every reference to religion and the churches. (*a*) What type of religious activity is most typical; most conspicuous? (*b*) What form of appeal for support and attendance seems to be most successful? (*c*) What type of religious leader is given most notice? What type arouses the most widespread approval; receives the most general condemnation?

## CHAPTERS VIII, IX, AND X

### TO DISCUSS

1. What do you say to the following: "God made the country, man made the town, and the devil made the little country town"?
2. Would an urban or a rural environment be more suitable for the rehabilitation of: a hobo, a pickpocket, a delinquent adolescent girl, a manic-depressive case of mental disease, a schizophrenic case, a borderline feebleminded boy?
3. A small-town youth comes to a great metropolis to "make his fortune." In what ways will his experience be (*a*) stimulating and liberating; (*b*) thwarting and depressing; (*c*) confusing?

### TO DO

1. Make a study of the statistics of homicides or suicides in a large city. Do they show upward and downward trends? Can these trends be related to business conditions; to any other important economic, political, or social movements?

2. Get acquainted with a number of juvenile play groups and carefully study their activities. How are these activities conditioned by environment; how many of them are potentially criminal or already tending toward criminality?

3. Study a number of "poor" families in either urban or rural environment, or both if possible. (You may be able to secure access to records in the "inactive" files of a social case-working agency.) Consider them in connection with (*a*) amount of money income available; (*b*) actual want as contrasted with inability to maintain customary standard of living.

4. Collect data concerning "graduates" of an institution for mental defectives (or mental disease). Try to determine the extent and the way in which their social adjustment is affected by the fact that they are returned to an urban or rural environment.

## CHAPTERS XI AND XII

### *TO DISCUSS*

1. How would the aspect of an urban residential district be changed if no ashes were hauled away for a month; for a year; for ten years? What if the water mains were broken for a day; a month; a year; ten years?

2. How would city life be changed if there were no public control over (*a*) street cars; (*b*) milk supply; (*c*) barber shops; (*d*) department stores?

3. Can a great city govern itself?

### *TO DO*

1. Describe a major public service enterprise in a city (electric light; water-supply; garbage removal; sewerage; etc.), giving particular attention to its organizational and economic features.

2. Study the newspaper files of a growing urban community over the past 25 years, and note the trends in mention of actual and proposed extension of public ownership or control in the field of business enterprise, particularly public utilities.

3. Analyze the leading "campaign issues" of the nearest large city, over the past 25 years, as reflected in its newspaper files, in order to determine (*a*) the extent to which economic, technological, and administrative questions, take precedence over purely political ones; or (*b*) the degree of honesty and competency with which public affairs are administered; (*c*) the relation of (*a*) and (*b*) to the growth of the city.

## CHAPTERS XIII AND XIV

### *TO DISCUSS*

1. Debate the proposition: "The city is the source of mental, moral, and physical decay, and is a menace to society."

2. If you were an inhabitant of a large city, what would you do in case (*a*) a gang of bandits began plundering your neighborhood? (*b*) the fresh milk supply of the city was curtailed and distributed only to invalids and infants under 2 years? (*c*) your city was captured by an ignorant and tyrannical set of military adventurers, and you were given your choice of continuing to live there or *immediately* departing?

3. If you were a member of a commission appointed to provide for the de-urbanizing within 12 months of 10 per cent of the population of every city of 100,000 or over, what plan would you propose?

### *TO DO*

1. Make a social and economic survey of a rural community, with regard to the extent of "rurbanization" in its activities.

2. Plot curves for the past 30 years of the automobile registration in the United States. Do the same for railway passenger traffic, miles of improved road, number of telephone instruments, radio sets, etc. Which types of utilities do you consider as likely to reach their maximum expansion soonest? Which is likely to continue expanding for the longest time?

3. Search the files of a large metropolitan daily for the past year, for news items describing contemporary events hostile to the continued expansion of city life. Classify and discuss them according to (*a*) countries affected; (*b*) types of influences.

4. Write an Utopian narrative of the city of the twenty-first century.

5. Assuming that population attrition should be steadily operative, for 200 years, but that no other disturbing factors should appear, describe the changes, in that period, that would come over the largest city with which you are familiar.

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