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WORLD CITIES

Second Edition PETER HALL

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**THE
WORLD
CITIES**

Second Edition

McGraw-Hill Book Company

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1 The metropolitan explosion

There are certain great cities, in which a quite disproportionate part of the world's most important business is conducted. In 1915 the pioneer thinker and writer on city and regional planning, Patrick Geddes, christened them *the world cities*. This book is about their growth and problems.

By what characteristics do we distinguish the world cities from other great centres of population and wealth? In the first place, they are usually the major centres of political power. They are the seats of the most powerful national governments and sometimes of international authorities too; of government agencies of all kinds. Round these gather a host of institutions, whose main business is with government: the big professional organisations, the trades unions, the employers' federations, the headquarters of major industrial concerns.

These cities are the national centres not merely of government but also of trade. Characteristically they are great ports, which distribute imported goods to all parts of their countries, and in return receive goods for export to the other nations of the world. Within each country, roads and railways focus on the metropolitan city. The world cities are the sites of the great international airports: Heathrow, Kennedy, Orly, Schiphol, Shermetyevo. Traditionally, the world cities are the leading banking and finance centres of the countries in which they stand. Here are housed the central banks, the headquarters of the trading banks, the offices of the big insurance organisations and a whole series of specialised financial and insurance agencies.

Government and trade were invariably the original *raison d'être* of

the world cities. But these places early became the centres where professional talents of all kinds congregated. Each of the world cities has its great hospitals, its distinct medical quarter, its legal profession gathered around the national courts of justice. Students and teachers are drawn to the world cities; they commonly contain great universities, as well as a host of specialised institutions for teaching and research in the sciences, the technologies and the arts. The great national libraries and museums are here. Inevitably, the world cities have become the places where information is gathered and disseminated: the book publishers are found here; so are the publishers of newspapers and periodicals, and with them their journalists and regular contributors. In this century also the world cities have naturally become headquarters of the great national radio and television networks.

Not only are the world cities great centres of population: their populations, as a rule, contain a significant proportion of the richest members of the community. That early led to the development of luxury industries and shops; and in a more affluent age these have been joined by new types of more democratic trading: by the great department stores and the host of specialised shops which cater for every demand. Around them, too, the range of industry has widened: for the traditional luxury articles, forged by craftsmen in the world cities of old, have become articles of popular consumption, and their manufacture now takes place on the assembly lines of vast factories in the suburbs of the world cities.

As manufacture and trade have come to cater for a wider market so has another of the staple businesses of the world cities – the provision of entertainment. The traditional opera houses and theatres and concert halls and luxurious restaurants, once the preserve of the aristocracy and the great merchant, are now open to a wider audience, who increasingly can pay their price. They have been joined by new and more popular forms of entertainment – the variety theatre and revue, the cinema, the night club, and a whole gamut of eating and drinking places.

The staple trades of the world cities go from strength to strength. Here and there, a trade may wither and decay: thus shoemaking in nineteenth-century London, diamond-cutting in twentieth-century Amsterdam, shirt-making in twentieth-century New York. In the long historical view, even the world cities may themselves decline. Where now is Bruges – a world city of late medieval Europe? But such

cases are conspicuous by their rarity. Nothing is more notable about the world cities than their continued economic strength. Not for them the fate of depressed regions which see their staple products decline: regions like the coalfields of Northumberland–Durham in Britain and Pennsylvania–West Virginia in the United States, or the agricultural and light industrial areas of the Massif Central of France and the Rhine Uplands of Germany. For as the economies of the advanced nations become more sophisticated, so does the emphasis shift to those industries and trades most aptly carried on in the metropolis: industries and trades dependent on skill, on design, on fashion, on contact with the specialised needs of the buyer. Associated with these trends, white-collar jobs grow faster than factory jobs: for every producer of goods, more and more people are needed at office desks to achieve good design, to finance and plan production, to sell the goods, to promote efficient nation-wide and world-wide distribution.

All these trends help to swell the populations of the world cities. Table 1 shows that around 1970 there were twenty-four metropolitan centres in the world each with a population of over four million; eighteen with over five million; five with over ten million. Not all these are world cities: even among the real giants, urban complexes like Osaka-Kobe, Chicago or Los Angeles have a regional, not a national or international significance. And conversely, some of the complexes near the foot of the table – like the Dutch Randstad – play a world role as centres of trade, of finance, of culture, which is far greater than the mere total of population might indicate. This book therefore will study seven centres among the twenty-four. Six of them are the greatest urban agglomerations of the world. First we look at two west European capital cities – London and Paris – which have tended progressively to grow at the expense of the provincial areas of their two countries, giving rise to very similar problems of congestion at the centre, economic decline and underemployment in the provinces. Then we turn to two urban complexes – the Randstad, or Ring City, of the Netherlands, and the Rhine–Ruhr complex of Federal Germany – which are world cities of a very special form. Instead of concentrating all the metropolitan functions into a single, highly centralised giant city, these countries have managed through accidents of history to distribute them among a number of smaller, specialised, closely-related centres. This ‘polycentric’ type of metropolis has special interest for planners and citizens in those

countries which have to grapple with the centralised city. We look at eastern Europe, where Moscow proves to be a rapidly-growing, multi-million metropolis with many of the problems of its western European counterparts. In North America the gigantic New York urban complex, biggest in the world in terms of population, presents many of the essential problems of the metropolitan city in a particularly acute form; it shows that a high degree of affluence may bring extra difficulties to the planner. Lastly Tokyo stands as the most advanced example of the fast-growing cities of eastern Asia. Its phenomenal rate of population growth – by far the most rapid of any metropolis considered here – demonstrates the potential problems in store for cities in many developing countries; and its peculiar difficulties of physical planning offer a warning for countries whose financial and technical resources are still very limited.

Forces behind metropolitan growth

Most of this book is an examination, in more detail, of the growth of these seven city-complexes; of the causes behind that growth, the problems which result, and of the attempts to solve those problems. But because the book is mainly about the particular problems of particular cities, it is important to understand from the outset the general forces, which all over the world are contributing to the continued growth of the world cities. There are three such. The first is that population is increasing, and threatens to go on increasing in almost every country in the world. True, by the late 1970s many developed countries had experienced a drastic reduction in growth from the high levels of the 1950s and 1960s, when birth rates peaked. But modest growth is still likely – and this is especially important for the developed nations, in which so many world cities are concentrated.

The second factor is the continued shift of mankind off the land, and into industry and service occupations in the cities. This is a trend which has been observable in all advanced countries since the industrial revolution, and which has now spread in some measure to almost every country in the world. Progressively, more and more of the world's population is becoming urbanised.

The third factor is that a large part of the total urban growth is being concentrated in the great metropolitan areas. It is difficult to generalise about this: though nearly all world cities seem to be attracting a progressively greater share of the populations of their

Table 1 The world's metropolitan areas c. 1970

(C = Census, E = Estimate)

1 Tokyo-Yokohama	1970(C)	23,873,000
2 New York-Northeastern New Jersey	1970(C)	16,179,000
3 Osaka-Kobe-Kyoto	1968(E)	12,300,000
4 London	1971(C)	12,037,000
5 Rhine-Ruhr	1970(C)	10,924,000
6 Moscow	1970(C)	10,718,000
7 Los Angeles-Anaheim-San Bernadino	1970(C)	9,593,000
8 Paris	1968(E)	8,850,000
9 Buenos Aires	1968(E)	8,600,000
10 Calcutta	1968(E)	7,900,000
11 Shanghai	1968(E)	7,800,000
12 Chicago-Northwestern Indiana	1970(C)	7,612,000
13 Mexico City	1970(C)	7,314,000
14 São Paulo	1968(E)	6,600,000
15 Rio de Janeiro	1968(E)	6,100,000
16 Cairo	1968(E)	5,900,000
17 Bombay	1968(E)	5,650,000
18 Philadelphia-Trenton-Wilmington	1970(C)	5,621,000
19 Peking	1968(E)	4,750,000
20 Detroit-Windsor	1970(C)	4,423,000
21 Leningrad	1968(E)	4,350,000
22 Seoul	1968(E)	4,175,000
23 San Francisco-Oakland-San José	1970(C)	4,175,000
24 Randstad Holland	1970(E)	4,100,000

Source: Richard L. Forstall and Victor Jones in Simon Miles, *Metropolitan Problems* (1970), updated in part from 1970/71 Census.

countries, some – London, Randstad, New York – are relatively losing ground. Whatever the relative rates of growth, however, in absolute terms most of the world cities are still increasing; and this alone creates enormous problems of land-use competition, transportation, urban renewal and local government.

In the rest of this chapter we will look at these forces in statistical terms. First, because it is fundamental, is the general growth of population.

Population growth: the mid-twentieth century revolution

The great world cities are still disproportionately concentrated in the most advanced industrial countries of Europe and North America. So it is important to understand a most potent factor in modern metropolitan growth: the profound change, amounting to a double revolution, in the pattern of population growth of these advanced countries.

Table 2 Total increase of population in advanced industrial countries

	1935–9 average	Postwar 'hump'	per cent per year		1970	1974
			1950	1960		
Canada	0.98	2.11	1.97	2.13	1.51	1.58
USA	0.75	1.95	1.67	1.60	1.08	0.72
Belgium	0.30	0.34	0.29	0.54	0.31	0.41
Denmark	0.74	1.18	0.97	0.75	0.61	0.60
France	–0.75	0.90	0.81	0.99	0.89	0.73
Western Germany	0.89	1.94	1.61	1.11	1.43	0.11
Italy	0.87	0.68	0.64	0.63	0.94	0.84
Netherlands	1.06	1.74	1.59	1.18	1.16	0.74
Norway	0.58	1.16	0.96	0.84	0.78	0.76
Sweden	0.37	–	0.83	0.35	1.00	0.25
Switzerland	0.34	–	1.19	2.12	0.96	0.78
United Kingdom	0.58	0.64	0.58	0.73	0.32	0.09
Japan	3.30	2.59	1.37	0.83	1.19	1.22

In the 1930s the population texts, like Sir Alexander Carr-Saunders' *World Population*, gave no hint of what was to come. Then, it appeared that population in every country followed a fairly simple pattern. In primitive countries, and in all the world until about 1750, a high 'natural' birth rate was offset by high infantile mortality, arising from malnutrition and lack of medical knowledge, and a high adult death rate caused by wars, epidemics and famines. Later, rapid medical advance and better diets caused a big reduction in the death rate, while the birth rate remained high, resulting in a rapid natural increase of the population; this condition prevailed in western Europe and North America between 1750 and 1900. Later still, the spread of contraceptive knowledge caused a fall in the birth rate in advanced countries of western Europe and North America; but the death rate had already been cut so low that it could not fall as fast as the birth rate, so that the rate of population increase in such countries declined, and by the 1930s in some cases was approaching zero. The

Natural increase of population in advanced industrial countries

	1935-9 average	Postwar 'hump'	per cent per year		1970	1974
			1950	1960		
Canada	1.05	1.93	1.80	1.91	1.00	0.81*
USA	0.61	1.57	1.39	1.41	0.88	0.59
Belgium	0.20	0.47	0.44	0.40	0.23	0.07
Denmark	0.72	1.30	0.94	0.70	0.46	0.40
France	-0.05	1.06	0.78	0.66	0.61	0.48
Western Germany	2.69	0.66	0.44	0.63	0.17	-0.16
Italy	0.93	1.09	0.98	0.88	0.71	0.61
Netherlands	1.16	2.17	1.52	1.36	1.00	0.58
Norway	0.48	1.32	1.00	0.82	0.64	0.50
Sweden	0.28	-	0.64	0.37	0.37	0.28
Switzerland	0.38	-	0.80	0.70	0.69	0.44
United Kingdom	0.31	0.83	0.44	0.60	0.44	0.11
Japan	1.18	2.17	1.73	0.96	1.20	1.28*

* 1973.

population experts in most advanced countries were therefore convinced that at some date – perhaps 1940, perhaps 1960, perhaps 1980 – the population curve would turn down, as had already occurred in France. Dr Enid Charles forecast in 1935 that on the basis of the then-current trends the population of England and Wales would fall from 40.5 million to 4.4 million in 2035. Professor Alfred Sauvy in France projected that there would be a decline from 41.9 million to between 30 and 39 million in 1975. German experts postulated a decline; so, assuming no immigration, did United States demographers. Carr-Saunders in Britain thought that the trend would spread eventually through all Europe. Economists were everywhere considering the consequences of a declining population.

Table 2 shows the changed situation since those years. It is clear first that the *total* increase of population is tied very closely to the *natural* increase. True, immigration has been important in the late 1930s into the United Kingdom, from 1945 into Federal Germany and from 1950 into Sweden, Switzerland and Canada until the recession of the 1970s; emigration reached very high levels in the late 1930s out of Nazi Germany and was quite important in the 1950s out of Italy. But these exceptions apart, for the explanation of recent changes in population growth we need to look at natural forces, and in particular – since death rates are low and almost static in advanced countries – at births.

Natural increase, or in other words the birth rate, was low in the 1930s in all advanced countries save Canada, the Netherlands, Italy (all with big Catholic populations) and Germany (where Nazi propaganda encouraged births). Japan was then at an earlier stage of demographic evolution. The birth rate stayed low almost to the end of the Second World War, though in Denmark it humped sharply up as early as 1945 – a foretaste of what was to come in every country of the group, save the two neutrals, between then and 1949. (Federal Germany, the defeated member, was interestingly the last over the hump, in 1949.) The hump represented the postwar 'baby boom', which demographers confidently explained as births delayed by the war. And indeed by 1950 birth rates, and therefore natural increase, had fallen sharply in all these countries.

But the new 'low' birth rates were in nearly every case much higher than the low ones of the 1930s. (The exception was Germany, where the rate in the 1930s was artificially high.) And in the 1950s they did not decline in any consistent pattern. It is true that they did fall

somewhat in some countries, but nowhere radically save in Japan (which was entering a new stage of demographic development) and Sweden; and they remained much higher than before the war.

Then – from the late 1950s in the United States, from the mid-1960s in much of western Europe – birth rates turned down again; and in the 1970s in many countries they plummeted. By 1974 Germany had a natural decrease; Britain's natural increase was near-zero. National differences, political factors and, above all, age structures are still important: there is all the difference between Belgium with its relatively old population and its rate of increase of only 0.07 per cent (in 1974), and Canada with its exceptionally young population and its increase of 0.8 per cent (in 1973).

Thus the demographic problem has changed rapidly. In the mid-1960s all these countries were showing sustained population growth through natural increase, and the immediate problem was to accommodate the extra people. But by the late 1970s there was the prospect of a near-static population. This can be seen by comparing the official population forecasts. In 1955, when the 'baby boom' seemed to have spent itself in Britain, the Registrar General calculated that the United Kingdom population would rise from 51.2 million (then) to 52.8 million in 1995. But just at this time the birth rate began to bound up – and this meant a big increase in fertility, for it was not accompanied by an expansion in the child-bearing female population. By 1960 the forecast was 62.1 million for 1995 and 63.8 million for 2000; by 1965 it was up again, to 74.6 million for 2000. Then the birth rate turned down again; by 1970 the projection for 2000 was down to 66.0 million. By 1975, with birth-rate at its lowest-ever level of 12 per thousand, the prospect was of an almost static population of some 55 million down to the century's end. In the United States, the Census Bureau's 1955 forecast was between 206.9 million and 228.5 million in 1975, depending on different assumptions. In 1958 the population was running so far ahead of the forecasts that the figures had to be revised upwards to a range of 215.8 to 243.9 million in 1975. By 1972, with the 1970 figure running below the 1958 projections at 205 million, the President's Commission on Population Growth and the American Future was accepting a projection of between 271 and 322 million in 2000. Again, by the mid-1970s these forecasts had been drastically cut back. In both Britain and the United States, therefore, fertility – and, belatedly following, official population projections – went up and then went down again;

the turning point in the United States came in the late 1950s, in the United Kingdom in the middle 1960s.

In all advanced countries today the big population riddle therefore concerns the pattern of fertility. Even highly sophisticated forecasts – such as that of the French expert, Jean Bourgeois-Pichat, for the countries of western Europe in 1953 – have gone wrong because they assumed that sooner or later fertility would return to a ‘normal’ pattern. It now seems clear that after World War Two fertility went up in a number of advanced western countries. In the United States the average number of children per woman, implied by the birth rate, rose from a low point of just over 2.0 in the 1930s to a peak of about 3.7 in the mid-1950s; but it then sank nearly to 1930s levels by the early 1970s. In Britain, it appears that women who started childbearing in the 1930s were producing on average about 2.0 children each – a bare replacement rate; those who began in the 1950s seemed likely to produce 2.4 or more children each, but with a probable fall in the number for the mothers of the late 1950s onwards.

In the late 1970s, therefore, demographic prospects were mixed. For most advanced countries, the forecasts gave low or nil growth; for the developing world, the certainty was continued buoyant increase – albeit at a declining rate. But in advanced countries, a near-static population was dividing itself into more and more, smaller and smaller households – a result of rising numbers of older people and of social changes which caused younger people to desert the parental home, plus rising divorce rates. Thus a static population could still produce a rising demand for homes. The question was where those homes would be; and thus the second factor – the pattern of urbanisation and of urban growth – becomes an acute problem.

The world pattern of urban growth

In 1899 Adna Ferrin Weber, a young graduate of Cornell University in New York, published a thesis on *The Growth of Cities in the Nineteenth Century*. He manipulated with great skill a mass of statistics from different countries to show that urbanisation had been one of the most distinctive, and most universal, features of the nineteenth century. Thus in England, the percentage of the total population that was urban had risen from 16.9 in 1801 to 53.7 in 1891; in the United States from 3.8 in 1800 to 27.6 in 1890; in France from 24.4 in 1846 to 37.4 in 1891; in Prussia from 25.5 in 1816 to 40.7 in 1895.

Since Weber wrote, the process has continued unabated. It is now recorded by the United Nations Statistical Office in their *Demographic Yearbook*, on which table 3 has been based. This diagram makes it clear that with variations, the most highly developed

Table 3 Percentages of population in urban areas

CANADA

1921, 49.5
1931, 53.7
1941, 54.3
1951, 62.9
1956, 66.6
1961, 69.6
1966, 73.6

USA

1920, 51.2
1930, 56.2
1940, 56.5
1950, 64.0
1960, 69.9
1970, 73.5

BELGIUM

1920, 57.3
1930, 60.5
1947, 62.7
1961, 66.4
1968, 86.8

FRANCE

1921, 46.4
1931, 51.2
1946, 53.0
1954, 55.9
1962, 63.4
1968, 70.0

SWEDEN

1920, 29.5
1930, 32.5
1940, 44.4
1950, 47.5
1960, 72.8
1965, 77.4
1970, 81.4

SWITZERLAND

1920, 27.6
1930, 30.4
1941, 32.9
1950, 36.5
1960, 51.3
1970, 54.6

ENGLAND AND WALES

1921, 79.3
1931, 80.0
1951, 80.8
1961, 80.0
1971, 78.3

USSR

1926, 17.9
1939, 31.7
1959, 47.9
1970, 56.3

WEST GERMANY

1939, 70.5
1946, 68.6
1950, 71.1
1961, 76.8

NETHERLANDS

1920, 45.6
1930, 48.7
1947, 54.6
1960, 80.0
1969, 78.0

NORWAY

1920, 29.6
1930, 28.4
1946, 28.0
1950, 32.2
1961, 32.1
1970, 42.5

JAPAN

1920, 18.1
1930, 24.1
1940, 37.9
1950, 37.5
1955, 56.3
1960, 63.5
1965, 68.1
1970, 72.2

AUSTRALIA

1933, 64.0
1947, 68.9
1954, 78.9
1961, 81.9
1971, 85.5

industrial nations are the most intensively urbanised. (And conversely: at the 1970 count 3.5 per cent of the population of Rwanda is recorded as 'urban', in New Guinea 4.7 per cent, in Malawi 5.0 per cent.) It is notable too that the countries which undergo the most rapid economic development also record a rapid increase in urbanisation – as Japan in table 3, which went from 18 per cent urban to 72 per cent in the half-century from 1920 to 1970. Indeed there is a close relationship between the figures of table 3 and the figures of the industrial structure of the labour force, which Colin Clark published for various dates in his book *The Conditions of Economic Progress*. England and Wales stands at one extreme, with 40 per cent of its labour force in manufacturing and 80 per cent of its population urbanised. Experience in Norway, Sweden and Switzerland shows that industrialisation *can* take place on a largely-rural basis, especially with the aid of hydro-electric power; but these countries prove exceptions to a very general rule. The indication is that most countries will continue to shift part of their workforce off the land, so that the urban percentage of the population will grow; that there will however be a limit to this, as the example of Britain shows; but that even when the urban population does not grow proportionately it may still grow absolutely, as long as high birth rates in the advanced countries continue.

In such international comparisons there is one great snag, which Weber first faced. One country's definition of an urban place, or of urban population, differs from another's: in Denmark a place with 250 people is urban, in Korea a place with less than 40,000 is not. In 1956 an American research team, International Urban Research, sought to correct this. They took as basis the Standard Metropolitan Areas of the United States Census, and sought equivalents in other countries, so as to provide a world-wide list of urban areas based on a common, standardised, functional definition. The definition they employed was *an urban unit containing a population of at least 100,000 people, being an area embracing a central city or cities, plus adjacent areas with an economic relationship with that city and with 65 per cent or more of their economically-active populations engaged in non-agricultural activities*.

This scheme has two advantages. It permits precise international comparisons of the degree of urbanisation, and of the growth of urban populations over time. And it provides a ready, functional definition of the metropolitan region of each country – the area