

THE HISTORICAL GEOGRAPHY OF EUROPEAN CITIES:

AN INTERPRETIVE ESSAY

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Introduction

The co-evolution of Europe's cities and towns and their economies in space and time – the subject of this exercise in geographic economic history – is a complex story, not only in its myriad details and multiplicity of cases, but even in its outline and main traits. Given the long period and great changes involved, models that attempt to capture it must account for both the stability of the system during a certain period and the cumulative disequilibrium that leads to a new order. Also, much of the recent literature in economic geography focuses on explaining the location of economic activities, whereas the object of concern here is the economy of the urban units and systems. In the first case, the location of production gives rise to agglomerations; in the second, producers who can benefit from agglomeration choose among existing ones, though of course their choices in turn modify the distribution of population and the economic characteristics of the places chosen.

A number of themes will run through the story, and it will prove challenging to keep them all going and in proper balance. Although the economic models of agglomeration that figure heavily in this volume and in the “new” economic geography – or geographical economics – will prove hard to apply directly to the long-run story of European urban habitats and economies, their insights can help to bring out general trends. In turn, the historical record may suggest some new questions for the economic model builders to tackle and new regularities to model. Here then, by way of introduction, are some themes that seem to constitute ineluctable elements of a coherent economic history of urban Europe.

- *Urban Growth*. Though it scarcely needs saying, the first stylized fact about Europe is

that it has, over a thousand years, become largely urban. From a share of scarcely 10 percent from medieval times until well into the 18th century, the urban population has risen to a clear majority in every country and an overall proportion near 80 percent, of course of a much larger total. Today, indeed, the apparent share of city dwellers is shrinking, but this is doubly misleading. Not only is the urban way of life almost universal even among those who dwell in the country, but the reach of particular urban areas, the extent of the “local urban system” [Dematteis 1999], tends to expand faster than statistical categories can encompass it. Thus, commuters and others can live farther than before from the city or town to which they nevertheless continue to relate closely.¹ Growth also characterizes the population size of urban units: cities, urban regions, conurbations, etc. Whereas in 1800 any place with 50 000 inhabitants was considered large, and only a score or so cities surpassed 100 000, today half a million inhabitants barely justify the designation of major city. In addition, urban regions or conurbations numbering in the tens of millions of inhabitants give the urban phenomenon a totally different scale than in the past.

- *Permanence*. Despite the enormous increase in the urban population – absolute and relative – since medieval and early modern times, Europe’s urban map has in many ways remained remarkably stable, to say nothing of the many places that date back earlier, notably to Roman times. The big cities of the past have more or less kept their place in the hierarchy or at least remained significant. Other present-day large centers are less ancient, owing their existence or importance to early modern absolutism or to 18th-19th century industrialization, whereas only

¹ A recent map of France shows 21% of the population residing in non-urban communes at least 40% of whose employed persons commute to an urban area [INSEE-IGN 2002].

a few date from the 20th century. Finally, while towns, indeed large cities, can today be found in all parts of Europe, the urban grid reflects the past, in that the areas longest urbanized, constituting the urban core of Western Europe, retain the highest density of urban places.

- *Evolution* Though the larger historical context in which Europe's cities have developed is rich in revolutions, economic as well as social and political, the urban system has – with important exceptions – changed mostly by increments. While the general direction is clear and the overall growth has been enormous, change has at times been slow and its rhythm and incidence, spatial as well as functional, uneven and complex. Indeed, an important theme of this paper is that ongoing urbanization does not preclude a re-emergence of earlier patterns, *mutatis mutandis*. Just as radical social movements have been pretty well abandoned as bases for organizing European societies, so some aspects of nineteenth-century urbanization, which gave enormous weight to factory industry, interurban rail transport, and the centralized nation state as agglomerative forces, are being partially rolled back. The rollback, largely spontaneous and unforeseen, has allowed older urban traditions to re-emerge. To express the matter more broadly, Europe's cities and its urban system exhibit considerable *path dependence*, but also decidedly non-linear behavior involving punctuated equilibrium, with spurts of change and with reversals as well as declines and stagnation [Arthur 1988].

- *Context* Finally, it is important to set the story within the large-scale social processes and transformations that mark Europe's history: the rise of *capitalism* – a multi-dimensional concept if it is to retain meaning – and of territorial sovereign *states*, empire or nation; the more recent reaction to the hegemonic nation-state represented by European *integration* and *regional autonomy* (or separation); the *demographic transition*; *global ties*, ancient and modern; and

successive *technological regimes*, to name a few. Clearly, the present chapter will not try to summarize these, let alone offer original interpretations, but they must be kept in mind.

Two points deserve a brief initial mention, both having to do with the relative role of states and markets. One concerns the relation of the city to the growth of a market economy. Cities have been the cradle of commerce and of the market economy, the first places created for exchange and totally dependent on it for their subsistence. Yet they have also housed both strong forces of resistance vis-a-vis unfettered markets and institutions to regulate them, and they embody the sources of market failure that economic theory and a mixed market economy must wrestle with.

The second point relates specifically to the pre-industrial period and the long run-up to sustained economic growth, understood in the sense of increasing per capita income. The prevailing wisdom has been that Malthusian limits on resources constrained the system, with population growth braking the pace of economic growth, notably in the 14th and 17th centuries.

Improvements in technology, as well as the opening up of overseas sources of “land,” then allowed Europe to overcome the ceiling on output per head. This view has been challenged by new work that stresses early institutional barriers to efficient use and full development of available resources. Some focus the beneficial effects of limits to political power that safeguard private property (North 1990), whereas others focus on the ability of the strong central state to pacify, and integrate large territories with positive effects on market activity (Epstein 2000).

A Systems Perspective

Europe’s array of cities and towns can be approached along a number of dimensions: spatial,

numerical/functional (to distinguish and classify the units), and, in the present chapter, temporal. Yet accounting for how large each city is, where it is situated, its principal activities, and how it came to be what it is, even if it were possible, would yield little understanding. Cities are both pointless and unviable in isolation. Thus it is the relations of the city with what is outside itself that matter most. Urban places are elements in an interacting set, in other words, in a *system*.

A great deal has been written about urban systems, much of it using the term to mean little more than an array, an ensemble. Somewhat more analytic is the idea of an urban system as a hierarchy, with population size, political function, and spatial centrality as possible metrics. Unfortunately, much of a city's activity, notably commercial, financial, and more broadly "informational," is at best crudely grasped by these criteria.² But the real difficulty is that even an ordered set of cities offers only a synchronic view, whereas the concept of system also needs to explicate the processes by which an array or hierarchy comes into being and evolves over time. Thus the approach followed here, and developed in earlier work, proceeds from the logic of urban systems rather than from certain manifestations of that logic in particular times and places [Hohenberg and Lees 1995]. The argument is that the systemic logic antedates the full development of Europe's urban array, and transcends particular numerical properties, such as a rank-size distribution, that may develop and that some have viewed as defining the urban system. As envisaged here, that logic is dual, in that two types of system effectively model urban Europe.

² It should be noted that W. Christaller, who defined central place systems in 1933, used the intensity of telephone traffic as a measure of centrality.

From the origin of cities onward, two sets of forces have driven the process of urban development, expressed respectively in *central places* and *networks*. The arrays of central places that service and administer (agricultural) territory build toward a pyramidal structure, with many small centers and (numerically diminishing) tiers of, larger, higher-order centers culminating in a single capital. These arrays show great spatial and rank stability over time. The system may develop from the top, with small centers as outposts of an initial center or gateway, or emerge by selection of high-order centers from among an array of small ones, or undergo a mixture of the two processes. Cities that participate strongly in network relations, on the other hand, form a spatially fluid system where distance as such counts for little, thanks to long-standing reliance on water (more rarely caravan) transport. Being in competition with other cities, they can seldom preserve a high order of “nodality” or dominance for very long. For certain periods the dichotomy of prince’s cities and merchant cities [DeLong and Shleifer 1993] captures the dual systems perspective pretty well. Figure 1 sketches the spatial relationships in the two systems.

Functionally, central places tend to house diverse service activities, whose range and “level” matches the size of the center, so that high-order places serve as centers of (smaller) centers. Their services are typically administrative and cultural as well as market-oriented. Networks, on the other hand, link specialized cities and zones of production (mines, plantations) in an inter-urban, often international, division of labor, and thus typically feature a limited range of activities in a single place. The political role even of a major network city may be informal and subordinate to commerce. (Population) size is an imperfect indicator of role, or importance, in networks, and its growth can be quite irregular, by contrast with central places whose size

generally follows their degree of centrality. Dominance or subordination in network cities thus depends on function more than on size, with finance and headquarters functions considered privileged.. Given cities can find a place in either or both types of system. While one system or the other may clearly dominate, we shall argue that a balanced role – regional or national capital plus cosmopolitan node – can prove a particularly vital basis. While this is clearly true, to take one example, for London from the 17th century on, it also applies to cities of less than metropolitan size. In our time, such places as Munich, Bordeaux, Barcelona, and Florence offer examples.

The growth of cities in each system follows a distinctive pattern. Central places tend to show a bias toward more rapid growth of larger cities, with a frequent tendency to *primacy* or gigantism in the principal city, usually a political capital. Small centers may fail to grow and in time shrink as they lose all central-place functions. Large ones, on the other hand, resist decline, except relative to those above them, counting on the state to supply facilities and subsistence when needed.. In the network system, by contrast, growth can be very rapid, as for example in a mining district or when a new trade or industry opens up. Yet booms may well be followed by busts, while the most brilliant mercantile cities have resisted letting their numbers exceed their employment opportunities. As a result, the relation of growth rate to initial size is somewhat negative among network cities whereas it is positive for the array of central places. The whole may be summed up in a model derived from Robson (1973) [Fig. 2]. It will be noted that the overall relationship between growth and initial size is nearly neutral, with only a slight tendency to favor the large cities, but the underlying dynamics reveal the more complex set of system-

based relationships.

In terms of the long-term changes in European urban systems, network system logic is behind most structural transformations, whereas the central place system has shown much greater stability over time. Political changes have given rise to new capitals, and more rarely demoted others, most notably in the period of absolute monarchy (early modern times), also in later eras of nationalism and break-up of empires, including most recently the Soviet. This aside, the high-order central places have tended to hold their position for a very long time. Network logic, on the other hand, is behind the rise and fall of great city-states such as Venice, and later the sometimes explosive rise of industrial settlements that sometimes coalesced into great conurbations. Other specialized cities, some achieving considerable size, also derive their dynamics from network system logic. What is most telling, perhaps, is that industry has on its own spawned so few cities that have achieved a high order of either centrality or nodality, the UK offering partial exceptions (Manchester, Leeds, Glasgow...). Mere size does not confer important leadership functions. Finally, network relations are behind the macro transformations of the European urban system, such as the shift from the Mediterranean to the northwest in early modern times and the more recent rustbelt-to-sunbelt move from regions of heavy industry to ones with a better climate and a more nearly unspoilt landscape.

Much of the work on economic models of cities and urban systems focuses on forces of agglomeration in production, and within that on material production or manufacturing. Yet in the historical context, these represent only a part of the basis for urban agglomeration. Indeed, where

large-scale manufacturing coupled with strong specialization has been the driving force, the resulting agglomerations have often proved especially limited in their capacity to renew their economic base or to engender a strong urban identity. Thus, history indicates that long-lived agglomerative forces come largely from services – not least trade, finance, and informational pursuits – and small-scale material production on the one hand, and from consumption and administration on the other. At the same time, the absolute level of material production and associated employment in particular cities, especially large ones typed as non-industrial, has often been underestimated. Early modern and nineteenth-century capitals and ports (Naples and Bordeaux before 1800, London and Vienna after) are historical examples .

The systems approach is also relevant to the debate, mentioned earlier, regarding institutional forces that freed Europe for economic growth in the early modern period. Those who stress the weakening of political constraints on markets, with competition between states curbing the arbitrary power of the sovereign over persons and property, would consider network cities key incubators for modern growth. Europe's overtaking of China can, in this view, be ascribed to the relative fragmentation of political units in the former (Jones 1981, Diamond 1997). On the other hand, those who view the integration of states as the key process that allowed markets to put resources to best and full use will put the accent on the role of central places in the administration, unification, and structuring of the territory (Epstein 2000).

A systems view, finally, casts a skeptical light on two quantitative constructs that economists have applied to arrays of cities: the rank-size rule and optimum city size. As regards the size

distribution, central place systems should ideally feature certain favored size ranges corresponding to the order of centers. There would thus be one largest city, n cities ($n = 3-7$) of the next lower order and size, n^2 of the next, and so on. The size-rank distribution would feature steps rather than a smooth log-linear decay. Network cities or those with significant network ties complicate the picture, their population being at any rate imperfectly related to their network role. While the end result, factoring in noise (historical contingency), may well approximate a rank-size array, it is difficult to derive strong conclusions from the fact, beyond the simple idea that a number of forces have contributed to the distribution of population among cities.

As regards optimum city size, the systems model not only recognizes different types of cities, from diverse service centers to places specialized in one or a few activities, but also hierarchic relationships. Without small centers as relays, for example, large ones cannot carry out their high-order functions. Thus no one size will work for all types. Small places will feature lower (congestion) costs in exchange for limited amenities in consumption and weak urbanization economies in production. Large ones will require massive infrastructural investments, justified, one hopes, by the unique functions their size makes viable. Cities can only be efficient or inefficient in size for the role they play. Of course, the question persists as to whether market forces, and particularly migration, the dominant source of change in city size, will yield a reasonably efficient size array of places. The confidence of economists that individual choices tend to provide positive guidance to the system as a whole seem fraught with problems in this case. Rural-to-urban migrations can often take on siphon-like characteristics, further emptying regions that have lost any excess population and adding to urban congestion at their destination.

Ireland in the late 19th century is a case in point, with the migrants ending up in the most crowded cities of Great Britain and North America. Of course, many migratory streams originate in stark necessity or coercion rather than in free choice by maximizing agents, while potential movements are often hampered by administrative and political barriers at either end of the journey.

This is not the place to re-open the discussion of the origins, really the rebirth, of cities in medieval Europe. Specialists ponder and debate the scrappy evidence, archeological and numismatic more often than documentary. Suffice it to say that economic motives are hard to find in the origins, though they come into their own in explaining later relative growth and functional characteristics. Prototypically, the seed of an urban formation was a fortified center of power, royal, noble, or religious, perhaps within the remains of a Roman city that had acquired and retained ecclesiastical functions (episcopal see). An abbey (monastery) sited nearby often served as the kernel of a civil settlement, as in the case of the Cité and St. Germain-des-Prés, separated by a few hundred meters in the heart of today's Paris. The earliest trade may well have involved servants of the local lord, entrusted with transforming rents/taxes/tithes collected (in kind) from the manors into more exotic and finer goods from elsewhere. Did these men begin a merchant settlement between castle and abbey while still dependent, or had they become autonomous merchants before starting the settlement process that would transform their successors into burghers or bourgeois, inhabitants of the burg or town? [Verhulst 1999] Towns also presumably gained an advantage over rural manors in the production of craft goods on the basis of specialization.

The systemic dualism we introduced earlier was at work even in the earliest stages. While the proto-towns depended on local rents and those who appropriated them, and housed local periodic markets, services, and specialized craft workers, the more active places were sited on routes that served for long-distance trade, offering the wandering traders shelter, provisions, and an occasion to trade. In this case, the periodic market might eventually rise to the status of a fair, purchasing protection from the local lord for the duration of the event. We are speaking here of the period, the 9th and 10th centuries C.E., which scholars no longer dismiss as the Dark Ages, despite the depredations of foreign raiders (who also proved to be active traders). While the Vikings came from the North, others originated in areas south and east that had a higher level of economic development and urban life. Europe itself was at that time a periphery of the Byzantine and Muslim empires in the Near East. Byzantium and Cordoba were, in fact, much the largest cities in what we today call Europe.

Pre-industrial Spatial Patterns

After the millennium, the pace of urban formation and growth accelerated in Western Europe. But while many towns were founded and grew, their distribution was far from uniform. By the 13th century, a clear pattern had emerged, with two cores near the coasts of the inland seas: the Mediterranean/Adriatic and North/Baltic. Linking the northern Italian and Low Country concentrations were a number of towns and urban-studded routes, from Paris in the west to central Germany in the east. Trade could flow in one or another of these network channels depending on the vagaries of war, the greed of robber-barons who controlled rivers and passes, the daring of bandits, and other market and non-market circumstances. At the external margin, a number of

ports on the coasts of the inland seas funneled the products of the interior for shipping to the core areas. Elsewhere, urban density tailed off as one moved east or west away from the core, and arable agriculture gave way to pasture, in a sort of macro-von Thünen pattern. In general, the south was more urban, more intensively settled, than the north, and the Italian core more developed than the Netherlandic one.

However active, most of the towns in medieval Europe were small. Florence topped out at 90,000 before the famines and plagues of the 14th century.³ But the bulk of places could count their numbers with four and even three digits, falling well short of what today can be called a town. In addition to offering commercial and administrative services, towns carried on craft production for markets, local or distant. Cloth was the dominant commodity – wool, silk, linen, and some mixtures – but metal, leather, wood, and glass/ceramic wares abounded. The town exchanged these with its environs for the food, materials, and also the wood it needed for fuel and so many other uses. Strong urbanization co-located with intensive and advanced agriculture, though the direction of causation, is hard to establish. Financial institutions – the early bankers, credit instruments, high-value coins, bourses, and systems of accounts – were also to be found in the urban cores.

The fourteenth century witnessed a crisis, leading to a general cessation of urban growth, except in the east where the process was just under way (Poland). Diminishing returns to agriculture on

³ Its greatest cultural flowering took place after the population had been reduced by half.

densely populated land farmed with poorly sustainable techniques (fallow) were largely responsible, most scholars agree. Dearth (worst around 1315) were followed by the bubonic plague at mid-century, with recurrences. Recovery was slow, although the 15th century flowering of the arts in the urban cores disguises the fact.

Medieval Europeans were far from immobile as the flowering of towns attests. They were founded and sustained by migrants, without whom few could maintain their numbers, let alone grow. High urban mortality was part of the problem, but celibacy among servants and clergy, and late marriage for commoners, also contributed. While the drift of rustics to town often represented a search for opportunity, other movements were generally motivated by fear and necessity rather than hope and opportunity. Towns offered possible refuge from violence and, paradoxically, from dearth, but, despite having all the doctors, not from infectious disease. In more quiet times, travelers as well as migrants dotted the roads and waterways. Pilgrims, pedlars, carters, and craft workers – aptly named journeymen – joined agents of the Church and of secular lords moving from one town to another.

Physically, towns grew by accretion rather than plan. The exceptions that have come down to us usually reveal the failure of growth to overrun an initial scheme. The planned towns tended to be outposts (*bastides*) for clearing or holding territory, or inhabited fortresses. Within the town, inhabitants congregated by, profession, area of origin, or “clan.” Prestige attached to a more central location, a forerunner of choices that still distinguish European cities, at least Continental ones, from the American norm. Most urban plots were narrow and deep, as frontage counted for

more than total area. Public spaces, though important for markets, festivities, and other gatherings, were typically limited in size and hard to expand. Masters of each craft clustered, eg., on the butchers' street or in the weavers' quarter, testifying to the regulatory power of the guilds as well as to economies of agglomeration . Areal expansion was discontinuous, since a new wall generally had to be built, so crowding was frequent. Settlements outside the walls, along the roads or at bridgeheads, enjoyed no prestige. Finally, whether it was a sweeping shoreline or a sluggish and small stream, scarcely a town did not boast some body of water running through or lying by it. The advantages of water transport, even on small or difficult rivers, were compelling.

The political and institutional context of urban growth and commerce must be evoked, though it deserves a treatise rather than a paragraph. A legend of free, enterprising, and even democratic towns amidst a society that remained rural, feudal, and church-ridden has come down to us, one which, as usual, mixes gross oversimplification and idealization with kernels of truth. Cities often achieved political autonomy, with remaining obligations to a nominal lord exercised collectively, and they did allow citizens to participate in governance, but with property and other restrictions on full citizenship and office-holding. While ways were found around the more commerce-inhibiting rules of the Church, towns imposed plenty of regulations of their own, typified by guild rules restricting entry into craft and other trades and prescribing product as well as process. On the larger political scene, urban oligarchies, which might in fact entrust effective power to an outsider, contended with and against rulers, powerful nobles, and the secular power of the Church and its bishops, in an unending series of struggles and alliances. Urban leagues such as the Germanic Hansa were only one manifestation of a struggle that inexorably saw power pass over

time to unified kingdoms over much of Europe. Only the northern Netherlands, the Swiss Alpine cantons, and some Italian and German cities – all parts of the old core – managed to remain outside the monarchic framework much past the 16th century.

The Early-Modern Period (1500-1800)

The era of absolutism and European expansion was marked by relatively modest changes in overall urbanization, and indeed in population. The beginning and end of the period saw growth, in the first case representing recovery from the late-medieval crisis, in the second the forerunners of mass urbanization and accelerated population growth in the centuries to come. In between, the 17th century shows up as another crisis period in most places. Two large-scale processes dominated urban change during this period: the formation of centralized and powerful states, notably in the areas where the feudal system had been strongest (the edges or semi-periphery of the urban core), and the expansion of European trade, settlement, and control to territories overseas and to the east. We must summarize the changes these forces and processes wrought on the urban map of Europe.

- *The North gained on the South*, with the northwest of Europe overtaking the Mediterranean.

Antwerp, Amsterdam, and London were successive financial and commercial centers, while Genoa, Venice, and Florence gradually slipped into relative somnolence. Yet the South remained more urbanized overall, in fact until the 19th century.

- *The fringes of the urban core gained on its heartland*, especially in terms of where the fastest-growing cities were located.

- *The fast growers were mainly territorial capitals*, from Madrid and Lisbon to Berlin and St.

Petersburg. Already large, London, Paris, and Naples attained a size (one half million or more) not seen in the Christian West since the great days of Rome. On a smaller scale, court cities in Germany outpaced the free Imperial cities [François 1978]. Dynastic power also gave rise to new cities that were not capitals but served that power as ports, fortresses, or garrison towns.

- *Growth was generally concentrated in large cities*, particularly in the 17th century, when many smaller ones declined [de Vries 1984]. This is why, despite the spectacular cases of growth, the best data suggest little or no overall increase in the urban percentage. While some declines reflected the loss of pretension to urban status in very small towns, the difficulties of the core areas in Flanders and northern Italy also led to a decline in their precociously high urban percentages. It needs to be mentioned that most scholars have, for data reasons, had to use a threshold city size of 5,000. This leaves out a significant – and secularly declining – fraction of the population that would at the time have been reckoned as urban, and thus overstates the gradual increase in urban share.

- *Absolutism worked against a high urban share*, despite the fast growth of capital and court cities. [DeLong and Shleifer 1993]. To be sure, the fact that strong rulers prevailed in areas of previously modest urban share, outside the old urban cores, biases the results. Path dependence again plays a role. The particular failure of cities located near capitals to grow suggests that the latter cast a strong shadow [Hohenberg and Lees 1996].

- *Ports stand out among cities that grew for economic reasons*, particularly those on the Atlantic coast, from Cadiz to Glasgow. By contrast, interior market centers fared less well. Of course, the ports, conforming to network system logic, tended not to grow excessively in population, unlike certain much less economically active capital cities (Madrid versus Cadiz, Brussels overtaking

Antwerp, Naples' ever greater primacy in southern Italy).

The early modern period saw little clear-cut or rapid growth in income per capita (or even total product and income, since population generally rose more slowly than it did earlier or later). But the changes that did take place take on added importance in view of the massive transformation that first took hold in England after 1750. What is noteworthy is that developments which anticipated the future were not typically urban, though cities had a part in mediating them. Again, a brief summary must suffice.

- *Agriculture* underwent a gradual and slowly-diffusing process of intensification and commercialization that resulted in a more sustainable system as well as a more productive.

Modern scholars emphasize the role of markets, transport, and communication – and thus of cities – in the diffusion process [Hoffman 1996], and we previously noted that intensively urbanized (core) areas also developed the most sophisticated agriculture.

- *Mobility*, of persons, capital, and information increased. Cities clearly played the major role here, not only drawing immigrants – and large cities were particularly hungry for human fodder, owing to the large natural deficit they typically ran – but housing the institutions that mobilized and transmitted both tangible and intangible capital, from early banks to printers.

- *Individual property rights* were better safeguarded despite fiscal and judicial systems that added absolutist and mercantilist demands to stubborn feudal exactions. Institutionalists have stressed the importance of secure property and freedom of contract, practices that were developed in and defended by cities long before they were generally accepted by rulers [North 1990].

- *Long-distance trade*, though significant in Europe for much longer than is often realized,

expanded during the period, notably overseas. Moreover, trade policy became an integral part of power politics, leading to overseas settlement and conquest and to aggressive policies concerning shipping, trade, and monetary matters (mercantilism). Some cities and nations thrived, while others stagnated or lost their commerce as a result. Not until 1815, with the end of Napoleon's attempt to control the shores of Europe (and thus break commerce-dependent England) did central governments begin to loosen their grip on trade, retaining mostly tariffs as instruments of control. In the major maritime countries, the great trading companies acted as surrogate governments with respect to the colonial areas and trades they controlled.

- *Manufacturing* expanded, though technical change was limited. However, large-scale production was mostly confined to what were called "manufactures," royally sponsored producers of luxuries or military goods, which appear to have played little part in the industrial revolution to come. Some coal was used as fuel, but wood remained dominant, along with other "organic" and natural sources of energy – animal, wind, and water. Cottage or domestic, and other small-scale industry, on the other hand, with large numbers of small producers typically coordinated by putting-out merchants, had more impact. The connection of this activity to cities, its geography, and its relation to the mechanized manufacturing to come raise complex and problematic issues and require separate treatment.

Proto-industrialization and towns

The late F. Mendels coined the term *proto-industrialization* to draw attention to development and change in manufacturing during the early modern period [Mendels 1971; Leboutte 1996; P. Glennie 1998]. He asserted that rural manufacturing, notably of cloth but also of other wares, for

sale outside local markets, broke the near-monopoly of urban craft production, and had significant impact on agriculture, trade, and demography as well. It thus represented, in his words, the “first stage of industrialization.” While the movement may have begun almost surreptitiously (since towns tried hard to enforce their long-standing hold), using labor from peasant families with seasonal or other surpluses, it gradually took over the economy in a number of regions. Full-time or near full-time workers could marry earlier than peasants, who had to wait for a tenancy or inheritance of land. The increased population came to depend for food on nearby commercial agricultural areas. Thus, a series of markets, for food, mass-quality manufactures, and labor, came into being or were stimulated and extended.

Of course, the success of proto-industrial production carried the seeds of its own destruction, once mechanization and factory organization began to push costs lower. Full-time workers were not so cheap as peasant by-labor, nor could they be treated by merchant-entrepreneurs as a reserve to be employed or released to farming according to fluctuations in product demand. Such workers had moved halfway to the status of an industrial proletariat, and so were ripe for the transition to the factory and the town. Also, the use of low-skill rural labor required that industrial processes be broken down into simpler steps, anticipating later mechanization. Finally, markets for manufactures of ordinary quality, developed in the proto-industrial period, built demand and so reduced the risk of fixed capital investment in machinery and factory buildings.

The proto-industrial model elaborated by Mendels and others soon came under attack, although the research it stimulated is a tribute to its persuasiveness and elegance. Historians, it must be

said, have a visceral distrust of models, and fiercely defend the uniqueness of the particular situation. This bias aside, it proved difficult in many regions to document the neat juxtaposition of proto-industry and commercial agriculture, or the acceleration of nuptiality and fertility, that the model specified. Eventually, many historians focused on institutions, which they identified with “power,” as the main explanatory variable in the study of why proto-industrialization took hold in some regions and not others. Why institutions should be exogenous and unresponsive to economic incentives is a question usually not asked, let alone answered.

More to the point here, the view of proto-industry as a dynamic rural counter to hide-bound, rent-seeking urban craft guilds proved much too simple and categorical [Hohenberg 1991]. Not only did the commercial aspects of this activity continue to involve towns and town-dwelling merchants, but stages of production requiring fixed capital, skill, or close control also remained urban. Many towns, with or without guilds, embraced domestic and small-scale workshop industry wholeheartedly, so that even simple manufactures by no means became entirely rural. Finally, luxury sectors that remained urban throughout also saw expansion; for example, the making of clocks, fine furniture and clothing, porcelain, and other decorative objects profited from the domestication of aristocrats by the monarchies, as well as from imitation of their lifestyles by rich burghers.

The geography of proto-industrialization is not simple to summarize, nor is it all that well known. An important point is that, by contrast with the iron and coal-based industry of the next century, proto-industry has left very few physical traces in town or country. A very rough summary

indicates that it first took hold in and around the urbanized core, from the West of England to northern Italy, with a few patches in Iberia and central Europe [Glennie, 1998, p. 263]. By the 18th century, when the movement peaked, larger areas were involved, including southern Spain, northwestern France, eastern Sweden and Ireland, and much of central Germany, while some Alpine territories had faded. However, the map from which these indications are drawn is rightly offered with warnings and cautions by its author. At any rate, the areas active in this form of production would have the most varied destiny in the industrial age to come, ranging from complete de-industrialization through flexible adaptation to full participation.

The Early Modern City: An Appraisal

From the point of view of spatial arrangements, early modern cities also conspicuously juxtaposed continuity and change. Those whose growth was sponsored by political leaders saw expansion, not only to house larger numbers but for the palaces and “hotels” of nobles required to attend the court, as well as for monuments and perspectives to celebrate power. Aside from the very privileged, however, big-city dwellers tended to experience mostly increased crowding.

Commercial centers, on the other hand, showed a general disinclination to invest large sums in expansion or beautification, nor was population growth there as rapid as in capitals even in prosperous times. Of course, cities such as Amsterdam and St. Peterburg, built in swamps, required major infrastructural investment. While the Great Fire of London, in 1666, stimulated rebuilding and some major architectural works in Wren’s churches, the opportunity to recast the city in the Versailles style (see Washington, DC) was passed up.

To summarize, the early modern period witnessed significant changes in urban development without much overall increase in the urban share of the population, with an exception for 18th century England's head start on the industrial age. In the logic of central places, growth favored mostly the largest centers, those exercising political control of a high order. Urban networks saw fierce competition, favoring ports over inland towns and the west and north of Europe over the Mediterranean. Within the winning region, leadership passed successively from Bruges to Antwerp, to Amsterdam, and to London. Capital of a long-stabilized monarchy and a major port in the most active 18th century economy, London became Europe's largest city, nearing a million inhabitants by 1800. But population grew only modestly in more purely commercial centers. For example, Vienna, Moscow, Madrid, and Naples grew larger than Amsterdam, Nantes, or Bristol, despite the contrary contrast in their economic vitality.

Cities and Industrialization

A good deal of what follows is concerned with the effects on cities, and urban growth generally, of industrialization, or modern economic growth, as it appeared in, and spread from, England between 1750 and 1914. Then and later, successive technological regimes stimulated the concentration of a growing population in urban places, creating many, favoring some pre-existing ones while bypassing others, and generally exercising a major influence on the structure of the urban fabric. A much more difficult although equally compelling question is what role cities, namely those that antedate industrialization, played in the growth/development process itself. The a priori case for the Industrial Revolution as an urban phenomenon seems compelling, but the evidence is elusive and contradictory.

As we have already seen, in the age of domestic industry a shift of production to rural sites formed an integral part of the expansion, and it was precisely those aspects that distinguished proto-industrial production from the traditional urban crafts (division of labor, production for non-local markets, loss of control over materials by workers) that pointed the way to the mechanized factory. Within the latter, water power dominated in the early stages, so that this was a major locational factor and often dictated a rural or suburban site. On the other hand, many cities were leery of industry, not only because of the dangers and disamenities that crude machinery and processes entailed, but also because the prospect of masses of landless, rootless workers posed daunting problems for the guardians of public order and political tranquility. Many cities relegated industry, and the worker housing that had to remain near it, to the suburbs, although this would eventually pose serious problems as the city expanded. A final point is that the new factory labor was not often recruited from established town dwellers, if only because other aspects of urban economies provided adequate employment.

When it comes to the technological developments that have caused the Industrial Revolution to be labeled by some a “wave of gadgets,” the picture is equally murky [Mokyr 1995]. Some cities witnessed episodes of clustered technological or entrepreneurial creativity, for example Birmingham, Basle, and Lyon, but other important beginnings have no obvious urban ties. Three things may be said with some confidence:

- All the forces that economists identify as centripetal, and thus agglomerative, strengthened greatly in the period of industrialization: economies of scale, inter-industry linkages, (increasingly) knowledge spillovers, and reduced transport costs. Not only did transport become

cheaper, but the reduction was concentrated until the 1890s on established interurban routes or lines served by steam-powered trains and ships.

- The institutions that turned technological change from a series of individual inventions to a regular process of search, trial, application, and diffusion of knowledge, and management of intellectual property, developed and found their home in cities. Patent offices, scientific societies, laboratories, libraries, and schools of all levels grew in importance as the 19th century wore on.

- With the 19th century emphasis, even in technological development, on nation states, the central place system drew these knowledge institutions increasingly toward the largest cities, and in particular the capitals. Case in point, the old universities outside large cities, as in Germany and England, played only a minor role in advancing technology; exception, a few firms, e.g., in the German chemical industry, sited their laboratories with their plants outside major centers.

Urban Formations of the Industrial Age

Overall, the period of industrialization saw great acceleration in Europe's population and in the share of that population living in urban places. The first of these trends is not so obviously linked to industrialization, since it can be found in parts of Europe, from Russia and Italy to pre-famine Ireland, decades before they experienced any real industrial development. The second, however, does follow the spread of industry pretty closely. The demography of urbanization is another complicated subject that we must slide over, save to say that accelerating population growth allowed the cities to expand even when the countryside was also growing. Only in a second phase would "rural exodus" become general, pushed by a combination of labor-saving agricultural technology and the loss of non-agricultural rural employment, pulled by overseas as well as urban

destinations.

For the most part, then, urban growth was fed by rural migrants, while the enormous increases in the population of metropolitan cities drew also on movement out of other, usually smaller, towns, up the central place hierarchy. When migrants came from regions of high human fertility, as of course many did, they in time adopted the much more restrained fertility behavior of city dwellers. By the time improvements in public health and sanitary infrastructure ended excess urban mortality, diminished fertility would keep “natural” population growth in cities modest or even negative.

In the interests of clarity and economy, we may schematize the most common urban types that industrialization produced or advanced.

- *Local and regional centers* often expanded, at least in early stages. It is too often forgotten that the rural population, farming or not, increased almost everywhere until modern growth was well along, or until a demographic trigger, foreign or urban-bound emigration, relieved the pressure on the land.⁴ Agriculture intensified with the spread of better rotations, convertible husbandry, and other yield-increasing techniques, while labor-saving mechanization only came along gradually. Increased commercialization and better communications, however slow and uneven their progress before the generalization of rail, stimulated the development of urban centers, from the smallest upward. So did the increasing activities of the centralized state, with Napoleonic administrative

⁴France is the exception, the one country with substantial regions of low rural fertility as early as the 18th century.

structures, for example, outliving French occupation. It is likely that many services we think of as traditional in small towns – shops, apothecary, solicitor/notary, carriage maker, tailor, publican – often go back no farther than the 19th century (or the mid-eighteenth in England). Still, provincial towns did not match the new industrial centers for activity, and many gradually became reservoirs of labor to be exploited for such routine products as boots and shoes. This phenomenon of industrial deconcentration is characteristic of mature industrialism and prefigures the 20th century policies of deliberate decentralization, whether for strategic, cost-minimizing, or developmental purposes.

- *Industrial city regions* developed in several variants. Some grew around natural resource points, such as coal or metal ore mines, or emerged from a proto-industrial concentration around a city. Such places as Sheffield and Birmingham, for example, gave the name of the principal city to an industry (and its wares) that spread over a much wider area. The city-region could also arise with no prior urban center, out of a series of settlements that coalesced with growth. Examples are Staffordshire (The Potteries), Le Creusot, and, of course, the Ruhr. The largest came to be known as *conurbations*. Finally, industrial regions could constitute a more structured urban system, as was the case in Lancashire. Manchester was its center, with Liverpool as the port of entry and exit, but the bulk of cotton mills were actually situated in a ring, or double ring, of towns around Manchester. St. Helens, also some distance from Manchester, furnished the chemicals vital to the textile industry.

“*Alpine*” *industrial concentrations* denote a form of settlement that even today is insufficiently appreciated. In the upland valleys of many regions of Europe, but most notably in the Alps, proto-industrial production gradually modernized, adopting the factory mode of organization and power-

using machinery, etc. The continuing pattern of small and medium firm and establishment scale has been compensated by other advantages, giving rise to a system described as one of “flexible specialization” [Piore and Sabel 1984]. Swiss watchmaking is a long-standing example, but familiar products range from quality textiles to pipes and even cuckoo clocks. The workers tend to live in small places strung out in the valleys, while the principal centers have comparatively unfamiliar names such as St. Gallen, Roanne, Elberfeld-Barmen (later Wuppertal), Prato, or Verviers.

Industry in large cities also developed, though it tended not to be so dominant or visible as in the sort of places sketched above. Within established cities, much of the activity took place in small establishments, externally little different from the domestic and workshop crafts of proto-industrial times. In fact, the coming of electricity gave new impetus to small-scale production, since it made possible compact and flexible equipment such as sewing machines and power tools for working wood, metal, or leather. Heavy industry, on the other hand, located on the outskirts, in the “red belts” or in satellite towns. Entire suburbs could be dominated by a single firm, as with Siemensstadt in Berlin and the Renault works in Boulogne outside Paris. Within the city itself, factories and workshops in working-class districts were overshadowed by the more central and showy temples of finance and commerce.

Given the costs of carrying on industrial production in large cities, affecting everything from materials transport to labor and land rent, there had to be compensating advantages. As in earlier times, the critical property was the information embodied in the product. Old criteria of labor skill, fashion, and uniqueness (one-off or custom-made articles) were joined by considerations of

technical complexity and innovation. Prototypes would be made in the big city, whereas routine mass production could be located in some lower-cost site. This suggests a product cycle, with “new work,” in Jane Jacobs’ phrase, characteristically metropolitan [Jacobs 1969, Gaillard 1977]. In a more recent context, P. Aydalot and D. Keeble [1988] contrast the early stages of an industry, characterized by spatial concentration of small firms, with the later (presumably less innovative) stages, where the firms are larger but production is dispersed.

One urban formation is noteworthy by its absence from the list. Except for Britain, it is hard to find genuinely new cities with important central-place functions, or even a leading role in networks, that emerge as a result of industrial urbanization. Manchester is an exception, and one can perhaps add Düsseldorf (previously a minor court city), Leeds and Bradford, and Bilbao to the list, but not many more. Some ports, Liverpool, Glasgow, Le Havre, and Bremerhaven being a few examples, were founded or came to prominence. As for the rest, fast as they might grow and large as they might become, industrial settlements seldom matured into high-order centers. This typifies network logic, where even populous places can maintain a high degree of specialization and depend for many functions on imports and ties to other places. Of course, the industrial settlements gradually added amenities, from shops to cultural, educational, and sanitary institutions, but usually with a lag and for local consumption only. Thus, industrialization had an enormous urbanizing impact if one looks at population, but much less restructuring force in terms of urban systems, especially the central place hierarchy and its metropolitan cities. In the main, the pre-existing big and important places merely became larger and more important, whether one looks at political, cultural, or financial and commercial leadership. Some, but not all, countries

saw a fusion between the two urban systems at the top, with the national capital acquiring a leading role in global finance and commerce.

Migration

As pointed out earlier, urban growth was fed by migration, either directly from rural areas or by successive moves up the central place system from smaller to larger centers. There was, of course, a great deal of inter-urban movement and some return flow to rural areas, and it is not always easy to distinguish temporary movements from migration, but the net flows are pretty clear cut. The move to the cities was driven by both pull and push factors, again not always easy to distinguish clearly [Williamson 1995] and it mingled very short moves, from neighboring villages or farms, with quite distant migrations across regional, cultural, and national boundaries. Of course, Europe's rural dwellers also peopled the great cities and lesser towns of the Americas and of the Antipodes, including South Africa.

Our image of the 19th century industrial city is dominated by crowding, squalor, and pollution. The image is largely accurate, though one should remember that the migrants kept coming and for the most part remained town dwellers once settled. A number of factors contributed to bad conditions: the irregular nature of migration, which tended to come in waves; the primitive industrial technology, introduced as quickly as possible and only gradually refined and perfected in use; the long hours and poor, relatively expensive, transport that forced workers to reside near their place of work. We can also add weak urban governance and administration, in all cities but especially in

nascent ones, justified by the triumphant liberal ideology, but due also to competing claims for capital; the revealed preference of worker families, which spent discretionary income on other things and often let some of their exiguous space to lodgers; finally, the competition for land in and near the center for public and commercial uses chiefly, also for wider and straighter streets on the model Haussmann applied to Paris. The perverse impact of “urban renewal” on the poor goes back a long way. Scandal and catastrophe compel notice, so it must be noted that millions lived under better conditions, however drab the urban landscape of industrialism might generally be, and that matters tended to improve with time and rising incomes and as the influx of newcomers slowed.

Metropolitan Areas and their Transformations in the Industrial Age

Whereas even large or fast-growing industrial areas were often left to shift for themselves, national governments paid a good deal more attention to the capital. Not only did elites of wealth as well as of culture and caste reside there, so did political unrest and the “dangerous classes.” Yet economic forces also played an important part in transforming the metropolis. Along with a share of industry, old and new, these cities saw enormous growth in commercial and financial activity. Banking, securities trading, and insurance represent sectors that centralized strongly. More generally, information-rich activities, from product development and fashion to publishing and communications, sought out the big city. Purveyors of high and popular culture and those who aspired to careers in these fields also gravitated to the capital. Many large firms, as well as once-regional banks, moved at least their headquarters to the big city, although a few industrial firms, typically with a secure market position and close inside control, chose to remain in their place of origin, perhaps turning it into a company town. These offer an interesting contrast to the typical

industrial city, offering the workers better physical amenities in exchange for closer corporate control outside the workplace.

Two big changes in land use clearly observable in metropolitan cities were the separation of workplace and residence and, once people were no longer closely tied to the place of work, the generalization of socially homogeneous neighborhoods. Ironically, European factory workers in their peripheral locations were among the last to win some choice in where to live. The old patterns, such as living above the shop, or a vertical social gradient with “noble” and “servile” floors in a single multi-story building, gradually (though not fully) gave way to the more homogeneous blocks of flats, row houses, or detached villas. Progress in transport, successively omnibus, rail, tram, underground, bus, and motor car, with falling cost and improving quality, was key to the process. While each city has its own story, two features stand out in the new social geography. One is that European elites were not nearly so quick to abandon the center as their American counterparts, Britain, in this respect, being somewhat intermediate. The other is that expansion out from the center followed a sectoral pattern, often with the west bourgeois and the east popular.

We have mentioned the hardships caused by land clearances and land-use succession generally. In the big cities, these projects could take on special scope, for example to accommodate rail terminals and freight yards, or government buildings and showplace plazas. The edge of the city, which traditionally housed the lowest and most noxious functions, and the most marginal people, also posed problems that had to be addressed as the built-up area pressed outward. In Paris and

Vienna, for example, fortifications were demolished late (after 1920 in the latter case!), yielding great opportunities but also posing problems. Finally, if urban development usually lacked adequate planning and infrastructure provision – though massive and impressive investments to provide transport, sanitation, and water, were eventually made – the situation was often far worse with regard to suburbs. For every planned “garden city,” there were many straggling and unplanned settlements practically devoid of services.

Laggards and Losers

Not every city and town gained in the general wave of urbanization. Certain regions lost their proto-industrial role, and this affected their centers. Agriculture began to shed labor, as we noted, in England as early as the mid-19th century (sooner in industrial regions), on the European fringes much later. Gradually, very small rural centers gave up their urban functions to larger ones, a trend that would greatly strengthen with the coming of the automobile. Also, despite the spread of secondary, light rail networks, the fortunes of smaller towns depended on whether or not they were served by a line. Regions of precocious high urban density, the old cores of Mediterranean and Low Country Europe, lagged behind industrially, and experienced little urban growth. Finally, old network nodes, many with a glorious past as centers of finance and commerce, were by-passed. Lübeck, Venice, Bruges, Augsburg, La Rochelle, and many others, could only aspire to the role of living museum. In the second half of the 20th century, the very absence of industrial development during the “paleotechnic” phase [Mumford 1961] might prove a major asset in attracting new activities and residents.

Urban Growth and Urban Systems in the Industrial Age

In the aggregate, industrial-age urbanization left the size distribution of European cities not very much changed in shape, although, of course, greatly shifted toward larger size. A system perspective brings out a somewhat richer story. The hierarchy of central places showed more rapid growth in the higher ranks, although some of this represented the incorporation of satellite towns into a metropolis and can thus be considered in part a statistical artifact.. In general, the clear-cut boundary of each city, whether walled or not, gave way to a fuzzier notion of “urban area,” posing definitional problems of arbitrary inclusion or exclusion of suburban and satellite settlements. On the other hand, the network system engendered a host of specialized, often but not always industrial, agglomerations, whose growth might well be explosive from the start. Non-industrial places included rail junctions, garrison towns, ports for war, commercial fishery, or commerce, and spas or other resorts. Here again, the growing together of nearby settlements into a conurbation gives an upward bias to the measure of growth relative to start-of-period size.

Overall, the combination of biases regarding the relationship of growth rate to initial size yielded the almost neutral result of proportional growth. Within the countries of Europe, therefore, the distribution tended toward a log-linear rank-size relationship, or the rank-size rule ($P = P^0/r$), where P is the population of a given city, P^0 that of the largest city, and r the given city’s rank in the hierarchy. Exaggerated growth of the capital or *primate* city characterized some countries (Austria, France, Sweden, even England) while others developed an oligarchy of major towns with no one dominant (Netherlands, Switzerland). But these departures from the rank-size order to an extent cancel one another out if one looks at the whole of Europe.

In systemic terms, the single greatest change was a fusion at the top. National capitals tended to add network leadership to their central place functions, including international finance and cosmopolitan exchanges of information and persons. Vienna and Berlin, though not so much Madrid, The Hague, or Rome, followed the lead set by London and Paris. A telling indicator is that banks bearing their provincial origin in their name – Dresden, Lyon – moved their headquarters to the capital. Of course, colonial empires blurred the distinction between national and international links.

The First Twentieth Century

In the first half of the 20th century, a number of factors caused urban growth to slow down and the systems to stabilize. Wars and depression slowed and sometimes even reversed rural-to-urban migration, while emigration for political reasons affected urban dwellers more than rurals (unlike earlier currents). Until World War II, destruction was confined to Belgium and northern France, and to Spain, with Liege, Lille, and Madrid the only large cities with much experience of it.

The slowdown, particularly in the 20s (England, Germany) and 30s (France), affected most strongly the industrial conurbations that specialized in a limited range of industries such as mining/metallurgy/metal-working or textiles. Although periods of war, re-armament, and reconstruction reversed the trend, it prefigured the definitive decline of these incipient “rust belts.” New industries, many making and transforming light metals and petrochemicals to make plastics, appliances, vehicles, and the like, sought out other locations. Ports and metropolitan areas received their full share, but nothing like the massive concentrations of the previous century

developed. Of course, late-Imperial Russia and the Soviet Union, rushing to make up for industrial retardation, did develop coal/iron/engineering complexes in the Ukraine and Urals, along with factories in old and new cities.

While economic growth faltered, the quality of life in cities underwent great improvements. Much of it was a matter of the infrastructure catching up with earlier growth, but there was more to it. The technology of the “second industrial revolution,” centered on advances in electricity, chemistry, and biology, proved urban-friendly. Sanitation and security improved, pollution diminished, and intra-urban transport was revolutionized. Progress in administration and public health, and the gradual extension of voting rights (at first only among men) also gave impetus to improvement. Most visible is the development of social housing, increasing supply and improving the standard, in the large cities where crowding was most severe. Elsewhere, increased firm scale made possible more employer-provided housing.

One feature that distinguishes European from American cities is the absence of skyscrapers in the former. Even in the heady days of the Belle Epoque, before the outbreak of war in 1914, Central Business Districts did not grow upward to take advantage of the electric elevator and structural steel construction as they did in New York and Chicago. Yet if one widens the view to the built-up area as a whole, Europe’s cities show greater, not lesser density. Except in the north, where row houses predominate, the prevailing form of housing in large cities was and is the apartment block, 4-7 stories high. They can be found from Naples to Edinburgh and from Madrid to Moscow.

The Second 20th Century

World War II posed a challenge for Europe's cities not seen since the Great Plague of the 14th century, with aerial bombing, artillery battles, sieges, and house-to-house combat, to say nothing of wilful destruction, wreaking havoc.⁵ In addition, masses of refugees fled cities, during the war and in its aftermath, often with little idea of where to go. Economic life came to a near-halt in many places, confiscation adding to the miseries wrought by occupation or fighting. While much has been written of economic miracles in postwar Europe, the fact that most cities were up and running within a decade is certainly as remarkable as the "30 glorious years" of growth.

What is equally surprising is how little change reconstruction wrought in terms of the urban fabric and "build" in the first postwar decade. Very little realignment of streets or radical innovation in design and land use took place. Even where blocks had been flattened, invisible constraints remained: the underground infrastructure of sewer and water lines, sometimes also gas, electricity, and telephone conduits, and the intangible pattern of property rights. Reconstruction was too urgent for either to be reworked. So old urban cores retained their crooked and narrow streets, which soon became prized pedestrian zones. As for building construction, the general quality was quite poor in the first phase, but the need was desperate. A few of the most heavily damaged centers were singled out for special care, usually building in a pastiche of the former style (Caen, Warsaw) or one that purported to be modern (Rotterdam, East Berlin). Yet these failings must not

⁵ It should be noted that massive bombing raids on cities had little impact on the war, in terms of either material production or morale. If anything, they increased British determination and German mobilization for war production.

be allowed to overshadow the quantitative achievement of urban reconstruction, which had to compete for resources with rail, road, and factory investments, to say nothing of a consumption-starved population. Baby booms also soon mandated investment in child care and school facilities.

While technological catching-up helped Europe launch and sustain a great economic boom, from the narrow point of view of cities the actual technological developments of the last half century have proved a mixed blessing. The enormous increase in human capital formation and use has proved a strong centripetal force, as the manipulation and communication of symbols has replaced the handling of materials in the work of more and more persons. On the other hand, many industries have become footloose, with the drop in transport costs turning industrial location into a complex game with public policy as one, sometimes more than one, player. As for information industries, one can only say that their full impact has yet to make itself clear, let alone to play out.

Of course, the single most influential technology of the period is the internal combustion engine, where Europe incurred, and then largely made up, an enormous quantitative lag relative to the United States. Once hailed as the savior of cities, when horses and their by-products (not least carcasses left where they fell) threatened to choke the streets completely, the motor car has become an ecological monster, almost literally eating the urban fabric. While European cities have devoted far more effort and resources to taming the beast than their more spread-out American counterparts, it remains true that the limits to traffic on both sides of the ocean are set by

congestion and not by the supply of alternative modes.⁶

Changes in the structure of output and employment have been profound in the past half century, with strong implications for cities. The old industries have faded badly, their decline fueled by gains in labor productivity and by competition from newly industrialized countries. Service employment, on the other hand, has grown, though in ways that defy easy generalizations about either job quality or locational impacts. It may be true that the largest cities tend toward a polarization between high-skill, high status jobs in information-rich occupations and menial service jobs, but it is easy to exaggerate that trend and forget the myriad of occupations in between [Sassen 1991]. Those concerned with economic development often argue that services alone – even if they are “basic” in the sense that tourism, entertainment, or higher education are when they serve non-residents – cannot sustain prosperity, that manufacturing is needed. The result has been an intense effort to attract or grow “hi-tech” industries: high growth potential, high value-added, clean. The Holy Grail of regional and national development efforts has been to grow new Silicon Valleys, whether in the glens of Scotland, on the Riviera, or in Bavaria. While concentrations have indeed developed, trying to implant this sort of self-organizing and -replicating cluster or complex has proved about as difficult as growing the equally prized truffle.

Tourism and travel, for leisure and business, have become enormous sectors in Europe, since

⁶ It would seem that improving public transport and commuting fares to passes good for a period of time results in greater use, notably at off-peak hours, but not in much modal substitution.

almost everyone now travels, including the young and old, as well as “guest workers” returning to their native region on paid vacations. Mass seasonal migrations to the seaside and the ski slopes, tours to the high spots of culture, gastronomy, fashion, sport, or art, meetings of all kinds, and weekend jaunts to second residences keep a variety of travel and leisure, as well as home improvement, industries busy. The wonder is that the prime destinations do not succumb, or at least lose their attraction, under the weight of so much popularity. By contrast, urban entertainment, from theater to street festivals, is caught between the competing forces of more exotic destinations, TV at home, and weekend absences, and has stagnated. Shopping and eating out have clearly overtaken other urban leisure pursuits.

While the general growth of service employment has been a factor of agglomeration, within other-than-leisure services, as with residence and manufacturing location, one can observe areas of decentralization. According to H. Klodt [1995], who looked at the case of the Federal Republic of Germany, only “disembodied” services, generally referred to as FIRE (finance, insurance, real estate), show large economies of scale (and agglomeration?) and a preference for city centers. Others are either footloose, which means they follow residents to the suburbs, or tied to their customers in peripheral locations. The issue in evaluating European developments would seem to be whether one looks at absolute change or uses the North American (US) pattern as a norm, in which case one continues to see relatively slow decentralization. But this could represent a lag rather than a lasting difference.

Urban Growth and Migration

Housing shortages apart, barriers to mobility have been sharply reduced in postwar Europe. People can move as family, career, life-cycle stage and sometimes just taste dictate. The once-elite notion of dual (or several-fold) residences has spread to the middle class, and a vacation house may turn into a retirement residence. In fact, many city dwellers had always had a second home in the village or small town from which they or their forebears had come. Daily or weekly commuting over considerable distances has also become common, helped by massive investment and favorable pricing strategies in interurban transport. European integration, affluence, and globalization have extended mobility well beyond the national boundaries of European states.

Despite the quickening of gross flows, population growth in urban areas – in some cases their decline – still depends on net flows or migration. After about 1960-70, earlier or later in given areas, the bulk of the new urban dwellers came from abroad rather than from the own countryside. Some countries, such as Britain, France, and Germany, had a long experience of foreign immigration, but not on the scale they experienced now; others were used to seeing their people leave and needed to adjust to the reversal of direction. Spain, Italy, and Ireland are examples. For all the stresses they brought (and experienced), foreign migrants have provided much of the labor supply on which growth has drawn and changed the look and life of Europe's cities.

The origins and motivations of migrants to Europe and its cities (only a few, such as some Europeans repatriated from Algeria to France or Spain took up farming or settled in villages) are varied. Many came from colonial and former colonial possessions overseas, taking advantage of

the legacy that gave them a shared language and culture and, though with complications, a nationality. Others were brought in from southern Europe to the richer countries, in principle strictly to work for a limited time and return. However, many eventually brought families and settled, and the host countries proved unwilling or unable to enforce their return. Political refugees have followed in the aftermath of periods of war, persecution, or unrest, while the opening up of eastern Europe brought others.

Not only did international migrants overwhelmingly choose urban residence, but they showed a preference for large cities and industrial conurbations, depressed as the latter's lead industries might be. As may be expected, they clustered strongly. Algerians, Turks, Sumatrans, Jamaicans, Pakistanis, and many other groups make up neighborhoods in and around the large cities, and people the housing estates where miners and steelworkers once lived. The social problems raised by the clash of cultures and the difficulties of employment have become more acute with the generation born in Europe, among whom many are not so much bi-cultural as a-cultural.

Resistance to immigration has become the rallying cry of the political Right in Europe, just as the environment has energized the Left, taking over the roles once played by nationalism and worker solidarity, respectively.

Recent Urban Formations

Just as the industrial zones of the nineteenth century tended to coalesce into a single conurbation, new urban entities have come into being, with or without gaining name recognition. Most studied, perhaps is the Dutch "horseshoe" of towns running north from Dordrecht and Rotterdam to

Amsterdam in the west and back down past Utrecht in the east . While the identification of Randstad by planners is tied to concerns for interurban linkages within the complex, it is equally about preserving green space inside the horseshoe. Europeans are clearly much concerned with sprawl, and prepared to fight it, however aware that they are engaged in a defensive struggle.

A term that characterizes recent change in Europe, and is construed as both criticism and recognition, is *counter-urbanization*, the move out of larger cities to previously rural areas (or to heretofore sleepy local centers and by-passed regions). Leisure activities fuel it, from ski or beach resorts to vacation houses in nearly abandoned villages, as does the preference of business for greenfield over brownfield locations. Mediterranean Europe has been the recipient of much of this attention, and one can now define a second “banana” of intensive urban and economic development reaching from Ljubljana to Cadiz, that cuts across the traditional core (stretching roughly from Newcastle to Rome).

Within this old core, and outside it too, in central France, southern Poland, and South Wales, to name a few, are the old industrial areas, or rust belts. Their cities have never freed themselves of dependence on the fading industries that engendered them, and efforts from outside to renew the economic base face almost insuperable odds. In Belgium, for example, the Borinage (Meuse valley) cannot compete with the Antwerp to Brussels corridor as a location for new ventures. A side effect, peculiar to the case of this bi-community nation, is that the once-subordinate Flemish north has now leapt ahead of the Walloon south. [Urban sprawl also means that suburban residents of the once-francophone Brussels agglomeration increasingly find themselves in Flemish territory.]

England too has reversed the pattern that gave rise to the proverb, “where there’s muck, there’s brass,” associating heavy industry with prosperity. The once-bucolic South has greatly overtaken the gritty North, while Germany and France have similar, perhaps less dramatic stories to tell.

In a system perspective, one can grasp that underneath the apparent stability of the urban structures and national identities a sea change has actually taken place. Its centerpiece is a certain weakening of the hierarchic national systems with their over-development of the national capital at the expense of both regional centers and other network cities. An exception concerns the new nations formed by the breakup of the Soviet Union and some of its satellites, where fresh nationalism also enhances the capital cities. The factors behind this change are pretty clear: trade liberalization, leading to European integration and globalization, and decentralization fueled by concerns for equity and by demands for autonomy at the regional level. At the policy level, what began as efforts to prop up backward areas and prevent exodus has become a positive policy of devolution and regional autonomy in many countries.

Decentralizing forces respond to and in turn strengthen a marked revival of regional identity, sometimes very strong (Catalonia), sometimes a bit forced and artificial, that has given a corresponding boost to provincial or regional capitals. Cities with cosmopolitan identity and network ties, often of long standing, have also benefitted from the weakening of ties to the center. They were long stifled by the territorial states to which they belong and thus subordinated to the capital. Germany (the Federal Republic) offers the best example, having profited from the isolation of once-dominant Berlin to develop at least five moderately-sized but genuinely world-class cities:

Hamburg, Frankfurt, Stuttgart, Munich, and Düsseldorf. However, France, Britain, Italy, and Spain offer examples as well. Most telling are cases, such as Barcelona, Florence, and Strasbourg, where a city has both a strong regional role and a real cosmopolitan reach. Swiss and Dutch cities, never subordinated to a primate capital, also display this positive local/global mix.

Urban Spatial Structure in Post-Industrial Europe

After a relatively quiescent period following reconstruction, many large cities became the object of plans rivaling the most ambitious of any earlier period. Vast renewal projects have transformed parts of Paris, London, Vienna, Barcelona, and, most recently and dramatically, Berlin. While each is distinctive, and the focus of critical comment and contestation, one can say that recent projects at least pay lip service to modern ideas of participation, ecological and cultural sensitivity, and the need to sustain and preserve the historic urban fabric. To be sure, balancing the demands of the automobile with a livable townscape calls for expensive investments in below-ground roads, rail lines, and parking structures. But they have often been made.

Planners also seek to retain a socio-economic mix within the city, despite costs of housing that promote gentrification. This objective applies equally to places of business, the fear being that small firms, whether workshops or retail establishments, will be squeezed out. Gentrification does have the advantage that the upper-income targets show a clear-cut preference for rehabilitated old buildings. This counters the “urban removal” reflex of planners, bureaucrats, and developers, who like to wipe the ground clean and start afresh. For a time, housing shortages enforced social mixing by not allowing people to be too choosy about the neighborhood where they settled. There are still

urban areas with a real mix, but one consequence of large-scale foreign immigration is to discourage such integration. To be fair, issues of schooling may play a greater role in this issue than unvarnished racism or xenophobia. Of course, relegating working-class and migrant families to the periphery does not mean that social problems are reduced or even excluded from the city center.

While city centers are more lively and better preserved in Europe than in the United States, the peripheral patterns typical of the latter are present as well. Sprawl, complete with villa estates, malls, commercial strip development, reliance on automobiles, etc., can be found at the edge of every city, but so can pedestrian zones in old village and town centers, clustered dwellings, green spaces, and other anti-sprawl measures. Perhaps the most telling difference from one side of the Atlantic to the other, at least to one observer, is the provision in Europe of paths for foot and bicycle traffic in many sub- and ex-urban areas. The sorry sight, so frequent in the US, of joggers or walkers having to fight traffic in lightly built-up places is much less common in Europe. But road congestion, whether of commuters or on weekends and at holiday times, is certainly no less serious.

One phenomenon that we have so far not evoked, although it has occasioned enormous study, is New Towns. One theme of this chapter is that the creation of new urban entities or cities is something of an art, perhaps a lost art. Cities born in the 19th century have a poor record of standing on their own as vital centers, in terms of renewing their economic base and sustaining their attraction to outsiders and natives. The 20th century has fared no better in this respect. This is not for want of attempts to generate true cities, as opposed to suburbs or renamed clusters of pre-existing settlements. New Towns have been touted as the answer to sprawl and to congestion in

capitals. In fact, they have turned out to be reasonably successful suburbs, more safe and comfortable than vital and exciting. Yet even where a reasonable balance of housing and employment was achieved, most workers commuted in or out, contrary to the goal of the planners. Commuting is the present-day equivalent of residential crowding in the industrial era: consumer behavior refuses to conform to the preferences and patterns planners think they should embrace.

Finally, the secular process of *triage* among very small centers continues. Many lose their urban character, while the remaining ones extend their reach and the range of their services. Enhanced mobility, along with greatly increased demands for goods and services, drive the process. With everyone attending secondary school, visiting doctors, and indulging in shopping and other social leisure pursuits, only services of a relatively high standard are viable, and they require a sizeable market. The historic process of urbanization, at least in the central place system, seems akin to the “Big Bang” model of cosmology,. All centers were created very early, and their subsequent evolution is principally a structuring and selection to form an orderly hierarchic system. On the other hand, the formation of new centers, of concern to economic geographers and location theorists, is relevant to the network system.

Conclusion

Although cities are human artifacts, perhaps the most impressive tangible achievements of what is aptly called *civilization*, a historical examination reveals that, once established, they take on a life of their own. In particular, public policy can do only so much to stimulate or contain growth, to renew the economic base, or to instill a spirit of enterprise and creativity. On the other hand, cities show

remarkable resilience. Very few decline much or disappear if they once reach a reasonable threshold, and they have time and again demonstrated the ability to recover from grave difficulties. This applies in the short and medium term to traumatic events – visitations from the four horsemen of the apocalypse – but also to a longer-term eclipse caused by political or other factors. With changes in technology, industrial structure, openness to movement of goods, capital, and persons, and political regimes, long-dormant places can thrive once more, drawing new strengths from very old traditions. The obverse is that cities, especially those whose activity operates through networks, are apt to stay at the top for only a limited time before competition, technological obsolescence, or the stifling effects of politically imposed controls drive activity elsewhere.

Taking both the resistance and the resilience of cities together, it is perhaps not so surprising that the European system should rest so heavily on places many centuries old, despite the enormous increase in the urban population and the transformations in urban economies. Models of economic location, like policies for local development, while not naively or passively extrapolating from the past, must take path dependence into account. And admirers of cities can take heart from the past. Cities seem to have done better than a cold calculation of costs and benefits, as well as risks, would suggest. Perhaps they will also show greater staying power in a time when advances in communication and transport appear (threaten?) to render agglomeration obsolete.

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