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The Disappearing City?

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Abstract

The question is: are cities destined to disappear? There are at least four separate urban processes happening at once: deconcentration of people and jobs from central cities to suburbs; deindustrialization, or the shift from a goods-handling, resource-based economy to an information-handling, knowledge-based one; reconcentration, a shift from large metropolitan cities to smaller adjacent ones; and a regional shift from both the oldest, densest central urban regions and the most remote peripheries to new growth bands and growth corridors, located in certain favored rural regions of each country.

Together these trends seem to spell a new and deep threat to the traditional great city. Yet this merely represents a shift from one kind of city to another. The key is that hardly any city any longer depends on a unique resource inheritance: it depends on access to information and on environmental quality, which can be enhanced or even generated. This poses an obvious challenge for the resource-based goods-producing cities of the earlier generation. But they too can find their niche, so long as they ally imagination with the will to invest. Public and quasi-public investment will surely be one of the main drivers of urban and regional change in the coming generation, as they lay down a new infrastructure of telecommunications and high-speed ground travel.

THE DISAPPEARING CITY?

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The central question I want to pose to you this evening is: are cities destined to disappear? Some of you may say that this is an old, tired question: there were articles with titles like that coming out of America even in the 1950s, reaching a peak in the work of writers like Berry and Vining;[1] yet, even there, cities are alive even if they are not well. But it is I think a question worth asking, because the fact is that the predictions of the deurbanization school seem to have proved right. Everywhere, during the twentieth century, there has been a persistent and growing tendency for cities to decentralize and suburbanize. The tendency, once restricted to the Anglo-American group of countries--the United States and Canada, Great Britain and Australia--is now affecting all of western Europe.

Recently, also, another and quite separate trend has manifested itself: many cities also appear to be losing their economic base. They no longer seem to exert the attraction they did for many traditional economic activities. Not only manufacturing and port activities and warehousing, but also the newer office- and laboratory-based service activities, seem to be deserting them, leaving large tracts of cities as economic wastelands. If cities lose people and also their economic base, in what sense can they be said to survive? This question has long been evident in some older industrial American cities, where the central city has now become a kind of relic area, a zone of repulsion that no one visits. There is a threat that it could be happening to European cities also.

In order to comprehend what is happening, we need to make a rather careful distinction. There are at least four separate processes happening all at once, and they interact in confusing ways. There is deconcentration of people and jobs from central cities to suburbs. There is deindustrialization, or more accurately the shift of advanced nations from a goods-handling, resource-based economy to an information-handling, knowledge-based one. There is reconcentration, a shift from large metropolitan cities to smaller adjacent ones. And there is, more questionably, a regional shift from both the oldest, densest central urban regions and the most remote peripheries to new growth bands and growth corridors, located in certain favoured rural regions of each country. In this talk, I want to review briefly the operation of these four trends, both worldwide and particularly with reference to Europe. Then I want to ask what, in combination, they spell for the future of European urban life.

Deconcentration

In the United States, just over a decade ago, Daniel Vining wrote a celebrated series of papers arguing that there, demographic trends indicated what he called a complete break with the past: the two-hundred-year old pattern of movement from farm to city had been reversed, so that for the first time in record so-called nonmetropolitan areas--basically, areas outside the sphere of influence of major cities--were growing faster than metropolitan areas.[2] And, almost simultaneously, research from the Rand Corporation showed that though about one-half of this growth represented a fringe phenomenon, whereby people moved to areas just outside the statistically-defined metro area, about one half consisted of the growth of genuinely small and remote places, well away from the major urban areas.[3]

Since then, the American experts have been arguing. Some have pointed out that data for the 1980s point to a sharp slowing of the growth of the non-metropolitan areas, partly because many of the fastest-growing counties have been absorbed into the metros in the latest redefinitions. William Frey has shown that during 1980-85 the larger metropolitan areas have started to grow again, though not nearly as rapidly as in the 1960s. Further, there now seems to be very little difference in growth rates between the largest metro areas [with 1 million and more people] and smaller ones, or between metro and nonmetro areas. What does emerge is a very strong regional effect, whereby in the 1980s metro areas of all sizes [and also nonmetro areas) in the south and west grow much faster than those in the north.[4] Even Vining has accepted that what he calls core regions--which are very large aggregates, consisting of entire United States Census regions--have again resumed growth in the 1980s.[5]

However, none of this alters the fact that core cities in the United States have continued to lose massively by out-migration to their suburbs. And very powerful evidence now suggests that this process has spread across Europe. Paul Cheshire and Dennis Hay have continued the work that Hay and I started during the 1970s, and have analyzed urban trends for the EEC countries on a comparable basis, at least as far as the data allow: this is the Functional Urban Region [FUR], a concept very similar to that of the familiar Metropolitan Statistical Area [MSA] used by American analysts. They conclude that "Decentralization has tended not only to 'spread' from larger to smaller FURs, it has also spread from the countries of Northern Europe to France and northern Italy and later to the countries of Southern Europe."[6] This pattern has proved remarkably stable over time: Cheshire and Hay predict that losses of core city populations, which occurred in northern Europe by the early 1970s [and in the UK as early as the 1950s] and in France and Northern Italy by the late 1970s, will occur also in southern Europe by the 1990s. By 1980, both the UK and Germany were dominated by population decline of their entire major urban regions, accompanied by continued out-movement from core to ring.[7]

Deindustralization

Everywhere, we are seeing the realization of the hypothesis that Colin Clark advanced in his book The Conditions of Economic Progress, almost half a century ago: the movement of employment from manufacturing to services, and the shift from an economy based on the processing of goods to one based on the processing of information.[8] So-called advanced industrial countries--the very term is now a misnomer--now count at least 60 per cent, and often more than 70 per cent, of all workers in the tertiary sector. As a result, we need a new taxonomy of industries and occupations. Robert Reich has recently suggested a useful threefold distinction: routine production services; what he calls symbolic-analytic services; and routine personal services.[9] This is close but not identical to the more conventional distinction between manufacturing, producer or business services, and consumer services. If we do not even know how to classify the newly-growing activities, still less do we understand the rules for their location. Our location theories, whether neo-classical or Marxist-based, are still obsessed with manufacturing and other forms of goods-handling. The most notable, that of Alfred Weber, was published here in Germany as long ago as 1909.[10] Many of you will remember his famous locational triangle, in which the location of an industry was determined by locational weights that depended on the bulk and the transportation costs of the raw materials and finished product.

There is a similar kind of Weberian triangle for the information industries, depending on the costs of information transfer, whether in the form of packages, or electronic impulses, or the physical movement of brains and the rather weightier bodies that unfortunately have to travel with them. There is also an equivalent for his famous agglomeration principle, but it is now rather more subtle. Agglomeration for Weber depended on economies external to the decision unit, generally in the form of a range of specialized services, markets, and pools of labour, access to which cheapened the costs of production. But agglomeration for the information industries has a quite other dimension: it actually contributes to the growth of these industries, through a process of constant innovation in what the late Philipe Aydalot called an innovative milieu.[11] The basic insight here goes quite beyond the static framework of neoclassical economics: it hinges on the processes first identified by Joseph Schumpeter, in a work ironically published exactly two years after Weber's, and then deepened by him in his best-known works of the 1930s and 1940s.[12]

A homely example, for academic readers, may illustrate the point. You wish to research a new subject. You have various choices. You may take the traditional course and visit the best library available to you. Now the density of information available in this way has a remarkable spatial gradient, which descends very rapidly from information-rich places like London and Greater Boston down to smaller and more isolated university cities. If you work in one of these latter, you may need to take your brain for a day or a week or a month to a bigger centre of learning, which costs time and money. Alternatively, you can phone or fax your academic colleagues and ask them to send you photocopies. Or you may conduct a very expensive, and often very frustrating, computer search of a distant database, inevitably located, for some reason, in Palo Alto, California. Or you may go to a gathering like this one, and obtain "unprogrammed" information from colleagues you meet in the corridors and wine bars. If you are lucky and belong to a big university in a big city, you may get this kind of information on a daily basis, but most academics have to spend time and money to obtain it. And this is important, because it is this kind of information that is most likely to lead to fundamental innovations. Conferences are temporary innovative milieus, but great intellectual cities are permanent ones.

Now all this suggests that cities have not yet had their day. Electronic information moves cheaply, though often access to value-added databases is expensive. The post represents good value too, though express international mail is relatively expensive. But, despite continuing technical advances like the high-speed train, moving people is time consuming and expensive.

So there are economies of scope and well as economies of scale in the big places.

Why, then, the paradox? For the evidence is that not merely the goods-handling activities, but some of the information-handling ones, tend to be leaving the cities. More precisely, a rather fine re-sorting is taking place. Those activities that can be spun off to distant locations will be so spun off, because it is cheaper to do so. This is why we see huge suburban office centres springing up around all the great metropolitan regions of the world: in places like Reading 70 kilometers west of London, Stamford in Connecticut a similar distance from midtown Manhattan, the so-called I-680 corridor in the San Francisco Bay Area, places like Tyson's Corner in the Washington DC area. They handle two major kinds of process: research and development, and large-scale routine electronic data input, processing, and retrieval. Activities requiring a great deal of skilled judgement or creative activity, in contrast, continue to command expensive space in the cores of the metropolitan cities.

So there is a constant tension, in these places, between the centripetal and the centrifugal principles. But, because the more routine part employs many more people, the tendency in general is for activity to migrate out.

In their new study, Cheshire and Hay confirm that this process has been occurring in Europe, though they cannot measure this as comprehensively as they can measure population movements, because of data problems. They do conclude that "there does appear to have been a significant relationship between specialization in industry at the start of the period and a poor measured performance for the urban region."[13] Everywhere, they find, service employment is growing at the expense of manufacturing, though the process still had a long way to go in the mid-1980s. The implication, clearly, is that the cities that are going to do best--or perhaps we should say the least badly--are those that earliest made the transition to the advanced service economy.

One way of looking at this is to concentrate not on the problem cities that everyone talks about, but on those that seem to have few problems. Cheshire and Hay analyze them comprehensively. They quote four cities as examples of "healthy growth": Bristol, Nancy, Norwich, and Strasbourg. And they quote five as examples of "healthy decline": Amsterdam, Bologna, Copenhagen, Frankfurt, and Hamburg.[14] All these are service-based cities, two of them smaller national capitals, the others regional capitals. They correspond quite closely to a longer list of such cities I produced earlier.[15] There I described them as the European equivalents of what Stanback and Noyelle, in the United States, term regional nodal cities:[16] "city regions with populations ranging from a few hundred thousand up to about two million in population, that act as service centres for prosperous, traditionally rural hinterlands". "All have this common quality", I wrote, "traditionally service cities, they have enhanced that role, and thus have more than compensated for any decline in their traditional manufacturing functions."[17] So there are some rules, but they are not binding; individual circumstances alter cases, and successful urban policies may promote one place while another languishes.

Reconcentration

Below these medium-sized cities in the urban hierarchy, Western Europe has well over one hundred smaller FURs with less than a quarter of a million people, many of them administrative centres for rural areas, or resort and retirement towns. Nearly three-quarters of them showed population gains in the 1970s; more than two in five had gains of 5 per cent or more. [They are not however the smallest places, many of which are losing both people and employment.] Again, many of these small-medium places showed losses in their urban cores; but, even then, many of these places are growing as employment magnets. These fastest-growing areas, whether larger or smaller, are for the most part semi-rural: the hinterlands of the cities are quite rural in appearance, but they are not remote. On the contrary, they are often next door to the places that are both deindustrializing and deurbanizing. It is a reciprocal process: the big industrial cities' loss is their gain. We can speak of it as a process of recentralization of jobs in these smaller places, with local concentrations of residential populations around them; the resulting commuting distances are generally quite short, certainly much smaller than in the giant metropolitan centres whence these people came.

This is very clearly shown in South East England. There, London has been losing both population and employment for the last quarter-century. But a ring of about twenty FURs, all around it, have gained massively. And the wave of growth is spreading ever farther outward, to engulf places 150 kilometres and more from the capital. In fact, the conventional South East Standard Region is no longer an adequate unit for analysis; we have to talk of a Greater South East, extending into the adjacent South West and East Anglia standard regions. Within it, maximum growth is now concentrated right at the perimeter, largely in those other regions. The fastest-growing belt in Britain--you may call it the Golden Belt, or Sunbelt--extends from Cornwall up through Somerset and Wiltshire to Northamptonshire, Cambridgeshire, Suffolk, and Lincolnshire: every one a rural county.

The evidence is compelling that the whole process is started by movements of people in search of more housing space at prices they can afford. But then, the jobs follow the people. More accurately, the jobs themselves for the most part do not move; rather, the local economies expand to absorb the newcomers. A study published in 1986 estimated that by the end of ten years, well over one-half and perhaps three-quarters were absorbed in this way.[18] This seems to be a very important conclusion. But we do not understand the reasons why: in these places, local economies grow in ways that need much more research.

We do know that these centres of job growth can actually be created by deliberate agency. We did that in Britain with our original new towns, just after World War II. Those around London were extraordinarily successful, returning many times the original public investment in them. The French paid their neighbours a compliment twenty years later, by adopting the same formula around Paris, with the same results. Much more recently, there has appeared a distinctly American variant, developed by private capital. Places like Arlington between Dallas and Fort Worth in Texas, or Mesa outside Phoenix in Arizona, have recently been cited as examples of "supersuburbs."[19] Like the example of Tyson's Corner, which I mentioned earlier, they are huge new commercial centres having many but not all of the attributes of a traditional downtown. They have come into existence almost overnight: Tyson's Corner, a supermarket and grocery store only twenty years ago, is now the largest downtown in Virginia. They signify the fact that informational activities, deconcentrating from traditional metropolitan centres, almost immediately find the need to recapture the traditional advantages of agglomeration--even when, as in several of these cases, they thereby recreate the same traffic congestion that they thought they were leaving behind. These supersuburbs--they have also been called urban villages--are in many ways the most startling recent American contribution to the evolution of urban form. The problem is that all too many of them are one-sided: they are pure agglomerations of office blocks, whose sole advantage is that they are cheap to rent. For the people who come to work in them, they may represent a parking lot and a corridor to the office, nothing more.

It is true that there is also another remarkable urban innovation, also developed in North America but copied in Europe: the super-shopping mall, represented by North Edmonton Mall in Canada and by Metro Centre in Gateshead, England. This is nothing less than the attempt to create a new kind of urban place, which combines shopping and entertainment: a kind of shopping centre in a theme park, again created instantly on an open site. [Gateshead, incidentally, is not a greenfield site but a piece of restored derelict industrial land.] Since both seem to have been successful, we can expect to see more examples. The fact is that, so far, no one seems to have thought to combine these two urban innovations into one. The new suburbs therefore tend to be determinedly polycentric: wealth is produced in one place, consumed in another.

<u>Regional Shifts</u>

What seems to be happening, as a result, is the development of belts of fairly widespread growth in basically rural areas of many European countries. The English "Sunbelt" is one example: the south German corridor from

Heidelberg via Stuttgart and Ulm to Munich is another; the Mediterranean coast of France and Spain, from Monaco to Nice and on to Barcelona and Valencia, is another; so, on a smaller scale, is the so-called Interstate 680 corridor in the San Francisco Bay Area. I find it difficult to form any meaningful generalization about such belts of growth. Some, like your south German example, follow major and very old-established corridors of movement by road and rail; others, like the British example, actually cut across the grain of the major corridors. Some can be regarded as "central" in terms of the major established urban centres; others appear to be "peripheral."

But what is central, and what is peripheral, depends on the geographical scale that is being used: the Nord-Pas de Calais region is peripheral in French terms, but central in terms of the European Economic Community; the Copenhagen region is central to Denmark, peripheral in relation to Europe. Therefore, I think that it is difficult to argue--as Cheshire and Hay at one point do--that in Europe the periphery is becoming relatively more remote. Some parts of it, like Northern Scandinavia or the Scottish Highlands or the Italian Mezzogiorno, do suffer from a combination of long distances and sparse population, which makes it difficult for them to achieve the necessary economies of scale to compete in the new informational economy. But other regions, peripheral in a European sense--the Spanish Mediterranean coast, central Italy--have been relatively quite dynamic areas. The geography of urban change simply cannot be reduced to a core-periphery basis.

Another point needs stressing about these new growth areas. In one sense, they do represent the formation of vast, sprawling Megalopolises, as Lewis Mumford forecast fifty years ago.[20] The urban centres increasingly form a set of interconnected functional urban regions. A husband may leave the home in one direction to work in one such centre, a wife may leave in the opposite direction to work in another. They may find it almost indifferent as to where they do their weekly shopping. They may eat in a restaurant in one place one weekend, in another the next. They may imbibe their news and their culture from national newspapers and television broadcasts. Their patterns of movement represent a kind of doodle on the map. There is no coherence, of the sort that geographers have always sought when they mapped daily urban systems. It is the Nonplace Urban Realm, forecast by Melvin Webber in a celebrated paper from California over a quarter century ago.[21]

But there is a profound sense in which the Mumfordian nightmare has not been realized, and probably never will be realized. The cities remain physically quite separate and quite small. They are surrounded by wide areas of open countryside. Indeed, that is part of their attraction: they remain country towns. There is a clear physical identity, even if functionally there is none. The Nonplace Urban Realm, in this sense, proves to be a myth. So does the idea of a continuous linear megalopolis, hundreds of kilometres long, as described by Jean Gottmann in 1960.[22] Emotionally, too, people are very attached to the places where they live--as witness the growing importance of local environmental issues, in political life all over Europe, as in the United States.

Conclusion: The End of the Metropolis?

Put together, these trends seem to spell a new and deep threat to the traditional great city, especially to those great cities that owed their rise to the manufacturing and port activities of what Patrick Geddes and Lewis Mumford called the palaeotechnic era.[23] Economic activities, it appears, no longer need such cities. People want to get out of them, or perhaps have to get out of them. The people and the jobs come together in smaller places arrayed in belts of growth, typically in places little touched by earlier industrial revolutions. To an extraordinary degree, in Europe today we are seeing a partial return to pre-industrial patterns of urban settlement: a return to the medieval urban hierarchy, based on historic trade routes.

Yet this does not mean a mass retreat from the city. On the contrary: it represents a shift from one kind of city to another. Cities that depended on the winning of coal or metals from the earth, or on simple production of the industrial goods that other places could soon imitate--first cotton textiles, then ships, then cars--found themselves left behind by history. Cities that can readapt into the informational economy do not. As Cheshire and Hay stress, urban prosperity is by no means synonymous with urban growth: cities can decline successfully. And, not far away, other places may be growing successfully too.

Clearly, in making a successful adaptation, some of the larger and more problematic cities have a harder road than others. The key is that hardly any city any longer depends, as many cities once depended, on a unique resource inheritance. Cities do not arise and thrive because they are located on coal seams or on deep navigable water. The locational factors that help or hinder them are more subtle, and to a considerable degree they are capable of being created by human decision. A new airport or a new high-speed railway junction, a teleport or even a new fibre-optic link, may create the conditions for large-scale private investment in the informational industries. Restored historic industrial or port buildings, coupled with the amenity values of a waterfront location, may similarly provide the basis for development of tourism, including that important variety, business tourism. A revived public transportation system, coupled with vigorous policies to civilize the private automobile, may create the right environment for a range of related activities, including retailing, tourism, and entertainment.

All over the advanced industrial world, we can see successful models of these kinds of inner-city revival. Everywhere, waterfront areas--London and Manchester docklands, the Boston waterfront, the old harbour in Rotterdam--are being redeveloped for a mixture of housing, services, tourism, and what has come to be known as leisure shopping or festival marketplaces. The model is provided by what James Rouse so successfully did, first in Boston, then in Baltimore, in the late 1970s and early 1980s. It has been followed by other models, so numerous now as to be almost beyond count; almost every older American city has its revived waterfront or warehouse area.

The most interesting point about this model is that it represents a deliberate attempt to restore urbanity to the heart of a great city that had lost it. The downtowns of many American cities, by the 1970s, represented nothing so much as urban disaster areas: the last remaining commercial buildings, relics of an earlier building wave of the turn of the century, stood isolated amidst a sea of derelict sites and parking lots. Baltimore, the most successful case of readaptation, was actually one of the earliest and the worst affected by this downtown blight. It successfully redeveloped both its downtown and the adjacent waterfront, which--as in Boston--had the happy fortune of being next door to each other. There is no doubt about the success of the formula: Baltimore's Inner Harbor is one of the major tourist attractions in the United States, rivalling the California Disneyland. Visitors and their children flock to it, enjoying a kind of synthetic urban quality that is, as they say in the hotel bathrooms, sanitized for their convenience. They are reacting against the dull sameness of the new suburban America, where so many of them now live and work.

It is very interesting to compare this model with that presented by the traditional European city. For it is being actively followed in those European cities that have been most drastically affected by the collapse of the old goods-handling, resource-based economy: places like Glasgow and Liverpool, Manchester and Rotterdam. But, as already seen, there is another kind of European city that was always service- and information-based, and has not suffered the same trauma of adaptation. Some of them suffered in a different way, from the destruction of war; and some few of those happened to have the good sense to rebuild their shattered patrimony. It is significant perhaps that some of those that did not, such as Frankfurt am Main, have actually begun to rectify that mistake in recent years: they want their history back. Everywhere, however, these cities have sought to breathe new life into their city streets, by pedestrianizing them and by improving public transport. Munich took something of a world lead in this respect, at the time of the 1972 Olympic Games; and many other German cities have paid it the sincerest form of flattery, as the English proverb has it.

The result is something rather extraordinary: a city that retains all its historic qualities, including the rare prize of accessibility without access to a private automobile. But you should notice that it is a quality shared, to a considerable degree, with those transatlantic urban innovations: festival marketplaces and supermalls and theme parks, too, are places designed to be enjoyed on foot; all of them depend on the creation of a unique environment, in their case engineered, in which the street becomes a kind of theatrical show. In fact, one of the keys to urban success is now to achieve just this kind of physical and cultural quality.

The fact is that, in their role as consumers, people come to these places to enjoy a particular kind of urban experience, which they are not going to find anywhere else. It is fairly easy to preserve and enhance that experience in Europe; in most of North America, it is almost necessary to create it ab initio. In Europe, and in certain places in America, they will be able to find a certain urbanity in the smaller country towns that are being progressively embodied into the new polycentric megalopolitan structure; and here they will resort for most of their regular weekly shopping and other personal services. But these places will not convey the undefinable sense of being in the heart of the big city; for that, they will have to return to the great cities. They fact that they are doing so--as occasional visitors, as tourists, and as business tourists--is ample evidence that these places give them something unique to enjoy.

These places are uniquely serving the third of those functions that I earlier cited from the work of Lester Thurow: that of providing consumer services. And, with increasing affluence and discretionary spending, this becomes a central function for urban places. The key may be to combine it successfully with the other distinctive role of the post-industrial city: the production of informational services, the manipulation of symbols in Thurow's terminology. I am not sure that many places have got this combination quite right--though a few, like San Francisco, Toronto, and of course Munich, come close. The problem is that the two functions have different locational and above all space requirements. Offices demand integration and bulk, either vertically [the skyscraper] or horizontally [the so-called groundscaper]. Neither structure sits well in a traditional urban fabric, such as is needed for consumer activities: both will prove completely overbearing.

This problem is easier in North American cities, where there never was much of a traditional urban structure and where--as Chicago showed--the gridiron street pattern early proved favourable to skyscraper construction. Here, it may be possible either to fit shopping streets into the spaces between office towers, as in San Francisco, or to build completely new enclosed malls--

the suburbanization of downtown, as seen variously in Vancouver, Calgary, and Atlanta. Elsewhere, above all in European cities with their delicate urban fabrics, it may be necessary to exclude large-scale office developments from the centre, in order to guarantee its survival.

Conclusion: The New Urban Form

We can thus see the emergence of a new urban structure, which is growing out of the old one like a butterfly from a chrysalis. Many of its elements are physically old elements, which are restructured to serve new purposes. Others are new, but in intimate relationship to the old.

The cores still constitute the old downtowns. First in Europe, somewhat later in North America, their position as centres of information exchange and processing will be suddenly and dramatically enhanced by the new high-speed trains--surely the true transportation technology of the twenty-first century. The places that become hubs on the new system, in particular, will play a unique role in the new system. A similar role will be played by nodes of advanced telecommunications, which are likely to occur in the same places. Private capital will inject large investments around these new hubs in the form of office concentrations, with attendant hotels. The major rivals to these revived downtowns will be new or existing airport hubs, wherever these can in turn be interconnected to the high-speed trains--as is certain to happen at Paris Charles de Gaulle and Amsterdam Schiphol, and perhaps some other places. But, with the general switch to train for journeys of up to 500 kilometres and even more, there will not be room for many of these giant interchanges.

In rather different places will be found the centres of conspicuous consumption in the new economy. Some will be revived medieval cores of major cities, including those special enclaves that have traditionally served as the places for night-life: Schwabing here in Munich, Sachsenhausen in Frankfurt, the Burg in Nuremberg. Some undoubtedly will be new centres. For the great bulk of the population will continue to disperse into smaller cities and towns and into their surrounding areas. A minority of these, in turn, will commute back to the cities for work; but a majority will find both homes and jobs there. A substantial number of the bigger or more attractive of the towns in these rural belts will almost certainly acquire an enhanced role as service centres, some perhaps even rivalling their larger cousins. In particular, towns with special roles--such as administrative or university centres--may be able to offer a range of services much richer than their size alone would signify. Places like Oxford, Cambridge, Marburg, or Tübingen will successfully compete with London, Frankfurt, or Stuttgart over a wide range of consumer services. And some new university centres--Louvain-la-Neuve in Belgium, Santa Cruz in California--may be able instantly to create the unique quality that evolved over centuries in their older counterparts.

Meanwhile, of course, the third of Thurow's sectors--production--will continue to provide the economic base for certain places and certain regions. But even it will be increasingly information-based, so that it will progressively gravitate to the places where knowledge is being generated. That is why, all over Europe, production is increasingly allied with research and development in precisely these rural belts of growth that I have earlier been describing: the western crescent of southern England, from Southampton and Portsmouth to Reading, Oxford, and Cambridge; the very similar research belt south of Paris; the Cote d'Azur; and the Munich-Stuttgart-Heidelberg corridor. In other words, production is now being driven by information, and the factors of location for the one sector increasingly become the same as that for the other.

It poses an obvious challenge for the resource-based goods-producing cities of the earlier generation. But they too can find their niche, so long as they ally imagination with the will to invest. Public and quasi-public investment will surely be one of the main drivers of urban and regional change in the coming generation, as they lay downeration, as they lay down a new infrastruct cations and high-speed ground travel. It is vital that, both at the national level and above all the level of the European Community, we appreciate just how momentous these decisions are going to be.

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