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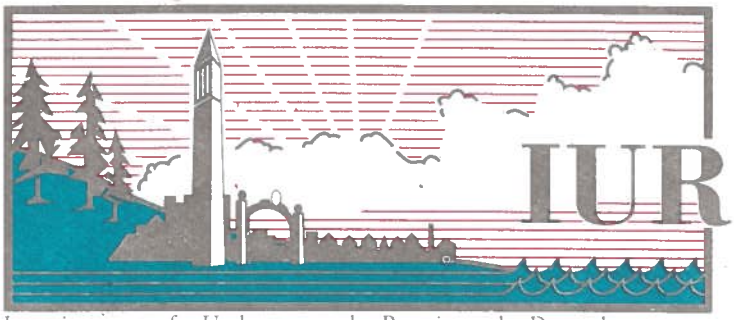

Institute of Urban and Regional Development

Three Systems, Three Separate Paths

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Any reader of these essays knowing Lloyd Rodwin's work would know that one main topic must be global urbanization. The reader would expect the contributions to take the form of learned discourses about structural transformations in latter-day capitalism, the replacement of Fordism by flexible specialization, the shift to the informational mode of production, the globalization of the economy, command and control centers, and the rest of the early-1990s neo-structuralist litany. But, to honor Lloyd Rodwin's achievement, a contribution should do more than that: it should try to tell him, and the wider audience, something new. So this essay will start from a different point.

A Varied Surface

Specifically, it will start from the geographical bedrock. The post-Marxist urbanists repeat that we need to understand the significance of place. And when we do, we discover the elementary but profound truth that the urban world is not a homogenous surface but is infinitely varied. If we restrict our attention only to the advanced industrial economies, we find three entirely different urban systems in Europe, Japan, and America.

Europe: The Shift Eastward

One year away from 1992, the year of the Single European Market, we find a series of distinct urban hierarchies in Europe that reflect two millennia of evolution. Britain and France have their dominant national capitals, which are each the centers of giant metropolitan regions: a heavily primate urban hierarchy, as the geographers call it. Spain, Italy, and Germany have their flatter urban hierarchies—five or six cities bunched together at the top of the graph—which reflect the long and tortuous history of national unification.

The most poignant and the most obvious symbol of this history is Berlin. The wall is down, Germany is reunited, and now there is going to be one of the greatest removal contracts in history. The government is going to come back from Bonn, the banks are going to come back from Frankfurt, and much of the city's rich media and cultural life are going to come back from Munich, Hamburg, and Düsseldorf and all the other cities to which they migrated after the war. These changes do not bode well for the economies of those cities. Almost certainly, there will be huge surpluses of office space there and a developer's paradise in Berlin. The new Mercedes tower, just starting to go up on the Potsdamer Platz—no-man's land for forty years—is just the harbinger.

There is a strange historical irony in this: the resurgence of nationalism in Europe, just at the time when post-nationalism seemed to be on the agenda. The national capitals will come back into their own, but what does that mean for the Single European Market? Only a year ago, the best expert guess would have been that the contest for the title of number-one global city of Europe would involve London, Paris, Brussels, and Frankfurt. Now there is a new contender, Berlin, potentially more powerful than any of them.

Here we enter the realm of political speculation. The most obvious scenario is that the rest of Europe reacts to the rise of Germany by trying to incorporate the new state fully into the Single Market, at the same time working even harder to create a political and economic counterweight in Western Europe—most likely in Brussels, the center of the irregular polygon whose corners are London, Paris, Milan, Frankfurt, Berlin, Copenhagen, and Amsterdam. But there is no doubt that, with the rebirth of Berlin, the economic and political center of gravity will shift powerfully eastward.

Japan: The Main Corridor Prevails

The Japanese urban system is also old, though not so ancient as the European. A critical difference is that it developed within a unified nation state, albeit long split by feudal rivalries. In this state, the accidents of physical geography decreed that the economic core would always be the fertile and densely populated Tokaido corridor between Tokyo and Osaka.

After World War II, the increasing concentration of economic power in the big corporations favored Tokyo, making of it a center of every kind of activity, almost unrivaled in any other country. Significantly, Japan has no real equivalent of Silicon Valley or Route 128, a high-tech powerhouse separate from the dominant metropolis; a disproportionate part of the high technology industry on which the country has flourished is located in the Tokyo suburbs, right next door to the center of control, above all in the Kanagawa prefecture astride the Tokaido corridor. The much-vaunted Technopolis program, which aims to spread innovative industry in pockets around the country, has so far produced no certain evidence that it can succeed on any large scale.

The successor to the old royal road between Tokyo and Osaka is the line of the original Tokaido Shinkansen, which opened in 1964 between the two cities. This, the first high-speed rail line to open anywhere, serves one of the most densely populated urban corridors in the world. This extraordinarily linear character of the Japanese urban system does have parallels in other parts of the world: in the American east coast urban corridor, in the Los Angeles–San Francisco corridor, in the so-called Megalopolis England that stretches from London up to Lancashire and Yorkshire, and in the Rhine Valley corridor from Rotterdam to Basel. But no other place has the same quality in such concentrated form.

without adequately recognizing the need for freedom of religious expression, which is an equal part of the First Amendment. The Court's view must be changed to save many of our big-city, minority young people. The avoidance of any "establishment of religion" by the state can be ensured in publicly funded schools run by religious organizations by (1) separating explicitly religious instruction from general educational functions, and (2) predicating funding on fulfillment of basic educational requirements.

Half-hearted attempts at educational reform will not work. In Chicago, where desperation about poor schools produced a strong public surge of support for reform, the reform did not abolish the stranglehold over schools held by teachers and other unions. Each school has its own schoolboard, but the principal cannot hire and fire teachers; he or she cannot even control the school's janitors. True, there are dangers in local autonomy, such as patronage-ridden staffs. But we must risk facing those dangers in order to get rid of the miserable systems that are now failing society.

Foundering Leadership

Another problem overshadowing the future of cities in the United States is the unwillingness of American political leaders to confront difficult choices. Our leaders are especially fearful of issues that require the citizenry to make short-run sacrifices to achieve long-run benefits. This is a national problem even more than an urban one, as shown by our federal deficits. But until it is faced at the national level, we cannot effectively marshall the resources to deal with city problems.

The very structure of democracy operates against the exercise of strong leadership from the top. If there is to be effective leadership, it must come from the bottom or from nonelected officials mustering popular support for drastic reforms. This is usually possible only after conditions have reached crisis proportions and have thereby stimulated outrage among the general citizenry, who then support private sector leaders launching attempts to change existing policies. The environmental movement is an example.

This situation is related to questions of human and political values. Right now, public attention on democratic values is focused upon Europe, the Soviet Union, and China. In those far-off places, radical changes in social organization now being undertaken can succeed in creating true and stable democracies only if they are accompanied by major shifts in cultural and personal values. For decades, communism in these countries undermined the values that are central to democratic capitalism—self-reliance, hard work, initiative, earning and keeping profits gained from entrepreneurship. New values need to be created there that will support markets and democracy. But changing basic values is just as vital to the future of American democracy as to the future of democracy in Eastern Europe and the Soviet Union. This is true on both short-run practical levels as well as long-run philosophic levels.

In spite of these formidable problems, I remain optimistic about the long-run future of cities and the people in them. That optimism is based not so much upon the outlook for the near future as upon a longer-range perspective. And I mean a really long-range perspective, spanning the past 10,000 or even 1 million years. Taking that long a view makes it obvious that humanity has in the past progressed immensely in abilities, values, and institutions. The rate of such progress has been especially striking in the past 300 years. I remain hopeful that this trend will ultimately prevail, in spite of the seemingly enormous urban obstacles we face.

AUTHOR'S NOTE

The views in this article are solely my own, and not necessarily those of the Brookings Institution, its trustees, or its other staff members.

NOTES

1. The subject of this article is supposed to be "major forces likely to affect the life of cities across the world during the next century." However, it is clearly impossible to deal with all such forces within a single short article. Therefore, the discussion herein focuses on just a few such forces that I believe will be of paramount importance, both internationally and within the United States. It is not meant to be either a comprehensive or a scientific analysis, but a quasi-philosophic overview of these few key issues.
2. Elijah Anderson has conducted several such studies. See Elijah Anderson, "Moral Leadership and Transitions in the Urban Black Community," in Harold Bershady, ed., *Social Class and Democratic Process: Essays in Honor of E. Digby Baltzell* (Philadelphia: University of Pennsylvania Press, 1989).
3. For an outstanding analysis of why fundamental reform is necessary and what it should consist of, see John E. Chubb and Terry M. Moe, *Politics, Markets, and American Schools* (Washington, DC: Brookings Institution, 1990). The discussion in this section has been based directly upon their work.

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Japan's linear urban corridor has a remarkable assortment of benefits and costs. On the plus side is the economy in infrastructure that a linear system permits. At peak hours, a Shinkansen train of fourteen cars runs every eight minutes in both directions along the 300-mile line between Tokyo and Osaka. The Japanese are well advanced on plans for its successor, the 300-miles per hour linear motor car that will cut journey times to one hour. On the debit side are the almost unbelievable congestion and escalating land values, especially around Tokyo, that are the everyday concern of the Japanese. Not only do they represent a major social and political problem, denying to the Japanese the quality of life that their economic success should bring; through their impact on financial speculation, they threaten the economic stability of the country and of the global economy.

America: Connecting the Hubs

The American urban system stands at almost the opposite pole to the Japanese. Largely unconstrained either by physical obstacles or by political barriers, America's great regional cities freely grew and spread. Land was at first cheap everywhere, and everyone wanted more of it. Right from the start, entrepreneurial innovation opened up this land for development. It is interesting that on three critical occasions America borrowed German innovations in transportation, and effectively democratized them: in the 1880s, Sprague took Siemens' electric trolley technology and used it to open up streetcar suburbs; in the 1910s, with the Model T, Ford appropriated the invention of Daimler and Benz to take the world lead in mass automobile ownership; in the 1950s and 1960s, Eisenhower borrowed the German concept of the *Autobahnen* and created the interstate highway system, completing and massively extending the suburban revolution that the trolley car had wrought.

Rail was the transportation technology that first tied together this far-flung urban system, but air was the system that finally allowed it to function efficiently, destroying the old tyrannies of distance. This indeed was the native American transportation innovation, owing little to any other nation; one could almost argue that, until it arrived commercially—tentatively in the late 1930s, and effectively only in the 1950s and 1960s—the system had not fully evolved. The key nodes in the American urban system are the giant hub airports that serve the needs of the information-exchange economy—places like Chicago, Dallas, Denver, St. Louis, and Minneapolis.

Americans are sometimes tempted into the heresy of wondering why their country cannot function more like Europe. The answer is that there is no comparison: the whole system is geographically too huge. High-speed trains, running at 300 miles an hour and more, represent the future means of inter-city travel in Europe, and in Japan too: in the United States, they can never serve more than a fraction of the demand.

The Key Differences

So the systems of cities are really very different. Try as we may, we cannot lay a common template on them. They are different in at least two dimensions. One is density: the European and the Japanese systems are very dense, with major cities competing with each other over very short intervening distances, to the point that they invade each others' commuting fields. The American system, the east coast apart, remains essentially a continental system on a huge scale, with correspondingly loose structure, in which the leading cities command huge territories. The other dimension is political and economic unity: the American and Japanese systems are alike in constituting a single national hierarchy, while the European system still consists essentially of a confusing mixture of national hierarchies, some reflecting present conditions, some those of a pre-nationalist past.

The Shift to the Informational Economy

Currently, epochal changes are affecting the historical arrangements of these three urban systems. The first can variously be termed the tertiarization of the economy, or the shift to the information economy, or the transition to the informational mode of production. These are not just different versions of the same phenomenon: they present different interpretations of it.

At one extreme, one can argue, as Colin Clark did as long ago as 1940, that there has been a very long-term tendency in advanced industrial economies for the proportion of workers in manufacturing occupations and industries to fall, and for the proportion in service industries and occupations to rise (Clark 1940). This trend has resulted in large measure because productivity gains have been achieved in actual production processes, while more and more workers have been needed in processes ancillary to production, such as planning, finance, and marketing. Some observers—for example, Stephen Cohen and John Zysman here in America and Jonathan Gershuny in Britain—argue from this that there has been no real change in the economy at all, and that if one reworks the figures according to a proper accounting matrix, one finds that indeed Manufacturing Matters (Cohen and Zysman 1987; Gershuny and Miles 1983).

But in his new book *The Informational City* Manuel Castells introduces a far more radical hypothesis (1990). Apparently casting off entirely the Marxist framework of analysis, he argues that what we are witnessing is the second great economic transformation of modern times. The first was the transition, not from feudalism to capitalism, but more fundamentally the change from an agrarian to an industrial mode of production. We are now seeing a transition from that to an informational mode, in which the fundamental inputs are no longer material, but knowledge-based.

Castells argues that information technology has powerfully shaped the three major changes in the capitalist economy in the 1980s: an increasing surplus from production (rate of profit), a change in the mode of state intervention away from political legitimation and social redistribution and toward political domination and capital

accumulation, and accelerated internationalization. These changes have profound consequences for the rise and fall of cities and regions. There is a "new industrial space," characterized by a sharp spatial division of labor, the generation of information in innovative milieux, the decentralization of different production functions, and extreme flexibility in location.

Here, Castells is drawing on a great body of empirical material with which many readers will be familiar. At the core of the system are the great global command and control centers, remote and apparently outside anyone's control. They are located in a few world cities, which increasingly relate more to each other than to the rest of the world: London, New York, Tokyo. These sit in the centers of vast and spreading metropolitan regions, within which more routine informational functions are constantly banished to more peripheral, low-cost suburban locations. Even more routine functions, like service delivery and information distribution and retrieval, can be standardized and spread across the entire national and international space, driven by the new information technologies. These technologies thus permit the spread of control of the leading centers, and cement their power.

The Innovative Milieux

The world cities thus constitute one critical set of places in the new global system. There is another set, consisting of the innovative milieux, a concept Castells borrows from the late Philipe Aydalot (Aydalot 1986; Aydalot and Keeble 1988). These, the Silicon Valleys and the science cities, are the innovative powerhouses of the new economy, the sources of its inherent dynamism. They command a complex chain of interdependencies and, if anything, they become more exclusive, more secluded, and more central in the process. Very often, innovative milieux are found in the world cities; since in the new economic system knowledge is power, there is a tendency for its increasing agglomeration in a very few places.

Places therefore matter, but they can be manipulated. Castells concludes that the restructuring process has had the fundamental goal of "[t]he supersession of places by a network of information flows," outside territorially based power altogether. Cities and regions compete aggressively, but have less and less power over their fate. The entire process is outside social control: "people live in places, power rules through flows."

Here, Castells is being too deterministic and too pessimistic. We are still a long way from the completely globalized economy. It is abundantly evident that we are moving strongly in that direction, but the shift to the informational mode of production consists, not of a single set of processes driven by global capital, but by a much more varied and complex set of forces. Nation states and national urban places still do matter in the overall scheme of things.

In the first place, a significant feature of the shift has been a long-term rise in the proportion of people working in the public sector and in the quasi-public or nonprofit sector—in government, educational, and health services. These people are by no means centralized in a few global centers; on the contrary, they tend to be dispersed in regional cities, state capitols or county seats, and campus towns. They help to account for the features noted in Stanback and Noyelle's important studies of American urban change in the 1970s and early 1980s, most notably the fact that, contrary to popular view, the real international giants like New York, Chicago, Los Angeles, and San Francisco did less well than second-rung regional centers like Boston, Atlanta, Minneapolis, Houston, Denver, and Seattle (Noyelle and Stanback 1984; Stanback 1985). True, that conclusion may have been biased by data for 1970–80, a decade when New York was in severe travail while places like Houston and Denver boomed. The 1980s may look very different. But Stanback and Noyelle also note that some of the highest growth rates of all were recorded by smaller specialized metros dependent on government, education, defense, or some combination of these. Again, the record of the 1980s may be different. But I would doubt it.

Regarding Europe, Paul Cheshire and Dennis Hay similarly conclude that some of the best performers are either second-rank provincial capitals in the bigger countries—places like Bristol, Toulouse, Florence, and Stuttgart—or smaller national capitals like Brussels, Amsterdam, and Copenhagen (Cheshire and Hay 1989). Some such cities—Bristol, Nancy, Norwich, and Strasbourg—are growing; others—Amsterdam, Bologna, Copenhagen, Frankfurt, and Hamburg—are examples of what they call "healthy decline," metros that are very prosperous though contracting. But there is an exception to this trend. Older industrial and port cities that served as provincial capitals for old industrial regions, like Glasgow, Liverpool, and Dortmund, did not do well at all. That conforms to Noyelle and Stanback's conclusion: the places that fared the worst in the American urban system were the specialized manufacturing and manufacturing-headquarters cities, like Cleveland, Buffalo, Pittsburgh, and Detroit. Though the evidence is just emerging, it now seems clear that even in Japan some cities of this kind are now performing relatively poorly as their basic industries decline.

Decentralization and Recentralization

Below these medium-sized metros, Europe has over 100 smaller places with less than a quarter of a million people. Many of these cities are administrative centers for rural areas, or resort and retirement towns. Cheshire and Hay show that nearly three-quarters of them gained people in the 1970s and that more than two in five had gains of 5 percent or more. The fastest-growing metros, whether small or medium-sized, tend to be semi-rural but not remote; they are often close to the biggest metros, which are losing people and jobs. There is thus a process of recentralization of jobs in these smaller places, with local concentrations of residential populations in relatively small and compact commute fields around them.

Southeast England is an excellent example. Over a period of nearly three decades, London has been losing both population and employment while a ring of about 20 metros around it have shown big gains. The wave of growth has progressively spread to engulf places 80 and 100 miles from London, all medium-sized towns in rural counties. Research clearly indicates that people move first, in search of affordable housing; then, after a time lag, the local economy expands to employ more and more of them. The same story could be replicated around Paris, Frankfurt, Milan, and a number of other places.

Elsewhere, we can see similar processes, but they differ subtly according to national history and style. The French are attempting to create a Silicon Valley 30 miles southwest of Paris by deliberately concentrating there major industrial laboratories and a technical university. But the results so far do not seem encouraging, and the Paris region has not shown major deconcentration beyond the ring of the planned new towns. The Japanese attempt to create a new science city at Tsukuba, 70 miles north of Tokyo, similarly seems to have been a conspicuous failure. Indeed, all the evidence to date seems to indicate that the genesis of innovative milieux is a highly elusive process, not readily subject to deliberate planning.

Part of the explanation, at least, lies in previous history. Southeast England had a rich research tradition around its two older universities and a number of established national scientific laboratories; both Paris and Tokyo tried to implant these traditions artificially. Again, Southeast England had an exceptionally well-developed structure of prosperous county towns with a good physical and educational infrastructure and a long tradition of informational services, which greatly aided the deconcentration process; the urban system in the corresponding ring outside Paris was more skeletal. Clearly, the urban system of any nation represents an extremely complex and subtle process of historical accretion, which in turn conditions the nature and speed of subsequent transformation.

More than that, different national governments will react very differently to what they perceive as opportunities for intervention. There is a world of difference between the activism of the French and the Japanese, and the laissez-faire approach of the Americans and the British. No global scheme will adequately represent it, though it may represent part of the constellation of forces that are operating.

Pointers to the Future

Against that background, are there any pointers to the future? Will the balance of forces remain similar to that of the past, or is there likely to be some radical disjuncture? Here some closing speculations may be in order.

The first is that the globalization of the capitalist economy is likely if anything to accelerate in the 1990s. Eastern Europe will witness perhaps the most dramatic manifestation. The transformation of the former Communist block represents one of the most extraordinary economic opportunities in the history of the free market system. Their transition to a market-based economy comes at precisely the time when the forces of internationalization have been running most strongly. Because they are relatively backward in the use of information, the virtual certainty is that they will be rapidly colonized by international capital. The contradiction between those forces, and the national spirit of self-determination that has helped shape the revolutionary transformation, should pose a fascinating saga.

The other likely critical factor is technological change. There are likely to be two major technological developments in the 1990s, which should affect in different ways the globalization of the economy. The first is the convergence of computing and telecommunications into an integrated user-friendly system offering a great variety of informational services from a variety of standardized entry-points. These will include the development of multimedia systems combining computer and advanced television services, and the increasing use of electronic notebooks linked to a variety of personalized telephone systems. Theoretically, such a system would permit the almost infinite dispersion of informational activities across nations and continents, including the spread of home-work and telecommuting. But practically, all the empirical evidence so far points to the opposite. Technical advance will be most rapid in the existing centers of informational exchange, above all the world cities, where demand produces a response in the form of rapid innovation and high-level service competition. Conversely, peripheral regions will remain locked into a vicious circle of low demand and low innovation.

The other development, already touched on in the European context, is the spread of high-speed train systems. The pioneers here have been the Japanese, with the original Tokaido Shinkansen of 1964. But during the 1980s the Europeans, especially the French, took a leading role. The 1990s will see completion of at least a skeletal European network linking the national capitals and leading provincial cities, and appropriating much of the present air traffic up to a critical limit of about 500 miles, as has already been observed on the first Train à Grande Vitesse (TGV) line from Paris to Lyon.

Meanwhile the Japanese are working on their alternative linear technology, which unlike the European system demands a completely new dedicated infrastructure. The outcome of the competition will clearly depend on a host of factors, including speed, cost, the capacity of the existing system for upgrading, and the degree of existing congestion. At present the first is highly uncertain. The latest TGV technology has achieved 300 miles per hour on test and 187 miles per hour in regular service; indications are that it might eventually run at up to 240 miles per hour. The Japanese plan to operate their linear motor car at 300 miles per hour, perhaps more. Because conditions are so different in Europe, it seems unlikely that the Japanese technology will be used there. The critical unknown is whether the United States—so far virgin territory for the new train technologies—will buy either or both.

These systems will boost the fortunes of the cities they serve, particularly those that gain early connection. Both the Shinkansen and the TGV seem to have aided their terminal cities (Tokyo/Osaka, Paris/Lyon) while weakening intermediate cities. The general likelihood is that the trains will disproportionately assist the major centers, particularly those that permit direct and easy transfers with air for long distance trips. Several European cities, led by Paris, are actively working on such links. So the new rail technologies will aid the fortunes of the global metropoles, while perhaps further assisting the development of sub-centers at accessible points within their regions. This has already occurred at Reading, 40 miles west of London, and Omiya, 20 miles northwest of Tokyo, which are the first stopping-points on their respective high-speed train lines.

Overall, therefore, the new technologies are likely to promote concentration at the top of the urban hierarchy rather than the reverse. But the exact mode of their operation will depend, as throughout urban history, on the fortunes that shape that hierarchy. Despite all the forces that are operating in the opposite direction, accidents of national and international history are likely to continue to have a profound effect on that evolution. For that reason, the urban hierarchies of the three great industrialized regions are likely to continue to go their separate ways. Global generalizations will be inappropriate for some time yet.

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Preparing the Next Generation of Planners

Lawrence E. Susskind

It is highly appropriate that some of the finest minds in the planning field—Raymond Vernon, William Alonso, Anthony Downs, and Peter Hall—should be invited to honor Lloyd Rodwin with discussions of national and international forces shaping cities of the future. Few individuals have done more to bring an international perspective to urban and regional planning than Lloyd Rodwin. He created MIT's Special Program in Urban and Regional Studies (SPURS), which continues to provide a model for cross-cultural collaboration in planning. He pioneered in focusing on the tricky problems of designing new cities to open up lagging regions or channel urban growth. He embarked upon path-breaking comparative studies of both national urbanization policies and explorations of de-industrialization in various parts of the world.

The essays that have evolved from the symposium in Lloyd Rodwin's honor outline some of the national and international forces most likely to shape cities in the future. These include the population explosion in the Third World and the immigration from South to North it will engender, the impacts that this new wave of immigration will have on older urban areas in the United States, the emergence of a global (informational) economy and the disproportionate importance it might give to a few megacities, and the increasingly competitive demands of a global economy and the urgent need it creates for a highly educated and well-organized workforce. Above all, the future of cities may well depend on the nurturing role that governments are able to play, particularly in creating what Peter Hall calls an "innovative milieu."

While the contributors show that new national urban policies reflecting increasingly sophisticated responses to the interplay of global forces are required in every country, including the United States, they also indicate potential areas of training for the next generation of planners. This is a particularly opportune time to discuss