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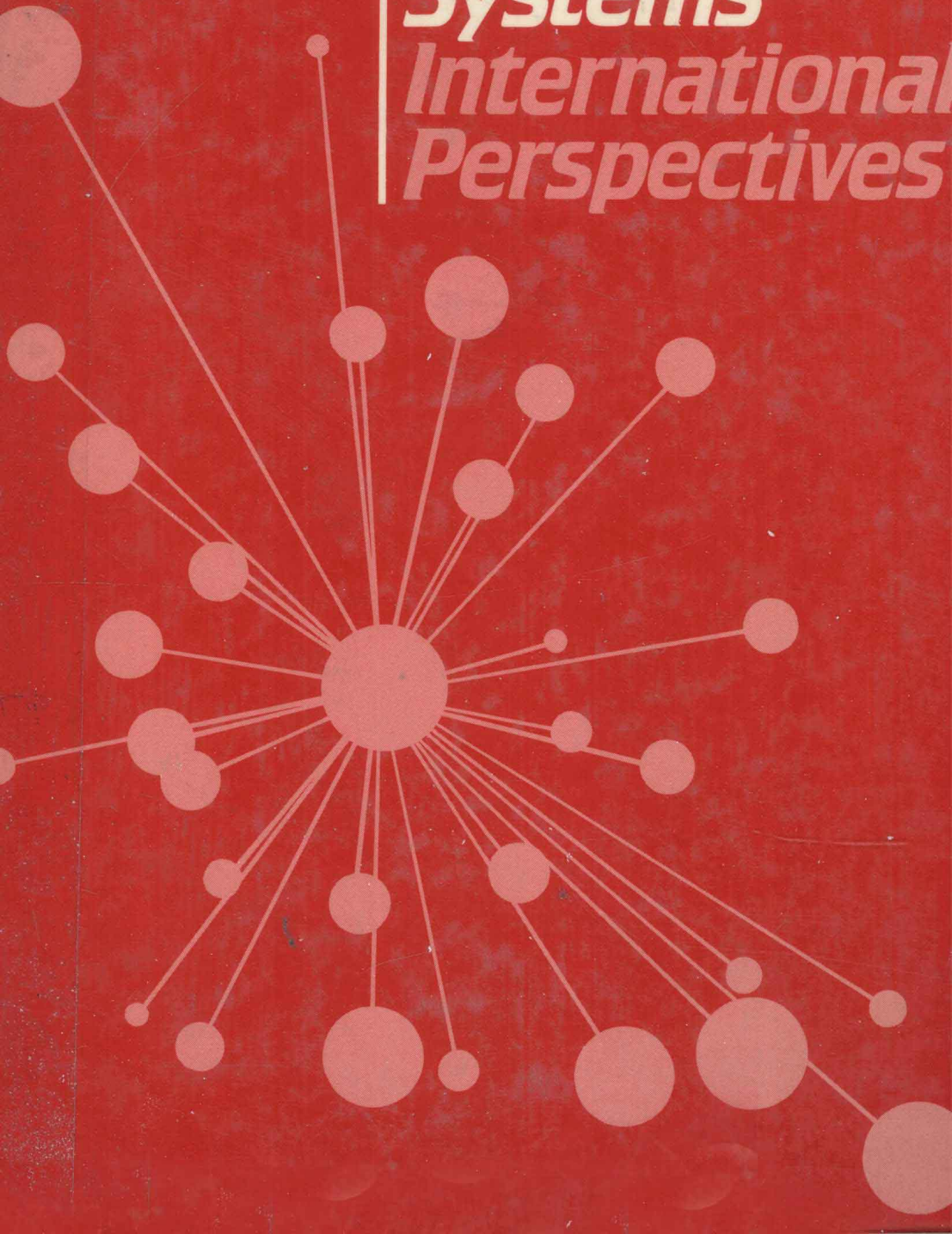
Urbanization and Settlement Systems

International Perspectives



Urbanization and Settlement Systems

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L. S. BOURNE
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For International Geographical Union, Commission on National Settlement Systems

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CONTENTS

INTRODUCTION

LARRY S. BOURNE AND ROBERT SINCLAIR

Urbanization has been one of the most significant vehicles for the transformation of societies over the last century. All countries to a greater or lesser extent have been affected. Not only has urbanization, as it is traditionally defined, involved a movement of population from rural to urban areas, but it has at the same time reorganized the economic, social, and political structures of every nation state. With this reorganization has come a dramatic shift in the distribution of wealth, in political power, in patterns of production and consumption, and in perceptions of national and cultural identity.

This volume examines one set of dimensions or expressions of this transformation by looking at the urbanization process within the framework of the settlement system. The volume brings together a collection of international papers which illustrate the development and contemporary structure of urban settlements in twenty-two countries of the world. It provides a notably diverse set of studies on settlement systems in both the industrialized western, capitalist societies and in the centrally-planned socialist societies (largely in Eastern Europe), as well as in developing countries.

The unifying concept in these papers is a focus upon *systems of urban settlements*—conceived of as an interrelated and interacting set of urban centres—which effectively present a view of the functional structure of each country's geography. Specifically, the papers examine recent trends in urban growth, city sizes and functions, demographic structure, economic structure, administrative reorganizations and population redistribution within those systems, and the varied responses of government to those trends. Most papers conclude with an assessment of future directions of change in settlement systems.

On Comparative Studies of Urbanization

Comparative studies of urbanization at an international scale are difficult, and relatively rare. Data sources tend to be limited and inconsistent. Direct comparisons of the urban experiences of different countries are handicapped by conceptual and definitional differences concerning what is urban and not urban, by the different reporting practices of national statistical agencies, by contrasting local government organizations, and by the diverse institutional environments within which urbanization has taken place. In some countries, data specific to urbanized areas or to functional urban regions which extend beyond municipal boundaries either do not exist, or

are now a decade or more old. Language and writing styles also present barriers to research and the exchange of information.

Despite these difficulties, the study of urban settlement change at the international level is one of the most challenging and rewarding of research pursuits. It is also of immense political and social importance. The UN Conference on Human Settlements (held in Vancouver in 1976) identified an improved understanding of urbanization and the designing of liveable urban settlements, as among the most crucial challenges facing mankind in the remaining years of this century (Ward, 1976).

None of the existing theories of urban growth nor policies of growth control have been shown to have wide applicability outside a limited cultural realm (*see* Abu-Lughod and Hay, 1980 and Pacione, 1981b on the third world experience; Hansen, 1978, Bourne and Simmons, 1978, Hall and Hay, 1980, Pacione, 1981a, and Kawashima and Korcelli, 1982 on the developed capitalist world; and Musil, 1981 on the socialist countries). Too often our explanations of the urban settlement patterns we see evolving around us become strangely irrelevant when they are applied to the experience of other countries. Moreover, it is not true that those varied experiences simply reflect differences in the stage of economic development and industrialization, although these are important determinants of the level and character of urbanization. Indeed, it is now widely accepted that the less developed countries will not necessarily follow the path of urbanization witnessed in the developed countries—either capitalist or socialist. Nor is it true that the path of urban development in the countries of the capitalist and socialist worlds, despite the contrasting roles played by the state, will necessarily diverge in the future.

Conversely, such differences do not mean that there are no common denominators in the processes of urbanization across many (if not all) societies, economies, and types of political systems (see Berry, 1973). Rather, they mean that the mix of common and unique denominators remains to be identified, and evaluated systematically, before any attempt is made to impose a universal explanation for the phenomenon of urbanization.

The Diversity of Urbanization Experience

Despite the sparsity of current literature and the absence of comprehensive data sources at the international level, it is important that we attempt to document the immense diversity in the extent of urbanization with the best and most recent data sources. The following tables and discussion illustrate global levels of urbanization, rates of growth, and city-size distributions for selected countries using recent United Nations statistics (World Bank, 1981). A note of caution is necessary here, however. These statistics, as is acknowledged by the UN itself, are based upon estimates from each country

and hence are subject to wide variability in both definition and accuracy. They are, on the other hand, the most recent, consistent, and comprehensive set of data available.

Among individual UN countries, levels of urbanization vary from only two per cent (e.g. Burundi) to well over ninety per cent (or one hundred per cent in the special case of Singapore). However, if averages for groups of countries at different levels of income and stages of economic development are examined, the range in level of urbanization is smaller, but none the less considerable (Table A.1). In this data set the World Bank has grouped countries into four major categories; low-income, middle-income, industrial market economies, and industrial nonmarket or socialist economies, with the additional special category of the small population, but capital-surplus (typically oil-exporting) states. Among the four major

Table A.1: *Levels of Urbanization, Growth Rates and City-Size by Type of Economy, 1980*

	Population* 1980	Urban Population				% of Urban Population in Cities Over 500,000	
		% of Total		% Annual Growth			
	(millions)	1960	1980	1960-70	1970-80	1960	1980
Low-income countries	2,300	15	17	3.8	3.7	31	42
(*a*) China and India	1,650	n/a	17	n/a	3.2	33	42
(*b*) Other (34)	650	12	19	4.7	5.0	23	42
Middle-income countries	1,008	37	50	4.1	3.8	35	48
(*a*) Oil-exporters	334	33	45	4.5	4.3	32	46
(*b*) Oil-importers	674	39	52	4.0	3.5	36	48
Capital surplus countries	26	37	69	7.4	6.7	22	53
Industrial non market economies	355	49	64	2.5	2.1	23	32
Industrial market economies	675	68	77	1.8	1.3	48	55

*Estimated.
n/a = not available.

Source: Adapted from World Bank, *World Development Report, 1981*. New York: Oxford University Press.

categories, estimated levels of urbanization in 1980 varied from an average of 17 per cent of total population in the low-income countries, to 50 per cent in middle-income countries, 64 per cent in the socialist countries (Eastern Europe only) and 77 per cent in the industrial market economies.

These levels are related not only to differences in levels of income but to each country's type of economy. Industrial economies, particularly capitalist market economies, have tended to produce relatively high levels of urbanization and metropolitan concentration at least initially, because of the benefits of urban agglomeration (Vining, 1982). Within each of these categories, of course, there is wide variability between individual countries because of their differing history, geography and political organization.

Furthermore, the rate of growth in urban population is, in general, inversely related to current levels of urbanization. Annual urban growth rates in the 1970s varied from a staggering 5.0 per cent in the low-income countries (excluding India and China) to 2.1 per cent in the industrial nonmarket countries and only 1.3 per cent in the industrial market economies. Perhaps more critical is the fact that the rates of urban growth in low-income countries have remained high, and in some cases have increased since the 1960s, while those in the industrial world have declined sharply. The continuing potential for explosive urbanization in the future in countries of the developing world, countries least able to manage such growth, is readily apparent.

There appears to be less differentiation between the developing and developed countries in terms of the degree of metropolitan concentration, measured as the proportion of the urban population resident in the largest cities (over 500,000). While the highest proportions are found, as expected, in the industrial market economies (55 per cent), the low- and middle-income countries also show relatively high proportions (42 per cent and 48 per cent respectively). The lowest figures (32 per cent) are recorded in the socialist countries of Eastern Europe, reflecting at least partially the effects of concerted government efforts to decentralize urban growth away from the capital cities and the older industrial heartland and the frequent definitional underbounding of the larger urban areas in those countries.

The principal difference shown between the developing and developed countries rests in the contrasting distribution of cities when ranked by population size. In the developing world, urban population tends to be heavily concentrated in one (the primate) centre or a few large metropolitan agglomerations, and this primacy appears to be increasing. In the developed countries, the city-size hierarchy shows a more even distribution, perhaps moving in the direction of some theoretical rank-size distribution. In those countries with relatively larger urban populations and several major metropolitan agglomerations, the degree of primacy has been reduced. In the last ten years the degree of metropolitan concentration in many industrial countries has stabilized or in some cases declined as part of a pro-

cess which has been variously labelled as deconcentration, deurbanization or counterurbanization (Berry and Silverman, 1980).

Statistics for individual countries further emphasize the diversity of settlement systems, and also the regularity of the differences identified above. Table A. 2 provides descriptive data for those countries examined in the papers of this volume. Although large parts of the world are under-represented, particularly those of the developing world, real differences in the size of urban population, the number of major urban centres, the rate of growth and the degree of metropolitan concentration are readily apparent. For example, although India has a much lower level of urbanization (22 per cent) than either the USSR (65 per cent) or the United States (73 per cent), it has almost as many urban residents (148 million compared to 174 and 165 million for the USSR and US). All three countries also have among the lowest proportions of their urban population resident in the largest urban area—4 per cent, 6 per cent and 12 per cent respectively reflecting their vast geographic scale and large total population. At the same time, in many countries of Europe, both east and west, the proportion of the urban population resident in cities over 500,000 is declining as the process of deconcentration appears to continue.

Again, the most meaningful single variable in looking to the future is the rate of urban population growth. Despite their small representation in this volume, the high rates of growth in the low- and middle-income countries are strikingly apparent. On the other hand, most of the developed countries show urban growth rates which are converging on zero, indeed several—for example the UK, W. Germany, and E. Germany—have already reached that state. Even with a possible future decline in fertility rates in the Third World, however, the youthful demographic structure of these countries ensures continued rapid urban growth through the rest of this century. The kinds of settlement systems which are likely to evolve in this context will look very different from those in advanced industrial countries which are attempting to adapt to conditions of near-zero population growth (or absolute decline).

Current Forces of Change

The diversity of urbanization experience illustrated by these data underlines, and at the same time reflects, a series of changes which appear to be restructuring most of the world's settlement systems. Descriptions of these changes pervade many of the contributions in this volume, and their spatial impacts upon settlement systems have been analysed and synthesized in a series of recent studies (Bourne, Korcelli and Wärneryd, 1982; Korcelli, 1981; Illeris, 1980; Sinclair, 1982; Van der Berg, 1981; Vining, 1982). In most developed market economies, in addition to an overall declining rate

Table A.2: *Levels of Urbanization, Growth Rates and City-Size: Selected Countries*

Country	Population 1980 (millions)	Urban Population as % of Total Population		% of Annual Growth		% of Urban Population in: Largest City		Cities Over 500,000		Number of Cities Over 500,000	
		1960	1980	1960-70	1970-80	1960	1980	1960	1980	1960	1980
India	673	18	22	3.3	3.3	7	6	26	39	11	36
Mali	7	11	20	5.4	5.5	32	34	0	0	0	0
Brazil	119	46	65	4.8	3.7	14	16	35	52	6	14
Venezuela	15	67	83	4.7	4.2	26	26	26	44	1	4
Ireland	3	46	58	1.6	2.2	51	48	51	48	1	1
Italy	57	59	69	1.5	1.3	13	17	46	52	7	9
UK	56	86	91	0.9	0.3	24	20	61	55	15	17
Finland	5	38	62	3.2	2.7	28	27	0	27	0	1
Japan	117	62	78	2.4	2.0	18	22	35	42	5	9
Australia	14	81	89	2.5	1.9	26	24	62	68	4	5
Canada	24	69	80	2.7	1.7	14	18	31	62	2	9
France	54	62	78	2.4	1.4	25	23	34	34	4	6
Netherlands	14	80	76	1.0	0.6	9	9	27	24	3	3
US	227	67	73	1.7	1.5	13	12	61	77	40	65
Germany W.	61	77	85	1.4	0.4	20	18	48	45	11	11
Denmark	5	74	84	1.5	0.9	40	32	40	32	1	1
Sweden	8	73	87	1.8	1.0	15	15	15	35	1	3
Portugal	10	23	31	1.3	2.9	47	44	47	44	1	1
Spain	22	57	74	2.6	2.2	13	17	37	44	5	6
Poland	36	48	57	1.8	1.7	17	15	41	47	5	8
Hungary	11	40	54	1.7	2.1	45	37	45	37	1	1
USSR	267	49	65	2.8	2.2	6	4	21	33	25	50
Yugoslavia	37	28	42	3.2	2.9	11	10	11	23	1	3
Germany E.	17	72	77	0.1	0.3	9	9	14	17	2	3

Source: Adapted from World Bank, *World Development Report, 1981*. New York: Oxford University Press.

of urban population growth and slow economic growth, these changes include:

(1) Revolutionary changes in family formation and household composition, with the ultimate effect of reducing average family and household size. Households are smaller, but there are more of them, so that there has been an increase in the demand for housing and other settlement amenities. Hence, the decline in urban population growth has not thus far been translated into a declining demand for urban infrastructure or most social services. Indeed, until the onset of the current recession in many Western countries, the opposite appears to have been the case.

(2) Changing labour force participation rates, particularly among women, with a corresponding surge in the number of two- (or multi-) income families, have redefined the resources, life styles and behaviour of many households. Not only has this trend increased the wealth and locational flexibility of household units, but it has also increased the overall demand for housing and recreational space (including second homes) and for various commercial and personal services. Higher unemployment rates, on the other hand, have made other households worse off and thus more isolated from the mainstream consumer society.

(3) Basic structural shifts in the economy, with expanding investment and employment in the resource sectors, services and the communications sector and declining employment in manufacturing, have altered the economic base of many urban settlements. Within the manufacturing sector, an increasing proportion of output has been devoted to light, high-technology and consumer-oriented products. These shifts have been accompanied by the continuing revolution in communications technology. The overall spatial implication of such changes has been (*a*) more locational flexibility and (*b*) the declining attraction of the agglomeration economies offered by the older industrial metropolis.

(4) An increasing dominance of major job-providing organizations (e.g., multi-national corporations and large government enterprises), whose locational decision-making practices play an expanding role in restructuring national settlement systems, but which are often detached from the instruments of control available to local and regional governments.

(5) The increasing importance of 'life-style' preferences and environmental amenities, rather than direct economic gain, as factors in migration patterns. These developments, brought about by expanding retirement populations, increased wealth, the expanding role of government transfer payments in relation to total income, and other elements of a mature or 'postindustrial society', are having profound effects upon the settlement systems of most Western countries.

(6) Re-assessments of the availability and costs of energy. In terms of their effects on the structure of settlement systems, these re-assessments have both a consumption aspect—in that they promise substantially to

influence residential, commercial and institutional location decisions—and a production aspect—in that they have brought settlement 'booms' to energy-rich areas, such as those in the western regions of Australia, Canada, and the United States.

(7) Reversals in long-standing national migration patterns, which reflect many of the above changes. The migration of population and jobs from the industrial Northeast and Great Lakes regions to the South and West of the United States probably has received the greatest attention, but this is paralleled by similar shifts in most other Western countries (Vining, 1982). At the same time growth has increased in non-metropolitan areas, often at the expense of the larger metropolitan areas.

These and other changes are well-documented in the pages of this volume, and have received much attention in the recent literature. One attempt to synthesize their spatial impact is shown in Table A.3 (Sinclair, 1982), which relates these changes to various spatial processes operating at different levels of the settlement system.

Equally dramatic changes underlie the urbanization data for low- and middle-income developing countries, although their impact upon settlement systems has been studied less extensively, and their documentation in this volume is restricted by the relative scarcity of contributions. Certainly, however, settlement structures in developing countries are being transformed rapidly by:

(1) The burgeoning population in the younger-age cohorts, which might well constitute a potential for future economic growth, but which today creates an increasing surplus of dependent, unemployed, and underemployed population, often migrating in search of economic opportunity.

(2) Intensive rural-urban migration, often in sequential steps to the local centre, to the regional capital, and eventually to the primate city. This migration is often triggered by a push factor—the lack of opportunity in the countryside—rather than the pull of opportunities in the cities.

(3) A consequent urbanization which in many cases is not a result of either industrialization or economic development, as was the case in more industrialized countries. The result is a burgeoning of urban population, without an equivalent increase in urban productivity, and an increasing polarization between urban and rural areas.

(4) Nevertheless, a relative increase in industrialization has taken place. Generally this growth is due to intentional government economic incentives, or it is dependent on, controlled by, and subservient to, the demands of external capitalist or socialist economies. Each situation has its characteristic influences on the developing settlement system.

(5) In most countries, an increasing amount of government control and regulation emphasizing economic growth and industrial development, but in many cases also specifically oriented toward the planning of urban settlements.

Table A.3: *Spatial Processes within the National Settlement System*

	Theme	Underlying Causes	Related Spatial Concepts	Spatial Scale		
				National	Regional	Metropolitan
Zero-sum	Growth in one place means decline elsewhere	Declining population growth-rates Increasing mobility	Spatial redistribution Re-location diffusion	'Southern' growth Vs 'Northern' decline Nonmetropolitan growth Vs Metropolitan decline	Nonmetropolitan growth Vs Metropolitan decline Smaller centre growth Vs Large centre decline	Peripheral & selected inner city growth Vs Centre city-inner suburban decline
Expanding Space Demands	Systemwide expansion of settlement space	Rapid household formation Multi-income families 'Post-shelter' society	Expansion diffusion	Settlement expansion New settlements Second home colonies	New settlements Megalopolitan developments Second home colonies	Metropolitan spatial expansion

Spatio-social Differentiation	Increasing spatio-social differentiation within system	Expanding mobility Diverse lifestyle motivations	Selective migration Spatial segregation Mosaic pattern	Selective migration streams Interregional & intercity differentiation	Selective migration streams Interarea & intercity differentiation	Social mosaic
System Integration	More intensive system integration	Space-time convergence Postindustrial economy Declining agglomeration economies	Functional decentralization Horizontal linkages Polynodal spatial structure	Interregional functional shifts Increasing number of control points Expanding Role of Smaller Centres	Increasing number of 'activity' centres Polynodal structure	Polynodal functional structure

The very recency and dynamism of the changes outlined here mean that their present and potential impact upon the settlement systems of both developed and developing countries are not adequately documented nor well understood. Certainly we are far from developing satisfactory theories for explaining their complex impacts. It is hoped, however, that the wealth of information contained in the contributions in this volume will fill some of the gaps in our knowledge, and aid in the search for such explanations.

Concepts and Themes

Several distinctive themes act to unify this collection of papers, in addition to their common concern with the processes of global urbanization. First is the focus on the changing settlement pattern, resulting from the transition from a rural to an urban society, from a pre-industrial settlement pattern to an industrial pattern, or from the latter to a service-oriented or post-industrial one. Most of the papers in this volume concentrate upon change, on the dynamic or evolutionary properties of urban settlements, rather than upon detailed examinations of the structure of those settlements at one point in time. Many of the contributors go further, and attempt to project current changes into future settlement patterns.

Second is the focus upon the 'national' settlement system as the principal area of study, an obvious reflection of the importance of the national government, or nation state, in shaping settlement patterns. Such a focus presents considerable difficulty and challenge to the authors in situations where the composition and boundaries of the states themselves have changed drastically in recent decades (e.g. Poland, West Germany, India). Still, even in those situations, the national government has become both a designer of and an outcome of the evolution of urban settlements. In all cases, the nation state is an integral component of and an actor in the process of urbanization rather than an impartial bystander (Simmons and Bourne, 1982; Dear and Scott, 1981; Johnston, 1982).

The third theme is a focus upon a 'system' of urban settlements or an urban 'system'. While few authors actually employ the rich array of concepts and techniques available in the literature on formal systems theory (Bennett and Chorley, 1978), the *idea* of a system permeates most of the papers. The focus upon systems terminology here serves to stress the relatively simple attribute that urban settlements are linked in a complex web of interrelationships and interdependencies. It is those links—involving the movement of people, goods and capital or of growth stimuli—which give meaning to the notion of an urban system (Simmons and Bourne, 1981). In a highly urbanized society these same linkages are the principal means by which a national territory is spatially organized. Through these linkages impulses of growth and change are spread across the nation, wealth is redistributed and political power is redefined. The cities become the *de facto*