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Edited by

R. A. FRENCH

Senior Lecturer in the Geography of the U.S.S.R.

University College London and School of Slavonic and East European Studies

and

F. E. IAN HAMILTON |

Lecturer in Social Studies of Eastern Europe

London School of Economics and Political Science and

School of Slavonic and East European Studies

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Contributors

- JAMES H. BATER is Associate Professor of Geography at the University of Waterloo, Waterloo, Ontario in Canada.
- ALAN D. BURNETT is Lecturer in Geography at Portsmouth Polytechnic, Portsmouth in England.
- FRANK W. CARTER is Lecturer in the Geography of Eastern Europe at University College London and the School of Slavonic and East European Studies, London, England.
- GORDON CHURCH has completed doctoral research in the Department of Geography, University College London.
- PAUL A. COMPTON is Lecturer in Geography at Queens University in Belfast, Northern Ireland.
- ANDREW H. DAWSON is Lecturer in Geography at St. Andrew's University, St. Andrews in Scotland.
- R. ANTONY FRENCH is Senior Lecturer in the Geography of the U.S.S.R. at University College London and the School of Slavonic and East European Studies in London.
- ERNST GIESE is Professor in the Geografisches Institut of Justus-Liebig University at Giessen in the Federal German Republic.
- F. E. IAN HAMILTON is Lecturer in Social Studies with Special Reference to Eastern Europe at the London School of Economics and Political Science and the School of Slavonic and East European Studies, University of London.
- HEINZ HEINEBERG is Professor in the Institut für Geographie und Länderkunde at the Westfälische Wilhelms-Universität in Münster, German Federal Republic.
- MERVYN MATTHEWS is Lecturer in Sociology at the University of Surrey at Guildford in England.
- THOMAS A. REINER is Associate Professor of Regional Science in the Wharton School, University of Pennsylvania, in Philadelphia, U.S.A.
- STEVEN L. SAMPSON is doctoral candidate in Anthropology at the University of Massachusetts-Amherst; currently a visiting instructor in anthropology at the Institute for European Ethnology, the University of Copenhagen, located in Brede, Denmark.
- DENIS J.B. SHAW is Lecturer in the Department of Geography and the Centre for Russian Studies at the University of Birmingham, England.

GRZEGORZ WECLAWOWICZ is working in the Urban and Population Research Unit in the Institute of Geography and Planning of the Polish Academy of Sciences, Warsaw, Poland.

ANDRZEJ WERWICKI is Reader at the Pedagogical Institute in Warsaw, Poland.

ROBERT H. WILSON is doctoral candidate in Regional Science at the University of Pennsylvania, Philadelphia; currently a visiting professor at the Mestrado em Desenvolvimento Urbano at the Universidad Federal de Pernambuco, located in Recife, Brazil.

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Editors' Preface

... Moscow is not an ordinary city like thousands of others; it is no silent immensity of cold stones piled one upon the other to form symmetrical patterns... no, indeed! It has its own soul, its own life... every stone is graven with its own inscription, carved by time and destiny, an inscription beyond the comprehension of the crowd but rich and rewarding in thought, feeling and inspiration for the scholar...

MIKHAIL LERMONTOV, *A Panorama of Moscow, 1833-1834*

It is appropriate to commence this book by a reference to Moscow. To those who know the city well today, Lermontov's words are remarkably fresh, vivid, and meaningful. Few cannot but be inspired by that 'majestic panorama stretching out almost beyond the range of vision'. His verse points up a complexity, a depth of history, which many can identify or sense in the present-day city. Yet in those extraordinary 150 years since Lermontov was writing, few cities could have undergone such profound changes as has Moscow. Feudalism was swept away in Russia, permitting industrial capitalism to penetrate the life of the city, only to be removed by the first successful and lasting socialist revolution that converted Moscow into the capital of the world's largest state, into one of the world's foremost industrial, scientific research, and cultural centres, into a forward point for the international diffusion of a new social order. The first socialist metropolis, Moscow became also the first large city in which socialist planners drew up a blueprint for the future growth and development of an entire city on new philosophical lines. Were Lermontov to return and to ascend, for another panorama, the 'Stalinesque' skyscraper, for example, standing beside the square that bears his name, surely he would find a city far more dominated by 'symmetrical patterns'—though he would also identify much in the vicinity of the Kremlin that had been familiar to him. Thus even this city demonstrates continuity, as well as much change.

Moscow became a model, one to which planners and scholars—eager to learn in an expanding socialist world—could turn for inspiration on urban designs and strategies, for object lessons in solving urban problems. This book, however, looks far beyond the 'communist metropolis' and examines the processes in operation, the thinking behind, and the patterns resulting from, the planning and management of cities in socialist countries. The major focus is on their internal spatial structure—a theme so far neglected by urban scholars everywhere. Undoubtedly the editors' first-hand experience of living in Moscow, and

Chapter 9

Spatial Structure in East European Cities

F. E. IAN HAMILTON

The proletariat seizes public power . . . and transforms the socialized means of production . . . into public property. By this act, the proletariat frees the means of production from the character of capital they have thus far borne, and gives their socialized quality complete freedom to work itself out . . . a predetermined plan becomes henceforth possible . . . (and) makes the existence of different classes of society thenceforth an anachronism.

FRIEDRICH ENGELS (1878), *Socialism: Utopian and Scientific*

The machine and transport environments 'swallowed up' capitalist man. In the socialist period man has to free himself from such dependence. Opportunities should be provided for pedestrians to have access to the cultural centre of cities without danger, noise and fumes from vehicles. Transport functions must be separated as the costs of urban renewal will be repaid by more healthy and congenial settlement forms.

EMANUAL HRUŠKA (1958), *Vývoj Stavby Miest*, Vydavateľstvo Slovenskej Akadémie Vied, Bratislava, p. 361

One of the central tasks of the present stage in socialist, communist construction in its quest for uninterrupted growth in socialist productivity among the member countries of the Council for Mutual Economic Aid is the transformation of towns and settlements into modern centres of public production and cultural life, of better living standards for the working people.

RICHARD WAGNER (1976), *Ekonomicheskoye Sotrudnichestvo StranChlenov SEV*, Vol. 2, Soviet Ekonomicheskoy Vzaimopomoshchi, Moscow, p. 57

Symbolizing the progress of socialism in Eastern Europe, these quotations express the new opportunities perceived by the 'founding fathers', the enthusiasm of post-revolutionary practitioners to exploit these opportunities, and the current real need for an international urban policy to meet the aspirations of socialist man. They hint also at major processes at work in shaping the contemporary

internal spatial structure of the East European city. Transfer of ownership from private or corporate into socialized public control demands innovation of new planning, economic and social mechanisms to fashion and to manage the functioning and spatial pattern of the urban economy. By eliminating private profit the same socialization generates conditions for the creation of a classless society dependent solely upon wage earning. How far, then, have spatial changes resulted in cities from socialization? What kind of changes are they? Socialism is a dynamic process: it seeks progressive change. It has had to experiment in translating Marxist-Leninist ideas into real policies and plans under a variety of static and dynamic, short- and long-term practical circumstances. How, then, has urban management adapted the internal spatial structure of cities to change as socialist organization has evolved, as economic reforms have been introduced, as economic development has become more sophisticated and more complex, as social attitudes and behaviour have altered, as social change has spread, and as pressures of urbanization have increased?

These questions emphasize often radical change. Yet in the short thirty years of socialist planning since the Second World War one should expect some continuity with the past. How much continuity is there and in what form? Two related questions may be posed. To what extent has the application of Soviet concepts and experience altered, and brought standardization to, the East European urban scene? Alternatively, do cities in different countries still have discernible 'national' or 'regional' identities and internal spatial patterns which are retained in their older quarters or are evident in new socialist construction and plans?

Data and Research Environments

It is highly presumptuous to pretend that adequate answers can be given here to these questions. Even today, possession of a good linguistic knowledge of diverse Slavonic and non-Slav languages used in Eastern Europe, including Russian and German, can provide only a skeleton key with which to try to unlock the door to a proper understanding of contemporary spatial structure in cities located between the Adriatic, Baltic, and Black Seas.

Published information on intraurban patterns of economic activity and social structure is very scarce. The only data readily available to Westerners—for *dzielnice* in Warsaw or *opštine* (*općine*) in Belgrade, Zagreb, Ljubljana, and Sarajevo—have limited value: such districts or communes are too large and heterogeneous to yield truly meaningful insights. Only very recently have 'problem-oriented' data become available for census tracts within cities and then only to a few East Europeans engaged in urban analysis in their own countries (see Chapter 14; Vresk, 1976). Information is restricted not so much for strategic reasons, though that accounts for the absence of, dearth of scales on, or

cartographic distortion of, published town maps. Rather it results from a lack of perceived real need for such data. Introduction to Eastern Europe in the late 1940s of the ideology of the new 'socialist scientific system' from the U.S.S.R. 'dismembered' the city as a research objective among disparate disciplines: geography, economics, sociology, town planning, and public administration. Urban geography often became part of economic geography and played a subordinated research role then commensurate with the real status of the town as a policy 'by-product' of priority industrialization and backward-area development.

Published research imposes quantitative and qualitative constraints upon the analysis of internal spatial structure. Clearly dominant in all countries have been studies of the 'macro-environment': urbanization, settlement networks, and urban-functional typologies, so mirroring the major orientations of the more voluminous Soviet literature and suggesting superficial similarities in 'socialist urban experience'. Yet these studies were stimulated by State 'commissioning' of information-seeking research in response to key changes in the planning environments of the socialist countries. Urbanization elevated the city to increasing prominence within the politicians', planners', and enterprise managers' decision-making action spaces; this required some reformulation of national, regional, and urban, policies to complement industrialization policies. Introduction of economic reforms decentralized management of resources *somewhat* in favour of production and service enterprises and local administrative (including urban) authorities: resource allocation thenceforth had to be based, more than previously, on the criteria of economic efficiency or *rentability* (Hamilton, 1968) which demanded research into costs of urban growth. And specific problems emerged in certain cities, generating some negative feedback on productivity, development, living standards, and on the rate of attainment of socialist policy goals. Such changes created 'stress conditions' in State planning which demanded pragmatic reappraisal in all socialist countries in the late 1950s of the nature and role of urban studies. Industrialization had generated the severest problems at the extremes of the urban hierarchy: high absolute growth in capital and larger provincial cities, stagnation—even decline—in the small towns. Except in Poland (Kiełczeska-Zaleska, 1956; Kostrowicki, 1953, 1957), Czechoslovakia (Blažek, 1951, 1958; Votrubeč, 1958), and the European U.S.S.R. (S.O.P.S., 1967), the latter problem attracted little attention. Expansion in large cities drew a far wider international spectrum of expertise since the phenomenon seemed to run counter to the avowed Marxist-Leninist goal of eliminating differences between town and country.

However, the *geographic* distribution of research demonstrates an overwhelming preponderance of Polish sources: elsewhere it is scanty, even non-existent. Thus, writing about intraurban space in the East European city in general can easily become an essay on the Polish city in particular. Such a strong spatial bias is explained partly by higher rates of urbanization, by problems of rebuilding

extensively damaged cities, of coping with large-scale population migrations and high population growth rates in Poland (Hamilton, 1974), by comparison with southern countries. But one cannot use these arguments with the same force in comparing Poland with the G.D.R., the European U.S.S.R., or even Czechoslovakia which, to a degree, also shared these problems. In fact three attributes distinguish the Polish 'research environment' from that in its neighbours. Despite eradication or deportation of Polish intelligentsia during the German and Soviet wartime occupation, several prominent geographers and planners were able to return to exert powerful influences on the rebirth of Polish urban geography and to engage in applied studies after 1945 (Dziewoński, 1956). Scientific boundaries remained relatively more 'fluid' in Poland than elsewhere: interchange of ideas and methods and the country's special geographic problems encouraged many economists, sociologists, and planners to adopt more readily a spatial view. Finally, Polish urban experts have had opportunities for earlier and far more intensive literary and personal contacts with the research methods and techniques evolving in, and urban problems of, North America and Western Europe.

How *representative* are Polish cities of those in other socialist countries? While this and subsequent chapters initiate some answers, one must await more thorough urban research elsewhere in Eastern Europe before making judgement.

Process

The Ideological-Political Process

It is no accident that debate on 'revolutionary' or 'counter-revolutionary' theory is currently prominent among geographers in the 'West'. The 'new' geography brought scientific maturity, demanding objective explanation of reality. The spread of 'ghettos' in many Western cities has forced analysis to recognize that the capitalist process nurtures a class division throughout a hierarchy of spatial orders (Hamilton, 1967, 1978) but is most overt along socioeconomic 'fronts' between groups living in sharply contrasted, yet juxtaposed, urban conditions. Indeed the Western city milieu—here tempered by, here intensified by State intervention—is in many respects little different today than 130 years ago when it motivated *The Communist Manifesto*.

Since the late 1940s the East European city increasingly expresses an attempted application of that manifesto. The socialist system established was inevitably adopted from the U.S.S.R. Hence it embodies Stalin's authoritarian version of a Marxist model into which Lenin had injected and institutionalized a disciplined Communist Party and a central-administrative and planning élite. The continued power of this Party apparatus has been deemed essential: some 'pre-socialist' attitudes and behaviour patterns persist in the minds and actions of the populace (Chapter 10); and Eastern Europe, now a spatial frontier of

socialism, and open to much West European influence (e.g. television) is a buffer zone of the U.S.S.R. in cold-war confrontation, a contact zone in times of peaceful coexistence. These factors explain significant uniformity in implementing the fundamental courses of action that Marx advocated in his *Manifesto* for creating a classless society. Governments everywhere confiscated the 'property of all emigrants and rebels', nationalized key economic sectors, and innovated free welfare services for everyone in towns. The State also fixed incomes and wage differentials at *relatively* low levels—so, in effect, 'pre-deducting' the 'heavy progressive taxation' needed to fund economic and welfare plans.

Yet Marx and Engels (1848) also recognized that socialization 'will be different in different countries'. Varied national 'paths to socialism' are visible in diversities among East European countries in the extent to which private property in land, rents therefrom, and rights of inheritance thereto, have been abolished or restricted in cities and in how far and in which ways farming and housing have been socialized, manufacturing integrated with agriculture, and thus *ceteris paribus*, how quickly it has been feasible to accomplish the '*gradual* (my italics) abolition of the distinction between town and country' (Marx and Engels, 1848, p. 33). These variable factors play a key role in shaping spatial organization and change, especially in the spread of the city into rural areas, for whereas most countries socialized their urban development land, forests, and farmland, in Poland and Yugoslavia much land is still privately owned.

No less significant has been national innovativeness in effecting, and governments' willingness to concede the need for, change: thus decision-making, economic mechanisms, and medium-term planning goals have been altered, sometimes radically. While liberalization of post-Stalinist international relations has been a permissive force, East Europeans have readily seized opportunities in a socialist framework to adapt to or to experiment with some of their historic legacies from Western civilization. Such change underlies the enhanced official perception of the city in building an economically and culturally advanced society within which socialized functional relationships will operate towards social equity. Prior to 1960 urban areas were treated as necessary residential and basic service adjuncts of mines, power plants, and factories. Several factors furthered such an attitude. There were few model guidelines for an ideal socialist city—save for Soviet concepts like *Sotsgorod* or plans for Moscow and Novosibirsk, implementation of which had been interrupted by the Second World War. Although Engels paid attention to urban problems under capitalism, Lenin had been preoccupied rather with industrialization and regional differentials. And few East European towns had planning traditions, expertise, or the administrative power to tackle their growth and design problems with much vigour.

In the past two decades, cities have gradually acquired a new status among policy-makers as the prime *forces motrices* of socialist modernization, as the arena within which improved and expanding educational, scientific, research

and development facilities, a highly skilled population, and widespread automation in industry can yield the economic thresholds necessary to support the highest level of human welfare (i.e. material; housing, cultural, social, recreational, and aesthetic living conditions) that can be equitably shared by everyone. As this process gets under way, East European cities are generally more fortunate than their Soviet counterparts; not only have they experienced much shorter periods of industrialization-dominated evolution, but they also enjoy a somewhat richer heritage in services and infrastructure, especially in the west-central regions.

The overall politico-ideological principle guiding the socialist character of urban development is the quest for equity or social justice. That quest is pursued on two levels: first, between cities and hence through the spatial structure of types of investment; and second, within each city through planned management of internal structure. Equity should *not* be misunderstood as equality in incomes or final consumption. The ideological objective is to provide *equal opportunities* for all people through the socialized control and allocation of highly equalized living conditions or public-consumption (welfare) goods. Irrespective of location, ethnicity, skills, or income, *all* people should have access to the same standards or norms in housing, transport, education, medical care, and cultural and recreational facilities 'to each according to need'. The key has been abolition of capitalist ownership of land or property from which unearned income or profit could be derived. Usually, private property is *not* expropriated if it does not greatly exceed the acceptable per capita living-space norms and is used solely for shelter; thus private property persists in the housing sector in town and country. Shelter also permits continuity of operation on private premises of one-man workshop and service business in which the State has little investment interest.

Like the U.S.S.R., East European societies do *not* strive for equal pay, except for equal work. 'To each according to his work' means that earnings and fringe benefits or privileges are intended to encourage socialist citizens to harder work, higher productivity and skills, and political devotion to the cause. Thus 'pay' is hierarchically ranked according to occupational priorities which are perceived to meet the requirements of the processes of economic development and of political socialization. Differentials thus affect varying family outlays on consumer durables and luxuries whereas they broadly should not affect social equity in access to public-consumption goods and services; in reality, housing can be an exception to this rule (see Chapter 10).

The inherited pattern of marked intercity and intracity inequalities in the provision of infrastructure, services, and jobs has to be altered, often very significantly, by the construction or redistribution of new facilities to create greater equity. Until the 1960s such a policy was often conceived as demanding more equitable location of industry, 'bringing the work to the workers', in planned 'growth poles', particularly in extensive areas of agrarian overpopula-

tion. Since 1970 attitudes have altered, to concentrate production more efficiently and to require greater spatial mobility of labour to the cities, while redistributing more equitably public-consumption facilities and jobs as a whole. These changing policies affect internal city structure since job-location patterns clearly shape the social-stratification structure within each city. As the socialist system generates occupational differentials, so any spatial localization or specialization in occupations between cities or within their sub-zones may generate spatial variations in urban social stratification. These gain greater significance under a centralized socialist planning system if they show positive correlations with inherited or existing variations in the spatial pattern of supply of public-consumption goods (Chapter 10).

The Administrative and Planning Process

The translation of ideology into practice in the organization, development, and management of urban space is effected through the interaction between city administrative and planning offices, on the one hand, and executive decision-making bodies and State-ministerial or other investors of national importance, on the other. Indeed, the city, as in the U.S.S.R., is dependent upon central government in four major ways.

First, national governments determine the administrative status—or lack of it—of each city. Though initially the status bestowed on larger provincial towns often reflected their *inherited* size and functional importance, governments have innovated new administrative centres in Bulgaria in 1959, in Czechoslovakia in 1960 (with greater autonomy in Slovakia after 1968), in Poland in 1954 and 1975, in Romania in 1968, and in Yugoslavia in 1954–1955 and in 1968. Such reorganization significantly strengthens the power of towns newly designated as regional (second-order) centres and weakens that of towns which never acquire local, regional, or autonomous status.

Second, central decisions shape the growth, stagnation, or alteration of city functions, infrastructure, and population dynamics. Broad policy allocations of resources among sectors affect structure in all cities, while specific major decisions to locate this or that industry, transport, or scientific facilities affect a given town.

Third, various responsible central ministries lay down a myriad of legal or recommended norms which city councils or other ministries must implement and which thus strongly influence the design, appearance, and quality of all urban areas. Such norms relate to: the supply of housing in permissible or mandatory living area per person (square metres of floorspace) and the number of living rooms according to family size; the application of building methods and standards of fittings; the supply of district heating; the scale and composition of service and welfare provision to population size; time-budgets, particularly travel time between the workers' residence and place of employment which also

affects transport provision; and zoning regulations. These norms apply in the State sector, and while town councils may vary them with respect to cooperative sector construction, they do account for the very high degree of uniformity in socialist urban construction.

Fourth, the central government determines the degree of autonomy and authority that city councils may be permitted to have over their own administrative areas. Under democratic centralism the city becomes an arm of national government, responsible for translating central policies and decisions on economic development, social services, and infrastructure into practice, strictly according to its rank. Decision-making is effected through hierarchically arranged structures using, and not being ruled by, economic mechanisms; the 'market principle' of capitalism is replaced by collective bargaining among socialized investors in deciding the sectorial and spatial allocation of resources within the overall policy framework (Hamilton, 1970). Thus decision-makers in central ministerial, planning, and political bodies *ceteris paribus* have more readily perceived, and have probably been most influenced by, the managements of larger, more important, or more numerous enterprises (especially in industry) and Party cells which are most often associated with bigger cities of first or second administrative rank. The structure has thus *tended* to build in certain self-perpetuating forces, but while larger urban centres have more and louder economic and political voices in the collective debate on centralized resource allocation, it is unwise to push the importance of this 'cumulative causation' process too far. Central political authorities have been no less forthright in applying locational correctives to actual or potential overconcentration in larger cities. In reality, too, the spatial distribution of talented, energetic, and influential managers and Party officials is often more random and less 'primate' than the existing or evolving urban hierarchy.

In general, therefore, higher administrative status endows a city with greater ability both to attract and to exert local planning controls over centralized investments. Yet the 'match' is unequal. Until recently, national investment decision-making organizations, especially in industry, have wielded far more power to innovate their projects in the urban arena than city councils, irrespective of status, have been able to exert effective control over such decisions. The gap, though, has tended to narrow as cities grew in size, their officers gained greater planning expertise and confidence, and as central government itself recognized the need to strengthen spatial-economic and town and country planning.

The Polish Model. With the proviso that Poland has stronger traditions in spatial and urban planning than her neighbours, the Polish planning model is nevertheless instructive and indicative of administrative and planning processes observable in much of Eastern Europe.

The role of town planning in shaping internal spatial structure has fluctuated. From 1944 to 1949 it initiated physical plans for reconstructing many war-

destroyed towns. In 1949, however, the Soviet model of national and regional economic planning was adopted: planning offices at city level retained very low-key advisory powers on the siting of reorganized functions, land uses, and new projects. Only larger cities with massive reconstruction problems boasted more effective planning offices, bent on redesigning and rebuilding their urban milieu, like Warsaw, Gdańsk, Szczecin, and Wrocław, though these also occupied key places in national economic revival. Elsewhere, spatial patterns of functions and land uses largely persisted, with little town-council interference, the power of central investors being virtually absolute. Not until 1961 did the *Ustawa o Planowaniu Przestrzennym* (Spatial Planning Act) give planners in the seventeen voivodship capitals powers to forbid development or to refuse permission for siting projects in particular towns. More important, the Act encouraged councils of almost 900 towns to devise master plans to designate: (1) sites for new industrial buildings and warehouses; types and intensities of residential areas; central and local service centres and their component functions; open space, transport arteries; and (2) areas where land uses should or should not be altered within the lifetime of the plan. City master plans are usually drawn to a scale of 1:5,000, local plans to a 1:10,000 scale.

Problems have emerged in practice in managing spatial structure in cities. They stem from difficulties experienced in coordinating planning and implementation processes. From 1961 to 1972 two distinct vertical sub-systems operated, with few real links. First, five-year spatial-economic plans were devised by the Planning Commission at the Council of Ministers (*Komisja Planowania przy Radzie Ministrów*), which coordinated the broad regional distribution of sectorial growth drawn up separately by central ministries in consultation with voivodship and district Commissions for Economic Planning. Second, physical and master plans, drafted for twenty-five year periods by town planning offices in towns, districts, and voivodships, were approved and coordinated centrally by the Committee for Town Planning and Architecture (*Komitet Urbanistyki i Architektury*) and after 1964 by the Ministry of Construction and Building Materials (*Ministerstwo Budownictwa i Przemysłu Materiałów Budowlanych*).

Why did the town and economic planning offices in each city, district, and voivodship not cooperate in practice? Most town planning offices were still devising master plans as the economic decisions of the 1961-1965 and 1966-1970 plans were being implemented by central State investors who had much latitude in selecting locations among cities, even among regions. Furthermore, two five-year plans existed in each voivodship, district, or larger town: one being the national economic plan for centrally controlled sectors and enterprises (about two-thirds of the Polish economy) and disaggregated by sectors and voivodships; the other being voivodship plans for sectors managed by the voivodship authorities (small-scale industries, agriculture, services). Moreover, no national spatial plan existed prior to 1972: the national economic plans specified the locations of only the most important projects of national and international significance

that had been centrally approved by the Planning Commission and the Central Committee of the Polish United Workers Party. Only in such cases were comprehensive socioeconomic and physical plans devised for specific urban or urbanizing areas—for Warsaw, Kraków-Nowa Huta, Gdańsk-Gdynia (Trójmiasto conurbation), Lubin, and Płock.

Further problems arise from the detail of the legal-administrative framework governing town planning. Changes in the regulations on building standards and site development may not always be for the best. Frequent alterations in rules can confuse investors (developers) and city officials alike regarding procedure, rights, and restrictions. Chmielewski (1971), for instance, claims that an order which was introduced in 1969 by the Ministry of Construction and Building-Materials Industry to simplify procedures for site selection and development in cities 'separated the economic evaluation of the specific land use proposed by the investor from the decision (by the city Department for Town Building and Architecture) to permit that land use, precisely when such an assessment was critical to the taking of the decision' (Chmielewski, 1971, p. 14). Inefficient land uses in cities thus occur and constitute a problem, further compounded by the much greater short- and long-term 'elasticities' or uncertainties of national and regional economic development plans by comparison with the 'inelasticities' of site allocations made by city authorities to projects in their master plans for specific uses. Particular projects, especially industries, warehousing, some services and transport, are subject to significant alteration both in scale and in character after their actual construction has begun on a designated site.

This manifests itself in the form and landscape of the socialist city. Here excessive empty spaces lie between those projects which have fallen short of their originally planned size or which have been 'temporarily' abandoned, leaving 'enclaves' or 'wedges' of farmland or—worse—wasteland. There, especially in earlier developed areas, increasing congestion occurs where projects have exceeded their initially predicted scales and have thus progressively encroached upon the 'green belts' or 'isolation strips' between zoned land uses (particularly between industrial and housing areas) or between projects within single (industrial, service, or housing) zones.

A good example is at Nowa Huta. Planned originally (1949) as a steelworks with 1 million tons' capacity, the plant has been expanded constantly to produce 9 million tons today and 12 million tons by 1985. As a result, the adjacent new town has been forced to expand north and west, parallel to and away from the steelworks. It encroaches progressively upon the green belt separating the town from Kraków which, in turn, has been expanding (for reasons of *its* industrial and residential growth) eastwards towards Nowa Huta. Air pollution now extends over the entire Kraków-Nowa Huta area on days when the city is cloud covered and a light easterly wind is blowing.

Rigid adherence to relatively detailed zoning—encouraged by town planning law and by the past behaviour of investors—has led to excessive dispersion of

new projects built by separate developers in different zones of the city, so raising the costs of project construction and infrastructure provision. Though this was more frequent before cities had sufficient powers to control site choices by developers, it has divorced warehousing from industry and one type of industry from another. More 'rational' land uses might have been realized had peoples' councils in cities been given the legal and financial stimuli to provide standardized 'advance' buildings on one or on a small number of sites. These would meet the longer-term needs of diverse investors, be 'tidier', and achieve economies of infrastructure provision as practised 'in some countries' (Chmielewski, 1971, p. 15). Prior to 1971, investors in Poland did not generally inform the relevant city council of their location decisions until they required a specific site on which to commence construction; nor did they assist the city in providing sufficient infrastructure and housing. Chmielewski concluded:

There is thus a need to coordinate the *programme* of investments (for any city) and not just (the period) and only the process of construction... (while) investors should be obliged to communicate to the appropriate peoples' council their (land-use and municipal-service) requirements immediately their location decision has been taken and to commit themselves (financially) to participate in the construction of such essential municipal facilities without the right to payment in cases of withdrawal from actually proceeding with building the project. (Chmielewski, 1971, p. 15)

Such a situation clearly points up the difficulties that councils face in coping with planned and 'unplanned' decisions by investors.

Kachniarz sums up the deficiencies and their consequences:

Hitherto in Poland... economic planning has not shown any interest in reality in spatial planning, despite formal laws intent on linking them... That situation... embraces the entire range of economic activity—from broad policy decisions at national level down to definitive investment decisions and their implementation. Very often, the more important decision does not result from rational spatial analysis, but from the competition and haggling of Peoples' Councils for 'wealthy investors'... Nowhere, however, are the virtues and vices of decisions, including decisions on general norms, more evident than in the scale of the space economy that constitutes man's immediate environment—the housing estate, residential district, service centre, the inner city and its centre, the production zone or the recreation zone. There, too, one discovers the virtues and vices of town-planning and architectural design... which draw attention to the convenience of use, the freedom and safety of movement, to comfort and aesthetic values. At that scale one is most sensitive to the lack of spatial order, to the incompleteness, to the fragmented implementation, to the inadequate equipping, to the dissonant relief of the city. (Kachniarz, 1972, pp. 2–3)

Since 1972 Polish planning has undergone changes to integrate physical and economic planning more effectively. Greater coordinating power was given in 1975 to the forty-nine new voivodship administrations whose plans, now relating to smaller and more 'manageable' areas, are to link the spatial allocation of housing, social services, and infrastructure in their territories with that of

economic activities, deriving their starting points from an integrated national economic and national-spatial plan. Yet they must still adapt existing plans while implementing the 1976–1980 national economic plan (Majchrzak, 1976; Pyszkowski, 1976)—a situation reminiscent of the ‘matching’ process of the 1960s, except that most cities now have master plans and experience from which to assert authority over the siting of investment projects. The initial step is to coordinate the economic and master plans of groups of towns within each voivodship (Jędraszko, 1975). Detailed planning studies are also being made of all twenty-four urban agglomerations; in four cases, Warsaw, Kraków, Łódź, and Katowice, these are coterminous with new voivodship boundaries. Kaleta (1974) warns, however, that publicity given to the need for planners to ‘make short-cuts’ in collecting sufficient data to speed the updating of master plans and the devising of coordinated economic and physical plans for their cities is at one and the same time both ‘a necessity of life if the urbanization of the country is not to get out of hand...’ and ‘... an inexpedience which must be quickly countered’ (Kaleta, 1974, p. 32).

A further factor, which has attracted little comment, concerns the role of councils of administrative sub-divisions of larger cities in managing their particular areas of the city. Only Budapest, Belgrade, and Zagreb boast ten or more subdivisions (Moscow has twenty-nine *raiony*). Major Polish cities vary from seven (Warsaw) through five (Łódź and Wrocław) to four (Kraków) districts (*dzielnice*). There is little standardization in relationships between city size and the existence, number, and scale of such subdivisions: Poznań and Skopje are not subdivided and while the former is the ‘smallest’ of the ‘top five’ Polish cities, the latter ranks third among the Yugoslavian ‘top five’ ahead of Ljubljana and Sarajevo (which *are* subdivided). Moreover, Yugoslav urban-administrative sub-divisions include extensive rural hinterlands by contrast with those in Berlin-Hauptstadt (Chapter 11), Prague, Budapest, and major Polish cities, which do not. At present, the powers of district councils are limited largely to the finance and administration of repairs and improvements to existing buildings and of developing low-order neighbourhood retailing and personal services (such as laundering, hairdressing). They can thus introduce little differentiation into the city. City councils retain responsibility for planning and implementing infrastructure provision (surface and underground transport and gas, electricity, water and sewage facilities to non-industrial users), housing, most neighbourhood and district social, retail, and welfare services and local (i.e. city-servicing) manufacturing, crafts, distributive, and cultural activities. Such a situation resembles that in Moscow (Selivanov and Gel’perin, 1970). It explains why there is little similarity in the sizes of intraurban divisions; thresholds for sustaining efficient management and operation of infrastructure are weak at the district, as compared with the city, level.

The broad features of the administrative and planning environment of the Polish city are shared broadly with cities in all other centrally planned East

European economies. Evidence does not suggest that town planning in those countries has been any easier or more efficient; indeed, their cities share with their Soviet counterparts the problem of how to cope with centralized investors.

Economic Processes

Socialist economic processes operate at both national and city levels to shape intraurban spatial structure. Centrally taken decisions regarding the investment allocations in each plan period among productive and non-productive sectors, and the workings of economic mechanisms such as pricing pervade the very canvas backing the economic landscape of every socialist city. These same forces also act at city level to condition the economics of urban growth and of city size, the spatial arrangement and functioning of activities, land uses, and infrastructure, and the expression of social phenomena.

Ownership and Land Use. Underlying all economic processes is the ownership relation governing production, services, and infrastructure. These are not simple. Privately owned property used solely for shelter or for subsistence (housing, workshops, some retail outlets, gardens) persists in varying degrees in many East European cities, although data to quantify this are hard to obtain. It occurs invariably in rural–urban fringes, at least as the housing and gardens of collective-farm workers, while in Poland 75 per cent. and in Yugoslavia 84 per cent. of all farmland is peasant owned. Data available for Polish towns and cities clearly indicate the scale of private ownership in land use and housing, even in the biggest cities (Table 9.1). Figures for Wrocław, in particular, and for Koszalin, Olsztyn, and Zielona Góra (where less than 24 per cent. of land is privately owned) demonstrate, however, that cities in the west and north experienced much greater socialization by comparison with those in ‘Old Poland’: only urban-fringe farmland resettled by Polish peasants remains in private hands today. No less than 40 per cent. of all urban land in the ‘old’ Polish territories is privately owned.

Indeed, the private sector is an important force actively or passively shaping the form, functional pattern, and economics of city growth and change. It is no less so in Yugoslavia and may play *some* role in other East European countries also. Contrary to belief, private property is generally expropriated for city expansion neither by force nor without compensation. People’s legal rights have been respected, except briefly perhaps in the turmoil of nationalization and farm collectivization before 1952. Unless agreement can be reached ‘out of court’, legal proceedings are essential if private property is to be transferred for development to State investors (i.e. developers)—be they ministries, enterprises, other socialist organizations, the Party, or city councils. Expropriation without compensation appears, at least from Polish evidence, to have been infrequent, especially since 1961. Then a new law was introduced to limit such expropriation

Table 9.1 Land use and land ownership in the administrative areas belonging to Polish settlements and in Polish city voivodships in 1970

	Total land		Agricultural		Forest		Water		Mining		Transport		Residential		Other ^a		
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
Polish towns and settlements:																	
Area (000 ha ^b)	1,149	774	330	640	369	52	93	2	5	0.1	107	2	147	70	98	9	
Percentage	59.7	40.3	17.2	33.2	19.2	2.7	4.8	0.1	0.3	0.0	5.5	0.1	7.7	3.6	5.1	0.5	
City voivodships																	
Warsaw:																	
Area (000 ha)	28.9	15.7	11.2	25.2	8.8	2.0	4.3	0.0	0.0	0.0	12.3	0.0	22.5	7.2	5.8	0.7	
Percentage	64.9	35.1															
Kraków:																	
Area (000 ha)	11.8	11.2	15.2	41.3	1.7	0.0	2.2	0.0	0.0	0.0	8.3	0.4	11.7	6.6	12.2	0.4	
Percentage	51.3	48.7															
Łódź:																	
Area (000 ha)	10.9	10.5	8.4	35.5	6.5	1.4	0.5	0.0	0.0	0.0	11.2	0.5	17.8	8.4	6.5	3.3	
Percentage	50.9	49.1															
Poznań:																	
Area (000 ha)	14.1	7.9	19.1	23.2	12.7	0.9	2.7	0.5	0.0	0.0	9.1	0.4	11.0	10.0	9.5	0.9	
Percentage	64.1	35.9															
Wrocław:																	
Area (000 ha)	19.6	3.3	35.8	13.5	5.3	0.0	3.9	0.0	0.4	0.0	10.1	0.0	21.8	1.3	7.9	0.0	
Percentage	85.2	14.8															

A = socialized land. B = privately owned areas.

^aIncludes 'miscellaneous' categories such as industrial land, cemeteries, etc., and 'unused' land (private land accounts for most of the unused category, 8,000 ha).

^bAll figures in hectares are rounded.

Source: Based on Grocholska (1974).

to no more than 25 per cent. of any site, especially when required for street widening or other infrastructure provision. Only the Polish Council of Ministers can approve expropriation of privately owned areas in or outside a city when the voivodship Peoples' Council wishes to redevelop or build on a big scale. This power has been used only twice—to redevelop 218 ha in Poznań and 113 ha in Warsaw—and then all persons displaced were rehoused in modern apartments.

The judiciary mostly ensure that property owners are compensated. Although in Poland the minimum payable for a small plot of land ranges from only 5 to 10 per cent. of the cost of constructing a five-roomed house on that site *at 1961 prices*, yielding minima of 12,700 to 30,100 zlotys (c. £250 to £600), and although inflation has eroded monetary values by 60 per cent. since 1961, property owners can—and do—negotiate much higher rates through the courts. The law provides that compensation can be the greater:

- (1) the larger is the plot of land and buildings to be compulsorily purchased;
- (2) the larger is the city in which the plot is situated (rates rise according to three city-sizes categories: < 50,000 inhabitants, 50,000 to 200,000, and > 200,000); and
- (3) the more 'central', 'accessible', or 'desirable' the location of the plot is to the purchasing State organization according to a two-, three-, or four-zone division of a city of these respective sizes.

This implies recognition of a very general relationship between the demand for and the location and value of land in or near cities—but one which results in a far 'flatter', less 'stepped', more uniform land-value surface than in capitalist cities. Moreover, concerned that urban-industrial uses of land had expanded by a third (from 3.6 to 4.8 per cent. of all land) in Poland from 1957 to 1968, the Polish Council of Ministers designated the protection of agricultural land a social, environmental, and economic necessity to ensure improved food supplies to cities and for export. It has encouraged urban expansion on to poorer land by imposing high prices per hectare in the purchase of better-quality farmland for non-agricultural uses (500,000 zlotys per hectare for grade I, 450,000 zł for grade II, and 350,000 to 400,000 zł for grade III soils) and 300,000 to 600,000 zł per hectare for lakes, while fixing much lower prices for poorer land (50,000 to 100,000 zł per hectare for grades V and VI). State investors are bound by law to pay such prices in addition to compensation for buildings, making expropriation of private property relatively expensive to State organizations, though sale is increasingly attractive for landowners in the urban fringe. For example, rates paid to owners on whose property the Warsaw City Voivodship authorities (prior to 1975) wished to develop (and have built) the east-west *Łazienkowska* motorway was often sufficient to permit former owners to purchase land and to build second homes beyond the city's boundaries. Nevertheless, when people refuse to sell out they may be subject to 'suasion' or to discomfort

to discomfort from utterly transformed environments (Chapter 18)—measures often used by city councils in Western countries.

Thus State organizations prefer to develop land which is already socialized. Legal proceedings with private property owners can be time-consuming (months or years), making serious inroads into their ability to meet tight planning schedules. Though modest by standards in the West, legal costs, compensation, and higher prices for farmland can seriously erode the always inadequate funds for development which are at the disposal of city councils, ministries, and industrial enterprises. The results are twofold: sometimes 'above-plan' intensities (e.g. residential densities) on State-owned land; and greater longevity of gaps in the continuum of city expansion into the rural fringe, with the persistence of individual (or of rows of) single-storey or villa-type houses of wood or stone amid new high-rise residential estates.

The spatial form of the growth of Warsaw amply illustrates the effects of land ownership patterns. Compact and intensive urban redevelopment typifies the pre-war city area that was entirely nationalized in 1945 (Figure 9.1), making State investment there an 'easier procedure' (Grocholska, 1974, p. 45). Beyond, in the surrounding zone of much private land ownership (Figure 9.1), expansion of the city to the present day exhibits (Figure 9.2) 'relatively little compactness, stretching out along the main lines of communication, with enclaves of agricultural areas coming near to the city centre' (Grocholska, 1975, p. 60). By the same token, cities in other East European countries (except Yugoslavia) should retain more compact forms because their continuous expansion involves simpler procedures of transfer of land between State organizations. How much influence the continued existence of villages and peasant plots under private ownership has is hard to tell, but equally State ownership of land in the urban-rural fringe and beyond also opens up opportunities for freer forms of city expansion, continuous or discontinuous.

Land ownership shapes urban forms in other ways. City councils usually try to control strictly, or prohibit, private building within their boundaries. The existence of peasant-owned land on the fringes of cities offers opportunities for piecemeal evolution—indeed even 'overnight mushrooming'—of 'wild settlements', as at Nowy Dwór and elsewhere outside Warsaw or in Kozarski Bok and Trnje on the margins of Zagreb. Such communities are not encouraged, yet they are tolerated and even provided with utilities and welfare since they relieve some of the pressures on city housing and budgets. Recently, too, increasing demand by city-dwellers for land for second homes has brought uncontrolled building to potential 'green-belt' land around larger cities. In this market there is little control over land sale prices between peasants, collective-farm workers, and individual buyers. State organizations and industrial enterprises have begun to build 'estates' of second homes for their key workers. Such second homes are cheaper to the employees than those purchased privately, although they may well have to wait longer for them.

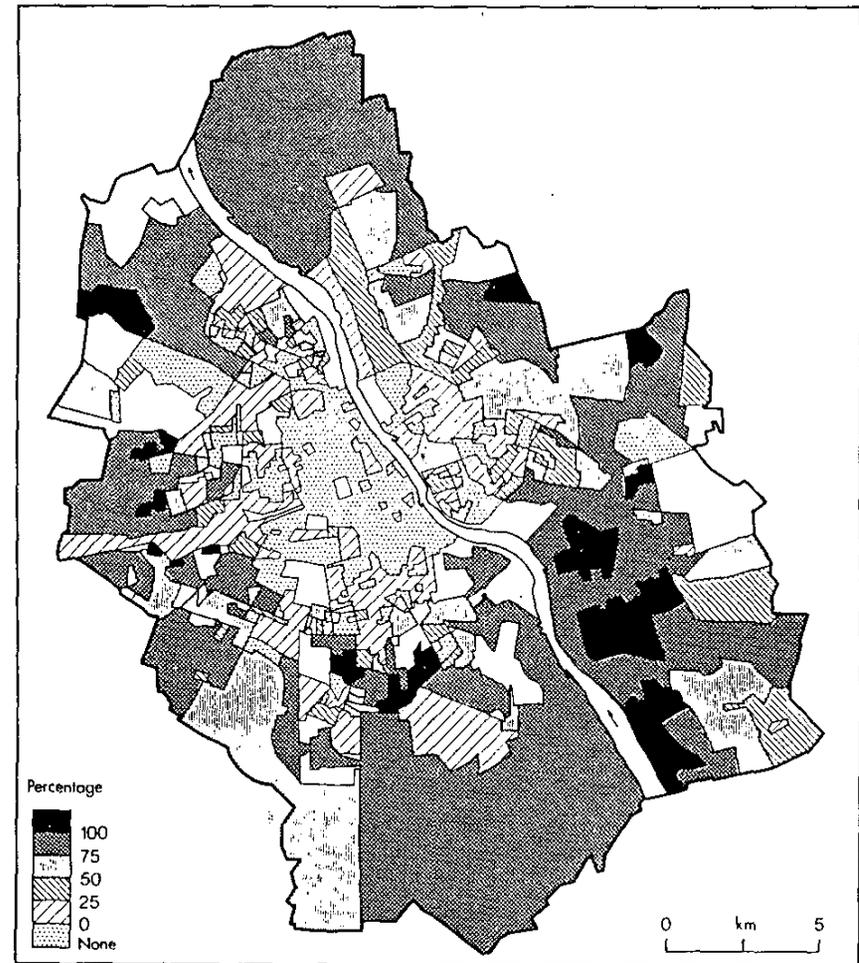


Figure 9.1 Percentage of privately owned housing in Warsaw in 1970

State organizations are, of course, the most fundamental forces owning property, utilities, and infrastructure on city land and hence in fashioning the functional and spatial patterns within the city. Those State organizations comprise separate ministries, enterprises belonging to economic associations or to regional councils and the city councils themselves. Thus 'the State' comprises many actors, each responsible for financing functions, productive or non-productive sectors and areas within the city. Nationalization in the late 1940s of landlord—finance, trading, transport, industrial, service, welfare or cultural

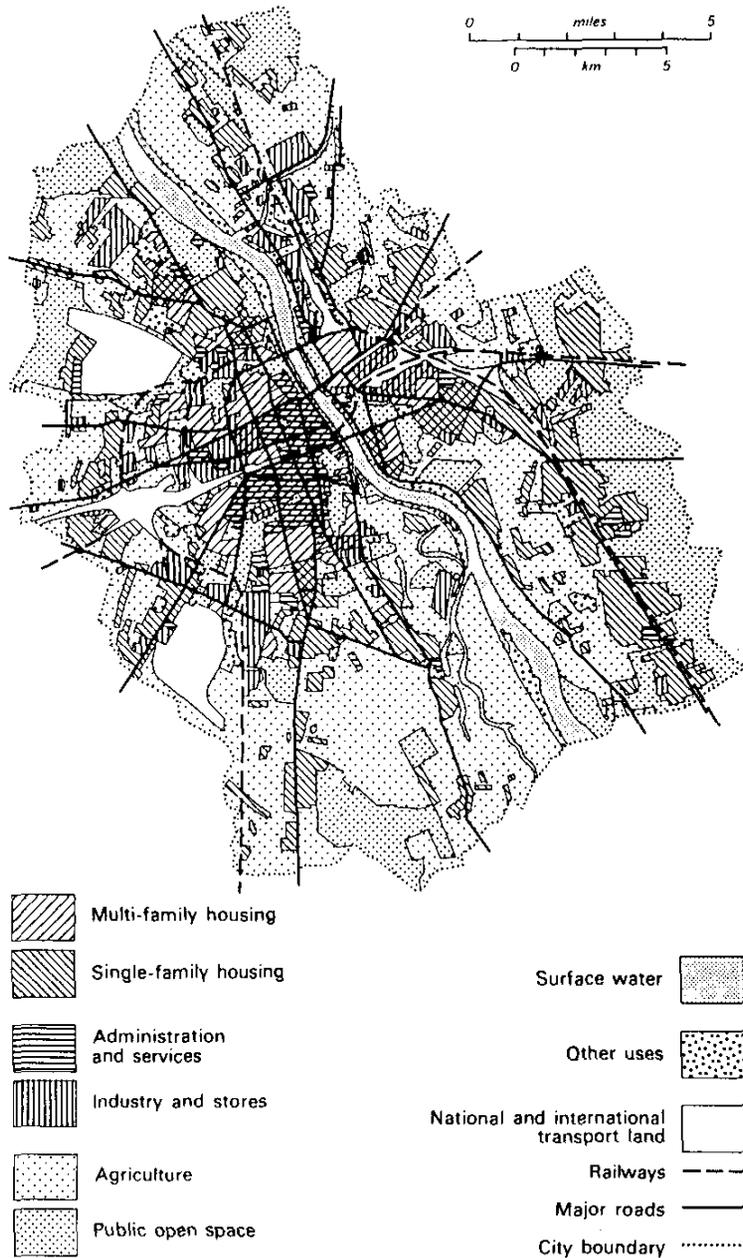


Figure 9.2 Land uses and functional zones in Warsaw

organizations, and capitalists renting out non-owner-occupied housing—resulted in socialization of continuous tracts of urban land, especially in or near city centres, industrial zones, and along railways or dockyards. Yet in many cities, both large and small, it left 'enclaves', 'backyards' or even whole districts of owner-occupied residential and workshop property in private hands, which has not necessarily been since compulsorily purchased.

Effective elimination of a speculative market followed nationalization. Land ceased to be regarded as a commodity for profitable investment or trade and assumed the status of a social asset to be used in the national interest. 'Ability to pay' was replaced as the decisive criterion influencing land and property allocation by the 'ability to satisfy socialist principles' in steering a course towards fulfilling the tripartite goals of rapid economic progress, much improved human welfare, and proper urban design.

The fabric of the pre-socialist city became subject to functional adaptation to the needs and ideals of the new socialist society. Nationalization facilitated rationalization of land uses in undamaged town centres. Retailing and other central functions were spatially 'shuffled' around central squares and along major streets, with 'invasion' and 'succession' processes in evidence. Concentration to achieve scale economies led to the enlargement of floorspace devoted to a given function on one site by extending that function into adjoining premises. This required relocation of their former functions elsewhere, and so 'rows' of formerly competing outlets selling identical goods were 'thinned out'. In war-destroyed cities rationalization involved choices to replace or not to replace former functions, to determine their number, sites, and scales, and to innovate new functions within the fabric of the reconstructed or renewed city. Socialist reorganization and post-war consumer-goods shortages exposed the 'excess' of much inherited service capacity—an excess which had often been concealed in the 1930s by indebtedness born of usury or by malnutrition and poverty, especially in ethnic ghettos.

Some premises vacated during rationalization were occupied by activities, formerly 'kept out' by 'bourgeois economics', but which commanded much higher status under socialism. Thus central sites in big or small cities, like Zagreb or Leszno or Iași, and especially in those which acquired new regional-administrative status, were partially 'invaded' by politico-cultural functions such as museums, libraries, and party-political and trade-union organizations—or by bookshops, which now enjoyed more prestige and bigger markets as a result of free and extended educational or training programmes and low prices on publications. Some former warehouses were converted to industrial uses, industries themselves were functionally reorganized on individual sites (Hamilton, 1963, 1968), while a few war-gutted factories became schools for lack of equipment. Unfortunately the substantial amount of urban land-use rationalization following socialization is largely undocumented or uninvestigated.

Yet powerful economic and other forces operated towards retention of former

functional land-use patterns in cities. Industry, transport, and welfare (educational and medical) facilities commanded priorities over scarce materials, equipment, and labour, so prohibiting extensive conversion of buildings accommodating the lower-priority service, retailing, and administrative functions. Often, major alterations would have made economic nonsense. Moreover, planners had to devote their energies to more immediate tasks of reconstruction and production-target fulfilment in the secondary sector. Thus functional rationalization was sometimes piecemeal and centres of cities which escaped serious war damage—like Kraków, Bratislava, or Zagreb—seem to display substantial continuities in land uses as between the 1930s and the late 1950s. New People's Councils occupied former town halls or palaces, nationalized economic organizations or regional-administrative or planning bureaux took over the office premises of pre-war capitalist firms, while many shops and service establishments continued their former functions *in situ*.

From the early 1950s, however, decision-makers were faced increasingly with the question of where to locate a growing volume of new secondary, tertiary, and quaternary capacities in cities. Under the command economy, such decisions were largely governed by the choices of central ministerial investors and reflected their respect—or lack of respect—for zoning or other town planning concepts and the availability of land to meet their specific needs (e.g. land near railways or water in the case of industrial ministries, fairly central city sites for new offices, housing areas for siting new schools) or the siting of existing facilities.

Investment, Functions and Employment. Allocations of capital among sectors is a major force in the economic milieu of the socialist city. Long-term national, CMEA, and 'socialist' investment policies since 1950 are already evident in:

- (1) a dominance of 'production' (industry, construction, transport, and communications) over 'non-production' functions (wholesale and retail trading, storage, finance, insurance, housing, municipal services, catering, medical services, culture and recreation, education, sciences, arts, administration, and defence: Pravdin, 1976, pp. 36–40);
- (2) the key role of secondary-sector activities in urban change since 1950 in many towns which exceed 20,000 inhabitants: even the largest, administrative, and commercial cities—like Warsaw, Zagreb, Szeged, Plovdiv, Kraków, or Craiova—have not escaped the impact of large-scale socialist industrialization; and
- (3) restricted development and growth in the retailing of consumer goods by comparison with a widespread and more prestigious build-up of public welfare goods and services.

The consequences for urban structure are evident from Table 9.2. Figures relate to sectors, not occupations, and while 'urban-type' jobs are not strictly

urban jobs (data on which are either not available or not comparable between countries), they clearly indicate the occupational components of *urbanization*. After a decade of socialist planning, in 1960 industry dominated employment in cities *irrespective* of the country and accounted for about half of all urban-type jobs. The ensuing fifteen years have seen a large-scale growth in mining and manufacturing jobs: East European cities today employ well over 5.7 million or 53 per cent. more industrial workers than they did in 1960. Yet a somewhat more rapid growth of services has marginally reduced industrial dominance, which is now remarkably even throughout Eastern Europe at around 47 to 48 per cent. Only Romania has a higher proportion than in 1960 and above 50 per cent. Trade occupies a relatively minor position with 11 to 12 per cent. of urban-type employment, and indeed is rivalled in city labour markets by construction and education with science and culture. Retailing, incorporated in employment in housing and municipal services—to which it is closely connected through city administration and city neighbourhoods—engages only 3 per cent. of urban-type employment, rising since 1960 to 4.5 per cent., thus employing little more than half the number working in medical services, social security, and physical education. That fact clearly expresses the present priorities of socialist society. Nevertheless, the 'non-productive' activities as a whole grew fast enough between 1960 and 1976 in all countries to raise their share of the fast-expanding job market from one-quarter to one-third.

The investment pattern that has brought about this urban structure is very clear. Throughout Eastern Europe material production has consistently absorbed three-quarters of all capital investment and industry 35 to 37 per cent., though variation from country to country is significant. Investment in non-productive sectors is relatively lower in the G.D.R. and Czechoslovakia than in Hungary, Poland, or Romania. While intersectorial allocations have tended to fluctuate more from time to time within Eastern Europe than Pravdin claims for the U.S.S.R. since 1928 (Pravdin, 1976, pp. 132–133), what is most striking is that investment allocations during the Soviet N.E.P. period of the 1920s were echoed in the 1930s and 1940s in Eastern Europe, when 65 to 70 per cent. of capital investment flowed into the *non-productive* sphere. Thus centralized socialist planning has achieved a fundamental shift in investment policy, and one which has been indelibly imprinted on the structure and landscape of the socialist city.

This shift highlights key contrasts between the East European city and the capitalist city. Socialist industrialization requires fewer, larger-scale plants, as planned use of modern technology replaces the spontaneous, evolutionary-competitive process in capitalist industry. This means that, apart from inherited capitalist industries sometimes intermixed with housing in inner-city areas, industry built in the socialist city since 1950 is both separated from the city by a green belt or open space, following Milyutin's ideas, and more concentrated in space on larger sites devoted almost wholly to industrial purposes. Examples are many, but one can mention Schwerin-Süd or Neubrandenburg-Ost (Kohl,

Table 9.2 The growth of urban-type employment in Eastern Europe and the U.S.S.R., 1960-1976 (in thousands)

Occupational group	Bulgaria		Czechoslovakia		German Democratic Republic		Hungary		Poland		Romania		U.S.S.R.	
	1960	1976	1960	1976	1960	1976	1960	1976	1960	1976	1960	1976	1960	1976
	Mining and manufacturing	769	1310	2258	2770	2406	3295	1298	1671	2949	4745	1254	2907	22620
Construction	161	313	501	702	309	539	221	373	783	1295	372	749	6319	10716
Transport and communications	144	243	294	377	536	618	296	379	541	911	235	479	6279	9378
Trade, storage, and servicing of material products	161	320	479	740	714	786	267	441	708	1068	320	588	4675	9010
Housing, municipal and retail services	47	76	120	242					215	464	94	242	1920	3896
Education, science, and culture	139	337	392	616	1035	1663	476	767	471	936	272	493	6710	13644
Medicine, social security, and physical education	64	165	178	313					308	622	145	271	3461	5878
Total	1485	2764	4222	5760	5000	6901	2558	3631	5975	10041	2692	5729	51984	87332

Source: *Statisticheskij ...* (1977, pp. 397-400).

THE SOCIALIST CITY

SPATIAL STRUCTURE IN EAST EUROPEAN CITIES

1978), the new Hungarian towns (Schultz, 1971), Žitnjak in Zagreb, and Młociny or Żeran in Warsaw.

Nevertheless, it is in the service sector that the most fundamental contrasts occur. First, East European cities of today contain a fairly high standard of provision of public-consumption (welfare) goods and services for all; a century or less ago at the same industrial stage of development the capitalist city almost completely lacked them, except for the few. Yet second, even the modern West European city with its (partially, wholly, or 'optionally') free education and medicine, and especially the North American city, demonstrate the overwhelming dominance of retailing and of personal services for private consumption, by comparison with the public-consumption sector; in the East European city the reverse is true. The reasons are many.

Education, science, culture, recreation, and medical care are well developed and relatively labour-intensive in the socialist city because these activities are: free rights, necessary for the full sociocultural development of every citizen; investments in the future to foster a healthy, highly productive, and enlightened society; and major attractions to female labour. Not surprisingly, many socialist cities have doctor to patients, hospital bed to patients, and teacher to pupils ratios that are equal to, or significantly higher than, equivalent ratios in many capitalist cities. Retailing is far more restricted in socialist cities, whether measured in floorspace, turnover, employees, or numbers of establishments per thousand inhabitants because: State ownership has largely eliminated competition; because planning has imposed norms on the ratio of shops and services to the population and arranged these hierarchically within larger cities; and because, in many cases, family budgets are spent more on necessities, alcohol, and cigarettes and less on scarce consumer durables. Indeed, supply, not income, is the critical factor, for while wages are low, welfare goods and services are extremely low priced or free. Family budget 'surpluses' feed per capita bank deposits which are among the highest in the world.

Of course, private enterprise in capitalist cities also generates duplicated or overlapping functional spaces among myriads of organizations in all branches of banking, insurance, finance, and in services from film distribution, through repair services to travel and tourism. The socialist city usually has one, two, or only a few such facilities. One example must suffice. South East London—an area which embraces virtually the entire range of British class structure in its dockyard, industrial, and commuter-residential functions and is quite distinct from The City—has approximately nine to twelve times more banks per 100,000 population as Belgrade, Moscow, Warsaw, or Zagreb. Hardly a more eloquent index could be given of the contrasting roles of money in shaping internal-city structure under capitalism and under socialism.

Thus, contrasts and nuances between capitalist and socialist cities reflect not only the differences in the stage of urbanization or affluence but also more fundamentally in the goals and mechanisms of the society as expressed through

investment policy. These remarks, however, overlook substantial intercity variations in functional structure. Work by Crkvenčić (1976a, 1976b), Djurić (1970), Jerczyński (1972, 1973), and Lewiński (1965a, 1965b) suggests how these might alter the balance of non-residential land uses and of occupations from city to city, so affecting internal organization. Studies of eighty larger Polish cities permit some generalizations to be made for all East European cities. Despite the apparent uniformity of national policies for the development of industry and a large welfare sector, different cities have experienced divergent paths of functional evolution. Between 1945 and 1950, administrative functions were greatly strengthened in towns which became local or regional centres, replacing commercial marketing functions as the leading activity. That this trend was most marked among voivodship and district towns in western and northern Poland, formerly in one of the commercially most advanced capitalist regions of Eastern Europe, is testimony to the shift in key urban functions from the economic to the politico-administrative. Nevertheless, the changeover was short-lived, for once national development commenced, the economic and social functions have become more overt in urban structure. Many formerly industrial towns, like Łódź, Erfurt, or Plzeň, have remained specialized on manufacturing despite the growth of non-productive activities, especially of education and health. Yet generally, industrialization has diversified the economies of larger commercial cities and made small and medium-sized towns industrially more specialized. Welfare sectors have been expanded in all cities; only in some is there a tendency towards greater welfare specialization than formerly, as in education and science in Kraków.

Prices and Costs: Land, Labour, and Infrastructure. Decision-makers in Eastern Europe respond in their actions to their perceptions of the key economic indicators—prices, costs, or profitability (rentability) of investments—but within a socialist politico-ideological and socioeconomic framework (Hamilton, 1970). As Wilczyński (1970, p. 127) so aptly stresses: '... socialist prices... do not determine the allocation of resources to the same extent as in a market economy... yet they are actively used as an instrument of economic and social policies and as such have a rationality of their own'. Prices *condition* spatial organization and development in East European cities through enterprise and city efficiency, land prices, accessibility costs, social and technical infrastructure costs, and the interplay of demand and supply for goods and services. All these affect, or are affected by, city budgets and centralized-ministerial or decentralised-enterprise investment policies. This has been particularly so since radical economic reforms, innovated in 1954 in Yugoslavia and later diffused in varying forms throughout Eastern Europe, introduced market mechanisms into socialist planning. These combined with greater devolution of budgetary resources to make managements and councils more directly aware of, and hence susceptible to, the costs, revenues, and efficiencies of their activities, to the scale of any

'planned losses' covered by central subsidies or local revenue (e.g. for city transport).

No data on inter- or intracity variations in *land prices* are currently available, though differentiation is known to exist in East European cities. Town planners calculate it increasingly often to assess the relative efficiencies of alternative urban land uses and urban growth paths. Land price as an expression of land value had been neglected in socialist economic theory and practice until the 1960s: nationalization was thought to remove capitalistic market processes. Economists and planners now recognize that socialization per se does not guarantee any desired pattern of land (resource) use. Nor, equally, should it permit socialist organizations of any rank to obtain land free of charge from any source, even from other State bodies. Practitioners and theorists alike now argue that land does have a value, both to each urban enterprise and to society as a whole. The current task is for them to devise realistic measures of value which can be charged as fees for transferring use, and so to influence land use to benefit both. Land-price variations from zone to zone within East European cities appear to be relatively small, but whether the scale of variation is greater than variations in costs of transport, labour, and infrastructure or in revenue from turnover must remain an open question.

Access in cost and time is a crucial variable in site quality, especially for the operating costs and turnover of socialist enterprises and for family budgets. Post-war East European industrialization by means of relatively few large-scale enterprises has meant that costs of product distribution are mainly *intercity* costs. Intracity transport outlays are negligible, except in big urban areas like Budapest, Berlin, or Upper Silesia where interindustry linkage is significant. Elsewhere production and warehousing facilities tend to bear similar freight costs wherever they are located within cities, since distance and 'friction' differentials between the city periphery and the inner city are still negligible. With urban growth and greater emphasis on consumer durables, however, intraurban transport will become more important (as in Moscow: Hamilton, 1976). Yet transport *tariffs* are low and form relatively small elements in the production and distribution costs facing individual socialist enterprises. Thus costs of access have been—and still in most cities are—practically undifferentiated from one zone to another. *Time differences* may indeed be greater, particularly in the dozen or so larger cities or urban agglomerations, but till recently traffic congestion has not been a significant factor determining access time. How important the time factor is to contact-intensive State organizations may be indicated by the close proximity to each other of offices of state planning bureaux, ministries, departments, information sources, and party organizations in the central areas of East European cities: e.g. in Warsaw along a broad northwest-southeast belt between the Palace of Culture and the *Sejm* (Parliament) (see also Chapters 11, 15, and 16). Ease and speed outweigh costs of contact both because transport is cheap (including taxis) and because meeting

planning deadlines—whether in design, implementation, or adjustment—is of such paramount importance in a planned economy. Similarly, individuals, faced with very cheap flat-rate fares within the urban area, find transport costs (and land prices) unimportant in selecting a desirable residence, workplace, or shopping centre. Far more significant may be the time and effort involved in satisfying needs and aspirations under conditions of scarce consumer-goods' supply.

Because of equal pay for equal work and a plentiful labour supply in much of Eastern Europe—so 'depressing' pay rates—wages have played a limited role in the labour-cost differentials from one part of a city to another. More important to State organizations seeking good performance and quality work are the partially interrelated factors of labour productivity, training, and turnover. Experience and skill have been the scarce factors, particularly as capital equipment for industry and social services has also been in short supply. However, in some regions three factors have created especially acute metropolitan and regional labour shortages: very slow growth in population (in the southern G.D.R.: Kohl, 1978); restrictions on in-migration (to Budapest, Warsaw, Łódź, and Upper Silesia); and the post-war shortfall in population in western and northern Poland (Hamilton, 1974) and in western Czechoslovakia. Such cities and regions offer both higher-paid occupations (in mining, heavy industry, professions, administration) and a much wider range of wage scales since pay is strongly differentiated by skill, profession, and 'contribution to society'. Thus workers have greater opportunities to change occupations, encouraging high labour turnover as they seek better-paid or less-demanding 'equally paid' jobs. This tendency is the more acute the more employment growth outstretches the physical capacity of cities to house, or their hinterlands to supply, the labour required. In such conditions, labour becomes a more significant cost variable as organizations see direct provision of housing for employees or major, indirect contributions to city budgets for developing infrastructure, housing, and attractive amenities near their plants, as ways of stabilizing the labour force, of fostering closer identity or understanding between worker and organization, and of raising productivity. This has reinforced, to a degree, the enterprises' support for developing urban neighbourhood entities near their main operating facilities.

Rather undifferentiated land, labour, and transport costs thus combine to create an economic environment within the socialist city which appears to State organization and individual alike to be highly homogeneous, from street to street or from zone to zone. For State investors in economic and welfare sectors and for city councils the range of site options that is open on economic grounds for development is greatly widened and for a greater range of activities. Thus the possibility exists for more decisive weight to be given to town planning concepts and welfare criteria in selecting the type of function and the scale of land use—whether that decision involves the search for a site for a particular function

or for functions for a particular site. Hence, economic mechanisms assist, not hinder, the implementation of socialist city planning. Such a viewpoint reflects only the costs' surface in the city: certain sites may yield more revenue than others—as in retailing—and hence be much sought after. The theoretical force of this argument is weakened by two real factors in the East European city environment: the State monopoly of retailing minimizes competition and maximizes revenue within each 'demand cone', largely irrespective of site; the limited numbers of retail outlets and scarcities of goods' supply within each 'cone' make it necessary for consumers in aggregate to visit most, if not all, outlets which do exist.

Nevertheless, the economic surface in the socialist city is clearly not isotropic; *some* aggregate variation results from differentiation in accessibility and in zonal or site quality consequent upon the age of and the extent of the inherited and unequal pre-socialist urban pattern, especially in housing areas (Chapter 10). Yet interzonal differentiation is blurred by a socioeconomic 'overlay' which assumes a mosaic-like character.

Against this background, there is evidence to suggest that since 1956 variations in *urban development costs* have been perceived to play an increasingly important, even decisive, part in shaping internal spatial structure in East European cities. Efforts to minimize such costs express themselves in two ways. First, land-use intensities tend to be higher in socialist than in capitalist cities (Lentz, 1975). Socialist planning can achieve large economies of scale in investment, maintenance, and operation by using prefabricated sections to assemble housing blocks and by supplying the relatively high-density population in new residential areas with district central heating, public transport, and other services. The *prima facie* result is to sustain relatively high and 'even' densities of population and other activities from the inner city to the periphery, at least on built-up land, in contrast to capitalist cities. Second, urban expansion tends to follow existing transport routes from the city, forming corridors, comprising 'blocks' of growth, rather than ribbon development or sprawling in all directions; this lowers costs of providing electricity, gas, road, water supply, and sewerage facilities because connections to existing networks involve shorter distances and fewer land-access problems.

Ledworowski (1971a, p. 21) observes that 'the possibilities for lowering the costs of infrastructure provision are primarily inherent in good, optimal design of the internal spatial structure of cities'. Why are urban development costs so important? Materials and equipment absorb higher shares of total production and operating costs in socialist countries: product prices carry high turnover taxes whereas land, labour, and transport are cheaper than in developed Western countries. Comparatively rapid, and hence largely 'new', urbanization in Eastern Europe means that materials' costs figure prominently as costs to socialist society in fulfilling national commitments to satisfy increased levels of equalized welfare services and housing. To do so at minimum costs of scarce capital and

materials has expressed itself on the 'macro-spatial' (national) level in attempts to define 'optimum city size' and on the 'micro-spatial' (intracity) level in attempts to devise 'optimum growth strategies'.

While the controversy surrounding 'optimum city size' need not detain us here, it revealed widespread intercity differentiation in the per capita costs of infrastructure provision. From the mid-1950s planners throughout the socialist countries became convinced that medium-sized cities (considered then to be of 10,000 to 100,000 population) *as a size group* offered decisive savings on such costs associated with a given project, compared with the location of that project in either smaller or larger cities. Most convincing 'were the following figures concerning the investment required per new resident in housing, services and communal infrastructure' (Kolipiński, 1970, p. 70), shown in Table 9.3.

Table 9.3 Relationships between city size and urban growth costs per new resident

Size of towns (000 people)	5	10	20	50	100	200	500	1,000	2,000	3,000	4,000	5,000
Investment per new resident (000 zlotys)	80	70	65	65	70	80	110	135	165	185	202	217

Source: Kolipiński (1970, p. 70).

These were presented at the Third Polish National Review of Local Plans for Spatial Development in Warsaw in 1964. Despite serious methodological weaknesses revealed only later, these figures gave strong impulses to national socio-economic policies for deglomerating major metropolitan-industrial centres and for dispersing economic activity in all East European countries in the 1960s. This had two *direct consequences*. First, there was the transformation of many medium-sized towns from their 'traditional' existence as service centres functioning within an inherited urban fabric to industrialized socialist cities with large new neighbourhoods and with a service capacity bursting at the seams to supply enough welfare, transport, and daily bread. The classic Polish case of Płock has been mirrored in many an East European 'growth pole': Konin and Puławy in Poland, Veszprem and Székesfehérvár in Hungary, Piatra Neamț in Romania—to name but a few. Second, interruption of existing cycles of investment in larger cities; in which expansion of employment capacities had already outrun infrastructure, caused further delays in the renewal of old housing and services and a further slowdown in the provision of new housing and services, so prolonging powercuts and overcrowding of living rooms, public transport, and shops: 'the growth of Warsaw, Łódź, Gdańsk and Upper Silesia would now cause long-term disturbance in their functioning... a worsening of living conditions of the townsfolk and also of the conditions of commuters working in these centres' (Kolipiński, 1970, p. 69).

In reality many factors cause variations in per capita infrastructure costs, irrespective of city size. Steady expansion of existing functions, as in Bydgoszcz, has different spatial implications for travel and circulation within the city and for the scale and location of investments in infrastructure and housing than large-scale construction of one major industry on one site as happened in Nowa Huta. The make-up of urban growth costs may vary markedly between the dominantly industrial and mainly non-industrial town. Provision of district central-heating units has become almost universal in new residential areas in socialist cities since 1950 since they can be integrated into the water recycling systems of local industries, especially where major industries (thermal electricity or metallurgy) use large quantities of water as a coolant. From a sample of 128 Polish cities, Ledworowski (1971b) found that differences in per capita costs between the 'cheapest' and the 'dearest' cities within each of six city-size groups were ten times greater than the differences between the average costs for all cities of each size group. More significant is the 'historical experience' of cities under the pre-1914 division of Eastern Europe between Empires. Still clearly evident in 'inherited' towns and inner-city areas, this expresses itself broadly as various permutations of 'positive' or 'negative' factors influencing the current per capita costs of urban development. Strongest negative combinations—low population density and land-use intensity and very poor infrastructure and service provision—and hence highest costs of urban development occur in towns long under Ottoman and Russian domination, followed by those formerly under Austro-Hungarian rule. Lowest costs most sharply distinguished cities developed under Prussian rule because of their high population and land-use 'densities' and high level of infrastructure provision (Ledworowski, 1971b, pp. 115–116).

In their study of the costs of urban development in Warsaw, Regulski and Słońska (1970) demonstrate how, to maintain living standards as city size increases, various types of cost per capita behave in different ways: they decline slowly in the provision of gas, sewerage, rail, and air transport facilities; decline rapidly in water supply and road networks; rise slowly in district heating, car parking (in commercial areas), and infrastructure for bus and road-freight transport; and rise rapidly in garaging facilities (in housing districts).

Table 9.4 further illuminates this issue by reference to a small sample of Polish towns* with contrasting sizes and with different rates of projected population growth between 1960 and 1980.

At the time of the study in the 1960s (Gliszczyński and Wyganowski, 1970), all the towns lay within two 'east-central' voivodships, Kielce and Warsaw. Kielce alone was a voivodship-administrative centre, the remainder (except Warka) being 'sub-regional centres of above-district status'. All (except Warka) became voivodship-administrative centres in the 1975 local government reor-

* The original study (Gliszczyński and Wyganowski, 1970) also included Wyszaków (population, 1960: 7,700; projected 1980: 35,000; actual, 1976: 14,700). The town was omitted here since there were doubts as to the completeness and accuracy of the urban cost data.

Table 9.4 Per capita investment in urban infrastructure required in six Polish cities, 1960–1980 (in thousand zlotys)

City	Radom		Kielce		Siedlce		Ciechanów		Ostrołęka		Warka	
<i>Population (000s)</i>												
1960 (actual)	132.5		88.6		32.3		19.9		15.2		6.0	
1980 (projected)	185.0		200.0		70.0		40.0		60.0		20.0	
1976 (actual)	179.8		156.9		46.6		28.1		29.6		10.0	
<i>Investment (per capita in: 000zł)^a</i>	1	2	1	2	1	2	1	2	1	2	1	2
<i>Housing</i>	12.3	35.3	14.1	36.7	12.6	37.2	13.9	39.8	18.0	35.0	32.1	33.1
Apartment blocks	12.0	34.7	12.9	34.7	11.9	36.3	13.5	39.1	17.4	33.8	31.8	31.2
Dormitories	0.2	0.6	1.2	2.0	0.8	0.9	0.4	0.8	0.6	1.2	0.3	1.9
<i>Services</i>	6.7	12.1	7.5	13.7	6.8	10.6	6.2	11.8	8.3	11.2	7.8	12.8
Education, culture and science	2.9	5.6	3.1	5.5	2.4	4.9	3.3	4.7	3.5	4.3	2.3	4.2
Health and social care	1.5	2.2	1.3	2.3	2.0	2.5	1.9	3.6	2.4	3.4	3.0	3.5
Retail trade and services	1.3	2.5	2.0	2.9	1.5	2.3	0.6	2.9	1.8	2.3	1.7	2.8
Telephones and mail	0.7	1.4	0.0	1.7	0.0	0.1	—	—	0.0	0.1	—	1.3
Sport, recreation, and tourism	0.2	0.3	1.0	1.1	0.7	0.7	0.3	0.5	0.6	0.6	0.7	0.7
<i>Parks and open spaces</i>	0.3	0.9	0.9	1.1	0.2	0.3	0.2	0.3	0.2	0.3	0.8	2.0
<i>Transport</i>	2.3	2.4	3.9	5.2	0.9	5.7	2.7	7.9	4.0	5.0	7.9	8.6
<i>Water supply and sewerage</i>	0.5	4.6	2.3	3.6	3.4	7.6	0.4	3.1	5.3	4.2	5.8	3.6
<i>Energy</i>	4.1	6.3	1.6	2.8	—	0.8	—	—	4.3	4.6	—	1.0
Electricity	—	1.1	—	1.4	—	0.8	—	—	—	1.2	—	1.0
District central heating	3.7	4.1	1.3	1.1	—	—	—	—	4.3	3.4	—	—
Gas	0.4	1.1	0.3	0.3	—	—	—	—	—	—	—	—
Total	26.2	68.7	30.3	62.1	23.7	62.1	23.4	63.1	37.5	60.6	53.3	61.1

^aNote the following:

1 = investment required per capita to satisfy the 1960 population's needs to accepted Polish standards of the 1960s.

2 = investment required per capita of newly arrived population 1961–1980, assuming the same standards and urban expansion to the projected population level for 1980.

ganization. Note that only Radom will reach the 1980 population target figures with any certainty; while this underlines the difficulties of projecting city growth and of adhering to plans, a broader problem is the much-slackened rate of increase in Polish population as a whole.

Clearly, estimated per capita urban investment costs do not vary much with city sizes, or with rates and scales of city growth. Development in Ostrołęka is 'cheapest' (at 60,000 zlotys per capita: c. £30,300), that in Ciechanów being 'dearest' (at 63,100 zlotys per capita: c. £31,550), i.e. Ostrołęka could expand from 15,200 residents *for the same urban costs* as Ciechanów could expand from 19,900 to 40,000 residents. Insofar as Ostrołęka *has* grown more rapidly, it is tempting to argue that lower urban investment costs *are* an explanatory factor shaping national and voivodship planning decisions. Far more significantly, Table 9.4 separates the costs of raising infrastructure in the city to acceptable standards for the existing population from the additional costs of every new urban resident at those same standards. Clearly, greatest variations would be incurred in *removing existing* interurban differentials (figures in columns marked '1'). With those costs in Ostrołęka 60zł per capita greater than in Ciechanów, however, this factor has had little impact upon the spatial allocation of investment. Nor indeed should it if planning subordinates short-term obstacles to the fulfilment of long-term goals of equality.

Removal of inherited differentials in urban-amenity standards has been, and still is, a major cost variable facing planners in Eastern Europe and may be decisive in intercity allocations of employment growth. Within cities it gives rise to marked variations in costs of adopting older areas of different quality and intensity. Once these differences have been removed, per capita costs of urban growth appear to be more 'even' among cities. Table 9.4 implies also the different urban-amenity 'thresholds' (Malisz, 1963) that constrain growth from town to town and that must be surmounted by major investments. Housing costs, the biggest item, are remarkably similar in all towns. Standardized design, building methods, and layout in similarly sized neighbourhoods minimize intercity cost variations: housing is a potential threshold only in Warka (to remove past deficiencies) and in Ciechanów (to permit growth). Differentials in service and infrastructure provision create greater cost variations: to provide Kielce with new telecommunications facilities; to develop adequate health services in Ostrołęka, Ciechanów, and Warka; to improve public bus transport in most towns as their size grows (but especially in Ciechanów and Warka, the smallest towns); to supply water and sewerage networks in making good deficiencies in Ostrołęka and Warka and in facilitating expansion in Siedlce; and to introduce district heating systems in Radom and Ostrołęka.

Threshold theory and analysis—founded and refined by Malisz (1963, 1966, 1971)—has been 'the sole method of economic accounting that has found wide practical application in urban planning Poland . . .' (Kolipiński, 1970, p. 73). Though tried in the United Kingdom (Kozłowski and Hughes, 1967, 1972)

there is, however, little evidence of its wider use in other socialist countries, except Hungary. While threshold analysis is sometimes blurred with the broader economic accounting methods born of the 'Warsaw optimization' (*optymalizacja warszawska*) school, founded in 1962 (Pilarczyk, 1972), it bears the distinction of the methodological and theoretical rigour and conceptual simplicity that has made the evaluation of urban-growth costs a fundamental force, at least in the economic processes shaping spatial structure in the Polish city.

Threshold analysis permits planners to identify when, where, and what kind of investment and operating costs appear to hinder improvement in, or expansion of, the city:

- (1) to surmount physical obstacles (marsh, steep slopes, mining subsidence), or to take account of land protected as grade I and II agricultural land or under private ownership and requiring compensation;
- (2) to convert current land uses to new purposes; and
- (3) to install and run the facilities (extended or new transport, water supply, sewerage, telecommunications, electricity, gas, or district heating systems) required on each (and every) site as a result of such conversion.

Generally, expansion of individual socialist cities is planned to occur out along one, two, three, or more radial 'fingers' or 'corridors' from the existing built-up area, following (where possible) directions in which spare transport and other infrastructure capacities still exist. Once these become bottlenecks, further urban development must spread to areas where neither urban land uses nor urban engineering improvement exist. As each new housing district or industrial zone of standard size requires transport and utility routes which follow a 'corridor', costs of these installations depend in part linearly on the distance of the farthest-developed district from the existing built-up area and in part on the number of districts actually constructed along each corridor. The incidence of such costs is roughly inverse to the number of districts developed. Usually a problem of marginal analysis, threshold analysis points up spatial variations in land or site qualities, constraints, and indivisibilities, which cause cost variation *within* and *between* corridors. Along certain radii more distant districts may offer significantly lower site-development costs. City planners have to trade off these savings (say in land-acquisition costs, water supply, sewerage, or electricity) for greater investment in (and operational costs of) transport to the city centre or inner city. Yet, these costs may be significantly reduced by the adjacent location of residential-service areas and employment (e.g. industrial) zones. As for any given corridor the optimum combinations for the development or non-development of districts can only be determined by a complete enumeration of all permutations, especially in larger cities, simpler threshold analysis commends itself to urban planners working against the clock, against variable investment behaviour, and sometimes against 'difficult' central investors.

Malisz and Żurkowski (1971, pp. 54–56) further claim that threshold analysis can identify urban costs which should be charged respectively to city budgets and to ministerial or enterprise investors. Yet, with the current complexities in all East European cities regarding how many, and which, State organizations own and operate functions and related infrastructure on city land, no one can identify who is paying how much for what to whom. Figures of transactions for individual cities are hidden in enterprise and sectorial accounts. Thus the road ahead for complete and thorough application of threshold analysis, even in Polish cities, is still likely to be a long and tedious one.

Pattern

Towards a Model East European City

After thirty years of operation, the foregoing processes combine with social processes (Chapter 10) to shape the typical East European socialist city of today. That city comprises several quite distinctive zones which may be portrayed in model form (Figure 9.3). These zones are clearly evident in townscapes throughout the region, irrespective of city size or location. Nonetheless, in reality, the relative scale and importance of each zone does vary from city to city. When travelling out from the city centre one can observe the following zones: (1) the historic medieval or renaissance core; (2) inner commercial, housing, and industrial areas from the capitalist period; (3) a zone of socialist transition or renewal, where modern construction is partially and progressively replacing inherited urban or relict-village features; (4) socialist housing of the 1950s; (5) integrated socialist neighbourhoods and residential districts of the 1960s and 1970s; (6) open or planted 'isolation belts'; (7) industrial or related zones; and (8) open countryside, forest, or hills, including tourist complexes. Broadly speaking, outward expansion of city areas yields a concentric-zonal pattern, successive stages of building being readily recognizable in architectural styles and skylines. This pattern tends to 'overlay' a more sectoral or 'wedge-like' distribution of functional zones associated with particular site qualities, historic traditions, and major transport arteries. Fundamentally distinct, however, are the pre-socialist inner and socialist outer urban areas.

The *inherited inner area* is a pre-socialist urban tract which has been subject to socialization, yet it retains some—even much—of its former spatial and functional structure, physical appearance, and marked interzonal differentiation. Within it patterns of social behaviour are dominantly centripetal as people gravitate to its highly localized, central services. By contrast, the modern *socialist outer urban area* is far more uniform in appearance, layout, and standard equipment. Within it, though, a much more 'polynuclear' spatial structure is evolving, generating comparatively more centrifugal patterns of social circulation in the outer city as people go about their daily lives in

neighbourhoods and residential districts, with local welfare, consumer, recreation, and entertainment facilities to hand, or as they make their journeys to work in the large industrial, transport, or other employment zones that lie nearby 'in parallel' or beyond the city's built-up area. Figure 9.3 provides the barest skeleton model.

The Historic Core. This usually pre-dates the 1830s. Besides having as its focus a once-fortified medieval town, a castle, a church or mosque, or a palace, the core usually comprises also a market square and a trading area with cooperatively or privately-owned handicraft workshops, repair services, and some housing in courtyards, alleys, and side streets. Although this zone contains the city's oldest buildings, many—if not most—have been restored or even reconstructed in their former style to preserve rich heritages of distinctive national culture, history, and even religion. By virtue of their enhanced local sociocultural value in smaller towns (e.g. Płock) and of their national or international touristic importance in larger towns (e.g. Gdańsk), city planners have cleared such cores of unaesthetic commercial or landscape features. In more extensive medieval zones, as in Kraków or Prague, routine functions have often been relocated to the periphery of the old town. In their place have been substituted shops selling artistic goods and books, attractively decorated cafés and restaurants, and museums. This applies as much in bigger cities like Warsaw, Gdańsk, Gliwice, and Bratislava as in smaller ones like Eger, Sandomierz, Złotoryja, and Suceava.

Yet there is also another type of core: some were so badly gutted during the last war that, in the face of the serious post-war shortages, they have been only partially rebuilt, or virtually abandoned. Szczecin is an example of the first (Hamilton, 1974, p. 23); Elbląg, Gorzów, Głogów, Kołobrzeg, or Nysa are examples of the second where only selected buildings—often churches or bastions—have been restored, the remaining land having been planted as parkland or given over to new socialist housing and modern central functions such as hotels or cultural facilities.

The Relict Capitalist City. Adjoining the historic core are the quite different, usually far more drab, inner zones of capitalist urban development. Built between the 1850s and the 1930s, such areas were invariably associated with industries, commerce, and transport made possible or necessary by the advent of the railway. Elsewhere, as in Gdynia, Gottwaldov (then Zlin), and Stalowa Wola whole new towns were built following national independence after the First World War. The zones that pre-date 1940, however, are the most highly differentiated in East European cities. First, they are most extensive in Budapest, Łódź, Wrocław, Upper Silesia, Ploiești, and in Czech and German towns, but are relatively restricted in their occurrence elsewhere. Second, in their intensity they exhibit very dense concentrations of population, services, and infrastructure

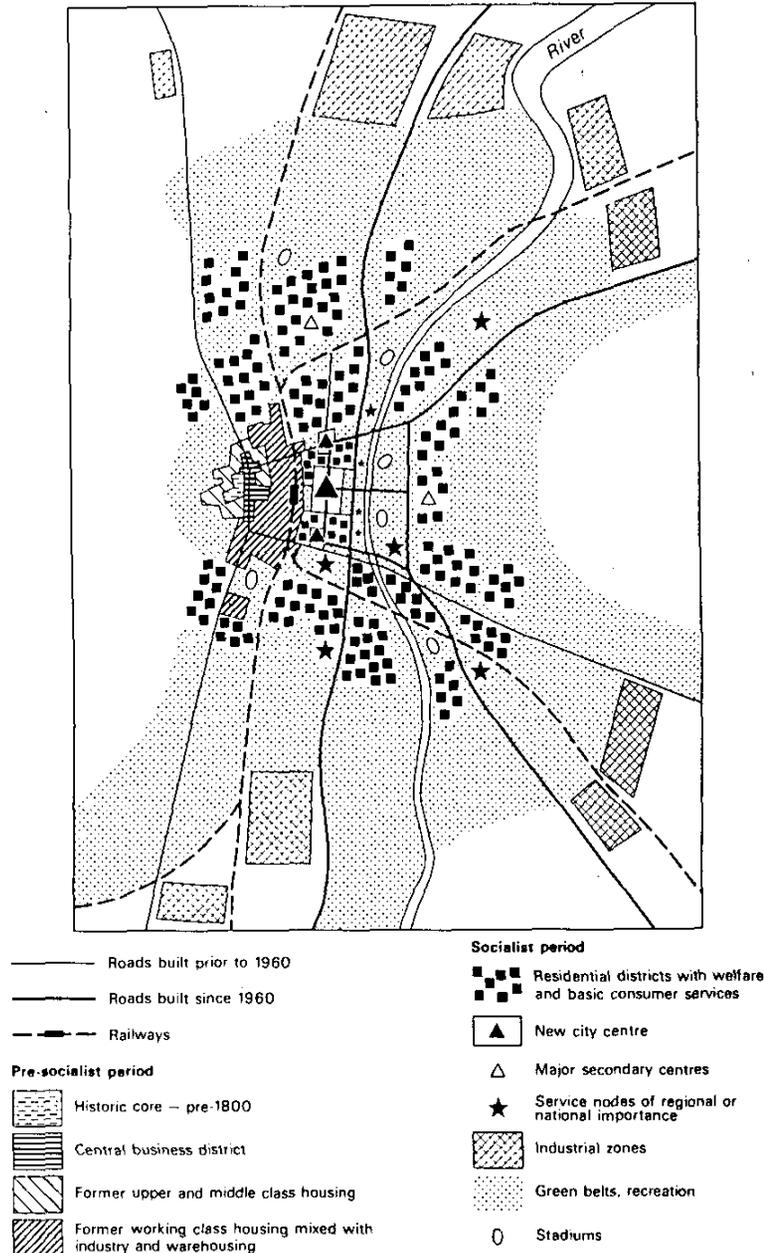


Figure 9.3 A model of the growth of an East European socialist city

(piped water, gas, electricity, cobbled roads, and tramways) in the towns located in the areas of pre-1918 Prussian occupation. Their development is much sparser by all criteria in the eastern and southeastern towns. Such a contrast is still observable, for instance, in Upper Silesia (which was politically divided until 1945) in the adjacent cities of Katowice and Sosnowiec. Third, they display great internal differentiation. Congested, commercial streets lined with continuous rows of shops and offices convey the image of the former capitalist central business district (CBD), especially in cities which experienced industrial or commercial boom in the nineteenth century: Piotrkowska Street in Łódź, Rakoczi út in Budapest and Ilica in Zagreb are classic examples. Adjacent to the inherited CBD are well-appointed, spacious apartments once belonging to the aristocracy, and middle and professional classes, as in eastern Donji Grad in Zagreb. Representative of the inter-war beginnings of the 'flight to the suburbs' among wealthier people are the villas or suburban-type housing in areas with gardens, as in Tuškanac in Zagreb, in Saska Kępa and Żoliborz in Warsaw, or in Buda. Near the railways and interspersed with smaller or larger industrial plants are the poorer, former working class residential areas. Sometimes built in 'planned' rows of urban workers' and miners' housing—as in Upper Silesian towns or in semi-rural 'wild settlements' as in Trešnjevka in Zagreb, Praga in Warsaw, or on the north side of Łódź—these areas were inherited in 1945 invariably lacking piped water, proper sanitation, or hard-surfaced roads.

Socialization has brought significant changes to these zones. During the late 1940s city authorities effected some population redistribution within the existing housing stock. Imposition of norms of living space per capita, often of around 7 to 9 m² per capita, resulted in expropriation of 'excess' rooms or floors in premises belonging to the 'bourgeoisie' and in its reallocation to more needy families. This process was short-lived. Indeed, for much of the 1950s it was precisely those highly differentiated and still largely privately owned housing areas from the capitalist period that bore the brunt of population growth. Rural-urban migration and indigenous city demographic growth led both to overcrowding and often raised in equal measure the inherited differences in housing densities between areas. Sometimes the environments of former working-class areas were further worsened in the 1950s by the planned expansion there, on grounds of short- or medium-term economic necessity, of existing industrial plants. Since the mid-1960s some have been closed and removed from inner-city areas: the copper-processing and chemical industries moved from the Kwater-nikov Trg-Kanal areas of east-southeast Zagreb provide an example.

Such trends form part of long-term city plans to rationalize and to zone land uses more effectively and to improve residential and service or industrial-site conditions. Indeed, these intentions of change partly explain why, in many cities, little has been done beyond basic repairs to modernize or to 'shore up' the urban fabric inherited from the capitalist period. Nevertheless, long-term neglect of these areas has led to a 'continued increase in the differentiation of living

conditions in cities by comparison with the new socialist residential areas' (Kozak, 1974, p. 13), with some undesirable consequences (Chapter 10). The need for modernization is recognized more and more, therefore, as in the case of Łódź (Kozak, 1974; Nowak and Wiśniewski, 1974). When such processes begin to operate, however, the inherited zones enter the phase of transition towards a socialist urban-spatial structure.

Zones of Socialist Transition: the Question of Urban Renewal. These zones appeared first in rebuilding the war-destroyed cities. Indeed, much of Warsaw on the west bank of the Vistula—the central area of the city today—has seen thirty years of the ebb and flow of such zones as rubble, remnant, or ruined pre-socialist buildings were surrounded and then completely replaced by new socialist construction. First, streets were widened and straightened, and infrastructure networks were rationalized and modernized. Second, in the early 1950s, the 'Stalinesque' government office, hotel, and the *Marszałkowska Dzielnica Mieszkaniowa* (MDM) housing-and-shopping complexes were completed to the south, and the Palace of Culture to the west, of the historic core. Third, some older industrial 'suburban' and 'village' relict features on the periphery of the pre-socialist city were partially or wholly replaced by large and expanding industrial zones at Żerań-Bródno (Praga), Bielany-Młociny, Służewiec, and Wola (Chapter 13). Extensive 'Stalinesque' housing rose in Praga and, with much tertiary service development, also in Mokotów. Fourth, in the 1960s and 1970s, the new 'central city' has taken final shape with the building, around the Palace of Culture, of the Centrum services complex and, on the site of the wartime ghetto to the northwest, of massive residential neighbourhoods. Once completed, these developments exhibit fully fledged socialist urban structures: the zone of socialist transition 'moves' elsewhere in the city or disappears altogether from it.

Clearly, these zones are temporary features of the city landscape. They may replace whole sections of the inherited inner city or the relict villages on the urban-rural fringe, usually the most sub-standard housing zones. However, some zones of socialist transition are less temporary than others. Reasons for the persistence of villages on the city periphery have already been outlined. Yet, commonly, cities with a large capitalist 'inheritance' which survived the Second World War (as in Kraków, Prague, or Zagreb) often still exhibit only small 'nests' of socialist building: the rather uneconomic urban *plomba* (fillings). The majority comprise housing projects which range from the individual block (see Figure 9.6), which may increase congestion or make comprehensive renewal more difficult (Kachniarz, 1973; Sumień, 1972), to the 'mini-neighbourhood' (e.g. Ahile Mihail in Constanța, see Chapter 18). This kind of renewal also typifies the central areas of older cities like Łódź. There, new premises scattered between four- and five-storey buildings (from the years 1870 to the 1930s) 'increased total office and service floorspace by almost 200,000 sq. m.' between 1964 and 1974 (Nowak and Wiśniewski, 1974, p. 8). Offices in the *Neboder*

(skyscraper) building in Zagreb or the *Energoinvest* offices in Sarajevo are other examples. Of course, the ultimate aim is to remove all vestiges of urban capitalism, save for buildings deemed to have special architectural, functional, or historical merit. Yet much of the capitalist legacy has had to remain simply because of the scarcity of financial and material resources and time to replace it.

The Need for New City Centres. Despite this, the past decade has seen the renewal to create *new socialist city centres* in more and more East European cities (Figure 9.3; and see Chapter 11). This is now deemed to be a very urgent construction task, for several reasons. The lack of modern, attractive town centres—symptomatic of restricted consumption generally—is a source of ‘negative social phenomena’ (Nowak and Wiśniewski, 1974, p. 7; and see Chapter 10). Urbanization, population growth, and rising living standards have stretched the capacities of inherited commercial streets and market squares and of new neighbourhood service centres, often beyond belief, even to satisfy existing needs. Sustained economic growth in all socialist countries is generating more resources for urban renewal. Yet it has also created the thresholds to support ‘take-off’ in personal consumption: levels of consumption are planned to double or treble throughout Eastern Europe by 1985 and to increase five- to sevenfold by 2000. Greater private car ownership and the outward expansion of socialist cities is creating a demand for city centres of new design and layout, of bigger scale, and often on newer sites.

Two problems are currently under discussion concerning city centres. New approaches in socialist urban economics must be devised to replace the still widespread notion that simple repairs to existing buildings are good enough. Sophisticated criteria and techniques are required to assess the benefit costs of comprehensive urban modernization and renewal (Kozak, 1974). Moreover, the architect-dominated city-planning profession has still much to learn, through well-organized and intensive training courses and project competitions, about the purposes of and the art and science of flexible, city-centre design. No longer can such centres be based on the use of iterative and simple planning norms applied hitherto to residential district and neighbourhood service centres of third or fourth order (Nowakowski, 1971, 1975; Skowroński and Żabliński, 1975; and see Chapter 11).

Despite this learning process, new first-order city service centres already exist in East European cities today and are of two types. First is the former capitalist (or imperial) CBD that has undergone substantial conversion and extension, demanding inner-city renewal. Second is the completely new socialist city centre that is constructed on a near-virgin site and, lying on the periphery or rural–urban fringe of the pre-socialist city, will *become* (or already is) centrally located within a rapidly expanding planned city.

Not unnaturally, the first type is currently best developed in heavily war-

destroyed cities which could be rebuilt after 1946 on new planned lines, such as Warsaw and Berlin-Hauptstadt* (Chapter 11). Yet where the physical volume of clearance necessary to make way for a new centre has been quite limited, involving removal of ‘low-density’ and ‘semi-rural’ housing, many smaller, unscathed towns have also acquired impressive new city centres, often their first true centres. Examples are Birlad and Vaslui in eastern Romania (Gugiuman, Cirlotă, and Baican, 1973, pp. 79–83). That many other cities will acquire new city centres in the next decade cannot be doubted, though this will entail much bargaining between city councils and State organizations, cooperatives, or private persons owning the property that will have to be cleared. Nowakowski (1975, p. 3) estimates, for example, that more than one thousand plans for city-centre redevelopment have been submitted to city-design competitions in Poland alone since 1965. Very few have yet proceeded beyond the drawing board. Crucial to many are much-improved road communications. At least this process has begun in Kraków and a plan for building a new city centre immediately to the northeast of Stare Miasto and the railway station has been accepted (Stawicki, Otto, and Żałubski, 1972).

A living reality is the ‘new centre’ in Katowice in Upper Silesia. There, the pre-socialist shopping, service, and office centre is well preserved in narrow streets forming an east–west elongated ‘grid iron’ parallel to the Wrocław–Kraków railway. The new centre extends away for almost 1 km northwards, at right angles, having been ‘grafted on’ to the old CBD, sharply contrasting in architecture and functions with it (Hamilton, 1978, p. 512). Built since 1964, this centre has some features in common with socialist first-order service centres in East European cities (Chapter 11) and in Moscow (Hamilton, 1976); others are distinctly its own. The centre flanks both sides of a very broad thoroughfare, *Ulica Armii Czerwonej* (Red Army Street), providing a fine vista to the Silesian uprisings (of 1919–1921) sited at the north end. Unlike the ‘check by jowl’ continuous frontages of old CBD shops or the ‘linear centres’ of the 1950s found in Moscow, Katowice’s new centre boasts a variety of functions which are each arranged in ‘modules’ in individual or in groups of free-standing buildings. These are ‘staggered’ in alignment and separated from each other by open, paved, or planted garden areas. Nearer to the old CBD the functions comprise: offices of regional banking and printing enterprises (including newspapers); hotels, cafés, and restaurants; and shops selling artistic and cultural goods and books. Car parks are central. Nearer to the stadium are: the largest, sixteen-storey ‘wall-type’ residential block in Poland, with almost 1,000 apartments and underground parking space for 300 cars; a service complex including

* Berlin-Hauptstadt der DDR (Berlin—capital city of the German Democratic Republic) is the correct title for the east sector of Berlin. Henceforth in this book it is referred to as Berlin-Hauptstadt both to distinguish it from West Berlin and to avoid repetition of its otherwise lengthy official title.

a cinema, a supermarket, and residential towers; offices belonging to Upper Silesian industrial enterprises; and a housing and office complex run by the Polish State Railways.

The thoroughfare is 90 m wide, with tree-lined pavements and lawns, and comprises a six-lane divided highway; trams use the median strip to link the old city centre and northern residential towers. This highway provides direct access to and from the new east-west Chorzów-Sosnowiec (eventually Wrocław-Kraków) motorway that separates the monument and the sports stadium. Moreover, since the centre is also close to the main railway and intercity bus stations, it is highly accessible by public transport from Upper Silesia as a whole. The new centre is built partly on land cleared of much poor nineteenth-century buildings and partly (with the motorway) on industrial waste heaps which have been landscaped and planted.

Examples discussed so far relate essentially to cities which have not experienced high rates of growth, certainly in relation to their pre-socialist size or area. By contrast, the completely new city centre located on the periphery of the pre-socialist city is characteristic of towns which are expanding rapidly and dominantly in one geographical direction. The 'relocation' of the city centre that such expansion necessitates is, of course, a fairly planned process—subject to qualifications noted earlier. Some might argue that it is neither a new, nor a socialistic, process. After all, many cities which pre-date the industrial revolution had already experienced locational shifts of their central service areas under capitalism: witness the many Polish cities in which *śródmieście* (the 'city centre') is much larger than, and quite separate from, the *stare miasto* ('old town'). But those new centres were built for profit. The creation of new socialist city centres may reflect the need to perform regional administrative and political functions, as the new centres of Zagreb (for the Croatian republic) and of Belgrade (for federal Yugoslavia) demonstrate. More important is the controlled growth of the new centre to meet the longer-term socialist objectives of providing easier access for the whole city to a vastly improved scale and range of personal consumption and public welfare goods and services. City councils are not constrained to make a profit; they can take bold action to create modern centres on the city periphery and so to forge new urban patterns of social behaviour, circulation, and habits.

These centres are not to be confused with the 'out-of-town' shopping centres that are fashionable near North American and West European cities. Within a relatively short period the new service centre of the socialist city assumes proper centrality in its spatial relationships, being located between the relatively stagnating or stable pre-socialist urban area and the dynamic residential districts of the socialist urban area. Such is certainly the case, for example, in Suceava in northeastern Romania, and indeed is relatively common in Bulgarian, other Romanian and Yugoslav cities, and even in Slovak cities like Košice and Banská Bystrica. It occurs, too, in Polish cities, although there it is often impossible to

separate the phenomenon from the legacy of war: not infrequently, service centres had to be constructed quickly on new sites outside war-destroyed central-city areas which would take years to rebuild, e.g. the service centre in Wrzeszcz, outside Gdańsk.

Zagreb provides a good example. By 1945 the city had spread southwards from its medieval, defensive hill site in Gornji Grad ('upper town') on to the Sava plain in Donji Grad ('lower town') and just over-spilled the Belgrade-Ljubljana railway. Most building extended east-west at the foot of Gornji Grad following Ilica, the main commercial axis. Except for small 'middle class' suburban housing in *Cvjetno naselje* (the 'estate of flowers'), the southern margins of the city still lay some distance from, even ½ km north of, the River Sava. Post-war industrial expansion was channelled into large-scale virgin sites beyond the city to the west (Trešnjevka, Jankomir) and to the southeast (Peščenica, Žitnjak). Substantial population growth resulted, rising from little more than ¼ million in 1945 to: 375,000 in 1953; 458,000 in 1961; and almost 650,000 in 1976. Although residential estates were built and 'wild settlements' formed to the east and west, the main thrust of planned city expansion has been *southwards*. Today more than 100,000 people live in Novi (New) Zagreb *across* the Sava.

In the late 1950s the Croatian republic and Zagreb city-planning authorities drew up a long-term plan for 'a million city on the Sava' (*milijunaš na Savi*) in which the river would become a focal landscape and recreational feature. Construction of a new city centre was to proceed in parallel to, but lying between, the Belgrade-Ljubljana railway and the River Sava (see the 'model', Figure 9.3). It would occupy land formerly liable to flood (but now protected), farmland, or replace 'wild settlements' of inter-war origin in Trnje. Though extensive areas of such 'rural' settlement remain to mar the landscape today, the major elements of the southward shift of Zagreb are already complete. In fact, five distinctive parallel east-west belts of planned socialist development are now evident. Forming the 'frame' is a new road 'grid': four east-west highways, two to the north and two to the south of the River Sava (which itself forms the fifth, central, axis), are interconnected by three north-south highways across the river (shown in the model, Figure 9.3). The northern-most belt, flanking the *Ulica Proletarskih Brigada*, focuses the key components of the new city centre. Located, like that in Katowice, nearest to the railway and intercity bus stations, its major buildings include the Zagreb city hall, concert hall, university, a workers' university, hotels, offices of some leading Croatian banking, trading, and industrial organizations, and a shopping centre. To the south is the second axis, formed by the Ljubljana-Belgrade motorway; this is flanked mostly by new residential-service neighbourhoods which suffer from substantial 'trucking' noise.

Beyond, lies the Sava River axis. Overlooking it on the north, near *Cvjetno naselje*, is an integrated complex of high-rise prestige flats, ground-level old

people's homes, medical and hospital facilities, a hall of culture, and the headquarters of the Croatian branch of the Yugoslav League of Communists. Along the river on the south are extensive recreational facilities for swimming, bathing, sailing, football, and horse racing. Southwards, adjoining this zone, in Novi Zagreb, are the vast grounds and pavilions of the Zagreb Trade Fair, relocated here from inner southwest Zagreb in the 1950s. Nearby is Zaprudje, a residential district boasting the city's largest and most modern shopping and service precinct, a future commercial centre for Novi Zagreb. The fifth and southern-most belt, along Boris Kidrić Avenue, comprises a series of large residential districts, each housing 10,000 to 20,000 people: Trnsko, Siget, Sopot, Utrina, and Travno. A new church has been constructed in Utrina to provide religious services in Novi Zagreb as a whole.

The past two decades have thus witnessed in Zagreb major population changes: decreases of 2 to 22 per cent. in the inner areas since 1953 and with rises of 45 to 565 per cent.(!) in the outer, especially, southern districts (Vresk, 1976b). There has been also significant relocation into the new city centre of politico-administrative functions from medieval Gornji Grad and of economic, educational, and cultural functions from nineteenth-century Donji Grad.

The Residential Neighbourhoods. In many cities the greatest extent of socialist building is vested in housing areas. Since the early 1950s these have been organized in all East European cities as residential neighbourhoods with their own welfare and consumer services (Hamilton, 1978; and see Chapters 11 to 18). Today they house at least half (35 to 40 million) of the region's urban population. In concept, scale, and quality of life that they offer, such neighbourhoods share very much in common, whether located in Grbavica (Sarajevo), Titan-Balta Alba (Bucharest), Uranvaros (Pecs), Dablice (Prague), Jelitkowo in Gdańsk (Hamilton, 1974), or Rostock Lütten-Klein. Remarks here, therefore, are confined largely to three case studies, drawn from Halle-Neustadt, Novi Beograd, and Warsaw.

Nevertheless, some important differences are observable between districts in the same and in different cities. In architecture and layout the uniform five-storeyed 'Stalinesque' of the early 1950s in Mokotów, Nowa Huta, or Eisenhüttenstadt has given way everywhere to what in 1957 Hruška (1961, pp. 287–288) described as 'weaknesses towards formal abstraction and revisionism'—then visible in some residential planning, notably in Poland for the Tatory district in Lublin and for Gołonóg in Upper Silesia. Districts built in the 1960s and 1970s are far more varied in layout, design, elevation, and colour. But many newer developments suffer from significantly higher densities, higher 'wall' blocks which cast dark shadows, and very inadequate provision for the new fact of consumer life—the private car. Currently, parking is a very serious problem in larger Yugoslav cities. Even in the newest residential neighbourhoods like Travno in Novi Zagreb, where car-parking space greatly exceeds that in Polish

or Soviet cooperative residential areas, double parking and use of pavements (sidewalks) is common. Yet even elsewhere, as in Warsaw (see Figure 9.6), many children's play areas in neighbourhood courtyards are effectively 'nullified' by the presence of cars. Generally the five-storeyed quadrangles of Stalinesque and the rigid rows of Khrushchevian residential blocks—so widespread in Soviet cities till 1965 and which often have more 'footpath only' access and extensive green areas—gave way much earlier in Eastern Europe to higher-density high-rise blocks. A major cause was the relative growing scarcity of land in general and of State-owned land in particular in and around cities, whether in Poland, Czechoslovakia, or in Yugoslavia.

This point is brought out clearly in examining the first residential case, *Halle-Neustadt*. Figure 9.4 shows how population densities in this, one of Eastern Europe's newest urban developments, *already commenced* at higher levels than those existing in a typical 'Stalinesque' new town, Eisenhüttenstadt. And they have surpassed, at more than 11,000 people per square kilometre, densities in Berlin Mitte (7,780 per square kilometre). Indeed, this case serves to underline the specific characteristic of the socialist city that housing densities in neighbourhoods do not decline from city centre to periphery and in many cities actually increase as between the older 'lower' inner city and the 'high-rise' periphery. What may happen, of course, is that the *frequency* of neighbourhoods decreases with distance from the city centre so that *overall* population densities do appear to decline. Fundamentally, however, the socialist city contains no suburbs—only high-rise flats to the very edge of the urban area. In reality, vestiges of suburbs may remain as village-relict features, illegal 'wild settlements', or limited but legal 'new class' villa development. Typically, therefore, Halle-Neustadt offers a very sharp contrast to the villa or mixed industrial-residential (pre-socialist) areas flanking it to the north and southeast (Figure 9.5) and to densities in Old Halle (Figure 9.4). Halle-Neustadt, which began its life in 1964, is planned to be a model 'new town' for the G.D.R. (with 110,000 people by 1980): to house 'overspill' from old Halle; to accommodate workers who commute to chemical-industrial combines outside Halle, especially at Leuna (Figure 9.4); to provide local residence for workers and women who will work in lighter industries currently developing in the new industrial zone (G in Figure 9.4); and to be 'self-contained', with its own shopping, service, welfare, sports, and recreation facilities. Typically (Figure 9.4), for socialist residential construction, the city has advanced in 'sectors' through time, mostly from the centre outwards, so as to achieve economies of scale in construction. On completion, each of the six housing districts will house 15,000 to 20,000 people. These comprise residential complexes in 'box-like' layouts (Anon., 1974) surrounding courtyards within which are located welfare facilities (e.g. schools, kindergartens, clinics), while shops are located in small clusters between residential complexes. By 1974, 21,000 flats in the town had been occupied by 53,000 people. The following list of services available to them (Anon., 1974, p.

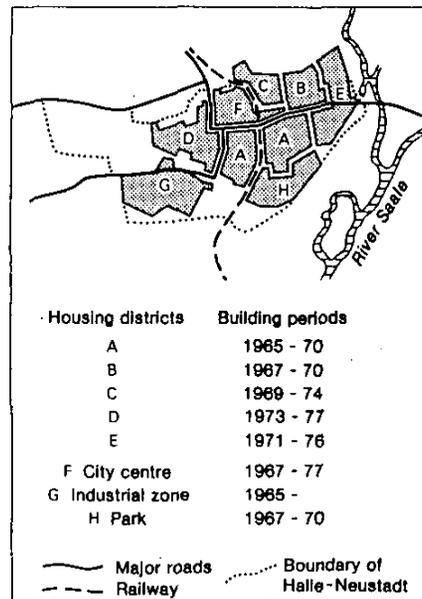
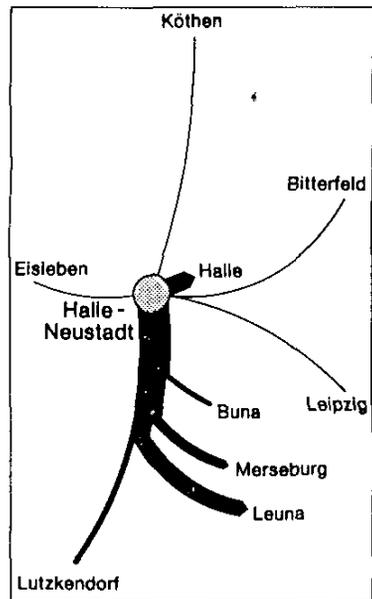
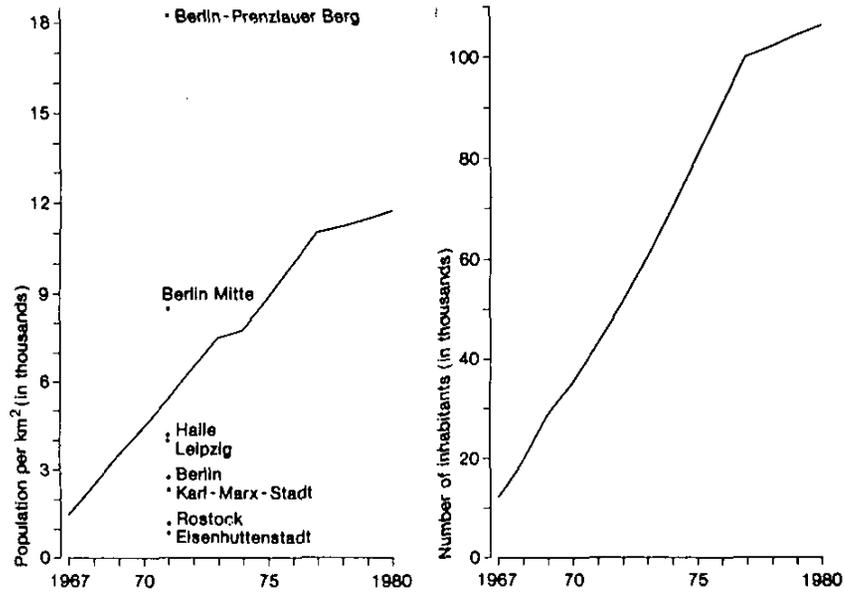


Figure 9.4 Halle-Neustadt: population and development trends in a new socialist town

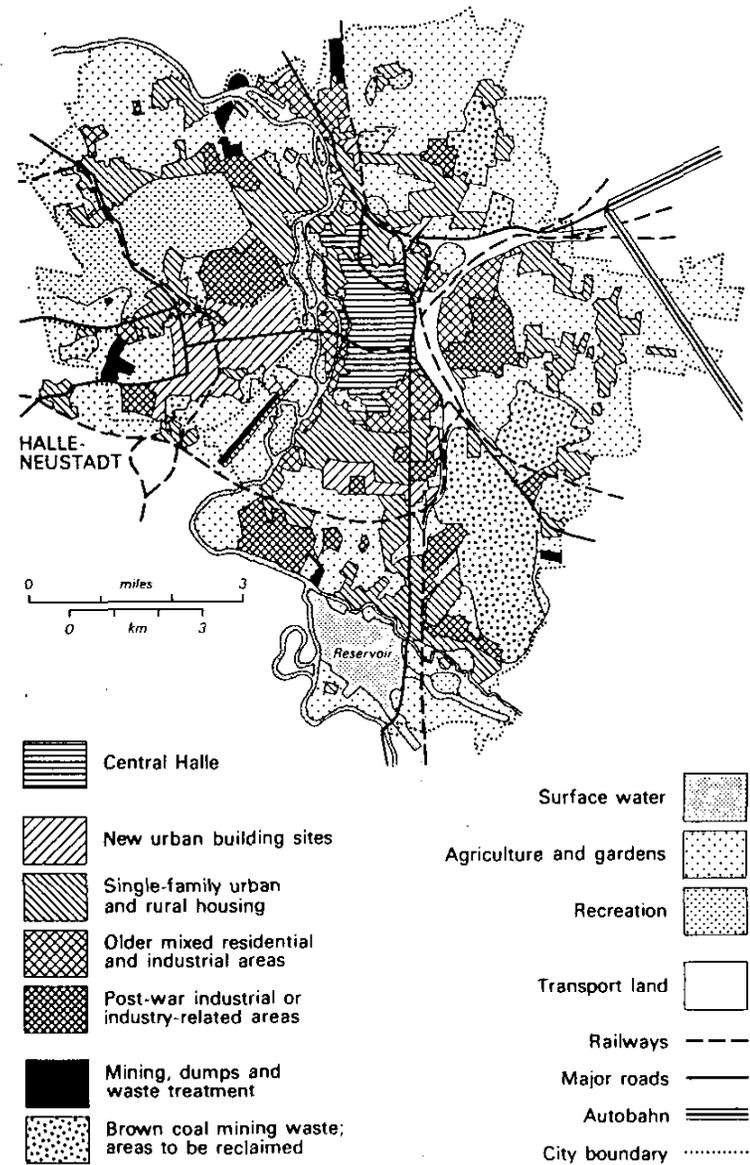


Figure 9.5 Land uses and functional zones in the Halle urban-industrial agglomeration

326) says much about the priorities of German socialist planning and local population structure: thirty crèches, twenty-nine kindergartens, seventeen schools, three clinics, two pharmacies, two children's libraries, a children's hospital, two sports centres, eight gymnasia, five supermarkets, seven food stores, three household-appliance shops, three warehouses, two car-service stations, one petrol station, a sports stadium, swimming pool, dormitory, canteen, industrial-training school, university institute, laundry, post office, fire station, railway station, bakery, and district central-heating unit.

Such provision clearly underlines the difficulties which may be experienced by living in such urban areas—at least in the short run. That few new facilities have been added to this list since 1974 reflects a failure to build the city centre. Inadequacies in shopping and entertainment services in particular mean extra journeys for residents by bus to old Halle. Thus while the young are well catered for, the adult are not. Not surprisingly, some workers are changing their jobs from the chemical plants to jobs in old Halle near shops and cinemas. Yet without population mobility, by the 1990s many of the crèches, kindergartens, and schools will be empty. That problem is widespread already in neighbourhoods in East European and Soviet cities built in the 1950s and early 1960s. There is evidence from Halle-Neustadt, however, that population mobility is already beginning. Some people are leaving to live in older properties in old Halle or nearby. They do so for two reasons: to avoid the arduous daily journeys to work or shopping trips on congested public transport (by bus and train); and to seek housing which offers more space and air. As many Poles can also testify, perceived health and comfort can suffer in the new prefabricated-concrete residential blocks with district central heating because, unlike the stone or brick of pre-socialist and Stalinesque buildings, their walls cannot 'breathe'. Yet the majority of people live where new housing areas are built, not where they choose to live.

The second case examines the major features of a typical residential district in Warsaw dating from the 1960s. Figure 9.6 shows the key elements. Pre-war buildings which remain at the west end form continuous frontages close to the road. The much taller structures of the 1960s are free-standing, are separated from each other by open space, and are 'insulated' from the major thoroughfares by tree-planted green belts and neighbourhood service roads. The north end, of earlier origin, with pre-war structures, and with post-war buildings forming infillings (*plomba*), is more congested and children's play areas and open space are confined by car parking, whereas in the south provision for all three is more generous. Churches at the north end have been preserved to serve the neighbourhood. Indeed, a significant number of new residential areas in Polish and Yugoslav cities have been given new churches, as in Nowa Huta, Tychy, and Novi Zagreb. In the field of services (Figure 9.6) there is a strong correlation between the pre-socialist building stock and the occurrence of privately owned shops, repair and handicraft workshops.

Elsewhere, in post-war blocks, services are entirely owned by socialist-sector organizations (e.g. the Cepelia crafts enterprise). Typical of socialist neighbourhoods and districts is the provision of shopping, services, and *Ruch* kiosks on the ground floors of almost every block. The 'row' of the capitalistic city (still visible at the west end) is replaced by a 'mosaic' of daily and weekly services. This points to the fact that, with high-density building (each fifteen-storey block houses 1,200 to 1,600 people), neighbourhoods easily become the next higher-order districts (groups of four or more neighbourhoods) and hence require services of 'mixed' frequency. Schools, nurseries, and clinics are central, while an administrative-cultural node is in evidence in the north centre. Two less desirable features of the district are the number of roads 'dissecting' it and the presence of manufacturing. Both indicate relict pre-socialist features; but the industry is shortly to be removed. Considering, however, that the district has 15,000 to 20,000 people and is within 1 km of the Palace of Culture and the Centrum shopping precinct, service provision here for consumers is of a far more 'mature' and higher order than in Halle-Neustadt.

The third case study investigates the quality of life in a neighbourhood in Novi Beograd as assessed by its residents. Although drawn from Yugoslavia, it points to problems which may be as common in Brandenburg or Bratsk as in Belgrade. The results were obtained from a questionnaire survey of 8,200 residents living in 2,400 flats in one neighbourhood in central Novi Beograd in 1975 by members of the Yugoslav Institute for Town Planning and Housing (Čanak, 1977). The neighbourhood was selected because it satisfied the following basic criteria: occupancy for more than a decade, giving sufficient time for habits, objective opinions, and social relationships to form among residents; varied housing units of five, nine, eleven, and seventeen storeys; and a fair cross-section of Belgrade population. Replies were obtained from 924 families each with two children, 674 each with one child, 220 childless couples, and 85 families with three children each. In fact, the residents appeared to be above-average since 32 per cent. had higher-skill qualifications, 27 per cent. had completed high schools, while 71 per cent. of all families owned cars. The vast majority of residents worked within 25 to 30 minutes of their homes either in Novi Beograd or in the old city across the Sava.

The questionnaire revealed a very high level of satisfaction with the location of the neighbourhood since it lay within easy reach of work, the river, good public services, and enjoyed good transport links with Belgrade. There was much dissatisfaction with the neighbourhood itself. On balance, however, residents considered that conditions in other neighbourhoods were worse; thus they did not wish to move.

They argued positively that their flats were comfortable, centrally heated, and functionally well planned, while the balcony offered excellent views. However, 'a whole series of defects were perceived concerning the arrangement and use of space in the neighbourhood and point to deficiencies in the details of

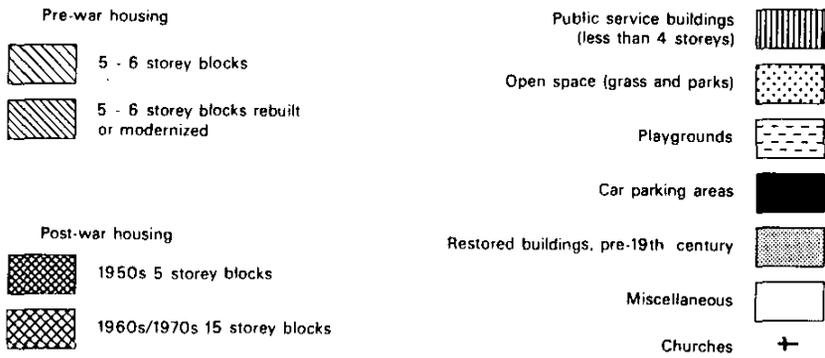
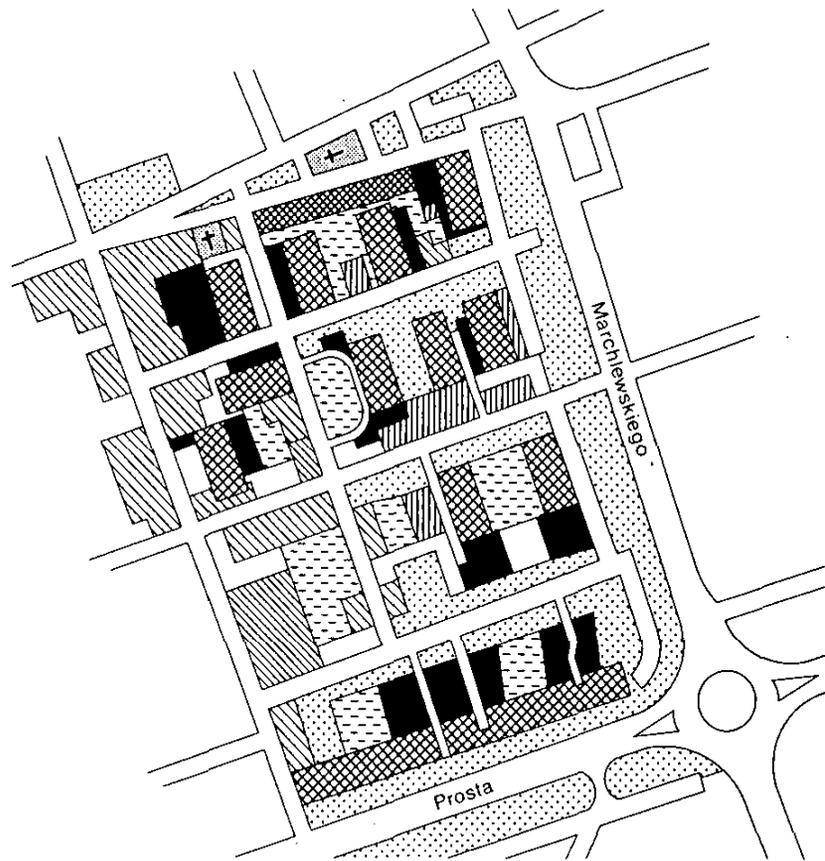


Figure 9.6 The built environment of a residential district in Warsaw, 1977

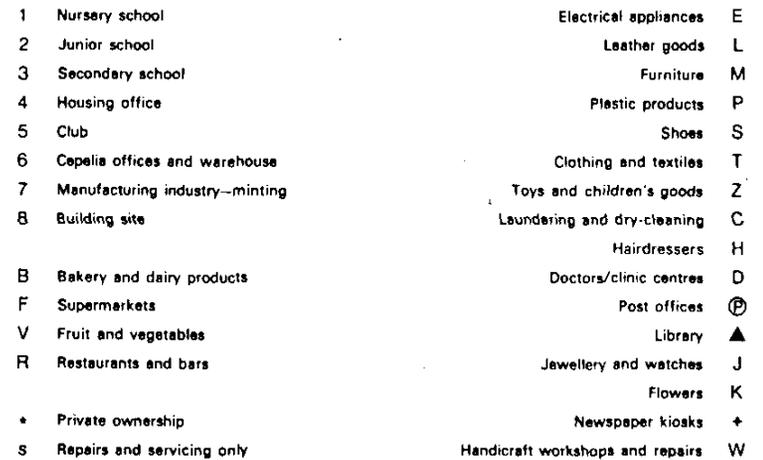
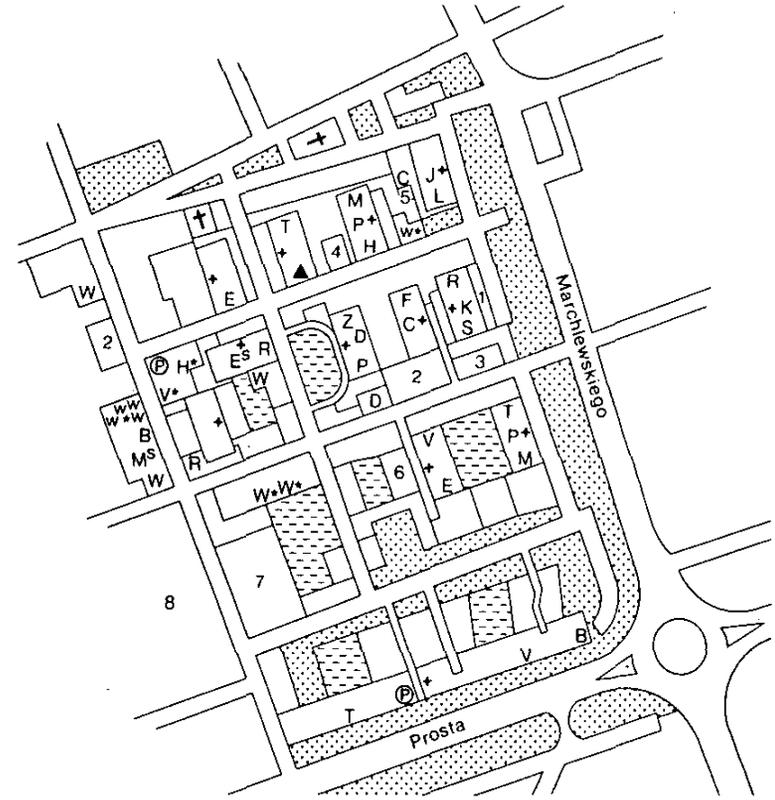


Figure 9.7 The location of services in the Mirów residential district, Warsaw, 1977

urban planning' (Čanak, 1977, p. 39). This view certainly finds support from Poland, too (Sumić, 1975). The defects concerned both living inside and outside the housing blocks. Most residents complained that the flats were too small, with too few rooms. Individual rooms frequently had to perform several functions. The interviewers observed that the living room in 61 per cent. of flats became a bedroom at night (a feature widespread in socialist cities where two-roomed flats are the norm). There was nowhere to dry clothes—that was the major use of balconies (37 per cent. of cases). Almost two-thirds of residents (61 per cent.) complained of noise. The majority considered neighbourhood services to be unsatisfactory or non-existent, whether these concerned children's facilities, shops, repair services, cultural amenities, or opportunities to cultivate fruit and vegetables. Only very basic daily needs could be fulfilled locally and 'weekly shopping required journeys to the Belgrade market or to Zemun, monthly shopping to the Slavija-Terazije-Knez Mihajlova axis or the Merkator shopping arcade in central Belgrade' (Čanak, 1977, p. 39). More than 57 per cent. of residents would have preferred to live in the five-storey building and not in their present blocks, because of the ease of exit it offered to ground level. Yet 84 per cent. perceived the neighbourhood to be overcrowded, offering nowhere for anyone to be alone, and having congested pathways and roads: these were all of a standard width, irrespective of the size of the building that they served. Thus residents preferred (56 per cent.) to spend their spare time in old Belgrade (especially in Kalemegdan), although children were quite happy to be in the neighbourhood since all their school friends lived in the same or in adjacent housing blocks.

Płock

A Case Study

Płock is located alongside the Vistula River downstream from Warsaw. Its examination briefly here has three purposes: to outline the post-war evolution of a medium-sized Polish industrial town; to test its growth pattern against the model East European socialist city; and to derive some further inferences concerning the 'model characteristics' of a socialist city.

Płock was 'put on the economic map' by a decision in 1960 of the CMEA authorities to lay the Kuybyshev-Schwedt Friendship oil pipeline just to the north of the town. Płock was chosen as the location of Poland's major oil refinery (capacity 6 million tons p.a.), so unleashing population growth on a scale unprecedented in the town's history and at a speed almost matched only in the capitalist period (Table 9.5). Typical of many an East European city, however, Płock had lost population in two world wars and then experienced transformation from a regional administrative and service centre into an industrial town of national importance.

Prior to 1939 the town had expanded from its medieval core on the steep

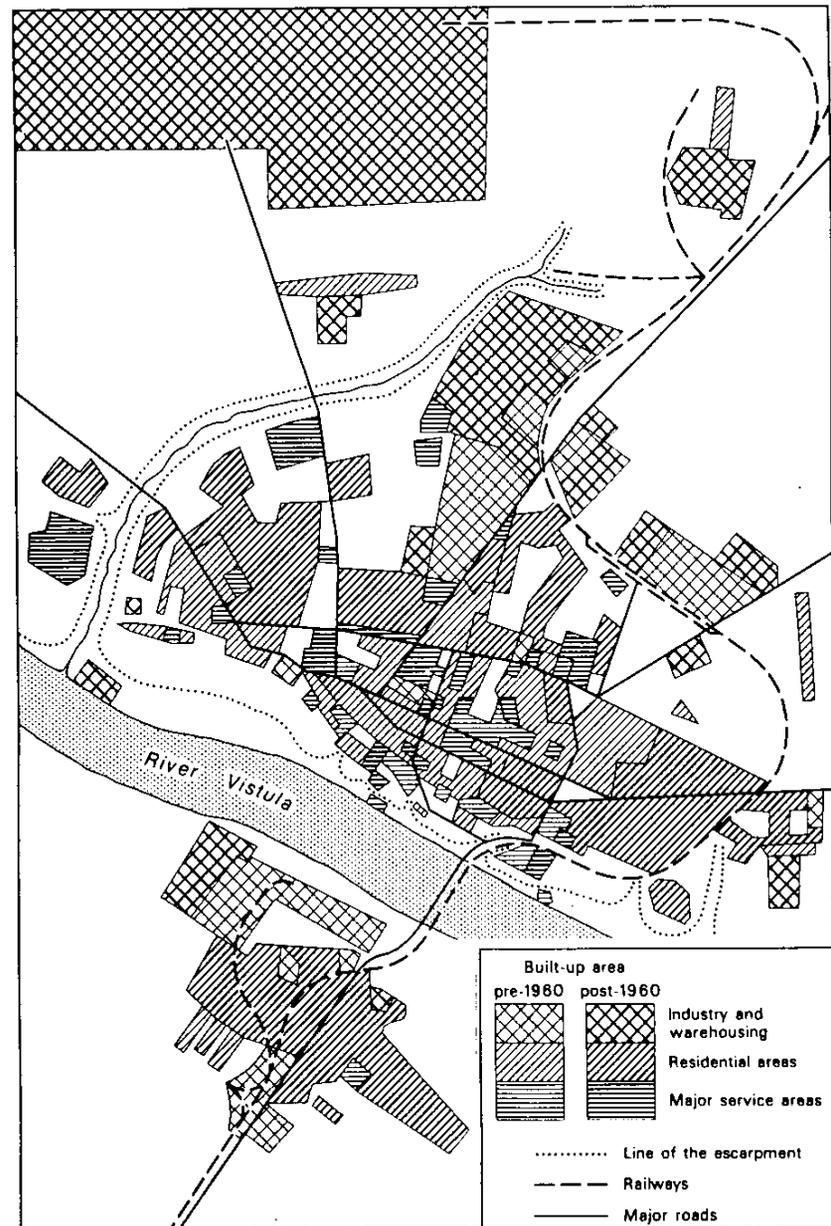


Figure 9.8 Changes in land use and major functional zones in Płock since 1960

Table 9.5 Population growth in Płock, 1800–1977

	1800	1913	1923	1939	1946	1950	1960	1977
Population (thousands)	3.7	30.6	25.7	36.0	28.5	33.1	44.3	91.0
Average annual growth rate (%)	—	6.4	-1.6	2.5	-3.0	4.0	3.35	6.8

Sources: *Statystyka Miast...* (1967); *Rocznik Statystyczny* (1977); Sokołowski (1972, pp. 17–28).

northern bluff of the Vistula, following radial roads and fashioning a concentric-zonal pattern, though with functionally distinct sectors (Figure 9.7). Broadly speaking, a centrally located axis of cultural, historical, religious, commercial, and administrative functions gave way northeastwards to small foods and metal-working industries and warehouses along the railway. Flanking this axis were residential districts, mostly of single-family homes. An outlier, Radziwie, had developed across the river in conjunction with boat building and repair. This pre-war situation changed little during the Second World War and in essence is portrayed in the urban land-use pattern in 1950 (Table 9.6); these indicate a dominance of transport (road, railway, port) and residential land.

Table 9.6 Changes in urban land use in Płock, 1950–1970

Land use	1950		1960		1970	
	ha	%	ha	%	ha	%
Industry, warehouses, and depots	63.1	11.3	131.3	17.9	898.0	49.4
Transport and communications	170.4	30.5	227.4	30.9	307.5	16.9
Central services, administration, and infrastructure	45.1	8.1	45.3	6.2	90.4	5.0
Parks, sports fields, and open space	86.6	15.5	90.3	12.3	148.7	8.2
Housing	193.4	34.6	239.6	32.7	372.3	20.5
Single-family houses	132.2	23.6	129.4	17.6	120.1	6.6
Multi-storey flats	61.2	11.0	110.4	15.0	252.2	13.8
Urban land use Total	558.6	100.0	735.1	100.0	1816.3	100.0
Administrative area of Płock	3118.0 ^a	—	3118.0 ^a	—	5194.0 ^b	—

^aThese figures relate to the administrative area of Płock designated in 1953.

^bThese figures relate to the new administrative area of the town from 1961.

Sources: Kachniarz (1973); Sokołowski (1972 pp. 17–28).

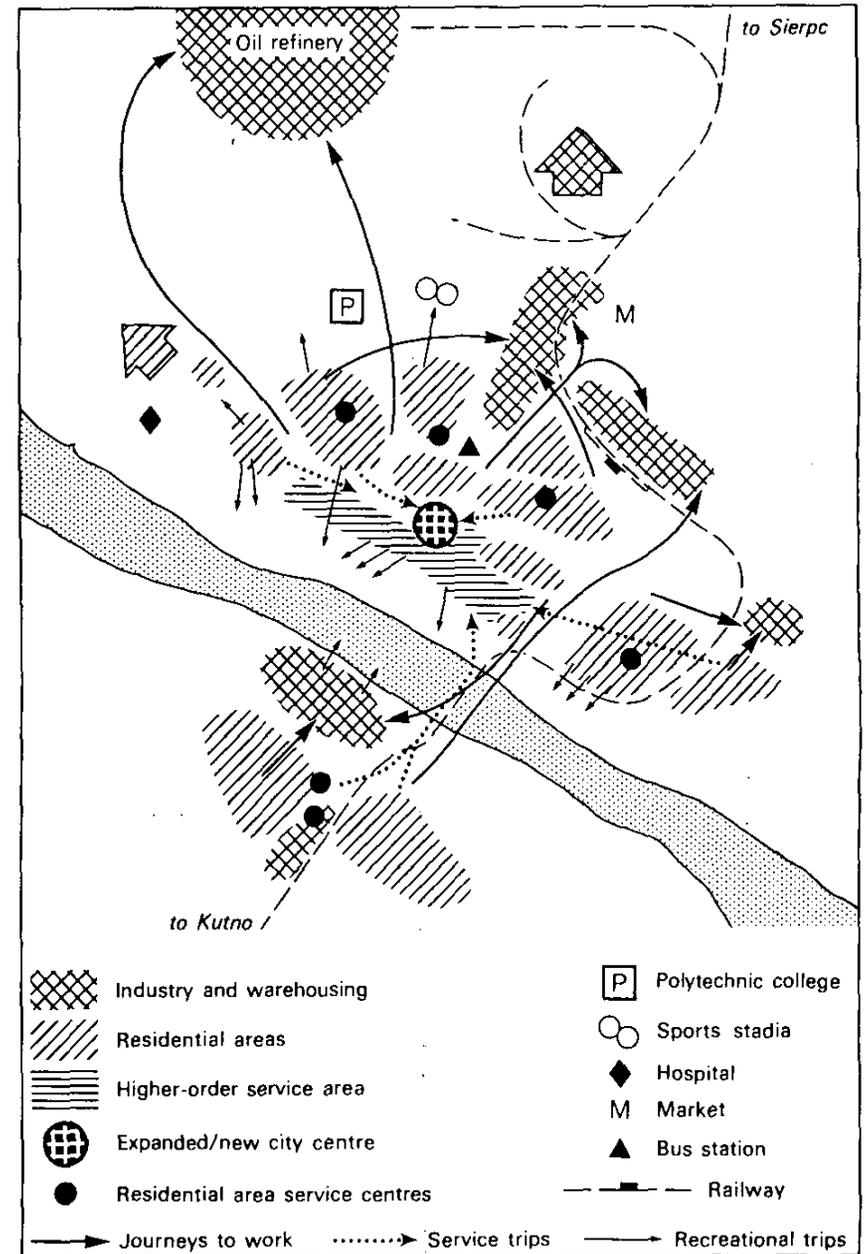


Figure 9.9 Social interaction patterns between functional zones in Płock in the 1970s

Although the concentric form is still visible, and in some respects has been reinforced, during the socialist era Płock has assumed a more noticeable radial-sectoral or 'finger-like' shape. The prime factor in this trend has been the enormous area devoted to the construction of new industries (Table 9.6) well outside the built-up area of the city (Figure 9.8): the oil refinery to the north and farm-machinery, bridge-building, and foods industries to the northeast. Several factors motivated such a strategy: to realize economies of scale in building, operating, and servicing large industrial plants, and to avoid air pollution in the town. Similarly, to achieve speed and savings in construction and associated infrastructure provision, residential development has been concentrated mostly in five- to nine-storey flats located in a series of neighbourhoods to the west (mostly for oil-refinery workers) and to the east (more for metal-workers) of the pre-socialist town. Housing was also built in Radziwie for metal-workers in the shipyards and in the easily accessible northeastern metal-working factories. Some 3,000 old, sub-standard premises were cleared from the inner areas to make way for flats or for commercial uses (Sokołowski, 1972, p. 19). Such a process has dramatically altered the residential land-use pattern (Table 9.6): by 1970 two-thirds of all housing in Płock post-dated the Second World War, while 46.8 per cent. was under a decade old. Indeed, in contrast to war-destroyed cities which saw intensive central-area or inner-city redevelopment, in Płock residential building 'led to a substantial increase in densities in the outer urban zone', a phenomenon observed 'also in Białystok, Kielce, Koszalin, Częstochowa, Tarnów and Rzeszów' (Kachniarz, 1973, p. 36). This has been true of many an East European city. As a result of building, infrastructure has been much improved: the water supply and sewerage networks doubled, the hard-surfaced road network quadrupled, and the city has acquired its first district central-heating systems.

Residential development in particular has 'stretched' the town parallel with the Vistula. Indeed, the similarity with Milyutin's 'linear city' becomes the more striking when one takes account of the development both of a tourist-recreation-parkland zone along the river and of the extensive green belt separating the oil refinery from the town.

The impact of industrialization has been dramatic in other ways, too. Time-series employment data are not available, but it is known that 30,000 new jobs were created in Płock between 1960 and 1970 (Sokołowski, 1972, p. 19), while the number of workers engaged in manufacturing rose from 3,800 in 1950 to 14,000 in 1965 (Kachniarz, 1973, p. 83 ff.). Despite the big housing programme, 6,000 commuters in 1972 still travelled daily to Płock from within a radius of 30 to 35 km, mostly to perform unskilled jobs in construction, transport, and industry. Together with the growth of the city's population, which is now about 5,000 'above plan', this has put a strain on urban services, especially rail and bus transport. To meet the need, the city centre has been extended northwards with a new shopping precinct, two hotels, and a cultural centre, while 'all seats

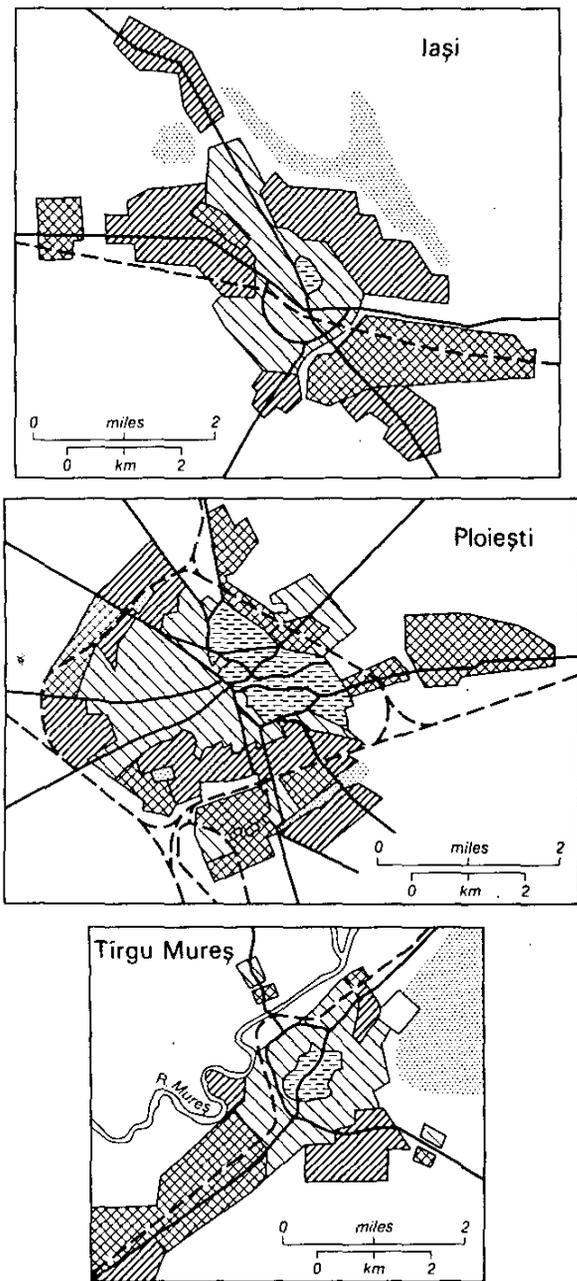
in catering establishments, the number of which has been raised from 700 to 2200, are to be found in completely new or in substantially modernized premises' (Sokołowski, 1972, p. 18). The residential neighbourhoods have been provided with more than twenty schools and with four secondary-service areas located in an arc (Figure 9.9) around the pre-socialist city. The service centres tend either to be of the 'linear type' (under wall-type blocks of flats) or of the 'clustered pavilion type' like miniature shopping precincts. Beyond the residential areas in the 'green belt' and located beside major radial roads from the city are new service complexes of regional importance: a hospital, a polytechnic college, a sports stadium, and a market.

These developments have altered very markedly the patterns of social movement in the city (Figure 9.9). The improved range of central functions of non-periodic demand combines with the newly developed tourist and recreation attraction of the medieval core and Vistula waterside to stimulate a continuity of the traditional, yet now somewhat less frequent, centripetal trips of city residents. Development of services in frequent or daily demands in the neighbourhoods has given the city a more polynuclear functional structure. The concentration of industries and of regional services in weekly or non-periodic demand in selected 'out-of-town' zones generates a centrifugal rhythm of flows new to the city. Yet by virtue of that location these sources of work and services are also more accessible to the regional population.

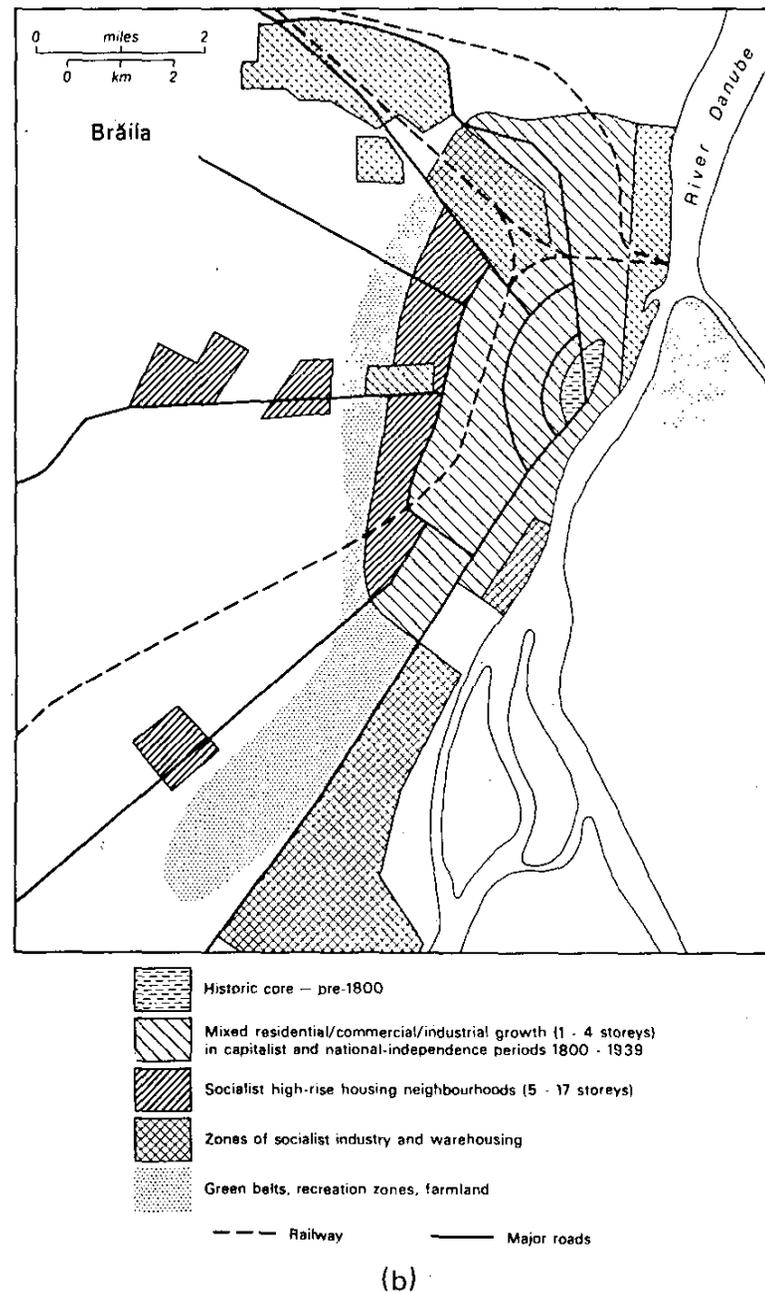
On a much smaller scale, Płock has shared with Warsaw the experience of a very high rate of change involving simultaneous outward expansion and redevelopment of its pre-socialist zones. These processes have been operating in a majority of East European cities and certainly in Poland in Białystok, Kielce, Rzeszów, Tarnów, and Częstochowa. Analysis shows this to be the case also in many Romanian cities, like Brăila, Constanța, Galați, Iași (Figure 9.10), and in smaller towns like Baia Mare, Vaslui, and Bacău. Thus Płock provides a representative case study and in general gives real support to the model of the East European city.

Conclusion

The foregoing may be synthesized by viewing East European socialist cities very tentatively within the framework of some basic theoretical postulates. It is widely accepted that the intensity of urban land-use occupancy is inversely related to distance from the city centre. While there is inadequate data to prove or to disprove this, it may be less valid in the East European city than in its capitalist counterparts. Socialist planning objectives are invoked to determine the locations of particular functions in the city within a socialist economic system: rent and profit are unimportant. That system, however, creates an urban economic environment which appears far more 'homogeneous' in the costs, benefits, and access it offers to individuals and socialist organizations alike. It thus facilitates greater emphasis in decisions on the variables of time, effort,



(a)



(b)

Figure 9.10 Functional zonation and socialist growth in selected Romanian cities: (a) Iași, Ploiești, Tirgu Mureș; (b) Brăila

convenience, culture, and ideology or on prescribed norms and goals. Provided that they are properly serviced as planned in the provision of welfare and consumer facilities, high-density residential districts further reduce the significance of time and convenience variables. These become crucial, however, when plans are not coordinated in their implementation or when planning norms fall below aspirations. Relict pre-socialist features in the socialist city play a dual role here. First, they introduce wide differentiation to the quality of urban environment, so evoking differential social responses, perpetuating pre-socialist behaviour, and 'hindering' the city in its progress towards socialism. Second, being located in central areas, in contrast to large, high-density, outer socialist residential developments, they contribute to a density or occupancy gradient *at least within the built-up area* which, in the East European city, appears to be more 'saucer shaped'. Thus the 'universal' rule that population density decreases with distance from the city centre needs some qualification.

The spatial structure of land uses and functions in the socialist city results from a partially managed interaction between two opposing tendencies. Zonation of larger-scale, hierarchical, and specialized functions like high-order services and industry creates localized, punctiform, or linear arrangements which interact with each other throughout the urban area. On the other hand, non-specialized and hence non-hierarchical functions can assume a repeated grid-like pattern, as do the residential neighbourhoods and their service areas. Within the socialist system, however, these tendencies often combine to create a mosaic. Groups of neighbourhoods here may be associated with one specific industry, while another group there is connected with a different set of activities. Thus there is much overlapping and merging of historic or functional concentric, sector, and poly-nuclear patterns. Since the functional structure of the urban area also generates superimposed patterns of human circulation by acting as a system of origins and destinations of trips of periodic or non-periodic frequency, this spatial structure tends to 'thin out' or 'diversify' flows of people by comparison with the capitalistic city. Yet again, if planning falls short of its goals or of people's aspirations, 'irrational' journeys will be generated. A decentralized socialist city cannot operate properly or efficiently when acute scarcities channel excessive flows in certain directions. The 'mosaic-like' spatial structure and the scarcities' factor, however, cast doubt upon the universality in the East European city of the hypothesis that the intensity of interaction between components of the functional pattern is inversely related to the distance between them. After all, cheap public transport encourages and facilitates high urban mobility, so that time and effort in relation to satisfaction of need would seem to be more important than distance.

City growth and planning goals in Eastern Europe would seem to substantiate the claim that technical and economic progress can facilitate either gradual or rapid urban deconcentration. In a sense, more equal transport costs encourage this process, since the interurban rather than the intraurban costs are the more

important, especially for industry. Thus the industrial function has been planned (or intended) to move the most, from the inner city to the belt beyond the city, 'leapfrogging' the zones of socialist residential expansion. The shift of city centres provides another example, the role of road transport being crucial in their design. Thus marginal outer zones do receive functions from the inner city either by direct relocation or by acquiring new growth. Certainly as cities have grown, planned zoning has reduced intermixing of unrelated or incompatible functions. Yet in the socialist city the process of urban outward movement is not associated necessarily with the movement of the least constrained or the most mobile socioeconomic strata. As housing supply increases, so the opportunities for social groups to 'filter up' also increase, reducing constraints on residential movement. Nonetheless, higher-income or status groups may be in a position to build or to acquire a 'second home' or a 'suburban' villa. When goods, housing, and public transport are scarce, though, the most mobile people may prefer to live in the city centre—even in old housing—while those who prefer or are eligible for new housing must go to live wherever the available or offered residential areas are being built.

The dynamic rates of growth and of spatial-functional change in East European cities since 1945 provide much evidence of the operation of controlled, if not planned, processes of colonization-type diffusion, invasion, succession, and changing-site utility in their landscapes and functions. It may not be entirely true to say that these cities are not subject to competitive forces: planning is supposed to represent the compromise agreed during collective bargaining for resources or for locations. Thus the urban landscape may be subject to 'competition' between city and central authorities or among enterprises, so generating some of the more 'stochastic' processes conceptually associated with invasion and succession. Industries and services once located on city peripheries may well attract auxiliary activities or 'spawn' diffusive developments, though in spatially more managed fashion than in the capitalist city. Zones of socialist transition abound in features of invasion, giving way to succession, creating planned sequences of occupancy in urban spatial structure. When housing supply is limited and residential mobility is constrained, the housing districts and neighbourhoods become prone to the 'life cycles' of rising, stabilizing, falling, and ultimately disappearing demand for their welfare services, especially crèches, kindergartens, and schools. The quality and the utility of the neighbourhood changes, sometimes for the better, but more usually—because of the negative behavioural effects of excessive densities—for the worse. And it is those excessive densities which often generate congestion in the initial years in services and transport serving neighbourhoods.

In these respects East European cities share much with their Soviet counterparts. Yet the preservation and rebuilding of historic cores and nuances in the design of key public buildings, consumer preferences, and social behaviour stamp them still with the specific characteristics of national culture.

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- 16.6 Population changes in the outer areas of Greater Budapest
- 16.7 Natural population increase and migration balance in outer areas of Greater Budapest
- 16.8 Principal features of the urban structure plan
- 16.9 Planned housing development
- 16.10 The rapid transit system
- 16.11 Service centres in Greater Budapest
- 16.12 The location of industrial areas in Budapest

Chapter 1

Is There a Socialist City?

R. A. FRENCH and F. E. IAN HAMILTON

In September 1972 the heads of urban government from twenty-four European capital cities met in Budapest for a symposium on contemporary urbanism. Their deliberations in part reflected a growing world-wide concern for urban problems, a concern which has been taken up actively since the mid-twentieth century not only by administrators, economists, geographers, planners, and sociologists but also by an increasing proportion of the public at large. Although situations vary from one country to another, certain key problems are common to all urbanizing societies. To what extent can or should the growth of larger cities be contained and population and productive activities steered into revitalizing smaller towns? How far can this process contribute towards the fulfilment of the goals of regional balance, national economic competitiveness, and expansion? How can an adequate standard of housing and other amenities be provided to shelter, and to meet the aspirations of, a growing body of city-dwellers? What policies must be adopted to achieve a satisfactory compromise between, on the one hand, designing, creating, and maintaining a healthy, congenial, and aesthetically pleasing urban environment in which to live and to work and, on the other, using scarce resources efficiently? How can or should inner-city areas be renewed in ways which are acceptable to the local population, while preserving the best of national heritage? What should be done to manage the increasing volumes and complexities of intraurban circulation?

Approaches to the solution of similar problems may differ substantially from one country to another, so that each may have something—even much—to learn from the experience of others. Such is the value of international contact—the transnational flows of ideas and knowledge—encouraging and facilitating better international understanding. This is particularly true of the socialist countries, where solutions to urban problems are sought within a philosophical framework of Marxist doctrine and mostly within a practical, decision-taking structure of a command economy. It is now more than sixty years since communist power

was established in the Soviet Union and approximately thirty years since the Eastern European countries became firmly under socialist control. By now, therefore, a vast body of socialist experience in urban affairs has been accumulated. That experience is all the more significant because the majority of countries concerned were at a relatively low level of urbanization when socialist governments took over. They have been able, therefore, to apply their philosophy primarily to the guidance of a massive and accelerated process of urbanization in the ensuing decades.

If anyone is to doubt the importance of the international flow of ideas, then bear in mind that many a Czechoslovak, Polish, Romanian, Soviet, or Yugoslavian planning office has substantial translated materials, plans, and maps of various 'Western', but in particular British, new-town designs and strategies. Indeed, planners in the socialist countries are generally sufficiently well informed of 'Western' town planning, and astute enough to cull from examples of sound, long-standing experience concepts and ideas, then to mould them for application within their own socialist framework (Hruška, 1961). It is not too presumptuous to suggest, however, that the interest of socialist planners in British urban planning stems not only from its widespread application and depth of experience in the United Kingdom but more particularly from the practical welfare approach that it adopted after 1880 to solve problems, identified especially by Engels, in cities which in Britain were then at the same stage of industrialization that is currently under way in the socialist countries. Nevertheless, solutions do differ, since in Britain, as in other mixed economies, the State has elected to intervene in, and operate within, the capitalist system, whereas the State in socialist countries has chosen to replace the system.

Specialists of all kinds within the socialist countries have produced a huge volume of work on urban theory and practice. Yet geography and geographers in the Western world so far have paid remarkably little attention to their socialist neighbours. This is all the more surprising in view of the voluminous literature on towns and urban structure not only in North America and Western Europe, but also in the developing world. Indeed, it is not unfair to suggest that the socialist city is the most neglected subject in the field of urban studies. True, there are genuine difficulties facing the spatial analysis by 'outsiders' of urban problems in the U.S.S.R. and other full or associate members of C.M.E.A. (COMECON). For many, the language barriers are formidable, while the possibilities of field investigation range among the various nations from the severely restricted to the totally impossible. Frequently, data are not available, or not available in the desired format, although this may be just as common in many other countries. Nevertheless, it is still quite feasible to study the socialist city, at least with reasonable hope of achieving some meaningful insights. One has only to think of the works of such honourable pioneers as Fisher (1962), Frolic (1964), and Parkins (1953). Moreover, geographers and planners in the socialist countries themselves have published a rising volume of

studies either originally in English or in subsequent English translation.

Admirable though this is, the total output available to the English reader is still limited and knowledge of the nature of the socialist city remains vague among Western urban specialists. General texts on urban geography either ignore the socialist variant entirely or at best devote to it little more than a passing reference. The present book is thus a modest attempt to fill some of this gap and to present sufficient detail to provide the reader with an adequate grounding. The editors, however, have not sought to cover all the many facets of such a vast topic as 'the socialist city'. In the first place, the book is concerned primarily with the spatial aspects of the city, with its geography. Second, attention is focused mainly on the internal structure of the city itself, rather than on the process of urbanization that forms the background milieu for the object of study. Third, the chapters are restricted to the 'developed' socialist countries, the Soviet Union and Eastern Europe. Omitted from consideration are the cities in the 'developing' socialist worlds of China, Cuba, Cambodia, Laos, Mongolia, and Vietnam. Quite apart from the recentness with which some of these countries have acquired communist governments, it was felt that they presented an entirely different problem as a result of the interaction of their much lower levels of urbanization and economic development with their distinctive cultures. These processes clearly interweave with social organization in shaping the character of any city. There is no doubt, however, that they offer examples of yet other forms of socialist city and—perhaps from the viewpoint of the developing world—forms more acutely in need of investigation than those examined here. Evidence exists (Kojima, 1974), at least in Eastern Asia since the Chinese Cultural Revolution, of attempts at the 'ruralization' of cities to raise intensive crops from city land. Such a tendency stands in stark contrast to the avowed urbanization of rural communities and higher urbanization of towns planned by the 'European' mind for settlements from Magdeburg to Magadan, although the Romanian *sistemizare* policy claims to steer a middlepath. Last, but not least, there are some cities in non-communist countries which have long been ruled by socialistic local governments. These also are omitted since the powers of such authorities to modify their urban milieu by the application of Marxist principles are severely circumscribed by the capitalist system within which they have to operate.

The basic question, which forms the central theme of the book, is whether or not the socialist city is fundamentally different from the city in what may be called, for lack of a better term, capitalist societies. The cities of Eastern Europe and the Soviet Union exist within societies which are organized on Marxist, not capitalist, premises, which aspire to socialist goals, which apply socialist theory in their actions and mechanisms. All these societies, excepting only Yugoslavia today, operate a planned economy where, whatever the degree of centralization in decision-taking, the ultimate decisions on priorities, on capital investment, on targets for sectorial and spatial patterns of growth and change, and on means

for achieving these targets, are taken by State organizations, primarily by the central organs of government and party. The very high order of control vested in the State over such matters as land ownership, land use, the degree and direction of industrialization, capital investment in all sectors, and at all levels of the economy, rents, wages, prices, and even (in certain periods and in certain places) movements of population, means that the State has a power to determine the pace and the form of urban development far greater than that wielded by any Western government, central or local. Has the exercise of this formidable power during three decades, or even during six, created an urban form which is a distinct, special phenomenon, more or less sharply differentiated from the capitalist or market-economy form? The editors contend that the answer to such a question is definitely 'yes'—but with certain qualifications.

As one might expect, there are significant differences in the geography of towns, not only between 'socialism' and 'capitalism', but also between the various socialist countries themselves—for good historical, social, economic, and even political reasons. To start with, the processes of urbanization have differed. The October Revolution created the Soviet Union at a time when the country was little urbanized. A mere 18 per cent. of the population lived in towns; the urban hierarchy was largely confined to the European part and was dominated by the two great primate cities of Petrograd (Leningrad after 1924) and Moscow. The early Five-Year Plans, commencing in 1928, saw an 'explosion' of urban population which, already by 1939 had lifted city-dwellers to 33 per cent. of the population, had created some four hundred new towns and urban districts (termed 'settlements of urban type'), and had initiated the urbanization of the Asiatic U.S.S.R. Since 1939, although the rate of urban growth has been fast, it has also slackened as the city system has become more mature. Between the censuses of 1926 and 1939 the average annual growth rate of urban population was 6.5 per cent. It dropped to 3.3 per cent. in the two decades from 1939 to 1959, partly as a result of the war years, since between 1950 and 1959 the recorded rate was 4.1 per cent. The following intercensal period, 1959–1970, saw the rate again at 3.3 per cent. annually but in the 1970s (1970–1977) it fell further to 2.5 per cent. Today, with 62 per cent. of all Soviet people living in urban places, and with an ever-growing share in the largest cities (see Chapter 4), the U.S.S.R. may be regarded as having entered the stage of mature urbanization.

The advent of socialism in Eastern Europe inherited a variety of situations, as Chapter 8 outlines. None of the countries in the late 1940s was as little urbanized as the U.S.S.R. had been in 1917, although the southern group of Romania, Bulgaria, Yugoslavia, and Albania was only slightly more so. Already Czechoslovakia had 44 per cent. of its citizens in urban areas, while the German Democratic Republic (G.D.R.) was the most urbanized, with 67.6 per cent., although that proportion represented a drop from the pre-war level of 72.2 per cent. Indeed the G.D.R. alone has experienced little new city growth since 1950,

while the pace and nature of the process elsewhere has varied significantly from country to country (see Table 8.2.). By contrast, Bulgaria has made the most remarkable strides, with the share of its urban population rising from 24.7 to 59.3 per cent. Although only the G.D.R., Czechoslovakia, and Bulgaria now have levels of urbanization presently comparable to that in the U.S.S.R., the slowing rate of growth in the late 1960s and 1970s has affected the other East European countries also, though Hungary is an exception. Some of these international variations, however, find parallels in the interregional differentiation of urban trends within the U.S.S.R.

The degree of urbanization at the time of the socialist acquisition of government power and the subsequent pace and character of urban change have affected what has been achieved. Of course, in each country urban development became subject to the responsibilities of various planners. Everywhere the broad aims of planners have been the same—to create an optimum living environment where enhanced productivity, social justice, and maximum satisfaction of the inhabitants would be attained. But in every case, the planners have had to start from given 'inherited' situations, to take into consideration the legacies of the pre-socialist era. That this 'inheritance' could embrace serious problems is made particularly clear by Bate (in Chapter 2), though also by other contributors. Medieval street plans, buildings of historic, architectural and national sentimental value, environmentally undesirable industries, slums and other sub-standard housing, overcrowded accommodation, and the lack of amenity or open space are just some of the key problems that capitalism bequeathed to socialism in Soviet and East European cities. The extent to which such problems existed or were eliminated, modified, or worsened by war and Nazi occupation, and the extent to which their preservation or removal was deliberately sought, became major variables in urban planning decisions. The Poles placed the reconstruction of the historic cores of their largest and most war-destroyed cities among their highest priorities in the rebuilding of Warsaw (Stare Miasto, Krakowskie Przedmieście, and Nowy Świat) and Gdańsk (Główne Miasto) after 1945, though in many smaller towns it was simpler to clear away the rubble and build anew, as in Elbląg, Nysa, and Kołobrzeg. In Chapter 15 Carter highlights the contrast between Prague, where almost the entire historic city centre, 881 ha in area, with 1,431 architectural and cultural treasures, was—and is—a prime zone for conservation, and Sofia, where there was relatively little that the planners felt could not be replaced. No fewer than forty-five Czechoslovak towns have been scheduled for complete preservation as part of a campaign to put 'new life into historic sites'. For a period—happily briefly—after the Revolution in the U.S.S.R. the past was considered to be expendable, an attitude precipitating the destruction of such buildings as Saviour (Spasskiy) Cathedral in Moscow, but subsequently skilled and devoted care has been accorded to the preservation and restoration of the best historic legacies.

Nevertheless, the greater the existing fixed capital of buildings and infras-

structure and the more objects for conservation, the harder it has been for planners to make a wholly socialist imprint. The initial challenge facing government and planners, therefore, was how to compromise satisfactorily between revolutionizing the feudal or capitalistic society fossilized in stone while sustaining also pride in national heritage and devoting the utmost resources to ambitious plans for economic development and 'socialist transformation'. Indeed, all major cities of the pre-socialist period, and many smaller ones, retain a very substantial element of their past—e.g. Leningrad, Prague, Łódź, Kraków, and Budapest. Is one justified in calling these 'socialist cities'? Perhaps it is more appropriate to term them 'socialized cities', for, against the background of highly inert fixed capital, some signs of change are overt. Street names and monuments of past imperial, religious, and capitalist personalities have been replaced by those of revolutionaries, socialist events and symbols, war victims, and heroes. Except for some private handicraft concerns, which often flourish in East European (but not Soviet) cities, shops no longer bear family names, but carry signs starkly describing their functions: 'dairy', 'hairdresser', 'electrical products', or 'supermarket'. Those offering specialized services requiring specific identity, like restaurants, cinemas, or hotels, have individual names. Among cinemas in Gdańsk, for example, are the 'Fairy Tale', 'Dolphin', 'Leningrad', 'Friendship', 'Heather', and 'Tram Driver', while among those in Irkutsk are the 'Pioneer', 'Peace', 'Seagull', 'Komsomol', and 'Screen'. Other changes are deeper—less visible—as the fabric of the pre-socialist city became subject to functional adaptation to the needs and ideals of the new society, its ownership was nationalized, and its interorganizational and interpersonal relationships were modified. And people in such cities, long brought up on old behaviour patterns and attitudes, had to attempt to adapt to change.

In each country, however, many—though not all—towns have expanded, and industrial and other investors and city councils have constructed new housing districts on planned lines. Wholly new towns have been developed in every country, untrammelled by the past and embodying solely socialist designs. In all, almost 1,200 have been built, more than 1,100 of them in the U.S.S.R. since the late 1920s. It is thus in the new towns that one might seek a true realization of socialist ideals. At present, such a search would prove to be partly in vain. Always a greater or lesser gap has existed between theory and practice. In part this was an inevitable consequence of the Second World War, and in the U.S.S.R. also of the First World War and Civil War. Serious population loss and damage to industrial and urban property had to be made good, and rapidly, with little short-term regard to desirable yet longer-term objectives. Even more so, the heavy emphasis on a forced pace of industrialization, which has characterized all the socialist countries for most, if not all, of their existence, has meant that only limited capital, manpower, and effort could be diverted into other sectors of the national economies, including housing and town planning. Backing the weight given to industrialization is the preeminent influence of the

industrial ministries which generally succeed in carrying their point when conflicts of interest arise with city authorities. In consequence, what has been done has frequently not been in accord with ideals, theories, and optimum goals, but rather has taken the form of swift, inexpensive, and loosely controlled expediencies. In recent years, however, particularly in the 1970s, these hampering factors have lost some weight, their place being supplanted in part by greater attention to the aspirations of the citizens themselves. For the first time, through questionnaire surveys and public participation in discussion, the inhabitants of towns in socialist countries are being asked for their opinions on shortcomings and their wishes for the future. Much of this debate is vented through city or local newspapers, as Sampson (Chapter 18) stresses. Sooner or later this process will inevitably influence the application of theory to an increasing extent.

Throughout the socialist period theories have been propounded about the role of the town and how this should be reflected in its form and appearance. Urban living has always been, and still is, seen as the highest form of socialist life—the town is the place where socialist consciousness can best develop the necessary environment for achieving the perfection of a socialist society. To this end the long-term goal is to transform the existing rural settlements, villages, hamlets, and isolated farmsteads into small towns with the amenities and social structures of urban places. In varying forms the *agrorod*, or agricultural town, concept has always constituted part of socialist settlement theory. Although ideas of the size of such agricultural towns have been revised downwards since the late 1950s, and although accomplishment of the urbanization of the countryside remains still a distant objective, the Soviet Union at least has begun the process and so, latterly, have those of her East European neighbours whose farming is largely socialized—Bulgaria, Romania, Hungary, and Czechoslovakia. Small villages have been amalgamated into rebuilt and enlarged local centres. Greater decentralization of investment and decision-making has, since the mid-1960s, facilitated and encouraged the peoples' councils of some such centres to cooperate with state farm managements in developing agro-industrial complexes and building-materials and crafts industries to strengthen and to broaden their economic base. Some villages are designated for further growth, others for phasing-out. Eventually a minimum settlement size of 1,000, or preferably 2,000, inhabitants is envisaged. Such centres would form the lowest rank in an ordered, planned hierarchy of settlements which would form a 'unified settlement system': in this, centres of services and functions appropriate to each level in the hierarchy would be rationally and regularly distributed—though varying regionally in density—throughout the country. By the year 2000, it is estimated that 72.3 per cent. of East Europeans and 76.5 per cent. of Soviet citizens will be encompassed by the urban systems of these countries (Dziewoński, 1976, p.28).

Within each urban place, or city, there is to be an equally rational, planned, spatial ordering of its functions. Industry and residence should be physically

separated from each other by 'green, or isolation, belts', yet located in sufficient proximity to each other to minimize the journey to work. Service functions should be distributed rationally, too, with daily needs met by local facilities

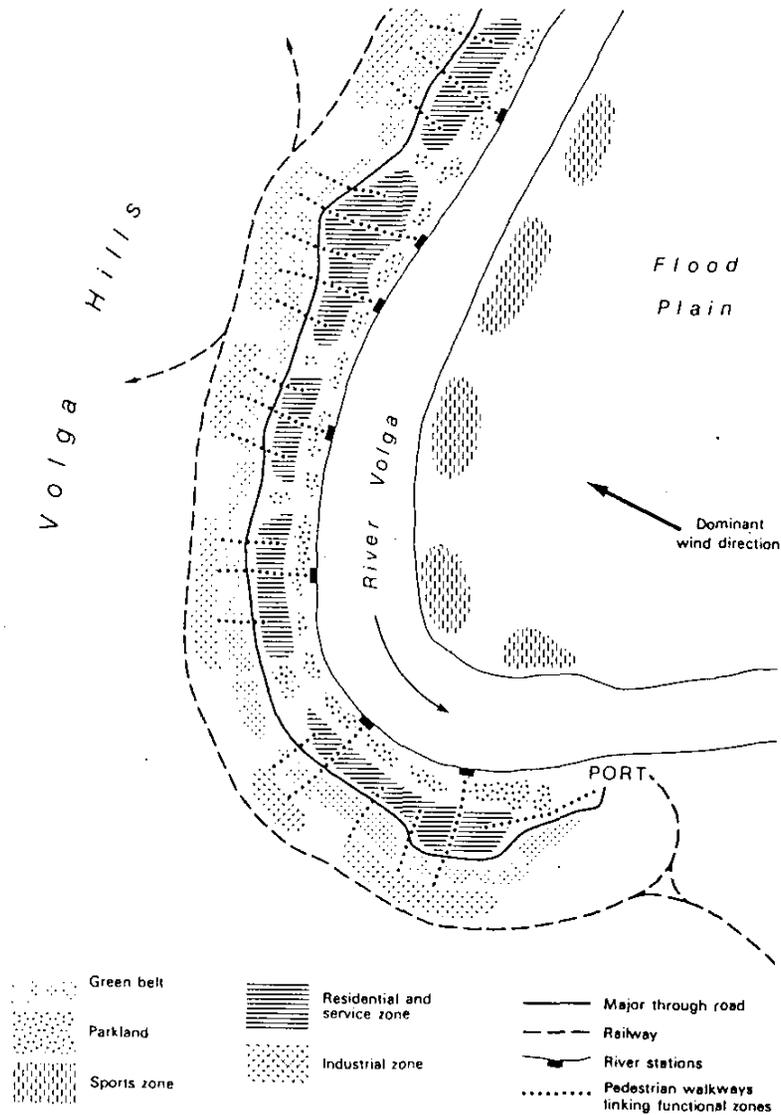


Figure 1.1 The linear city: Milyutin's concept for the planned growth of Stalingrad, 1930

within each residential neighbourhood, weekly requirements satisfied by establishments sited in a district service centre (usually located to serve between four and ten neighbourhoods) and less-frequent needs provided for by specialized services in the city centre (Hamilton, 1976, 1978). Such a nested hierarchy is based on the premise that, for comfortable living in a socialist society, all citizens should have equal access with minimal outlays of journey time and effort, whether on foot or by public transport, to all the material, cultural, and welfare goods and services that they require.

This broad scheme has several origins. One of the earliest ideal forms designed to realize such objectives was *Sotsgorod* or 'socialist city', propounded by Milyutin in the late 1920s (Milyutin, 1974), in part in criticism of irrational town planning then being put into practice. He envisaged the achievement of socialist goals by developing the idea of the 'linear city' that was originally conceived as a model to guide the building of Stalingrad. Milyutin's linear city (Figure 1.1.) comprised parallel belts of housing (with services) and industrial plants separated by a green 'sanitary' zone. Parks and water bodies were to be to windward (the River Volga and its banks) and industrial zones to leeward of the residential areas. Although Milyutin's scheme has been substantially altered, its basic principles remain accepted. Indeed, despite very substantial rebuilding following destruction during the Second World War, Volgograd today still exhibits a modified version of the linear city, stretching 60 km north-south alongside the Volga river in a chain of residential complexes, each linked westward across the intervening green belt with distinctive groups of industrial enterprises (Lappo, 1969; Lipyavkin, 1971) (Figure 1.1.). The importance that Milyutin attached to the linear-city arrangement may have stemmed from both the potentially high frequency in the 1920s and 1930s of the siting of new Soviet industrial towns alongside broad rivers or artificial reservoirs and the success of experiments in urban design at Dnepropetrovsk and Zaporozh'ye on the Dnepr. Evidence of the wider impact of these ideas, however, comes clearly from a large number of new socialist and expanded towns in the U.S.S.R. and Eastern Europe in which industrial and residential zones have developed in parallel yet separated fashion (Chapter 9). In 1932 Ladovskiy proposed a new 'trident-like' version of the parallel-belt idea to guide the allocation of functions among zones and sectors within the ring-radial pattern of expansion of Moscow (Figure 1.2.). With modifications, notably in the increased importance of open and recreation space penetrating the service corridor in the centre of the 'U', these ideas are still identifiable in the plan for Moscow 2000 (Hamilton, 1976). Lappo (1969) has suggested that Ladovskiy's concepts were forerunners of Doxiadis' notion of *dynapolis*, the dynamic city.

The early theoretical ideas of the ideal socialist city culminated in the writings of Academician Strumilin (1961), who saw forms of communal living as the basis of society. To him, the *mikrorayon* or 'micro-district' would provide the urban-spatial framework for such living, being a self-contained community of

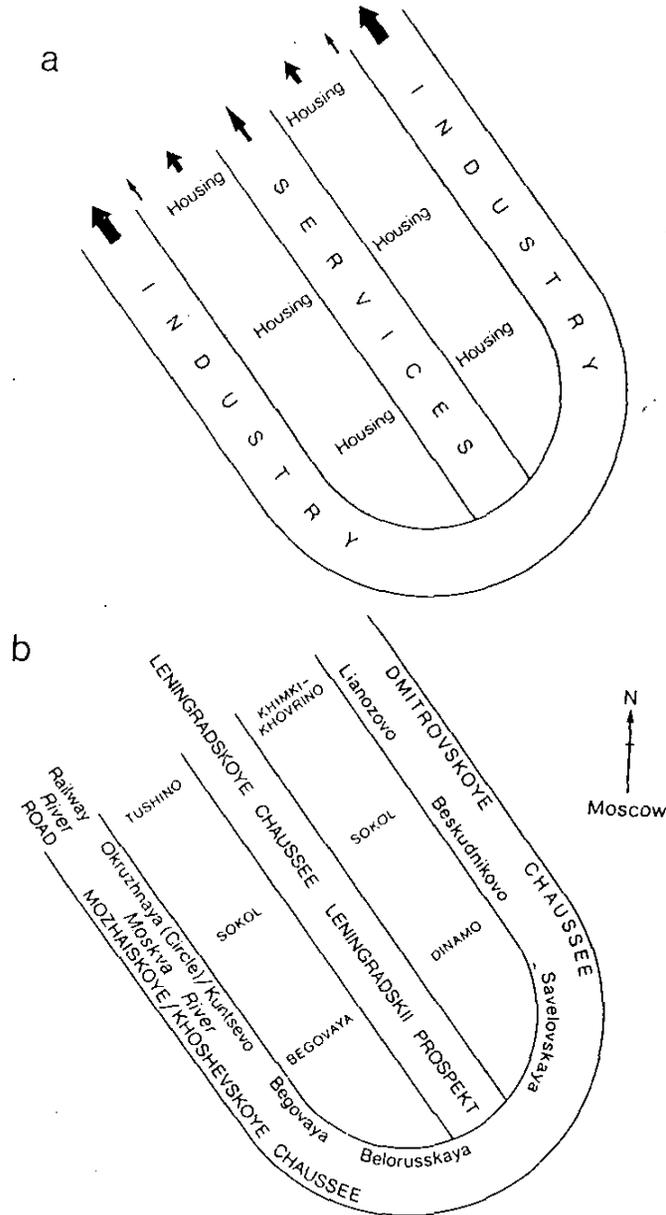


Figure 1.2 Ladovskiy's scheme for the directional growth of the socialist city: Moscow 1932-1933

residential quarters, including dormitories, communal eating and recreation places, crèches, kindergartens, schools and local medical facilities, shopping and other service provision. Each micro-district would be linked, through locational proximity and through employment of its inhabitants, with an industrial plant or other major activity. Although communal living has not developed and now seems unlikely ever to do so in either the U.S.S.R. or Eastern Europe, the physical format of the micro-district, or residential neighbourhood, has become the basic unit of new housing construction throughout the socialist countries. In practice the micro-districts have not always been provided either immediately or fully with the optimum range of services. Even more usually, they are grouped into large, sometimes huge, residential complexes without close spatial links with any specific industries or job markets. Quite often their inhabitants are employed over the whole urban area. This is particularly the case in larger cities where the variety of job opportunities and wage rates encourages higher labour turnover (Chapter 9). One might cite as an example some staff of Kraków University who live in or near Nowa Huta, the new satellite town lying to the east of Kraków and adjoining what, for the past twenty-five years, has been Poland's largest steel plant. Thus minimization of the journey to work becomes often an ideal, especially once cities pass the quarter-of-a-million mark in population. Nevertheless, the micro-district is one major element of socialist urban planning which in the past two decades has been translated into bricks and concrete.

Less successful have been the concepts of optimum city size. Originally, it was fashionable among planners to think of towns of from 50,000 to 100,000 inhabitants as of optimal size. Beyond that, growth in any one place, it was thought, had to be 'hived off' into new towns located at some distance, rather in the manner depicted by Ebenezer Howard for his evolving system of garden cities. From the very beginning, however, this was hopelessly unrealistic, requiring as it did the restriction of growth in larger towns. It ignored a whole series of economic processes which in reality bolstered growth in larger towns: the priority given to rapid industrialization in large-scale integrated plants, which required plentiful labour and skills; the multiplier effects of establishing new industries; the attraction of migrants to bigger towns, with better amenities, more especially the capitals; and those with industrial employment offering higher wages than are on offer in rural areas. Thus theoreticians have steadily conceded ground over optimum size, first up to 100,000, then 200,000 to 300,000 inhabitants (Bater, 1977, p.191), although to a degree this reflects an increase in economies of scale accruing from prefabricated construction methods. Yet the growth of cities has continued to run ahead, despite efforts to control immigration to the largest cities such as Moscow, Sofia, and Warsaw. As Chapters 4 and 8 indicate, ever greater shares of Soviet and East European populations live in the cities of largest size. By the 1970s, therefore, 'optimum size' had become a dead letter among socialist planners, although some writers still pay

it lip service. Even so, the debate surrounding this issue has proved of value, at least insofar as it raised the question of costs of urban infrastructure, welfare provision, and growth to a position in the forefront of the criteria that planners have applied to shape the internal spatial design and organization of socialist cities in general.

Planners are now supplementing controls on in-migration by devising ways of organizing effective linkages between 'clustered' or 'grouped' towns, which they term agglomerations. Much recent East European and Soviet research has been investigating the functional structures and dynamics of all types of urban agglomerations, with a view to improving their management. In itself, this reflects increased urbanization and city size in all countries, yet it also mirrors everywhere the growing complexities of intercity interaction and integration, within and across regional and national boundaries, as factories proliferate along lengthening chains of manufacture on an increasingly C.M.E.A.-wide basis, as the tertiary and quaternary sectors enter a phase of accelerated growth, and, in consequence, as transport flows multiply and intensify. No less, though, it also expresses the impact of scientific progress on planning organization and on planning strategies, because the advent of systems analysis has baldly exposed—most sharply in the functionally complex arena of the urban agglomeration—the inadequacies of the past and continuing dominance of 'productive-sector' planning decisions. Significant, too, is the growing tendency to approach urban problems from the 'human' viewpoint, by treating agglomerations as key labour-market structures and key components of social planning in the national planning system (Bogorad, 1966; Davidovitch and Lappo, 1964; Khorev, 1976; Korcelli, 1976).

The agglomerations may be monocentric, being focussed on one major city, a polyfunctional centre, with satellite dormitory and industrial towns linked to it and lying within a radius of 50 to 80 km of it. Examples are the capital-city agglomerations of Budapest, Moscow (Hamilton, 1976), Sofia, and Warsaw or the manufacturing-industrial agglomerations of Gor'kiy, Łódź, Novosibirsk, and Sverdlovsk. Or they may be polycentric, comprising several, larger—but no really dominant—cities with similar or with complementary functions, such as those industrial agglomerations based on extractive industries in the Donbass, Upper Silesia, and the Kuzbass.

In either case the planners seek to achieve a better functional and spatial 'balance' within the agglomerations. All are characterized by three groups of activities: first, the leading group of 'propulsive' activities on a national or regional scale, be they manufacturing, energy-productive, administrative, and scientific activities; second, linked or complementary activities which are dependent upon inputs from or demand from the leading activities; and third, productive and non-productive activities on a local scale, including welfare, serving the needs of the population in the agglomeration and its immediate region. Generally speaking each agglomeration *as a whole*, whether in Czechoslovakia, Poland,

or the U.S.S.R. has *tended* to be dominated by the first group, leaving 'disproportions' in the sense of inadequately linked or service activities. However, within each agglomeration similar 'disproportions' may be observed within constituent towns and cities. Thus current concern is to structure service provision hierarchically within the agglomeration and to minimize daily commuting by 'reshuffling' the pattern of residences and workplaces among towns in the agglomeration. Administrative and the more occasional service requirements are to be met by the major central city or, in a polycentric agglomeration, by one designated and developed as the centre (as is Katowice for Upper Silesia). Other industrial and satellite towns are to receive much better provision of the services in more frequent use. Dormitory satellites are to acquire new industrial plants and research institutes, or similar facilities which are relocated from the older, inner zones of the major city, to 'soak up' their labour force locally and so to reduce the need for commuting to the central city. Existing industrial towns outside the main city are to be expanded further, or their ranks joined by new scientific or industrial towns, but their job potentials are to be better matched by services, leisure activities, and new residential micro-districts. At the same time, preservation of intervening open spaces for forest, farming, amenity, and recreation zones is seen as a means of preventing the agglomeration from becoming a conurbation.

The key variable in implementing these policies is the ability to plan *effectively* for the agglomeration as a whole and its region. Thus, in the future development of Moscow, the planners are designing strategies for the Moscow region, to steer the growth of industry, research and development, and population away from the capital itself into satellite towns beyond the green belt which are spread throughout Moscow *oblast* and occur even in parts of adjacent *oblasts* (Hamilton, 1976, pp. 42-45). One must have reservations about the success of such city-regional planning. Even as noxious industries are being moved out of inner zones, other existing plants are enlarged and new industries established. In Moscow, therefore, more than one million square metres of production space is still put into operation *every year*, despite efforts to locate growth beyond the metropolis itself (Lappo, Chikishev, and Bekker, 1976, p.74). Yet such planning is new to the socialist countries: only two 'special, integrated economic and social development plans for the period 1976-80' exist in the U.S.S.R. 'for Moscow with Moscow *oblast* and Leningrad with Leningrad *oblast* and these are of an experimental nature' (Kibal'chich and Lyubovniy, 1976, p.244). The basic problem hitherto and still elsewhere lies in the division of interests and responsibilities. More powerful central authorities, the ministries and Gosplan U.S.S.R., are primarily concerned with the development of particular industries and related activities of regional, national, and international significance, not with local or city-level problems. Thus they encourage continued modernization and growth of enterprises in Moscow and Leningrad to 'further their avant-garde role in Soviet economic life' (Kibal'chich and Lyubovniy, 1976, p.244).

On the other hand, *oblast* and city planning is more concerned with local industries, services, and welfare provision.

Thus city-regional planning experiments should integrate national-economic and spatial-social planning for the agglomeration. In Poland, the reorganization of local administrative regions in 1975 has been implemented with this objective partly in mind. However, two further reasons are suggested as to why city regional planning must be made to work (Karlłowicz, 1976; Kibal'chich and Lyubovniy, 1976; Yendrashko and Karbovnik, 1976). Though highly practical, both express existing problems in realizing a socialist manifesto for the city. First, the use of 'administrative measures' to restrict city growth, that is the use of the residence passport to prevent entry by would-be migrants into the largest cities, has not operated satisfactorily, whether it be Moscow, Warsaw, Budapest, or Sverdlovsk, and in any case is increasingly frowned upon as governments become more liberal. Instead, planners advocate action on two levels to regulate city growth: a national-spatial policy framework within which national economic decisions must ensure more effective steering of growth away from the biggest and most densely populated agglomerations and into other agglomerations; and on the lower level vast improvements of infrastructure, amenities and the aesthetic appearance of smaller towns to make them more attractive to industry and workers. To date Poland is the only country to have designed, in 1972, a national-spatial development plan, while only certain agglomerations (usually capital-city regions in other Eastern European countries and in the U.S.S.R., together with Leningrad and Sverdlovsk-Nizhniy Tagil) have had detailed plans drawn up for them. Other agglomerations await integrated socioeconomic plans. Second, a continuing and often thorny problem in many agglomerations, especially in the Soviet Union, results from the priorities for heavy industrialization, that is the limited supply of jobs for women, while often there is a surplus of jobs for men. The planning approaches outlined should be applied to ensure the location of growth in lighter industries, research and services among agglomerations and among places within agglomerations to absorb labour surpluses; otherwise the 'right to work' and the 'right to equal opportunity' lose some of their meaning.

The sharing of the foregoing theoretical concepts and actual planning strategies by planners in the various socialist countries, and the similar problems of translating theory into practice, have brought about a certain degree of uniformity in cities throughout the Soviet Union and Eastern Europe. The casual visitor may well be conscious of the differences between one town and another, from Mecklenburg to Mongolia and from the Adriatic to the Arctic, but this is because his experience is mainly of central areas where the historical, cultural, and religious differences remain most strikingly apparent. The cores of Prague, Gdańsk, Łódź, Split, Plovdiv, Craiova, Moscow, Leningrad, Bukhara, and Irkutsk are classic examples of the variety. Soon the visitor, in exploring, begins to find resemblances. Architectural styles recur. The heavy and grandiose

'Stalinesque' architecture of early skyscrapers in Moscow, like the Ukraina Hotel or University, is reproduced in the Palace of Culture and Science in Warsaw, and in key buildings in Bucharest and Sofia. Blocks of flats of the same period appear virtually indistinguishable, whether at the Kaluga Gates in Moscow, on the Miners' Prospekt in Prokop'yevsk, in Mokotów in Warsaw, along Karl-Marx-Allee in Berlin, or in central Nowa Huta, Eisenhüttenstadt, Havířov, Dunaújvaros, or Dimitrograd. Even more widespread are the prefabricated five-storey blocks of the 1960s and high-rise towers of the 1970s. Everywhere the apartment blocks are grouped in neighbourhoods of closely similar layouts. Indeed, if one were transported into any residential area built since the Second World War in the socialist countries, it would be easier at first glance to tell when it was constructed than to determine in which country it was. The uniformity extends equally to the street furniture—the heroic statuary, the white-on-red slogans, the central square as a ceremonial focus, the kiosk selling newspapers, or the 'kvas' vending machines. It may well be, as Church argues (Chapter 17), that these reflect the uniformity of socialist consciousness pervading the new societies of Eastern Europe.

And yet national culture and tradition expresses itself in nuances of modern architectural design, as also in the persistence of customs, traditional behaviour, music, and drama. Decorative designs which surmount the walls of the Palace of Culture in Warsaw were copied from the medieval Cloth Hall (*Sukiennice*) in Kraków. 'Central European' red-tiled gable roofs and shopping arcades in Eisenhüttenstadt or the Czechoslovakian new town of Havířov, the 'Romanian' tower in the new centre of Vaslui, and the Uzbek 'filigree' concrete designs on the Lenin Museum in Tashkent, all these are intended to testify to socialism as a mode of national and cultural expression and development. An immediate impact on the first-time visitor from Western countries anywhere in socialist Europe is made by the lower order of service provision, the fewer shops or petrol stations, and the more thinly stocked shelves, especially when one travels away from the capital cities. And yet important differences do exist, too, with their roots in historic cultural legacies and response to local environment, for whereas in the U.S.S.R. the visitor will search far and wide for a coffee house for refreshment, in Polish cities cafés are as thick on the ground as are bars in Paris; in Yugoslav cities the *slastičarne* are as frequent as the ice-cream parlours in Italy or the cake shops in Vienna, and in Bosnian or Serbian towns the barber is as common as in Istanbul. In general, to date, however, it is only when going to the cinema, participating in sports, or travelling on public transport outside rush hours that the visitor may find better provision in the socialist city than in almost any developed, capitalist city.

Far more subtle, less visible to the casual visitor, are the greater uniformities of spatial distribution within the socialist city that form the major subject for discussion in this book. Urban areas created since the 1940s all share a much more even spread of industry than is common in the capitalist city, where firms

seek out wedges of cheap land close to good transport facilities. Such evenness, however, is combined with a physical separation of factory from dependent housing by trees and open spaces. Nowhere is this more apparent than in Siberian cities. For example, when encircling Novosibirsk from the air one sees to the south of the River Ob', a residential micro-district, a narrow sanitary zone, an industrial plant, and a wider green open 'wedge', repeated from west to east along the axes of Titov, Batutin, Pamir, and Siberian-Guard Streets in an astonishingly regular sequence of 'rectangles'. In Novokuznetsk, where the city has grown since 1930 as a 'dismembered' arc not unlike Milyutin's linear city, large residential districts are associated respectively with the Kuznetsk steel combine of the 1930s, the West Siberian metallurgical complex of the 1950s and 1960s, and post-war chemical, metal-working, engineering, and ferro-alloy plants, each being separated from the others by a few kilometres of river, forest, hills, or recreation land (Figure 1.3.).

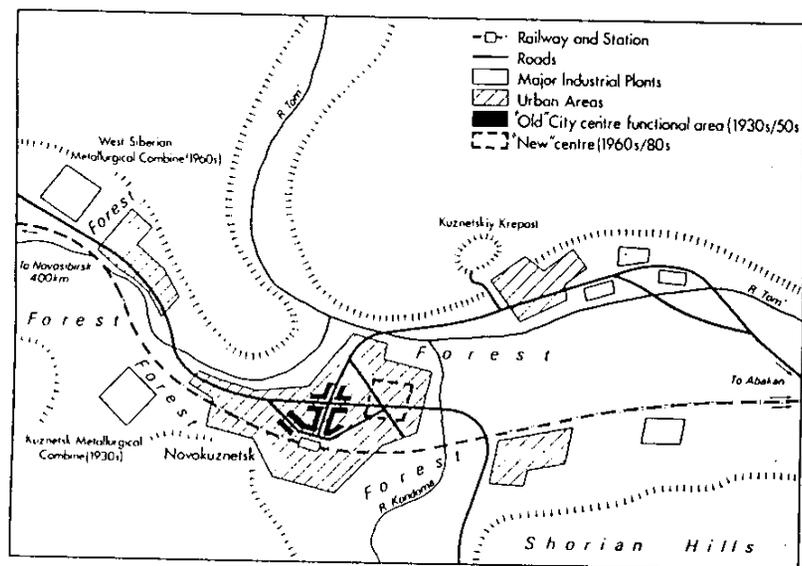


Figure 1.3 Novokuznetsk: an example of a Soviet socialist city in Siberia

Everywhere, social segregation of the socialist city by *sectors* is absent or very greatly diminished, although in each city there is a tendency for some social segregation by apartment *building* to be found. In part, relative homogeneity of the occupational composition of the work force in industrial cities facilitates such uniformity. Nevertheless, in *any* city the low, largely nominal and relatively uniform rents for state-owned apartments mean that no part of

the city is barred to any inhabitant or migrant on the grounds of cost, income, status, or race. Indeed, one may suggest that in the larger, polyfunctional cities that embrace the entire range of occupations, potential segregation can or could occur from application of the criterion of minimizing journeys to work; this could be between administrative, scientific, or welfare-sector employees working in city centres or in particular 'wedges' of the city (as in southwest Moscow) and the manual employees operating machines in factories, working on construction sites or driving transport vehicles from depots in outer city areas or other 'wedges' (as in eastern or western Moscow). Such segregation can be, and is, diminished substantially by trading off social mixing in the micro-districts and housing blocks for more and longer-distance commuting on public transport at nominal flat-rate fares. These fares, very low to the individual, represent higher transport infrastructure and operating costs to the city. These problems, however, become geographically enlarged as socialist planning, in seeking to avoid the conurbation, creates the urban agglomeration. Thus it is in the agglomeration that planned initial specialization on particular activities, whether industry, tourism, or research, among the satellite and new towns creates *intercity* social differentiation, not only among these smaller cities but between them and the major polyfunctional centre of the agglomeration. That is also why the agglomeration is also an object of growing social concern among planners.

Whatever the differences and similarities between socialist and capitalist towns, any account must be limited to a moment of time. In neither form is the situation static. Planners modify their theories, and at least their immediate aims, as realities force themselves to their attention. Some Western observers see a convergence of the two forms and believe that the differences reflect different stages of urbanization, or merely the circumstances of post-war austerity, and that the socialist city is now becoming more and more like its capitalist counterpart. There is much, at least superficially, which might tend to support such a view. Standards of living have been gradually but steadily rising, although economic circumstances in the mid-1970s appear to have slowed this progress in some socialist countries as a result of food deficits and growing sensitivity to inflation on the world market. In particular, the rise in car ownership is making the street scene, at least in larger cities in the socialist countries, resemble more closely that in the West. Problems long familiar to the Western planner—traffic congestion, parking, air pollution from exhausts, garaging facilities—are increasingly preoccupying their socialist counterparts. Mobility and recreation patterns among individuals are being changed by the car as they have been in Western Europe and North America. As yet, however, the predominance—and hence the relative efficiency—of public transport has not been impaired to any significant extent, but no longer can authorities in the socialist countries set their face against a car-owning society, as Khrushchev did in more than one public utterance less than two decades ago.

Rising living standards, however, go hand in hand with changes in social status. Differences in income in the socialist city are still substantial and there are signs that they may be increasing, rather than decreasing, social stratification—particularly as opportunities to work and to travel abroad open up. If circumstances in the early years of socialism have largely prevented such social stratification acquiring any significant spatial dimension, might the future not see at least a degree of occupational segregation? Weclawowicz in Chapter 14 indicates that one can observe this in Warsaw, as indeed do other authors in other cities, but he stresses emphatically that it is neither marked now nor likely to become so. The availability of free welfare services in socialist countries, notably health and education, is general and in itself is rarely a spatial variable. Even when consumer goods and services are scarce (as has widely been the case in the past and is still so in certain instances), this has not significantly affected patterns of residence of various groups. Rather it has increased cross-town journeys in search of such services and goods. The increasing provision for such needs will reduce any future possibility of social segregation on grounds of better access to services, especially for the less-mobile sections of society.

Furthermore, emphasis which has been given since the 1960s to cost-effectiveness in all aspects of socialist economic management has made some planning decisions appear to resemble more and more those of capitalist enterprise. It has been argued frequently, even by central ministries, for example, that it is more efficient to locate new industries in existing cities, where pools of labour skill and markets are available, than to go on creating new towns on green-field sites. The new Khromotron plant manufacturing colour television tubes was built in Moscow itself, and not in Siberia or even in the outer areas of Moscow *oblast*, for excellent practical reasons—the existence of a major electronics industry, skilled labour, a large market, and the transportability of the product. Much the same could be said for the development of the Polish vehicles industries in Warsaw and Upper Silesia. Nor, it can be argued, is convergence on one side only. The period since the Second World War has seen the growth of planning, government intervention, and developmental controls in Western societies. The need for town-planning permission to alter land uses in cities or to erect buildings can greatly circumscribe the actions of private enterprise. Centrally taken decisions, at least in Western Europe, can be enforced by the issue or refusal of development certificates, permission, and financial provision to proceed with hospital, education, or housing programmes. Problems of Western urban areas, such as the redevelopment or revitalization of the inner cities, may not be resolved as yet, but they are now regarded as the responsibility of local and national public authorities, problems which can now more rarely be left to the uncertain consequences of untrammelled action by private enterprise.

All this said, fundamental differences remain and, in all probability, will remain. Above all, decision-making affecting the capitalist and the socialist cities operates in quite distinct socioeconomic and political contexts. State

intervention and control in Western countries is aimed at, and can only hope to achieve, the amelioration of the inadequacies of the existing system because planning has to operate within limits imposed by private ownership of land and buildings, private control of investment, and the greater freedom of choice and action possessed by the individual, even when such action may not be in the best public interest. The inner-city problem is a classic case in point. Governments, at least in Britain, have encouraged industries to move from inner cities, especially London, without analysing the long-term consequences which are now all too apparent: little in the way of systematic *economic* planning has been able sensibly and acceptably to fill the void. While differences in national growth rates are a significant variable here, it is nevertheless true that the same process of industrial out-movement from inner areas of socialist cities has not left a crisis, partly because the process so far has been slight, partly because people have been moved with their jobs (and in any case there has not been the same 'flight to the suburbs'), and partly because new employment opportunities have become available in the centre as administration, research, welfare, and service provision have increased in scale.

The complexities of the situation are, however, formidable, and while change in the socialist city can also be less smooth than desirable and planning is more piecemeal than is often suspected, nevertheless the existence of a much higher degree of planning in socialist countries permits reductions in uncertainties and encourages more intersector and city-region-nation coordination. Above all, planning is set on course towards clearly prescribed long-term objectives. The socialist planner has greater freedom from the constraints set in Western or developing-world cities either by capitalist enterprise and market forces or by the public planning enquiry which has yet to become a feature of socialist city life. However, it is misleading to corrolate the introduction of market socialism with the market economy in the capitalistic sense, since the former is a means of achieving economics, subject to many of the same economic-scientific variables as in a capitalist system, but within a totally different framework of ownership relations and social objectives. Thus, with much land ownership (though not all) vested in state organizations, a land-value surface as understood in the West simply does not exist; socialist planners' evaluations of land are not based on the same criteria. In consequence the patterns of urban land use are markedly different, save where these are relics of the capitalist period of development. Many models of urban development, which have been devised primarily in North America—though also in Western Europe—cannot readily be applied in the socialist context. To the socialist planner indeed they are, or may be, irrelevant. It is suggested that such models are attempts to analyse the processes of the past and to understand the resulting spatial patterns of the present, at best to extrapolate to the future. Socialist urban models are of what is intended, blueprints for a planned future.

'Utopia' is always over the horizon. Between future ideals and present reality

a gap remains. To attempt to bridge it in practice, however, national governments have encouraged the councils of the larger socialist cities to devise long-term master plans. The Moscow plan for the 1990s is a classic example of the way in which such master plans seek to attain socialist city-planning objectives within the framework of modern aspirations and technology (Hamilton, 1976). As is apparent from the chapters in this book, however, Moscow is not at all alone. Master plans are the practical blueprints for the future socialist city.

Nevertheless, the gaps in our knowledge and understanding remain, too. Thus there is a need for more research on the socialist city, in particular for detailed studies of functional structure and actual land-use patterns, of spatial organization and circulation within the city, and of distributions and behaviour patterns of various ethnic, social, and occupational groups. The growth of sociological research and urban studies in general in the socialist countries will surely provide greater quantities of material which the urban geographer can use. One cannot doubt that there is much to be gained, positively learned, from further work. Planners, economists, geographers, and sociologists in the socialist countries take great interest in the research methodology and findings of Western scientists and practitioners. To return that interest will provide us with object lessons, new ideas, and perhaps some solutions to current and future problems. Undoubtedly we can learn from the study of socialist experience.

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Chapter 4

The Individuality of the Soviet City

R. A. FRENCH

The Study of Soviet Urban Geography

The previous chapter examined some of the theoretical and planning considerations, forming the framework within which the Soviet city has developed over the past half-century. On the basis of Marxist-Leninist principles, Soviet writers and planners have developed a set of planning ideals for their urban areas. Although discussion of these theoretical concepts is widespread and a variety of opinion exists on what should be achieved and how to achieve it, there is a general consensus of thought on the nature of the ideal Soviet city. Indeed, highly developed urbanism is seen as fundamental to the development of a socialist way of life. 'The emergence of large cities is accompanied in our society by the diffusion of leading forms of socialist consciousness, of leading morality, furthers the rapprochement of classes and social groups' (Vardosanidze, Kogan, and Pravotorova, 1976, p. 84). As one would expect in an overall planned economy, it is taken for granted that the form of the city and the way in which it functions must be planned at all levels from the general development of the city and its industry (together with the hinterland) down to establishment and provision of norms of living space for each inhabitant. Second, such a planned entity should achieve and, given proper regard to socialist theory, will achieve the optimum conditions of work, recreation, and living and therefore satisfaction of the urban population. The fundamental principles of 'town building' (*gradostroitel'stvo*) are: first, the perfecting of the network of settlements economically interlinked; second, the establishment of towns with a high level of living conditions, with well-developed transport systems and with progressive cultural and service provision; third, effective measures of conservation and environmental improvement (Belousov, 1976, p. 10). Bater (1977) has outlined some of the basic concepts of Soviet planners in seeking these ideals—that there is an optimum size of city, that there should be an equitable level of well-being, that journey to work should be minimized and mobility based on public transport.

and that there should be spatial segregation of different forms of urban land use. To these should be added that the use of any part of urban space is determined, not by patterns of land-rent values, as in capitalist cities, but by notions of technical considerations and optimal functional structure, thus achieving maximum-investment effectiveness. During the pre-Second World War period theories of urban planning were developed which, although never fully realized in bricks and mortar, have influenced subsequent thinking. Of particular significance were the ideas of Milyutin, whose 'linear city' provided separation of residence and work place by a green zone, without bringing about excessive journeys to work.

Planning theory tends in most cases to assume a *tabula rasa*, to plan developments on a green-field site, or at best to take account only of buildings of special historical or architectural interest. The vast number of entirely new towns, that have appeared all over the Soviet Union since 1928, have indeed provided opportunities for the planned creation of urban environments, untrammelled by legacies of the past. The great outward spread of previously existing towns into the surrounding countryside has done likewise in suburban contexts. Nevertheless, it is extremely doubtful if a single town in the U.S.S.R. today conforms precisely to the ideal model of the Soviet urban planners. In the first place, more than a third of all urban places already existed as such in 1928 and therefore contain at least some inheritance from the era before planning. (The term 'urban place' is used here to cover all settlements included in the Soviet categories of *gorod* (town) and *poselok gorodskogo tipa* (urban district).) Towns only founded after 1928 embody aspects of past planning principles, now modified or discarded. Yet again, the plans actually drawn up have not always adhered to theoretical norms and objectives. Frequently quick and pragmatic solutions have been adopted in preference to a longer-term, more expensive optimum. Such was commonly the case before 1956, in a period when investment in the urban environment enjoyed a low priority compared with other spheres of activity, such as heavy industry. On other occasions plans have not achieved fulfilment.

For all these reasons the geography of Soviet cities as they actually are is often, and in many respects, different from the blueprints devised by the planners and theoreticians. Unfortunately the study of the reality of Soviet urban morphology faces severe difficulties, especially for the foreign geographer. First, the foreigner is not in a position to undertake detailed field-work. Large-scale plans of towns are classified documents and, even if they were available, a foreigner would not at present be permitted to compile maps of industrial or other locations. Maps of actual urban land use or of the distribution of various urban functions simply do not exist. Very few statistics relating to individual towns are published. Even total-population figures were published in the 1970 census only for urban places with over 15,000 inhabitants. Of the other data collected by the census, none were published for individual towns (except for

Moscow, Leningrad, and republican capitals). Figures relating to lesser areas within towns are rarer still. Directories and similar sources are infrequently available; even telephone directories are notoriously hard to come by.

Perhaps because of statistical problems and deficiencies, even for Soviet citizens, there is very little relevant Soviet literature. There is indeed a huge volume of Soviet publication on planning at macro- and micro-level. There is an equally large literature on urban geography; a bibliography published over a decade ago listed more than 700 geographical items (Pokshishevskiy, 1966). Professor Harris has compiled a bibliography of over a thousand items, coming from the pens of more than 400 Soviet geographers (Harris, 1970). The bulk of this geographical literature, however, falls into two broad categories. First, much effort has been devoted to systems of classifying urban places by size and function and to examination of the processes and rates of urban growth. Second, there has been equally great attention to the relationships between urban places and, in particular, to the linkages between central places and satellites and to the structure of agglomerations. In recent years there has been a growing interest in towns as service centres. Study of the morphology of cities as they actually exist is extremely rare. A group of geographers writing in the *Vestnik* of Moscow University has developed theoretical models of town structure in relation to intraurban communications (Bugromenko, 1974; Tarkhov, 1975), but these are descriptive and classificatory—that of Bugromenko serves primarily as an index of adequacy of transport services. Gurevich (1967), Khanin (1975), Sevost'yanov (1972), and others have put forward mathematical models for the analysis of urban population density, models which Khanin (1971) and Pen'kov (1971) have applied to studies of Barnaul and Kazan' respectively. Rather more sophisticated studies are presently under way in the Institute of Geography of the Academy of Sciences, but as yet no results are available. Generally empiric, in-depth studies of individual towns are lacking. A large number of town descriptions have been published, but the majority are superficial surveys of their history and geography, intended for the layman. Almost all have either no map at all or only a simple and small-scale general map. Only a few, invaluable exceptions make penetrating analyses of the urban geographies concerned, notably Saushkin (1964) on Moscow and Lipyavkin (1971) on Volgograd. This is all the more surprising in view of Saushkin's call for the study of urban 'microgeography' as long ago as 1947 (Saushkin, 1947) and Pokshishevskiy's (1957) elaboration of the field of such a study.

If both primary and secondary Soviet sources for the study of Soviet city structure are in short supply, it is hardly surprising that writings in English on the subject are still fewer. Saushkin's volume on Moscow has been translated (Saushkin, 1967). Hamilton (1976) has written on the Moscow city region, and there have been brief, if useful, studies of Moscow by Hall (1966) and Odessa by Fox (1963). Others have looked at Soviet urban-planning concepts (Frolic, 1964; Parkins, 1953) and Bater (1977) has examined the degree of effectiveness

of planning. Mellor (1964, p. 160) has drawn an idealized diagram of the morphology of the typical Soviet town, but its purpose is illustrative rather than analytical, and Gohstand (1976) has mapped some aspects of Moscow's morphology. The single major work in English on the geography of the Soviet city, by Harris (1970), examines with great thoroughness urban networks, the development of urbanization, and urban classification by size and function, but it excludes intraurban structure from its scope.

In view of the paucity of material, one might fairly ask whether an examination of the nature of the Soviet city is feasible or worth while. Certainly any conclusions reached on the basis of available evidence must contain a substantial subjective element and must be open to extensive criticism and modification. Nevertheless there are important reasons why consideration should be given to the individuality of the Soviet city, whatever the hazard of imperfection or misconception. Urban geographers in Western Europe and North America have commonly divided the world's urban places into two basic classes—the 'pre-industrial city', characteristic of the past and of much of the underdeveloped world today, and the modern, industrialized 'Western city'. The contention of this chapter is that the modern, industrialized Soviet city represents a third, quite distinct, basic class, differing in a number of significant ways from the Western city. Consequently, the models developed on the basis of American or West European experience are unsatisfactory if applied in the Soviet context. In cases where such models might have relevance, given the required data, they would surely highlight marked differences, even though the U.S.S.R. is like the advanced Western countries in being highly developed, industrialized, and fundamentally urbanized. Since 1961 more than half the total Soviet population have been urban-dwellers; by 1977 the urban share had reached 62 per cent. and it continues to rise steadily. In the R.S.F.S.R. the proportion of urban population was 69 per cent., over two-thirds of the total (*Narodnoye Khoz-yaystvo*, . . . 1977, pp. 7 and 44).

The Urban Network

A basic principle in Soviet city planning is that every town should be harmoniously fitted into the national network of settlements. This network should be developed on rational, planned lines in the interests of the social and economic development of society. These developments should be in terms both of spatial distribution throughout the country and of 'vertical' hierarchy—the unified settlement system—from the national capital down to the smallest centre of a collective farm. In such a 'unified settlement system' the Marxist goal of abolishing the distinction between countryside and town could be achieved. Present plans are to reduce drastically the number of rural places by a massive, long-term programme of concentration in reconstructed or new settlements with at least 1,000 inhabitants and preferably over 2,000; such a programme when

accomplished would in effect make the entire Soviet population 'urban' in terms of living conditions, if not employment.

Given this basic principle of a planned and structured network, it is worth examining briefly how the network has developed so far. Harris (1970) has provided a very detailed picture of the state of the network up to the late 1960s and it is not necessary to iterate it here. What the subsequent decade to 1977 has shown is a marked increase in the role of the ultra-large city (Table 4.1).

Table 4.1 Percentage of urban population in towns by size category

Population	1926	1939	1959	1970	1974	1977
Less than 3,000	4.6	1.5	1.6	1.5	1.4	} 30.5
3,000-5,000	4.8	3.5	3.7	3.0	2.7	
5,000-10,000	10.2	8.9	9.2	7.4	7.1	
10,000-20,000	13.4	11.4	11.2	9.4	9.1	
20,000-50,000	15.1	16.0	14.8	13.6	12.8	
50,000-100,000	15.6	11.6	10.9	9.6	9.8	9.6
100,000-250,000	12.1	14.8	13.0	15.7	15.6	15.4
250,000-500,000	8.4	11.1	11.4	12.4	13.6	13.8
500,000-1,000,000	2.0	8.6	13.7	12.0	12.0	12.3
Over 1 million	13.8	12.5	10.5	15.4	15.9	18.3

Throughout the first forty years of Soviet power, the only cities with over a million inhabitants were Moscow and Leningrad, both of which had far surpassed the mark before the Revolution. By the late 1950s they had been joined by Kiev, but even as recently as the 1959 census only some half-dozen other cities were anywhere near the million mark. By the 1970 census there were ten 'million' cities and by January 1, 1977, the number had reached fifteen, with at least six other cities almost certain to pass the mark by the end of the 1970s (Dnepropetrovsk indeed certainly reached one million during 1977). If the average annual rates of increment in the largest cities during the 1970s were maintained, one could expect there to be 28 'million' cities by the end of the century. Meanwhile, as Table 4.1 indicates, the share of total urban population living in towns with less than 100,000 population is steadily declining.

This trend towards 'megapolis' goes against one of the basic desiderata of Soviet planners, who have always envisaged an optimum size well below such giant cities. Their desired optimum size has gradually been revised upwards from early ideas of 50-60,000 to 200-300,000, but has always lagged far behind the reality of what was happening (Bater, 1977, pp. 190-191). Nevertheless, the prejudice against very large cities has been responsible for the attempts to control their growth through the requirement of residence permits. Undoubtedly rates of growth consequently have been less than would have otherwise have

been the case—notably in the case of Moscow, which has so much more to offer its inhabitants than any other city. Yet Moscow, most strictly controlled of all, is growing by over 100,000 each year, of which less than 20,000 can be attributed to natural increase. Increasingly Soviet planners seek solutions, not in hopeless efforts to contain growth of large cities, but in planning for urban agglomerations as a whole, i.e. for groupings of functionally interlinked urban places, and thereby maintaining intervening open spaces for amenity.

At the other end of the scale, the small urban place presents a range of problems to the planner, problems thoroughly and frankly examined by Khorev (1972). The narrow range of employment opportunities and the limited provision of amenities in many cases cause heavy out-migration of the young, able-bodied population, particularly those who are best qualified. This in turn often brings about a highly undesirable demographic situation. Although some small towns are thriving, perhaps due to their status as satellites of larger centres or to the presence of a growth industry or to a broader industrial base, in general these urban places face stagnation or even decline. Yet their role in the urban network as lowest-order service centres is not insignificant. Nor must one forget that nearly one urban-dweller in three lives in a place with under 50,000 inhabitants and one in five in places under 20,000—those where the problems tend to be most acute. Pressure from industrial ministries often tends to discriminate against the smallest-sized towns, steering investment towards medium-sized and large towns.

The Legacy of the Past

Obviously in distinguishing a 'Soviet' type of city, it is not suggested that it has no structural features in common with the Western city. Up to 1917 the towns of Russia were developing along lines broadly parallel to the growth of cities in other advanced countries of the time. Thus although the Industrial Revolution came late to Russia, when it did get under way in the nineteenth century it produced in the principal manufacturing towns of the period 1860–1917 areas of low-grade, artisan housing in close proximity to factories, much as it did elsewhere. The main railway termini of Moscow and Leningrad lie on rings at the periphery of the built-up area of the early railway age, as they do in London or Paris. Already by 1917 central business districts had begun to emerge in the larger cities. There were distinct fashionable, middle class, artisan, and slum residential areas, although the slow growth of intraurban transport (as illustrated in Chapter 2) caused such socially differentiated parts of the city to be more closely juxtaposed than was often the case in other lands. This factor also meant that the areal spread of the Tsarist Russian industrial town tended to be considerably less, and the density of population higher, than in comparable towns elsewhere.

Urban renewal since the 1917 Revolution has removed part of this Tsarist legacy, especially in the period after 1956. In some towns, such as Minsk, massive destruction in the Second World War all but obliterated the older parts and today it is hard to find a pre-1917 building. Nevertheless, there are still a great number of towns, including nearly all the largest ones, where the capitalist period of development has left many visible traces in street patterns, in buildings, and in the distribution of activities and functions.

The historical inheritance has left many Soviet cities with problems shared by their Western counterparts. For example, noxious industrial plants are sited in central areas and contribute seriously to air and water pollution; efforts by planners to relocate such enterprises are often slowed or frustrated by industrial inertia and the opposition of industrial ministries. In fairness it should be added that not all the environmentally undesirable locations can be blamed on the pre-Revolutionary period.

Population Density and its Patterns

One feature of the earlier epoch, which has remained a characteristic of the Soviet town and which tends to distinguish it from the average Western city, is the remarkably high density of population. The appalling overcrowding of Tsarist times, exemplified in Chapter 2, was not alleviated in the post-Revolutionary period. True, the large houses of the rich and the bourgeoisie were taken over and subdivided into flats and individual rooms. But the limited additional space so gained was swamped by the huge influx of population to the towns. Conditions in the years immediately following the Revolution precluded almost any urban development, but even when stability was restored and economic life recovered the housing shortage did not improve. Throughout the long Stalin era investment in housing received a low priority. From 1928 to 1954 inclusive housing represented 17.9 per cent. of total capital investment in the national economy, but half of this came in the last five years of the period. Although in the years 1929–1955 over 800 million m² of living space were constructed throughout the country (excluding collective farms), a very high proportion of this new housing was perforce in the many green-field urban developments, in post-war reconstruction of devastated towns, and some in rural areas. In the towns already existing by 1928 there was relatively little development, other than 'showpiece' blocks of flats such as the skyscraper on the Kotelnicheskaya Embankment and the Kaluzhskaya Zastava flats in Moscow. Meanwhile the flow of in-migration to urban areas was increased in step with the accelerated rate of industrialization. At the same time rates of natural increase in towns, although in general declining over the period, remained relatively high. The rate of crude natural increase in Moscow was 10.7 per thousand in 1940 and 7.4 in 1950 (*Moskva v Tsifrakh*, 1972 p. 6); in Khar'kov the equivalent figures were 7.2 and 8.9 (Kurman and Lebedinskiy, 1968, p. 34). Between 1926 and

1956 the urban population of the U.S.S.R. rose by some 61 millions, of which about 4 millions can be attributed to extensions of Soviet territory in the years 1939-1945.

As a consequence the very high population densities of the pre-Revolutionary town remained a feature and indeed may well have increased during the Stalin period. Existing accommodation became more and more overcrowded, so that by the early 1950s the housing of a whole family in one room was the rule rather than the exception. If in 1922 the average amount of accommodation space per urban inhabitant was 8.3 m², by 1950 it had fallen to 7.4 m². According to Saushkin (1964, p. 195), the population density in central Moscow, within the Sadovaya ring road, was 50,000 per square kilometre in 1964, even after some eight years of Khrushchev's massive housing drive. This figure compares with less than 9,000 per square kilometre in 1961 in central London (as defined by the Registrar General). In fact the figure was exceeded by only seven central wards of St Petersburg in 1910. In Odessa in 1963, according to Fox (1963, p. 14), urban authorities quoted densities of up to 800 per acre for some central parts of the city, i.e. a staggering figure of almost 200,000 per square kilometre (although this must surely refer only to density per building area). So acute was the problem by Stalin's death in 1953, that one of Khrushchev's first measures was to launch a huge programme of housing construction, which has continued unabated to the present, with impressive results. Between 1950 and 1971 the amount of 'useful' housing space in urban areas trebled and by 1977 had reached 1,932 million m² or 12.1 m² per head (*Narodnoye Khozyaystvo...*, 1977, p. 24). The term 'useful' housing space includes all rooms and service spaces such as kitchens and corridors in flats and hostels.

The rehousing of millions has greatly eased the overcrowding and the excessive densities of city centres have been sharply reduced, but even so densities both in the centres and overall in the built-up area remain high. The vast bulk of the new accommodation has consisted of flats with no more than two or three rooms. Many people and families still live in one-roomed flats, sharing communal kitchens and bathrooms. A survey (Broner, 1973, p. 56) carried out in 1971 of 9,165 families in eight cities, all of whom had received new accommodation, showed that 24 per cent. lived in one-roomed flats and a further 49 per cent. in two-roomed flats (Table 4.2). The eight cities concerned were Voronezh, Magnitogorsk, Mikhaylov, Rostov-on-Don, Rybnoye, Ryazan', Sverdlovsk, and Taganrog. Overall the average number of persons per room (i.e. all rooms except kitchen and bathroom) was 1.6, rising to 2.1 in single-roomed flats; there were 3.4 persons per flat, a figure close to the 1970 figure for Greater Moscow. Moscow's 7,061,000 inhabitants, less an estimated 303,000 living in hostels, hotels, and other accommodation, occupied 1,867,000 flats, or 3.6 per flat (*Moskva v Tsifrakh*, 1972, pp. 5 and 102). Pressure on urban housing is kept up by the continuing high rates of in-migration to urban areas, even into the largest cities, despite the requirement of permission to reside. Total in-migration

into all urban areas over the two years preceding the 1970 census was 9.5 million, of whom some 4,364,000 came from rural areas (Table 4.3).

Although, as a result of these factors, population densities in urban areas are clearly unusually high by Western standards, quantitative evidence of actual densities is scarce. Table 4.4 gives overall density for the total areas of a number of leading cities. The remarkably high figure for Moscow stands out; in 1974 the density for all Greater Moscow, which includes extensive areas of forest,

Table 4.2 Family accommodation in an eight-city sample

No. of rooms	Families	Percentage	No. of persons	Percentage	Persons per flat	Persons per room
1	2,180	23.8	4,625	14.9	2.1	2.1
2	4,519	49.3	15,327	49.4	3.4	1.7
3	2,133	23.3	9,458	30.5	4.4	1.5
4	329	3.6	1,619	5.2	4.9	1.2
5	4	0.04	17	0.04	4.25	0.85
Totals	9,165	100.0	31,046	100.0	3.4	1.6

Source: Broner (1973, p. 56).

Table 4.3 In-migrants to sixteen major cities and republic capitals, 1968-1970

To	From other urban areas	From rural areas	Total
Moscow	138,261	63,378	201,639
Leningrad	106,209	50,184	156,393
Alma-Ata	31,426	17,300	48,726
Ashkhabad	8,285	3,651	11,936
Baku	17,798	11,708	29,506
Dushanbe	12,603	9,863	22,466
Frunze	19,268	19,968	39,236
Kiev	45,128	42,793	87,921
Kishinev	12,940	17,868	30,808
Minsk	31,945	32,171	64,116
Riga	18,888	10,992	29,880
Tallin	11,678	6,902	18,580
Tashkent	34,131	20,365	54,496
Tbilisi	7,132	7,609	14,741
Vil'nyus	11,287	10,330	21,617
Yerevan	9,364	6,417	15,781
All urban areas	5,290,253	4,364,275	9,654,528

Source: *Itogi Vsesoyuznoy Perepisi Naseleniya 1970 goda* (1974).

Table 4.4 Population density in selected major cities

City	Area (km ²)	Population	Density (per km ²)	Year
Moscow	878.7	7,368,000	8,385	1974
Leningrad	512	3,786,000	7,395	1974
Minsk	158.7	907,104	5,716	1970
Khar'kov	287.8	1,330,000	4,614	1974
Tallin	96	363,000	3,780	1970
Gor'kiy	334	1,260,000	3,772	1974
Kuybyshev	330	1,140,000	3,455	1974
Kazan'	c.280	850,000	c.3,035	1969
Novosibirsk	477	1,243,000	2,606	1974
Kiev	777	1,887,000	2,429	1974

farmland, and park, was approaching that for central London. Moreover, the Moscow figure has been, and still is, rising; in 1963, according to Saushkin, it was 7,000 and in 1970 it was 8,035. However, the statistics in Table 4.4 are not greatly informative, since they reflect primarily the amount of land included within the city boundaries. Thus Kiev, with one-half the population of Leningrad, has an area half as big again. In particular, extensions of city limits in the last decade have artificially lowered many overall densities. Today most urban boundaries include considerable tracts of surrounding farmland and forest.

In a limited number of cases it is possible to get a clearer picture of population density within the developed, built-up areas of towns. Pokshishevskiy in 1966 gave the density of Leningrad 'in the town itself' as 11,380 persons per square kilometre (*Sever Yevropeyskoy Chasti SSSR*, 1966, p. 413). Table 4.5 displays the contrast between the central wards of Kiev in 1969, where the density

Table 4.5 Population densities within Kiev by wards (*rayony*), 1969

District	Area (km ²)	Percentage	Population	Percentage	Density
Leninskiy } Radyanskiy } Pecherskiy }	23.8	3.06	406,890	27	17,096
Zhovtnevyy	134.4	17.3	201,938	13.4	1,503
Stevchenkovskiy } Podelskiy }	167.0	21.5	406,890	27	2,436
Moskovskiy } Zaluznichnyy }	169.4	21.8	361,680	24	2,135
Darnitskiy } Dneprovskiy }	279.7	36.0	135,630	9	485

Source: *Ekonomichna Geografiya* (1969, p. 46).

Table 4.6 Density of electoral population in Kazan', 1971

No. of electoral districts	No. of electors per hectare of residential area	Density per square kilometre
40	25-50	2,500-5,000
67	51-100	5,100-10,000
58	101-150	10,100-15,000
50	151-200	15,100-20,000
58	201-300	20,100-30,000
24	301-400	30,100-40,000
17	Over 400	Over 40,000

Source: Pen'kov (1971, p. 67).

surpassed 17,000 persons per square kilometre, and the trans-Dnepr wards, which were then largely in non-urban land uses and which had a density of only 485 persons per square kilometre. Pen'kov's (1971, p. 67) study of Kazan' gave the number of electors (i.e. the adult population) per hectare of built-up area for 314 electoral districts in the city. With all open, undeveloped land and non-residential uses excluded, adult densities ranged from 2,500 to over 40,000 per square kilometre in 17 central districts (Table 4.6).

Most detailed information is available for the administrative districts of Moscow (Figure 4.1), shown in Table 4.7. For each district densities can also be calculated excluding 'green areas', i.e. forests, parks, and other open recreational spaces. Unfortunately the residual area is not the built-up area, because figures are not available for farmland, which is quite extensive in southern outer areas. Another drawback is that the wedge shape of the districts, which all extend from outer parts in towards the city centre, cuts across zones of temporal expansion of Moscow and therefore tends to mask possible variations. Nevertheless the effect of the very high central densities on inner districts is clear in Figures 4.2 and 4.3, as is the contrast between the outer southeastern districts, Lyublinskiy and Krasnogvardeyskiy, where there is much farmland and densities are under 4,000 persons per square kilometre, and the central districts with over 20,000 and surpassing 25,000 in Baumanskiy, Sverdlovskiy, and Oktyabr'skiy districts. Comparable densities of 20,000 are given by Khanin (1971, p. 103) for central Barnaul, a largely new town in Siberia.

In the Soviet Union these already high densities are tending to increase, not only overall as a result of the continuing influx of population but also within the built-up area as a consequence of the increasing construction of high-rise residential buildings. Lipyavkin (1971, p. 69) points out that in Volgograd blocks of flats were generally of five storeys, up to 1966; subsequently they were to be of nine, twelve and sixteen storeys, although even higher ones may now be envisaged. He considers that in consequence even when the norm of living

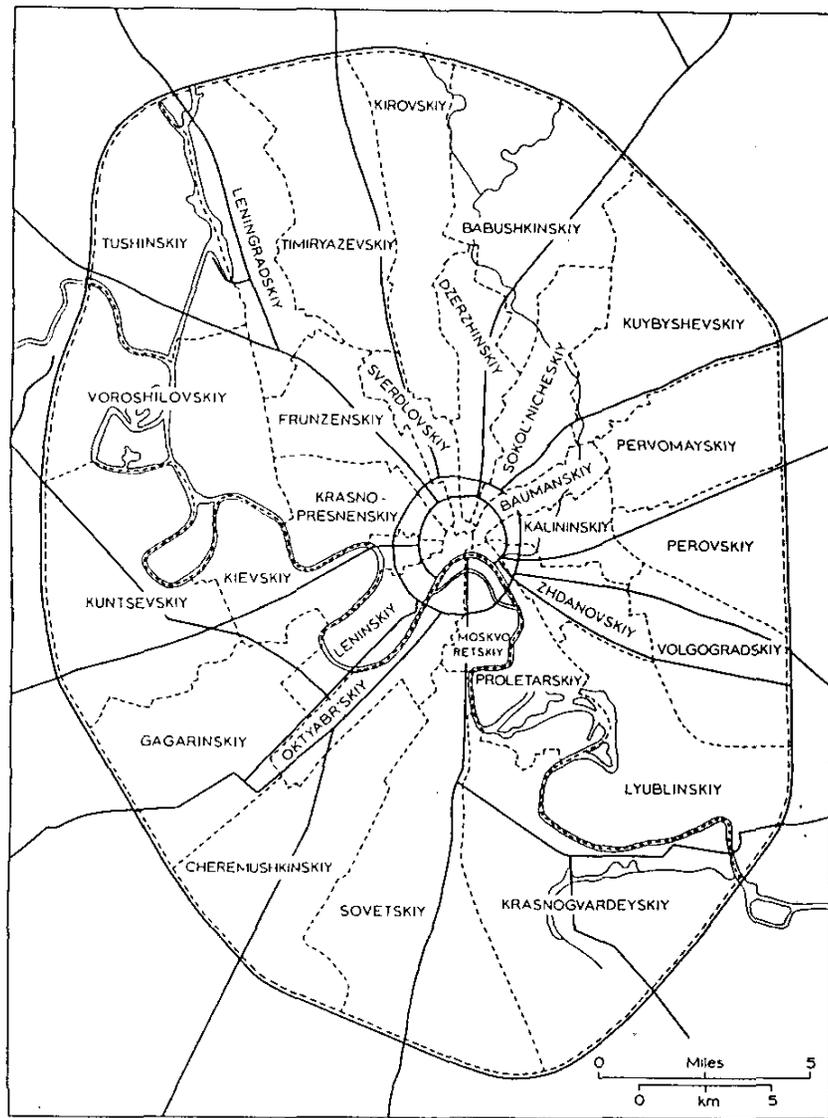


Figure 4.1 Moscow—administrative divisions in the 1970s

Table 4.7 Moscow—population densities per square kilometre, 1970

District	Area (km ²)	Green areas (ha)	Population 1970 (thousands)	Overall density	Density excluding green areas
Babushkinskiy	42.0	1,100	345	8,214	11,129
Baumanskiy	6.3	64	144	22,857	25,263
Volgogradskiy	29.7	1,118	311	10,471	16,811
Voroshilovskiy	42.8	949	231	5,397	6,937
Gagarinskiy	49.3	1,177	204	4,138	5,440
Dzerzhinskiy	16.5	614	210	12,727	20,192
Zhdanovskiy	14.2	137	173	12,183	13,516
Kalininskiy	12.0	152	142	11,833	13,524
Kievskiy	18.9	369	223	11,799	14,671
Kirovskiy	37.3	1,101	180	4,826	6,844
Krasnogvardeyskiy	67.9	1,429	169	2,489	3,153
Krasnopresnenskiy	13.5	139	214	15,852	17,686
Kuybyshevskiy	49.6	2,927	306	6,169	15,074
Kuntsevskiy	44.3	1,399	304	6,862	10,033
Leningradskiy	27.3	708	342	12,574	17,015
Leninskiy	13.8	431	182	13,188	19,158
Lyublinskiy	56.0	866	167	2,982	3,531
Moskvoret'skiy	9.3	195	168	18,064	23,013
Oktyabr'skiy	16.1	509	303	18,820	27,545
Pervomayskiy	34.1	1,306	395	11,584	18,810
Perovskiy	32.2	1,046	259	8,043	11,935
Proletarskiy	22.2	351	258	11,622	13,797
Sverdlovskiy	7.4	105	168	22,703	26,667
Sovetskiy	60.9	2,358	317	5,205	8,499
Sokol'nicheskii	21.7	913	164	7,558	13,016
Timiryazevskiy	40.8	750	370	9,069	11,111
Tushinskiy	30.2	750	209	6,921	9,207
Frunzenskiy	15.6	258	222	14,231	17,077
Cheremushkinskiy	46.9	992	308	6,567	8,324

Source: *Moskva v Tsiifrakh* (1972, pp. 153-157).

Table 4.8 Moscow—percentage of living accommodation in buildings

No. of storeys	1966	1971	1976
Under 5	28.4	16.9	9.0
5	43.9	39.3	33.0
6 to 9	23.4	32.5	37.6
Over 9	4.3	11.3	20.4

Source: *Moskva v Tsiifrakh* (1972, p. 104); *Moskva v Tsiifrakh* (1976, p. 133).

space per person is raised from 9 to 15 m², the density per hectare will remain the same. The rapid trend to high-rise flats in Moscow is clearly seen in Table 4.8.

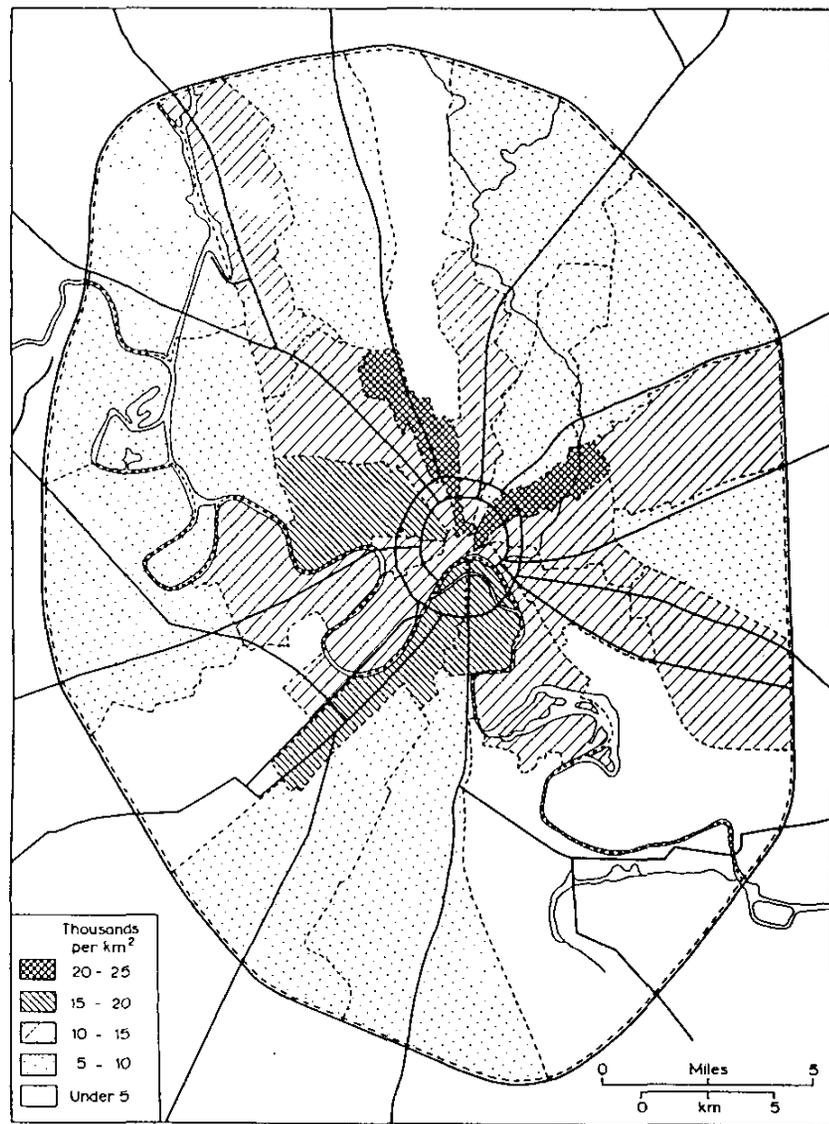


Figure 4.2 Population density of Mόscow, 1970

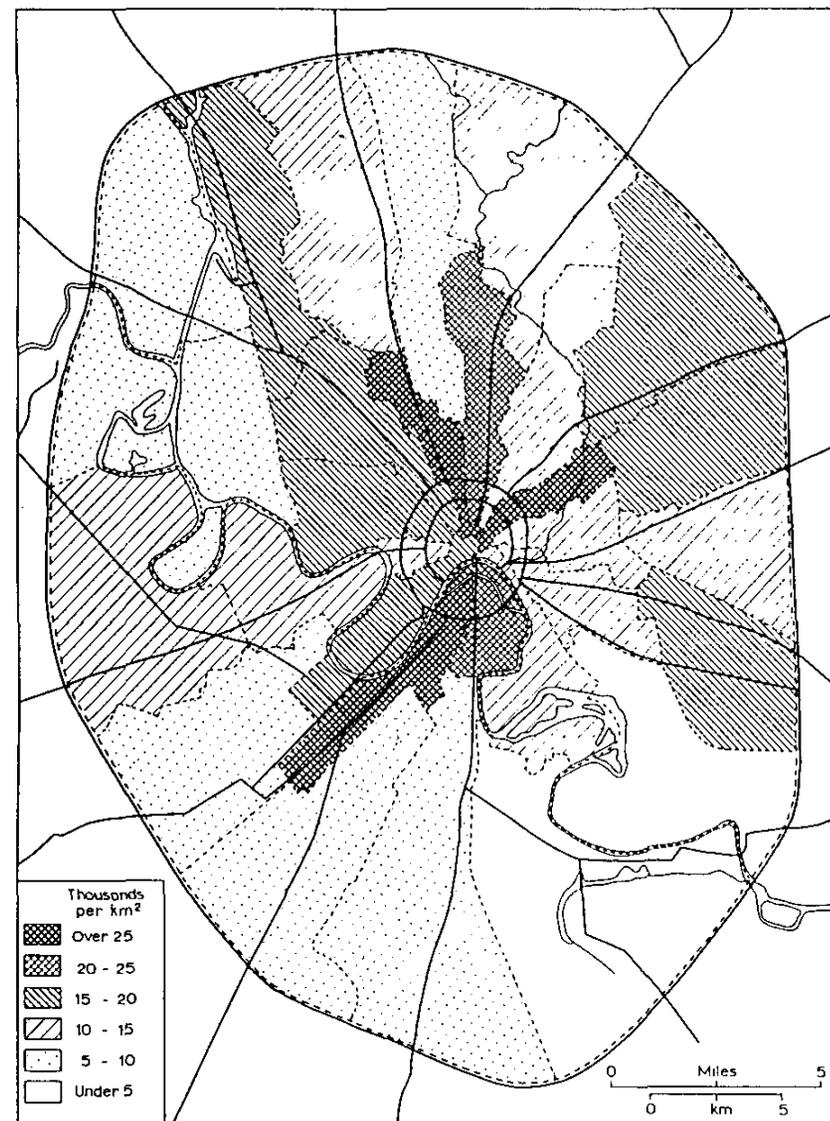


Figure 4.3 Population density of Moscow, 1970, excluding 'green areas'

In 1968 plans were announced for blocks of flats with twenty-five to twenty-seven storeys, and already a number have been built. In March 1974 the Soviet press announced that in future the minimum height of new blocks would be twelve storeys and that most would be fourteen, sixteen or twenty-five storeys, with some reaching thirty storeys. By 1980 all 'low' buildings (by which, presumably, was meant one and two storeys) would be gone (*Soviet Weekly*, March 23, 1974, p. 3). Older towns still have many low buildings and often a significant proportion of these are of wood. Even Moscow as late as 1970 had 9.5 per cent. of its buildings with one or two storeys and 4.3 per cent. built of wood, although by 1976 only 3.7 per cent. of living accommodation was in one- or two-storey buildings. Such dwellings are usually in the historic core and are steadily disappearing in the process of urban renewal, their place being taken by high-rise blocks. Thus it seems more than probable that a high-population density will be an abiding feature of the Soviet city. Only in the smallest, older, urban places, where there has been limited economic development and growth in the Soviet period, does one commonly find the separate, single-family dwelling and, one might assume, a somewhat lower density. Such dwellings are almost always of one or two storeys and frequently constructed of wood. In this respect the very small town proclaims its affinity with the Soviet village, where such homes are still the rule, despite the commencement of a village-reconstruction programme based on apartment blocks. In a survey of Mariïnskiy Posad, a town in the Chuvash republic of some 10,000 inhabitants, 57 per cent. of those questioned lived in private houses or parts of private houses (Khorev, 1972, p. 131).

The general reliance on blocks of flats for urban accommodation and the standardized nature of the blocks mean that population densities in built-up areas remain largely constant all the way to the outskirts; they also mean that densities are very similar in different sectors of a town and, indeed, in different towns. Only the historic core area, tending still to be overcrowded despite the massive rehousing of the last two decades, stands out as a region of even higher density. In the Soviet city there has not been an outward migration of the zone of maximum density. Nor does the Soviet city display the gradient of decreasing density towards the outer suburbs, associated with larger houses and gardens, which is characteristic of the Western city (Figure 4.4). On the contrary, it is the most recently established outer suburbs which have the greatest number of high-rise buildings. It is impossible to imagine that Clark's negative exponential curve of decreasing density from the city centre would apply in the Soviet Union and although Davidovich may advocate such a curve on other grounds, as discussed in Chapter 3, what the urban planners have done and are doing seems to rule out any such development for the foreseeable future. Moreover, one cannot, in the Soviet context, speak of a gradual urban-rural transition. The continuously built-up area of blocks of flats tends to end abruptly, giving way to entirely open farmland and forest. At times the limits of the built-up area are

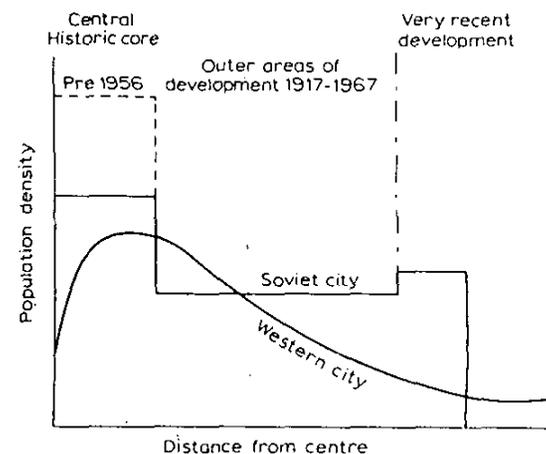


Figure 4.4 Comparative urban density gradients for Soviet and Western cities

as sharply demarcated as those of a medieval walled town. Only where there is a surviving fringe of old, individual, wooden houses is there a blurring of the line between 'town' and 'country'.

Standardized norms of construction and, in particular, the very great use made of prefabrication, together with the fact that the majority of residential buildings have been erected since 1956, mean a high degree of uniformity of appearance in the Soviet urban landscape across the entire country, from Minsk to Khabarovsk and from Leningrad to Tashkent. Frequently a strong sense of monotony is engendered; as H'in (1972, p. 165) has commented, 'Reinforced concrete is everywhere becoming the basic building material.' Such architectural distinctions as there are tend to be temporal rather than regional—the heavily ornate, pompous, stone-faced blocks of the Stalin era; the brick five storey blocks of Khrushchev's time (when shortage of lifts limited height); the plain, prefabricated concrete blocks of the mid and late 1960s; and the high-rise towers of the 1970s.

A characteristic feature of Soviet urban development since the Second World War is the adoption of the cellular residential unit, known as the *mikrorayon* or micro-region, intended to be self-sufficient in the provision of services needed on a daily or weekly basis. In practice many of the micro-regions that have been constructed do not achieve the theoretical ideals of the propounders of the concept, such as Strumilin (Frolic, 1964). The communal aspects of such residential units have been toned down in face of the continuing vitality and strength of the family as an independent unit. Moreover many micro-regions have been built far larger than the planners' optimum, up to 20,000 inhabitants or more, rather than 2,500 to 3,000—possibly as a pragmatic solution to the

cost of providing services. The micro-regions are in turn grouped together into 'residential complexes'. For example the Volgograd development plan includes seventeen such complexes, each consisting of twenty-five to thirty micro-regions and having a total population on average of 50,000 (Lipyavkin, 1971, pp. 66-67).

The Functional Structure

A second major area of difference between the Soviet and Western cities is that of spatial structure of function. This is seen when one tries to apply Western structural models to a Soviet city, e.g. to Moscow. Certainly a map might suggest at first glance that Burgess's theory of concentric structure could have relevance to Moscow, for its streets display a pattern of concentric rings and radials. The inner rings are circular boulevards laid out along the locations of medieval fortifications. The outermost ring is the orbital motorway, completed in the early 1960s, which marks the administrative limit of Greater Moscow. In terms of function no marked concentric pattern emerges. It is true that within the Sadovaya ring road there is a central area, with a concentration of central-area functions, but in large measure it had acquired this character before 1917. Although in theory and in practice the Soviets locate in urban central areas those functions which serve the whole town population, such as administration and major shopping and entertainment facilities, the degree of concentration is far less than in the Western city.

This limited feature of concentricity is as far as the model applies. Moscow and other towns of pre-1917 vintage do have zones of older housing and industry adjoining the historic, once-fortified, core. But not only are these also of pre-Socialist origin, but more significantly they do *not* represent a zone of blight, occupied by depressed social groups and run-down economic functions. The ghetto is never a feature of the Soviet city. In the west of the U.S.S.R. a number of towns had surviving ghettos of Jewish population until the murderous holocaust of the Second World War largely exterminated their inhabitants and often destroyed the properties. Although Moscow, Leningrad, Odessa, Baku, and a handful of other towns saw considerable spread of the built-up area in the late nineteenth and early twentieth centuries, most towns in the U.S.S.R. had very little growth at that period (Figure 4.5). This was chiefly due to the limited industrialization before 1917, but was also in part the result of increased density of persons in existing housing stock and to the growth of peripheral shanty towns, subsequently swept away. As Bater (1973) has shown, even in the major industrial city of St Petersburg the slow and limited growth of cheap public transport restricted labour mobility and the journey to work, and therefore the growth of suburbs before 1917. As a result, in many of the older Soviet towns the new developments of the last twenty years abut directly on the old, historic core hardly larger than the late medieval area of the town.

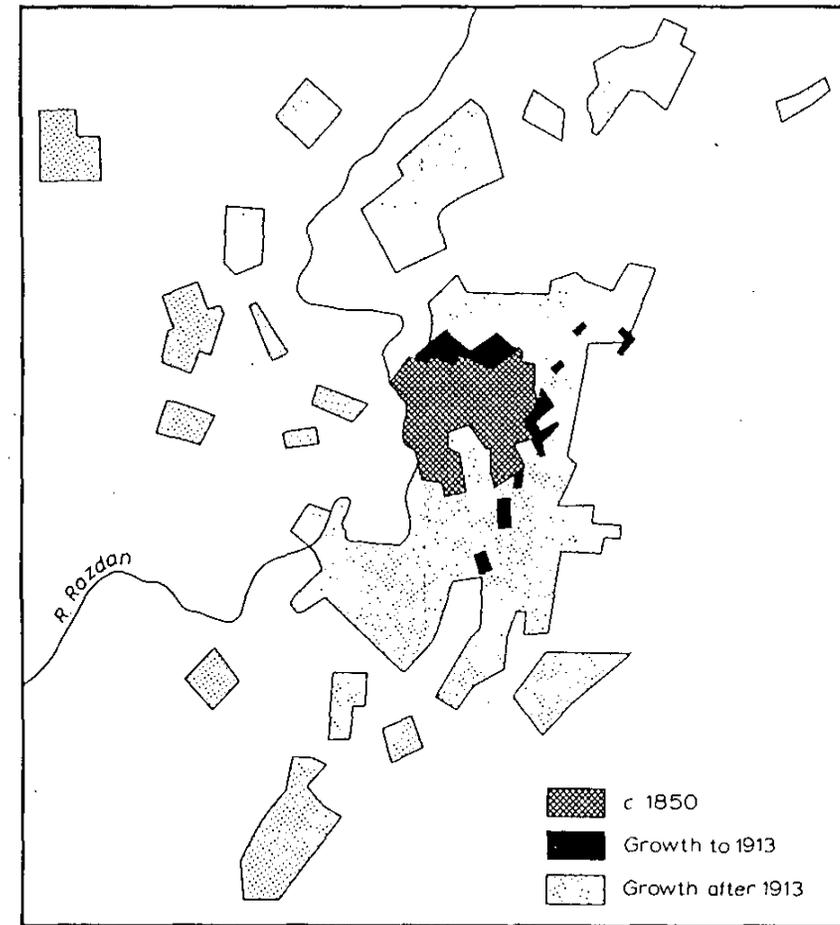


Figure 4.5 Growth of Yerevan, Armenia

The sector theory of Hoyt provides no better fit, beyond a degree of radial industrial development along the railways, yet another pre-Revolutionary pattern nowadays much masked by infilling with new industrial locations. The pre-Revolutionary beginnings of an industrial sector to the south-east of the city centre were to some extent continued by inter-war industrial developments in the Likhachev car factory district. One might see a minor application of sector theory in Moscow's plan for 'green wedges', discussed in Chapter 6. However, the amenity value of parks does not affect rents and has not so far led to the development of wedges or sectors of better-class housing. The multiple-nuclei

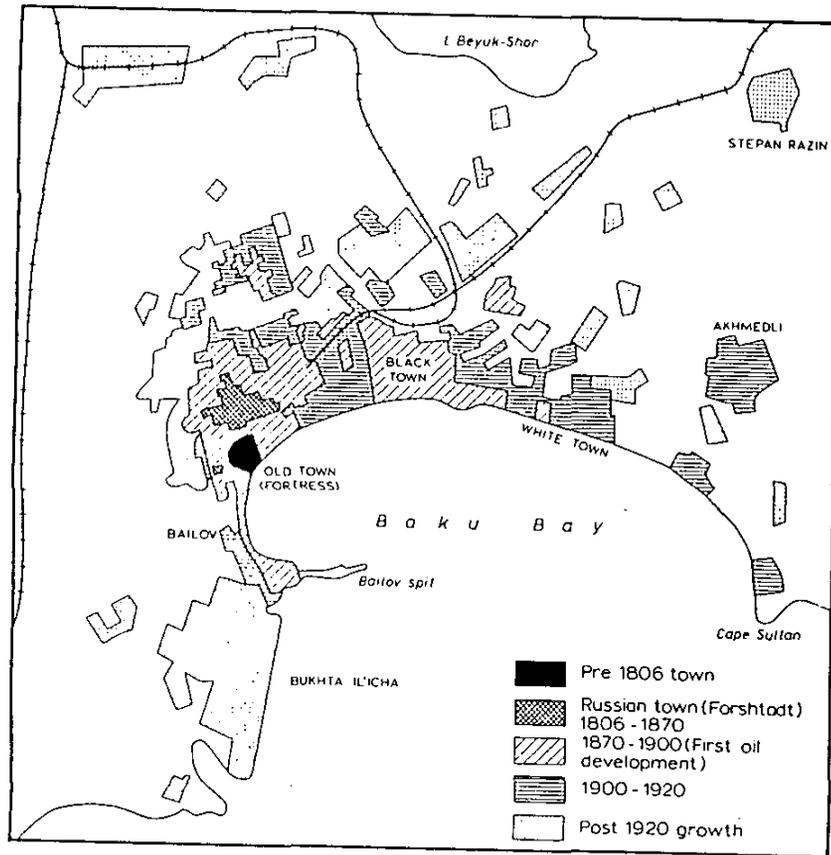


Figure 4.6 Growth of Baku, Azerbaydzhan

theory of Harris and Ullman, being less formalized and more flexible, might in some cases have greater relevance. For example in Baku (Figure 4.6) it is possible to distinguish the Old Town of the pre-Russian conquest period, the early Russian colonial town, the early oil-refining and industrial cells of Black Town and Bailov, and later industrial and residential cells. However, the dispersal and intermixing of functions make even this model rather hard to apply. Professor Harris himself has commented in a personal communication to the author that the large blocks, or even communities, constructed in the U.S.S.R. by special institutions such as factories, academies of sciences, universities, and the like, do not fit in with the theory of discrete nuclei, as they are not generally full communities with separate identities. The micro-region is a cellular unit, but as a planned unit of fixed size it is not a nucleus of growth.

Multiple nuclei can be distinguished in some of the entirely new towns. Thus Bratsk consists of five communities at a distance of several kilometres from each other, each associated with a specific administrative or industrial function (Figure 4.7), but these separate units have not coalesced into a continuous urban area and it is not intended that they should. One might well regard places such as Bratsk, despite their administrative unity, as 'mini-agglomerations'—groupings of linked, but distinct, settlements (Figure 4.7). Of course, multiple nuclei exist quite commonly in a different sense, where large cities in their development have absorbed neighbouring settlements. The creation of Greater Moscow in 1960 brought within the city boundaries several formerly independent satellite towns, such as Perovo. Some of these lay, or still lie, separated from the continuously built-up area of Moscow itself. Other towns have grown by the amalgamation of previously separate but neighbouring settlements. Sometimes, as at Orekhovo-Zuyevo or Anzhero-Sudzhensk, the place-name still commemorates the two original nuclei. Several Donbass coal-mining towns, e.g. Makeyevka, have developed from groups of mining villages,

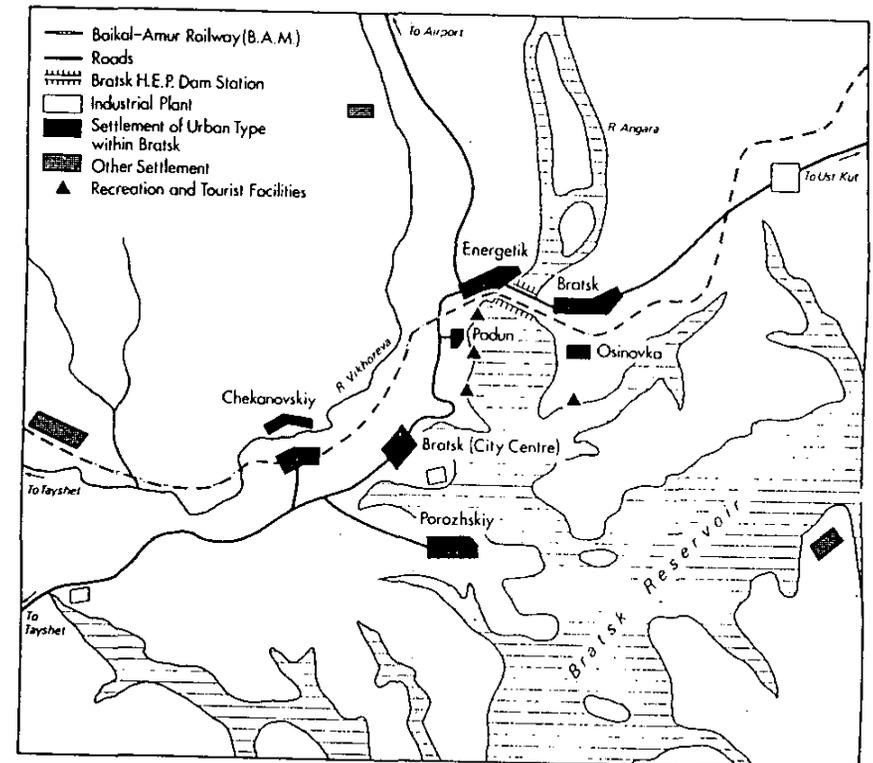


Figure 4.7 Sketch map of Bratsk, Siberia. (The author wishes to thank F.E. Ian Hamilton for this sketch map)

each originally clustered round a pit. In a number of such cases, as at Makeyevka and Donetsk, infilling between the nuclei has been restricted by subsidence risks and parts at least of the intervening lands remain as open spaces.

The principal reason why none of these classic theories of urban structure is wholly satisfactory is that the different areas of the Soviet city are in general only weakly differentiated by function, on either the macro-scale or the micro-scale. On the macro-scale one can say as a broad generalization that in all parts of the city are found residential, industrial, and service functions. Even the central region of Moscow, within the Sadovaya ring, contains a wide range of industries; these include not only such usual central activities as printing and the manufacturing of clothing and confectionery, but also large-scale textile, metal-working, and machine-building industries. In 1973 there were 443 postal-code units in Moscow, of which at least 57 were allocated to individual institutions such as hotels, airports, and railway stations, or to the overspill town of Zelenograd (and doubtless others to individual government offices). Of the remaining 386 post-code areas, 257—two-thirds—had at least one industrial enterprise and 178 had more than one (*Moskva 1973*).

The plan to move 200 enterprises, particularly noxious factories, out of the city by 1980 and the ban on establishing new plants in the city may have some effect on the widespread distribution of Moscow's industry, but it does not seem likely. In the first place in 1973 there were 1,050 industrial works, including printing houses, in Moscow (*Moskva 1973*, pp. 354–399). Then what little evidence is available suggests that the planners have difficulty in making headway against the influential industrial ministries, which are usually more concerned with maintaining production levels than with social costs and which therefore are reluctant to close plants down. Moscow's long-term master plan envisages even less functional separation of industry. The plan divides the city into sixty-five industrial productive zones, with the stated aims of distributing industry more evenly and thereby reducing the length of journeys to work (Promyslov, 1972, p. 391). In Moscow, as in most other Soviet towns, a close juxtaposition of industry and housing is fostered by the common practice of an enterprise constructing accommodation for its own workers. Thus Moscow's automobile works is surrounded by a large number of blocks of flats, built by the works and occupied by its employees.

All this is not to say that certain areas of Moscow do not have a greater concentration of industry than others; whole complexes of residential micro-regions have as yet little or no industry. Nevertheless there is far less concentration and segregation than in the average Western city. It is also obvious that the functional mixing of industry and residence is more clearly seen in the largest Soviet cities and in poly-functional medium-sized towns. Medium and small towns based on a single industrial enterprise would not fit this generalization. In the latter cases there is often a physical separation, or 'green belt', between mine or factory and housing, especially in newly established towns and

urban districts. An example of such a 'green belt' is found in Rustavi, Georgia, where it divides the large steel works from the town itself. However, single industry towns are a tiny minority even in the smallest population category: the average small town has eight enterprises (Khorev, 1971, p. 119). Again, expansion of the enterprise often involves an invasion of the amenity belt.

In Western cities the central core tends to have few residents. In all Soviet towns the centre has an important residential function. Indeed, far from being a 'dead' centre virtually uninhabited at night, it is usually the most densely populated part of the town. Thus one cannot find in Soviet cities a true central business district, in the strict sense of the term. Certainly major administrative institutions, such as the town council or the town party committee, are normally based in the centre, but there is not an area where office functions have almost entirely pushed out all others (as in the City of London), nor yet an area where entertainment and retailing have done so (as in London's West End). In a socialist command economy there is not, of course, the proliferation of competing firms found in Western cities, but broadly similar functions have still to be carried out by a large bureaucracy. It would appear that Soviet government departments, state-owned banks, insurance and retailing organizations, and the like, do not feel the same desire as private enterprises for the benefits, whether real or imaginary, of agglomeration and face-to-face contact. There is, however, a core-area feature which is found in almost every Soviet urban place, whatever its size, and that is the ceremonial focus, or central square. Here take place major celebrations, in particular the parades commemorating May Day and the anniversary of the October Revolution. It includes as an essential part of its furniture a statue of Lenin (in an earlier period, and/or Stalin). Commonly the town's administration and other major public buildings are grouped around the square, often reflecting the usual period of ceremonial-centre development in their ponderous 'Stalin civic' architectural style.

Even shopping facilities show little concentration, save where this had started before 1917, as along Leningrad's Nevskiy Prospekt or Moscow's Arbat. Specialist retail outlets are by no means always centrally located; some are to be found in recent outer suburbs. Moscow's specialist bookshops are scattered far and wide across the city. On the micro-scale, too, within the new micro-regions, shops are rarely concentrated into shopping precincts. Instead they are dispersed on the ground-floor levels of the blocks of flats—functional intermingling at the most localized scale. As a result even local, daily-need shopping often involves a good deal of walking. Sometimes local services, such as laundries and dry-cleaners, are located in the basements of apartment blocks. Recently this lack of convenience has evoked calls for the establishment of local shopping precincts, distributed rationally throughout the urban area so that no one is more than ten minutes walk away. In the precinct there should be either a group of shops and service establishments, or a single multi-functional store. Such precincts would relieve pressure on the facilities of the city centre (Abbakumova, 1976).

The range and number of retail outlets in relation to the population served are far less than in Western cities. Moscow, where service provision is at a higher level than in other towns, in 1971 had only 10,932 retail outlets, of which over half (5,915) were stalls and kiosks. There was one shop for every 1,400 inhabitants. By 1976 the picture had changed little, with 10,524 outlets of which 5,152 were shops (*Moskva v Tsifrakh*, 1976, p. 118). Greater Moscow has 677 men's and women's hairdressing establishments, or one for every 10,400 people. Even allowing for the generally larger size of Moscow's establishments, this is a low order of provision compared with, say, Watford in Great Britain, where there is one establishment for every 1,149 inhabitants. Similarly in 1970 Moscow had 25 public hotels, compared with the 125 listed in the A.A. Handbook alone for London. Moreover, Moscow lacks the supplementary accommodation of private boarding houses and bed-and-breakfast establishments. In terms of the number of retail outlets per capita, central Moscow districts have only marginally more than outer districts. However, central establishments are generally larger and certainly have a significantly greater trade turnover per capita. Indeed GUM, the famous department store on the Red Square, alone accounts for over a tenth of Moscow's total retail turnover in goods other than comestibles (Lappo, Chikishev, and Bekker, 1976, p. 102).

If functional differentiation on the macro-scale, by sectors of the town, is weak in Soviet urban places, there is still less localized specialization on the micro-scale. As already pointed out, retail outlets are seldom clustered. This applies equally to other forms of services, even in Moscow. The capital has no Whitehall, no Harley Street, no Inns of Court and Temple, no Soho. Largely this reflects the lack of choice offered to the consumer. For all medical services, everyone uses the local polyclinic and, for more serious needs, the local district hospital. In the case of central government functions there is a special historical reason. During the period when a modern style of government by ministerial departments was developing, the capital was St Petersburg. There the original, planned grouping of ministerial buildings can still be seen, clustered round the Winter Palace. When in 1918 the capital was transferred back to Moscow, ministries had to house themselves wherever they could; until recently there has been little significant concentration of government offices, although almost all are within the Sadovaya ring. The Kremlin still houses the Presidium, the Council of Ministers and meetings of the Supreme Soviet, but only Gosplan is close on Marx Prospekt. Indeed the new building for the Council of Ministers of the R.S.F.S.R., under construction in 1976, is outside the Sadovaya ring, on the Moskva River opposite the Ukraina hotel. The Ministries of Foreign Affairs and Foreign Trade are located well over a mile away from the Kremlin on Smolensk Square. In recent years a certain grouping of ministries has emerged along the new showpiece street, Kalinin Prospekt, built in the late 1960s.

There can be little dispute that the much greater degree of functional mingling in the U.S.S.R. is due to the lack of a price mechanism of land values, which

in Western cities sorts out land users by their ability to pay. In the Soviet city desirability of any particular site in terms of accessibility or amenity is not reflected in rent. It is not possible to construct a land-value surface for the Soviet town. It follows therefore that the considerable volume of work, especially in America, on models of urban structure, which take the land-value surface or rent differentials as a basis, is simply irrelevant in the Soviet context. One might argue that capitalist price competition is replaced by planning decisions, theoretically achieving the optimum use of a piece of land and the most rational distribution of functions, and that the end product might well be rather similar. The factors by which Soviet planners make an economic evaluation of land are the costs of engineering work for development, the compensation necessary to agriculture or forestry, economic manifestation of social consequences, the suitability of the area for its designed purpose, and sanitary conditions (Kabakova, 1976). Planners' ideas of optimum use frequently differ sharply from those of private entrepreneurs. For example, convenience to the public, that is accessibility, may not be a primary consideration, as anyone who has stayed at one of Moscow's more peripheral hotels will testify. In any case centralized planning is a rather coarse instrument of differentiation compared to free-market pricing. Yet again bureaucratic decisions tend to operate more slowly than the financial pressures of competition in bringing about change. In the Soviet Union especially, the ability of planners to change urban land uses has been much hindered by the great housing shortage and the overriding need to continue use of existing accommodation until sufficient 'decanting' space became available.

Patterns of People

The distinctiveness of the Soviet city in its lack of functional differentiation is matched by its lack of social segregation. It might be said that this is only to be expected in a classless society, but there are of course very marked differentials in income. Additionally, in many, if not most, Soviet urban places there is considerable ethnic mixture. Ethnic segregation was sharp in pre-Revolutionary Central Asian towns like Tashkent, where there was a 'native' quarter with a maze of alleys and traditional mud and wattle houses, interspersed with ornate mosques and medressahs, and a Russian 'colonial' town on a regular street pattern, with entirely Russian styles of architecture. Today, in all parts of the U.S.S.R., differences in income or nationality are not expressed in geographically separated living patterns. All land is owned by the State, which allocates it to individual users and which therefore has the power to prevent social differentiation as a thoroughly undesirable feature in a communist society. Housing in towns, apart from that provided by an enterprise for its own workers, is usually allocated by the local authorities. Soviet citizens frequently try to influence those allocating, but the housing shortage has also had an effect in preventing any segregation of privileged groups. New and more desirable accommodation

has been allocated, often indeed to the favoured or influential, as it became available, regardless of location. Influence may help in some cases, but a larger income gives little advantage in itself, since rents for flats are universally low, in fact nominal, not even covering running costs, let alone capital costs of construction (Il'in, 1972, p. 168).

In consequence, social segregation tends to be by building, rather than by street or area. One street may have housing of varying age and quality, occupied by a range of income groups. In the prevailing shortage there has been very little choice of where to live for anyone. Families thankfully take what is offered, without particular regard for desirability in terms of amenity or convenience to work place. This factor leads to a very large number of cross-town journeys to work, a factor reinforced by the imposition of standard fares irrespective of distance. In the past decade or so this situation of social mixing in space has perhaps been modified slightly by the increasing construction of privately financed cooperative housing. Groups of people put up money for the building of a block of flats, one of which is allotted to each family in the cooperative. Government credits are available to assist those wishing to join. A site is allotted by the local authority. Naturally those able to participate in such schemes are usually the better-off members of Soviet society, and as standards of living rise cooperative ventures are becoming ever more popular. From 1965 to 1973 inclusive, 63.5 million m² of this type of housing were built in urban areas, about a tenth of total housing construction (*Narodnoye Khozyaystvo...*, 1974, p. 609). In Moscow, over the five years 1966–70, 85,401 cooperative flats were built and, during the next five years, a further 75,678 (*Moskva v Tsifrah*, 1976, p. 68), representing in all almost 15 per cent. of all flats constructed over the decade. This higher proportion undoubtedly reflects the greater concentration of well-off citizens in the capital, although the steady decrease since 1970 in the number of such flats built each year (from 21,446 to 10,408) may indicate that the market is beginning to be saturated. Cooperative housing is usually distinguishable by the much greater care given to its maintenance, noticeably the maintenance of communal features such as lifts, corridors, staircases, and surrounding land. What is less clear is whether these blocks of flats are yet beginning to form distinct 'quarters' of a town or are located on more desirable sites.

There is one aspect of Soviet urban structure where segregation of function and, in consequence, of social groups does occur to a limited extent. That is segregation not on the intraurban but on the interurban level or, more accurately, on the intra-agglomeration level. For several decades the U.S.S.R. has seen—and encouraged—the active development of urban agglomerations of groups of functionally related towns. The most usual pattern is one large central place and a ring of satellites. Individual towns and urban districts within the agglomeration are often planned to have one specific function, most commonly as 'industrial' or 'dormitory' settlements. In recent years there has been a trend

towards other forms of specialization. A notable example is Akademgorodok, the satellite urban district of Novosibirsk, which is devoted to academic and scientific research institutions and to the homes of those working in them. Similar 'academic towns' are planned for Leningrad, Vladivostok, and other cities.

The population of the Soviet city differs from that of the Western city, not only in its spatial structure but also in its occupational structure. It is not necessary to analyse this at length here, since what can be done with the very limited data available has already been accomplished by Harris (1970, pp. 55–61). Suffice it to say that the U.S.S.R. has a distinctly higher proportion (61.5 per cent.) of the urban employed population working in industry, construction, and transportation, and a lower proportion engaged in trade (7.8 per cent.) and in administration and services (21.4 per cent.) than in American and British towns. As one might expect, Moscow with its role as national and republican capital has a lower proportion of its workers in industry than other towns, yet even there industry alone accounts for over one in four of the gainfully employed. Table 4.9 highlights the contrast in this respect between Moscow and

Table 4.9 Occupational structure: Moscow and Khar'kov (percentage of employed population)

	Khar'kov 1959	Moscow 1960	Moscow 1970	Moscow 1975
Industry	54.2	36.4	30.2	27.8
Transport		8.9	8.0	8.0
Communications (post, telephones, etc.)	6.5	1.4	1.4	1.5
Construction	9.0	10.2	9.6	7.0
Trade		4.8	5.4	5.2
Catering		2.3	2.7	2.7
Material—technical supply and sale	7.0	0.9	0.8	0.9
Other branches of production	1.7	—	—	—
Housing and services	3.5	5.7	5.0	5.0
Health, sport, and social security	4.9	4.4	5.0	5.0
Education and culture		5.3	6.0	6.1
Art	9.0	0.6	0.5	0.5
Science		12.4	17.6	19.6
Finance and insurance		0.4	0.5	0.5
Government	3.3	3.2	4.7	5.0
Others	—	3.1	2.6	3.0

Sources: *Moskva v Tsifrah* (1972, p. 65); Kurman and Lebedinskiy (1968, pp. 177–178).

another very large city, Khar'kov, which can be reckoned as having a more typically 'Soviet' occupational structure.

Urban Transport

Another area of contrast between the Soviet and Western cities is seen in the degree of reliance on public intraurban transport. Even though car ownership in the Soviet Union is steadily increasing, it is still very low compared with the countries of Western Europe and North America. This, combined with the lack of choice in residential location, means a very heavy and still-rising dependence on public transport. In 1970 there were 651.6 journeys per inhabitant on Moscow's intraurban system; by 1975 the figure had risen to 693.7. In consequence, services—at all events in large and medium towns—are usually very good, with dense networks of routes, high frequency of services, and cheap standard fares. Most cities of any size rely on a broad mix of services, including underground trains, surface electric trains, buses, trolleybuses, trams, and fixed-route taxis. Moreover, public transport, far from declining in quality and quantity of services as is common in the West, is everywhere being extended and intensified. Places like Moscow, Leningrad, and Kiev, with existing Metro systems, are adding new lines. Moscow opened fourteen new stations and 75 km of line between 1970 and 1975. Other towns, such as Tbilisi, Tashkent, Khar'kov, Minsk, and Baku, have commenced the construction of underground railways within the last decade or so. This expansion applies equally to forms of urban transport which have been, or are being, abandoned in the Western city. Between 1965 and 1975 Moscow's length of trolleybus lines increased by 35 km and the number of passengers carried annually rose by 109 million (*Moskva v Tsifrakh*, 1976, p. 63). Although Moscow's length of tramline has shrunk by 10 km since 1970, the number of people carried has risen slightly. National use of both these forms of transport is steadily rising (Table 4.10); justification for this increased reliance is based on their non-polluting characteristics.

Table 4.10 U.S.S.R. tram and trolleybus services

	Trolleybus		Tram	
	Length of line (km)	Passengers (millions)	Length of line (km)	Passengers (millions)
1950	949	945	4,609	5,157
1960	3,030	3,055	6,375	7,842
1970	8,142	6,123	8,261	7,962
1976	11,912	8,345	8,810	8,343

Source: *Transport i Svyaz' SSSR* (1972, pp. 256–257); *Narodnoye Khozyaystvo SSSR za 60 let* (1977, p. 41)

Undoubtedly the continuing rise in car ownership will cause future traffic problems with these inflexible transport modes. Between 1960 and 1976 car production in the U.S.S.R. soared from 138,800 to 1,239,000 (*Narodnoye Khozyaystvo* . . ., 1977, p. 227). The number of person/journeys in privately owned cars has already risen from 45 million in 1950 to 1,344 million in 1970 (Davidovich, 1972, p. 31). This trend will increasingly bring to the fore another urban problem. The millions of apartments constructed over the last two decades have been put up almost entirely without associated garaging facilities. At present urban road systems are usually well capable of dealing with existing densities of mainly commercial traffic. In Moscow in particular, road widening and the construction of underpasses have kept one jump ahead of traffic demand. The Sadovaya (Garden) ring is already approaching the standard of an inner motorway and the completion of the orbital motorway over ten years ago stands in stark contrast to London's situation.

In the Soviet Union urban lines of communication have had much less influence in determining the shape of the town than is common in the West. In the earlier pre-Revolutionary period the provision of urban transport was, in general, too meagre to have much effect. After the Revolution surface rail commuting into urban areas was not greatly developed and even today is at a much lower level than in most advanced countries, although it is increasing. At present some 12 per cent. of the Soviet employed population (together with those in higher education) are involved in what Soviet writers call 'pendulum' migrations, or daily commuting. In Poland the corresponding figure is 20 per cent. (Khorev, 1971, p. 287). With the huge post-1956 expansion of the built-up area in new micro-regions, public-transport routes have been established following the new developments, rather than preceding them and influencing their location.

Conclusion

The evidence available, although fragmentary, suggests very strongly that the Soviet city is sufficiently distinct from the Western city in a number of important respects as to warrant its classification as an entirely separate category of urban settlement. Although in a country the size of the U.S.S.R. there are inevitably differences between one town and another, these differences, which in any case are chiefly historical, are minor compared with the common characteristics. The principal respects in which the Soviet city displays its peculiar qualities can be summarized as:

- (1) a generally much higher population density;
- (2) a lack of a density gradient;
- (3) a lack of any surface of land values assessable in financial terms;
- (4) a lack of a determinable spatial differentiation of social groups;

- (5) a far-less marked spatial differentiation of function between one part of the town and another;
- (6) a relatively low order of service provision;
- (7) a distinctive employment structure, with a higher proportion of workers engaged in industry;
- (8) a high degree of reliance on public transport; and
- (9) as a framework to all the rest, the total concentration of decision-taking in the context of development and urban change into the hands of the planners, and the elimination of individual decision or competition.

Urban geography and urban structure in general have received a vast amount of attention in recent years, but the Soviet city has largely been ignored by British and American writers. If the contentions of this chapter are valid, then this is a major omission, not only of a great area of the earth's surface but also of a whole species of town. In future the Soviet model may well develop in various other countries, still largely in the pre-industrial stage. Surely therefore the Soviet city deserves much more investigation, despite the very real obstacles which presently exist to its study, both for its individual character and for the lessons it offers to those whose primary concern is the Western city.

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Chapter 5

Social Dimensions in Soviet Urban Housing

MERVYN MATTHEWS

The modern city brings together, in close proximity, people of most social groups and classes. Yet despite its overall cohesion, the *urbs* must somehow allow for social differences within it. Two terminal patterns of social distribution may be postulated on the basis of location and quality of housing. In a capitalist city, say, each district would typically have a well-defined social character. The best ones would contain the most pleasant and expensive houses inhabited exclusively by the upper classes. At the other extreme there would be slum areas—unpleasant, cheap, and the abode of an impoverished proletariat. The socialist city, by contrast, would be devoid of such invidious distinctions. Although historical or geographical variations in the attractiveness of districts would, perhaps, be inevitable, all housing would be of approximately the same standard and cost, while such social groups as could still be discerned would be evenly mixed throughout the settlement.

In practice, of course, such ideal types (in the Weberian sense) are rarely, if ever, encountered. The object of this paper, given the dearth of information, is limited to indicating the factors which promote or hinder residential differentiation in the Soviet town, and to assessing the degree of success achieved. Specifically, we shall begin with the problem of State control of housing, State policies (where discernible) on the quality, location, and allocation of housing, and the social role of rents. We shall then consider a few Soviet studies which record some degree of social differentiation through sociological research.

State Control—A Historical Note

When the Bolsheviks took over the machinery of state they were inevitably confronted by a major dilemma in the sphere of urban housing. Their ideology demanded the creation of an egalitarian society, which implied a policy of