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INSTITUTE OF GEOGRAPHY AND SPATIAL ORGANIZATION**

GEOGRAPHIA POLONICA

69



**URBAN DEVELOPMENT AND URBAN LIFE
IN INTERNATIONAL PERSPECTIVE**

**EDITED BY
WIM OSTENDORF, PIOTR KORCELLI, ROBERT SINCLAIR**

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FOREWORD

The 28th International Geographical Congress was held in the Hague, the Netherlands, from August 4–10, 1996. There was one main Congress, hosting and integrating Commissions and Study Groups, including several joint sessions of the Commissions and Working Groups. The main theme of the Congress, Land, Sea, and Human Effort, served as the integrating topic. The topics of the IGU Commission on Urban Development and Urban Life constituted an important element of the Congress: twenty-four sessions were organized by the Commission, of which ten were joint sessions. Some 100 papers and posters were presented in those sessions, too many for one integrated publication. Hence the contributions of the Commission are published in special issues of several international journals. This Special Issue of “*Geographia Polonica*” is one of them.

The papers in this volume do not have one specific theme. Instead they mirror the scope of the topics covered in the work of the Commission: Several papers (2–7) concentrate on urban development; others (8–12) on different aspects of urban life, although clearly there is no clearcut division between the two. The first paper by Denise Pumain, Chair of the Commission, covers the state-of-the-art in urban geography, and is an appropriate introduction to the other contributions. Pumain stresses the importance of studying urban problems, considers the usefulness of the concept of urban systems, and evaluates the work of the Commission in the past four years.

Three papers concern the changes taking place in the urban systems of Eastern Europe. Tiefelsdorf and Braun investigate the integration of Berlin after reunification, looking at changing migration patterns within and between the city’s different subsystems as the city is increasingly influenced by the global economy. Korcelli continues this theme by analyzing the impact of the changing international situation on the Polish system, again showing the important role of Berlin. Ianos, discussing the Romanian urban system, indicates the continued impact of communist policies, which he judges to be negative. He suggests how the market economy might improve this situation.

The next three papers focus upon the urban systems of Western Europe. Cunha and Racine look at the urban system of Switzerland, a country with a federalist structure. They pay attention to the impact of recent economic restructuring. Bonavero describes the Italian urban system, specifying the functions of different local labor markets, and discussing the integration of the system into the European urban system. Basten describes a deliberate attempt to enhance a city’s international importance. He analyzes the planning strategy of Centro, a large development project in the city of Oberhausen, Germany.

Five papers are more in the category of Urban Life: two study migration and mobility, whereas the last three papers cover segregation and poverty. Smit looks at the problem of traffic in the Netherlands. She considers the possibility of decreasing congestion by adjusting the location of residential areas and areas of

work. Murayana, Inoue and Hashimoto analyze the migration of residents in the city of Yokkaichi, Japan, in response to changes in their lifecycle. Sinclair examines racial segregation over the postwar period in Detroit, U.S.A. He emphasizes the changing contexts of segregation during the period, relating them to the contemporary patterns and problems of race within the metropolis. Madaleno explains how urban planning is used to create segregation in the cities of Cape Town, South Africa, and Brasilia, Brazil. Reddy focusses directly upon the poor. How is the quality of life to be judged in the slums of Hyderabad, India? She suggests that the alleviation of slum poverty demands a well-organized governmental strategy.

Together the papers in this volume suggest the breadth of the urban topics covered in the Hague Congress, as well as the dynamism and diversity of the present urban scene. The editors are pleased to present these papers in this Special Issue of „Geographia Polonica”.

The Editors

URBAN GEOGRAPHY FOR THE XXI CENTURY

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ABSTRACT: Geographers, and especially those involved in cooperative work inside the IGU for the last decades, have contributed in a significant way to provide original insights in both theoretical and practical urban issues. By developing and illustrating the concept of urban systems, they have emphasized the importance of scale effects and spatial organization in the urban realm. Comparative research at intra- and interurban scales have demonstrated the universality of the problems created by the process of urban transition, under a variety of cultural forms and socio-economic circumstances. A formalised consideration of metropolisation trends, social polarisation, urban image and identity is already well advanced, whereas questions about the vulnerability of megacities or the elaboration of comparable indicators on an international basis are still in progress. The time has also arrived to elaborate a new convergence between urban geography and mathematical modelling, to bring about a better integration of spatial analysis and urban dynamics in the increasingly numerous and sophisticated urban information systems.

KEY WORDS: urban geography, urban development, urban live, urban systems.

INTRODUCTION

With more than half of the world population living in towns and cities, it has become commonplace to say that we shall be living henceforth in an urban world. This means that cities organize the world economy, that the living environment of a growing share of the world population is an urban one, and that the urban way of life dominates the collective mental representations of humanity. This general awareness, as illustrated by the organization of the second United Nations conference on Human Settlements (Habitat II or "City summit") at Istanbul in June 1996, is accompanied by significant changes in attitudes and expectations concerning urban research.

The major activities of the last decades were those induced by dramatic urban growth and uncontrolled urban development. Although the magnitude of metropolises and the spatial sprawl of cities remain subjects of major concern, especially in third-world countries, the attention of specialists in the urban realm has shifted to issues of a more qualitative nature. The new key-words are mondialisation, globalisation along with their related consequences such as the metropo-

lisation trend, the new forms of vulnerability of urban social life and the question of sustainability of large cities in their environment. They involve new inquiries in such diverse fields as the dynamics of urban systems, the formation of social links in an urban environment, the interactions between urban forms and their representations, the implication of new communication techniques to the functioning of cities, and the definition of urban identities.

The emergence of such questions has prompted an exploration of new methods of investigation, which would ensure a better linkage between the features and determinants of individual behaviour on the one hand, and the conception of urban spatial structures and their evolution on the other. Advances have been made in understanding the interactions between forms and processes at various geographical scales. Acknowledging the complexity of urban reality has involved a growing interest in pluridisciplinary work. At the same time, operational and fundamental research has been helped and also inspired by the prodigious development of Geographical Information systems, which find in cities their major domain of application.

With this context of dramatic change in all aspects of urban development and urban life, a touch of modesty is required when presenting the way this new situation has been evaluated through the four-years work of a Commission of Urban Geographers. Fortunately this Commission has benefited from a solid inheritance, following in the footsteps of such distinguished predecessors as Prof. W. Dziewonski and L. S. Bourne and their Commissions on National Settlement Systems (1976–1984), Urban Systems in Transition (1984–1988), and Urban Systems and Urban Development (1988–1992), and Prof. J. Beaujeu-Garnier, who led the Commission on World Metropolises (1980–1988), as well as study groups on Urbanization in Developing Countries (1980–1988) (Robic et al. 1996). The summary presented below is indebted to the work of hundreds of geographers from many countries who have contributed closely or more remotely to the work of the Commission. It is intended to be representative of the main trends in urban research and analysis of problems in contemporary urbanisation.

RECONSIDERING PARADIGMS: THE CONCEPT OF URBAN SYSTEM

Knowledge stemming from the experience of previous commissions and more broadly from urban geographers' work has emphasized the concept of urban system. By focusing attention on interdependences between towns and cities and on the coherence in their evolution, this concept has widely demonstrated its theoretical value and heuristic potential.

In a world, where urban changes are no longer considered mainly as a matter of quantity, but as a challenge for improving the quality of urban life, geographers have to reconsider the definition of "urbanity". One may wonder, as did L. S. Bourne (in Braun ed. 1994), if the concept of urban system is still useful in this new context and if it still has a paradigmatic value for urban research. We

are tempted to give a positive answer to such a question, provided that the concept of system is taken, not in an organisational or mechanical sense, but with its probabilistic and even evolutive connotations. It is more and more linked to the notion of urban complexity.

SPACE AND TIME SCALES

The city as it has been built as a scientific object of study by geographers, is conceived at various levels of spatial organisation: the three levels of the individual actors, the city itself, and the system of cities, are generally considered whereas some intermediary levels such as neighbourhoods, or some regional subset of cities may also be of interest.

A growing consciousness of the interdependences between those scales of analysis in urban evolutions has emerged among urban geographers. It means that an integration of the different spatial scales has to be made for a better understanding of the complexity of urban phenomena.

Another source of complexity makes the description and modelling of urban systems difficult: namely the multiplicity of time scales which are operating at the same time in the same city. For instance, one only has to consider how the timing of daily life adjusts (for instance by commuting) to the more stable pattern created by the location of jobs and housing facilities in the city. The life-time of buildings is generally longer than the duration of stay of their users or inhabitants, or even of one generation of people. This leads to the well-known pattern of movements from central locations to the periphery and back to the centre, which are linked with the successive stages of the life cycle of individuals. But other time-scales, which may have a decisive and sometimes catastrophic effect on the life of its inhabitants, intervene in the life of a city: the duration of a cycle of economic specialisation (adoption of a large set of innovations) may be from a few decades to one century or more, inducing alternate periods of rapid growth, stability and slow decay. Even if cities succeed in adapting to several successive innovation waves, the speed of change of the economic and social functions is generally quicker than the speed of transformation in the town plan and infrastructure. All these differences in the time scales of the components of an urban entity cause severe dysfunctioning in the everyday life of cities, and also make the description of the dynamics of the urban systems very difficult. Not only do the relevant steps of time have to be identified, but also the mechanisms articulating various temporalities have to be considered.

Without being too deterministic, or playing with ideas about finalism, we could suggest that the articulation of such different temporalities, which is part of urban complexity, is also a condition which explains the survival and the persistency of cities over very long periods of time. The same structures can respond to very different social needs and economic activities, and this adaptability and flexibility ensures the sustainability of the whole urban system.

Momentary on adaptation of form to function, congestion phenomena, time lags in adjustments to change, mismatch in facilities and infrastructure, and discrepancies between real needs and the objectives of policies may result from inequalities in the duration of the life-cycle of each of the components in an urban system. The analytical handling of such a large variety of time-scales is very difficult and is a main source of the problems faced by urban theory and modelling in their conceptualisation of urban change.

ADAPTIVE AND INNOVATIVE SYSTEMS

Urban systems are also complex because they cannot be wrapped up in a stable taxonomic description. The social and economic content of cities and its significance is changing over space and time. Different “generations” of towns and cities have to be characterized differently, according to their morphological aspect as well as their urban functions. These changes lead sometimes to the disappearance of some cities, to the creation of new towns or of new places for urban communities, but in most cases the transformations and adaptations occur within permanent urban entities. Indeed cities are often considered as the main vectors of social transformation and technological innovation. This *adaptation* process induces more or less pronounced specializations of towns and cities and neighbourhoods into functional types. Successful adaptations or failures to transform determine inequalities in city size. Meanwhile, the significance of size thresholds is also evolving over time. The qualitative content suggested by concepts such as a ‘small’ town, a ‘large’ city, a ‘metropolis’ of international level, an ‘industrial’ or an ‘administrative’ one, has to be constantly revised.

With respect to innovation and creation, this particular process of urban change is very difficult to include in models which attempt to make predictions. Even when general trends in evolution have been identified as internationalisation of the economy, opening of urban markets, decentralisation of urban centres, extension of suburbanisation etc., there is no instantaneous, neither mechanical nor universal “response” to be expected from the urban systems submitted to those trends. According to local conditions, and to the timing of their previous evolution, urban systems may react in quite different ways. This makes the identification of actual general “trends” difficult, controversial, and perhaps problematic. Indeed, diversity, creation of new products and new ways of doing things have always been a characteristic of the urban phenomena. There are no predetermined alternatives for urban evolution which could form guidelines for the trajectories of cities. Indeed, cities are permanently inventing their own evolution.

The innovation process itself is also a source of complexity in the sense that the integration of social interactions at any particular time produces networks of relations which have a long existence and persist well beyond the migrations of people and even the passage of generations (Dematteis, in Braun ed. 1994). The analysis of institutions and the political economy of conventions lead to such

conclusions. Towns and cities become indivisible objects and cannot be analysed as the juxtaposition of their different parts. It is significant for instance that a conurbation resulting from the merging of two or three independently grown cities will not reach the same functional level as a unique monocentric city of the same size until a long time (many decades or centuries) has passed.

LOCAL INTERPRETATIONS OF GLOBAL TRENDS

One more source of urban complexity is the fact that the same mechanisms or rules, or planning principles, may lead to different structures, according to the situation of the city under study and the moment of its evolution. The same action (external perturbation or internal change) may have no effect if the city is on a stable dynamic trajectory, but it can deeply alter the structure if it intervenes at a moment of instability, when bifurcations are possible (Pumain, in Braun ed. 1994).

The complexity of the behaviour of urban systems emerge from our comparative work. No simple answer can be given to most alternative questions which oversimplify the problematics of the future urban evolution, as quoted again by L. S. Bourne: Which dominant trend should appear as a consequence of the growing internationalisation of economies and societies and of the contemporary main technological and political changes?

– will urban systems react by drastic modifications of their spatial organisation, or will they adapt their structure within the general pattern of stability which characterized their evolution, even during the dramatic changes linked to the urban transition of the last century?

– are urban structures evolving towards more concentrated or decentralised patterns, at the different scales of observation?

– is there any convergence of urban profiles toward a growing economic and/or social and cultural homogeneity, or is social and economic heterogeneity increasing?

No straightforward answer can be given to any of those questions without considering precisely at which kind of place and at which spatial and temporal scales of analysis the phenomena occur. The consequence is a necessary restructuring of the field of urban research, intertwining previously separated themes and scales of analysis. It was suggested that the Commission prepare “intelligent” monographs on cities enlarging the traditional way of considering an urban case by developing new concepts which tend to integrate the idea of complexity and the simultaneous consideration of several scales of analysis.

Whatever the spatial scale of analysis, in the case of individual cities as well as in whole national settlement systems, we also emphasize the necessity of considering evolutions over periods long enough for them to be interpreted correctly. Urban systems are continuously adjusting their structures, causing many temporary fluctuations in the trajectory of the main state variables which are currently used for their description. Moreover, many trends present temporal

curves which have a cyclical aspect, for instance because of the changing relation to city size over time induced by the hierarchical diffusion of innovation and urban changes. Errors have been made by interpreting too hastily momentary inflexions as dramatic “reversals” in the general evolution.

A major consequence of this change of paradigm is the loss of confidence on the part of decision-makers. When conceiving the future of one city, trends can no longer be seen as the prolongation of the past. Local strategies also cannot limit themselves to choices inspired by the general context of urbanisation trends, since even the best recipes when applied to different situations may not work at all. A progressive consciousness of the advantage of substituting anticipation for imitation is emerging in urban marketing and strategies of development.

Some examples illustrating the complexity of contemporary urban evolutions have been selected below, without pretending to reflect the entire work of our Commission.

URBAN DEVELOPMENT: CHANGING PERSPECTIVES ON URBAN ACTORS

Since World-War 2, a number of structural transformations have affected the social organisation of the economy, the nature of production and the geographical scale of interdependencies between places. How such a context is changing the content of urban activities and the significance of urban development is one of the major questions faced by urban geographers. It also incites them to emphasize the role of new actors and practices in the urban environment.

THE RESTRUCTURING OF URBAN ECONOMIES

Whatever term is used to describe our post-industrial, information or knowledge-based society, the service sector is perceived as becoming more and more the main economic base of cities. The general methodology inspired by central place theory is still effective by helping to distinguish between widely-diffused services activities which develop proportionally to the resident population, and specialised services creating inequalities in development among cities in urban competition. Examples are given for the Toronto region (Preston, in Braun ed. 1994, Simmons, in Braun ed. 1994). The development of business services and especially financial centres is put forward as a significant indicator of a growing urban economy. International activities such as tourism are also analysed in that perspective, for instance in the case of Tallin (Kuus, in Braun ed. 1994). Cities of developing countries do not escape the process, as illustrated by changes in the CBD of Harare (Cumming et al., in Davies ed. 1996). However, it would be an oversimplification to conclude that old industrial centres are definitively fixed in economic and social decay, as demonstrated by studies of Detroit (Sinclair, in

Braun ed. 1994) or by studies about smaller cities of former East Germany (Cassel, Schwaderer, in Braun ed. 1994).

THE INFORMAL SECTOR

A fast growing set of tertiary activities in cities of developing countries belong to the so-called informal sector, as described for instance for Mexico (Aguilar, in Braun ed. 1994), or China (Dao Qi, in Braun ed. 1994). The attitude towards urban informal activities has changed. Lately, they used to be conceived as a more or less parasitic form of economy, impeding real development and contributing to maintain people in poverty. Detailed field studies have reversed this too limited view and revealed the specific role of the informal sector in the learning processes of newly immigrated populations in the urban milieu. It may also represent a non-negligible source of income. Once more, results from local studies provide contradictory results: in some cities such as Hyderabad, India, informal activities appear as an instrument of new gender division of labour and a source for a possible change in status for women (Reddy and Rajkumar, in Braun ed. 1994), whereas around Lake Chad in Cameroon informal trade is mainly a practice of foreign refugees and seems to weaken the national economy (Simeu-Camden, in Braun ed. 1994). In both cases however the informal sector provides several fundamental forms of elementary social links which are the basis for the integration of new populations into the urban environment.

URBAN IMAGE AND MARKETING

It may be a consequence of the growing influence of communication and the media in our societies that urban images and awareness about their importance are progressively being incorporated into the general know-how of urban decision-makers (Borchert, in Braun ed. 1994). The use of images for competitive purposes by cities and attempts to modify the way they are perceived are by no means a recent phenomenon. However, it is only during the last ten or fifteen years that cities have multiplied their marketing efforts. This concern can be explained, firstly by the development of our information society which exacerbates competition between cities, and secondly by the above-mentioned trend toward the growing importance of services in the economic bases of cities, inducing the urban authorities to develop market-oriented strategies for attracting those foot-loose activities (Dematteis, in Braun ed. 1994).

Urban marketing studies have been classified into various types corresponding to unequally professional strategies and objectives: from place promotion and urban advertisement to new image definition. Various instruments are used for promotion, from historical heritage and architecture to public art and festivals (Borchert, in Braun ed. 1994 and in Davies ed. 1996). Less frequent is a reflexion about the complexity of the process of urban identification and definition of an

identity. This would substitute for the static idea of an urban patrimony a more dynamic concept of an urban milieu, made up of competing, co-operating and conflicting groups. The marketing policy could “connect the sense of belonging with mobilisation aimed at change, and the subjective identities of the individual components with the collective identity of the city as self-organised system” (Dematteis, in Braun ed. 1994, p.436). Such images have been tried by cities like Glasgow, Toulouse, Annecy or Antwerp. Other examples are given in the specific case of double cities (Buursink, in Braun ed. 1994 and in Davies ed. 1996). New policies for “smart development” may in the long term replace competition for growth. In many cases, however the use of urban images is limited to very standardised operations of promotion.

Other studies emphasize the role of private-public partnership in inserting urban marketing into planning strategies, for instance in the German experience (Helbrecht, in Braun ed. 1994) as well as the specific role of “mega events” such as the application to become the European Cultural City of the Year by Bergen (Sjoholt, in Braun ed. 1994), Helsinki (Haarni, in Davies ed. 1996) or Copenhagen – actually elected for 1996 (Andersen and Matthiessen, in Braun ed. 1994), or the competing bids for the organisation of the Olympic games of 2004 by Durban and Cape Town in South Africa (Davies, 1996). Those last studies also emphasize two conditions for efficiency in city marketing: the generic definition of urban qualities and their identification and description in terms appropriate to the target group it wishes to impress.

If operational methods for urban marketing are improving over time, urban identity as a “hidden face of the city” (Racine, in Braun ed. 1994) has still to be explored in the theoretical framework of urban geography. Several epistemological ways are suggested for defining what makes urban identities, answering such questions as “do cities have a soul?”, building a “mental ecology” or finding the secret of urbanity and its follower “metropolity” (Racine, in Braun ed. 1994). How may an urban collective identity emerge from individual symbolic values and aspirations to social distinction, through the interactions between the level of individual representations and the more aggregated level of urban images.

URBAN LIFE: THE CITY AS A TERRITORIAL AND SOCIAL ENTITY

Several authors have analysed the social and intellectual counterpart of such developments as “postmodernism” as well as their geographical consequences. Contradictory tendencies are hypothesized: on the one hand the widening of relationships between all parts of the world leads to a diffusion of various cultural features which may be used and “quoted” far away from their place of origin; the consequences in the urban realm would be a trend towards more diversity inside each city (multiculturalism in society, pluralism of cultures, eclecticism in architecture, relativism in intellectual interpretations) and more uniformity between

cities. On the other hand, the globalisation of the world economy and the ideological domination of liberalism would lead to reactions reaffirming local identities and particularisms, exacerbating for instance ethnic tensions and social polarisation inside cities.

TOWARDS AN INCREASING SOCIAL POLARISATION INSIDE CITIES?

Detailed field studies throw some doubt upon the often accepted idea that increasing social polarisation should be the necessary price to pay for becoming a main node the world economy. There is an oversimplification induced by theories as the globalisation theory, linking the central position in world networks to social and spatial segregation and the increasing difficulty of social integration.

The shape and evolutionary trend of the spatial organisation of social groups inside cities appears to be not so much a consequence of an abstract “law” of the real estate market as of social, political and cultural choices. For instance, the decay of housing and the concentration of the most deprived groups in inner cities is not a universal fate. In some countries, a clear and conscious choice has been made in favour of upgrading the city center, for instance in Warsaw (Korcelli et al., in Braun ed. 1994) as in most European countries. However in the European continent an increasing spatial segregation is occurring in some places, for instance in Turin where it accompanies the de-industrialisation process (Petersimeris, in Palomäki, Karunaratne eds. 1995). Elsewhere, there are still slow-downs in the trend towards gentrification of inner cities, as illustrated in the case of the central neighbourhoods of a few Canadian cities, which may be related to the aspirations of one particular generation of people (Ley, in Braun ed. 1994). Indeed, patterns and processes of change are more complex than is generally assumed, as suggested by a study of income inequalities in Canadian cities (Bourne, in Palomäki, Karunaratne eds. 1995), as well as the spatial pattern of ethnic groups in greater London when disaggregated by levels of social status (Petersimeris, in Palomäki, Karunaratne eds. 1995).

The most striking examples of contrasting urban evolution may be found between North America and South Africa. The formation of new urban ethnically homogeneous communities in some North-American suburban areas, and its extreme forms of “gated” or “walled” communities has been analysed as a specific cultural and political process. By its extreme and “pure” character as a social and spatial form, this may appear as a model, but can by no means be interpreted as a general trend for the evolution of urban socio-spatial structures all over the world. Even in North America, most communities have only a partial and flexible character; they are oriented to specific aims and do not encompass all aspects of local social life (Davies W. K., in Palomäki, Karunaratne eds. 1995). The end of apartheid in South Africa has led to a tremendous social change and to great spatial reorganisation of the administrative structure of the

territory. Municipalities have been redefined in order to associate urban white communities with parts of the former black townships or “coloured” neighbourhoods (Davies R. J., in Palomaki, Karunaratne eds. 1995). The specialised workshop on social segregation, integration and urban transformation held during the Commissions Cape Town meeting includes some twenty contributions with detailed studies of contemporary changes occurring in various South African towns and cities, examining the desegregation process through questions like urban governance (Maharaj; Simon, in Davies ed. 1996), policy (Parnel; Simon, in Davies ed. 1996) and planning (Lemon, in Davies ed. 1996), economic activities and development (MacCarthy; Rogerson; Grant et al., in Davies ed. 1996), home ownership and social status (Donaldson; Fairhurst et al., in Davies ed. 1996), population and household dynamics (Spiegel et al.; Rule; Myburg; Geyer, in Davies ed. 1996), relationships between ethnic communities and economic groups (Fox; van der Merwe, in Davies ed. 1996).

From studies of the contemporary evolution of intra-urban social and spatial structures, it would be difficult to detect a general trend towards an increased heterogeneity or homogeneity in the repartition of social, ethnic or income groups in the urban space. First, depending on the cultural and political history of each country, the intensity of social and spatial segregation which determine an action in favour of regulation is very different. For instance, American ghettos may be monocultural at 60% and more, whereas in Europe a concentration of 20% of one type of population in a neighbourhood is already identified as a serious problem. Second, national and local policies about intervention on the housing market and in urban planning have a decisive impact on the spatial organisation of income groups inside cities.

Observations of postmodernism trends in urbanism and multiculturalism can be made in various parts of the world, as in Hout Bay at Durban (Olofse, in Davies ed. 1996). But new schemes of explanation are not always connected to significant changes in reality: for instance, an evaluation of differences in quality of life in Chinese cities still reveals a strong correlation with the income level of the population (Jingke, in Polomaki, Karunaratne eds. 1995). Consistent planning of new towns may be a way of improving the quality of suburban life, as demonstrated in Tama city, close to Tokyo, by Taniuchi (in Polomaki, Karunaratne eds. 1995). Several studies show that what is now called “social exclusion” remains actually mainly a matter of pauperisation. The effects of poverty are worsened by the severing of social ties, marginalisation of social or ethnic groups and denial of social rights, and are also probably reinforced by some design of urban spatial structures. Still, the main question is a matter of social and spatial distribution of income and power. Actually, the application of “post-modernism” to urban geography still remains problematic and should not necessarily lead to the adoption of relativism in science (W. K. Davies, in Davies ed. 1996). The conclusion of this last enquiry goes in the same direction as what already appears as the leitmotiv of this paper: “the result (of new tendencies) is even more complexity in city structures”.

Complexity can be tractable when several points of view and scales are considered simultaneously. For instance, the changes in suburbanization trends, which may be puzzling on a superficial observation, can be largely understood, and perhaps predicted, if the composition of urban population in groups of different age and mobility behaviour are carefully considered (Illeris, in Braun ed. 1994). Analysis of planning issues shows clearly the linkages between chosen orientations and the scale of operation and power of leading interest groups (for instance about central Helsinki (Haami, in Braun ed. 1994) or Turku (Andersson, in Braun ed. 1994)).

URBAN VULNERABILITY AND SUSTAINABILITY

Perhaps referring to our knowledge of living systems may help us to conceive that the contemporary urban evolution is leading toward an increasing power of urban control of human activities and at the same time to an increasing vulnerability of urban systems. When the system becomes too specialised, if there are not enough redundancies in the multiple links which ensure its complexity, if its dependance regarding a single resource or a type of environment becomes too narrow, the growth of the system may increase its vulnerability. But an increase in complexity also means a growing diversity in the urban system, which increases its stability and develops its creativity and ability to respond to an expanded variety of external perturbations.

With respect to the theme of urban vulnerability: according to our experience, it is still largely a matter of internal organization, the cohesion between various social and cultural groups, the quality of “social links” and the integration processes within urban society which are more frequent factors of instability in the history of cities than possible “external” perturbations like “natural” catastrophes. This does not deny the existence of the risks associated to a poor management of resources and the presence of hazard events, for which a real pluridisciplinary research still has to be developed. The idea is put forward, however that human decisions and urban policies are of tremendous importance in what is called the “sustainability” of cities, and this even when apparently “pure” environmental circumstances are considered.

REVISITING THE DYNAMICS OF URBAN SYSTEMS

The excellent work accomplished by the preceding Commissions on urban Geography in identifying the main general characteristics and local specificities of urban systems has been carried on by several studies trying to determine how their structure would react to the context of increasing international linkages. The general result is that the contemporary evolution of urban systems does follow general trends but with variations, depending upon their stage of development and their geographical situation with respect to world trade flows. However local policies may produce significant deviations.

THE EVOLUTION OF URBAN SYSTEMS

The importance of geographical situation in the reaction of urban systems to globalisation trends was emphasized during a special session devoted to urban systems of the “periphery”, such as those of Finland (Palomaki, Karunaratne eds. 1995) or Estonia (Marksoo, in Palomaki, Karunaratne eds. 1995). This is also illustrated by many attempts at measuring the degree of international integration of urban systems. Examples are found in cities belonging to the Polish (Korcelli, in Palomaki, Karunaratne eds. 1995), Japanese (Fujita, in Braun ed. 1994) and Finnish (Palomaki, in Braun ed. 1994) urban systems, for a large set of cities of the European community (Rozenblat, Pumain, in Braun ed. 1994), or for fast growing capitals such as Seoul (Kim, in Braun ed. 1994). At a lower level, inside each of those systems, a clear differentiation exists in the intensity of the internationalisation process between a few centres (usually the capitals, sometimes specialised cities) and the other cities belonging to the urban system.

The concept of urban systems in transition applies particularly well to those of Eastern Europe where integration into the international flows of the market economy on the one hand and processes of denationalisation and privatization on the other have been major perturbations. Detailed studies have shown that, in most countries, the consequence of this opening could be an accelerated trend towards metropolisation, whereas the development of the main capitals had been successfully maintained until this took place (Rey; Pak, in Braun ed. 1994). However, the trend could be ineffective if the general level of the metropolises by international standards was not already high enough. However, the geographical situation of cities (for instance proximity to border lines) and their rapid connection to major international transportation infrastructures could be decisive issues for the selective development of some cities, leading to significant restructuring of the existing urban hierarchies (Korcelli, in Palomaki, Karunaratne eds. 1995, Rey; Grimm, in Braun ed. 1994).

Regional development policies may have a significant impact on the structure of urban systems, if they are conducted with full determination. Examples have been provided for Sri Lanka (Wanasinghe, in Palomaki, Karunaratne eds. 1995 and in Braun ed. 1994), Argentina (Gomez-Insausti, in Palomaki, Karunaratne eds. 1995), Bangladesh (Saleheen et al., in Palomaki, Karunaratne eds. 1995) and Cameroon, where several “generations” of cities can be related to the dominant political group of the respective period (Simeu-Kamden, in Palomaki, Karunaratne eds. 1995).

GLOBAL NETWORKS AND FRAGMENTED SYSTEMS!

The contemporary evolution of urban systems also has been submitted to the other “post-modern” hypothesis of an increased participation of urban structures in international networks. This takes the form of a deepening gap between a few nodes of flexible accumulation, intensively connected and participating in the

main decision centres of those networks, the so-called “global cities”, and the other cities, lagging behind and possibly affirming their identity by returning to practices of parochialism. Parallel to this framework is that of the declining role of the state as a significant level for spatial organisation.

Such generalisations ignore careful analysis of actual evolution, for instance in the well documented European case. It is true that the opening of borders to international trade and the adoption of new technologies of communication has prompted a stage of “metropolisation”, inducing more rapid transformations in the largest cities than in the smallest ones. But even if the effects of internationalisation are momentarily more concentrated in metropolises, many examples of their diffusion into other centers may be found. Moreover, the progressive emergence of an urban system shaped on the European scale is already noticeable. It is henceforward at that level, and no longer inside each national country, that the secular trend to the reinforcement of the hierarchy in urban systems has to be considered. The uneven participation in and benefit to European cities from this “innovation” can already be understood (and predicted with reasonable probabilities for the next decades) from various properties of cities, including the status of capital, a previous specialisation in urban functions, proximity to international boundaries, and relative rank in their national urban system. Such studies also confirm that national boundaries are still effective in reducing the level of spatial interaction. They also show no generalised impact of fragmentation tendencies, except in the revival of a few cultural aspects, including the exploitation of regional or local identity and the existence of patrimony for marketing and social integration purposes. Contrary to the common belief in fast-changing intellectual fashions, a review of already existing theoretical knowledge about the dynamics of urban systems might well be an efficient method for understanding how cities are evolving in a changing international context.

TOWARDS A FORMALISATION OF THE DYNAMICS

The regulation of urban systems is not determined entirely by external global trends in the evolution of the economy and technology. The evolution of urban systems is perhaps not mainly a matter of any “external” conjuncture. As with other self-organised systems, they have relatively autonomous rules of development. The main general features of their dynamics are partly predictable because they are very common. They are linked with the competing spatial and hierarchical structure of urban systems and with the universality of the “urban transition” processes. As a first approximation those general principles of urban systems dynamics can be used for shaping rough scenarios for a few decades of future evolution. They are of great help in interpreting the highly fluctuating temporal behaviour of urban growth.

The best example of this is the theory of “counterurbanization”, which was correct in describing the trend of decentralisation of intra-urban population den-

sities but wrong at the scale of national urban systems. This error was detected early by a few specialists in the long-term evolution of urban systems. It was confirmed by the observed evolution at the end of the eighties and during the nineties. Indeed, several contradictory trends have been reported and interpreted according to the situation of each urban system in space and time: for instance in Mexico during the eighties a trend of diffusion of economic development was observed in the medium-sized and small cities (Aguilar, in Palomaki, Karunaratne eds. 1995); in Estonia, A. Marksoo (in Palomaki, Karunaratne eds. 1995) also noticed a decentralisation trend, but suggested a shift to metropolisation in the near future, since the spatial evolution of resident population contradicted the creation of employment in large cities; the Finnish urban system has a composite evolution, more intensive in the south and extensive in the north of the country (Palomaki, in Braun ed. 1994); at the European scale, a process of metropolisation has been identified, but correct predictions about the future evolution of cities can be made only if one considers not only their rank in the European urban hierarchy but also their function in their national territory and their geographical position with respect to international boundaries (Rozenblat, in Braun ed. 1994).

Past misunderstanding about counterurbanisation trends could be replaced by another one if the actual trend to “metropolisation” or reinforcement of the urban hierarchies through a quantitative growth and/or qualitative improvement of the structures of the largest cities were to be interpreted as a definitive and linear trend. On the contrary, the actual state of knowledge about the evolutionary process of urban systems leads us to interpret this new trend merely as the first stage of an innovation cycle linked to the widening scope of inter-urban linkages permitted by the increasing speed of communications between cities. The metropolisation effect should be reduced, stopped or even reversed as the effects of that innovation is progressively extended to the other parts of the urban systems.

Fragments of urban theory have been included in models using the concepts of complex systems theory, both at an intra-urban (Portugali, in Braun ed. 1994) and inter-urban scale (Pumain, in Braun ed. 1994). Urban models have been inspired by new theories as self-organisation theory, (sometimes referred to as chaos theory), or individual random choice theory, and confronted by various new methodologies like fractal measurements or neural nets. Promising results are already obtained from computerised simulation methods such as cellular automata or multi-agent systems, which are more flexible than mathematical models of differential equations for modelling the many spatial interactions which are producing the dynamics of urban systems. Many efforts are still needed however to direct urban modelling efforts toward an improvement of our understanding of urban processes and to develop empirical research which acknowledges urban complexity. As urban geographers, we would consider ourselves satisfied if we succeeded in exposing the weaknesses of excessive simplification and too easy interpretations, as suggested by many current ideologies.

CONCLUSION

Above, we invoked modesty and humility. To the big challenging questions of the time about the future of cities and urban systems, the work of our Commission does not bring clear-cut answers, nor inspired predictions, nor ready-to-use managing recipes. Our contribution could be interpreted mischievously as another version of the bashful intellectual discourse saying: "the question is badly put", or, even worse: "things are much more complicated than that". Actually we do say that the alternative questions, as they are quoted by the media, are too simple, because the future of our cities is not embedded between already fixed contrasting tendencies. It is constantly inventing itself in a mix of many simultaneous acting forces. To all problems there are more than two opposing solutions.

We would like to clarify the meaning of the concept of complexity. Claiming its importance is not an incantation, but a call for more field investigation and comparative analysis. Its main usefulness is to help in recognizing significant geographical entities, which may be observed in a persistent way, at various scales in space and time, and whose behaviour cannot be reduced to mechanical reactions to external stimuli. This does not mean that their evolution is not understandable; sometimes it may even be predictable. We have the aim of identifying some of the properties which make systems react differently to the same general historical context. The stage in the development of urban systems, their geographical situation in a given region of the world, but also the peculiarities of their cultural history and the political choices which are made are among the most significant features which emerge from comparative analysis as key-factors for our understanding.

Urban systems may be viewed as an invention of humankind for reducing the uncertainties and hazards of a local environment by developing networks which increase accessibility to the resources of other places. At the moment this seems quite successful at the level of systems of cities, with a growing globalisation process. But uncertainties seem to be increasing at the level of each city, concerning the sustainability of its development, its ability to create jobs and wealth, and its vulnerability to social and technological risks. Uncertainties are also part of the everyday life of a growing number of urban citizens, experiencing precariousness of life through poverty and violence. We do hope that urban research could contribute to the reduction of those hazards, whether natural, social or technological, by developing a better integrated and comparative knowledge of urban complexity.

Our main concern of the last four years could be summarized as an effort to make explicit the content of the small word "and" in our broad theme "Urban Development and Urban Life". After a period of deconstructing concepts, reconsidering data and exploring new ways of research, our research agenda for the future is to continue to explore the following themes: metropolisation and evolution of the role of small and medium-sized towns in urban systems; connections

between trends in world economy and local urban development; social polarisation, “natural” hazards and vulnerability of cities; indicators and evaluation of urban quality of life; new local governing and urban planning methods. This also should include a better theoretical formalisation of our results, an increased effort at providing comparable indicators on an international basis and a cooperative work for adapting our means of research to the social and institutional needs of our urban planet.

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THE MIGRATORY SYSTEM OF BERLIN AFTER UNIFICATION IN THE CONTEXT OF GLOBAL RESTRUCTURING¹

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ABSTRACT: The migration process within the politically unified Berlin seems to be an excellent indicator in how far these two sub-systems have already merged socially and economically or have restructured under the present global economic stress. Classical questions on the behaviour of an intraurban migration system include: (i) What is the stage of development back to a unique migration core? (ii) What is the stage of a re-developed or re-established radial pattern of stepwise out-migration flows? (iii) Is there a converging or diverging behaviour towards an integrated intraurban migration system? (iv) How do migrants perceive distance, and (v) are there imaginary walls that structure a migratory urban system into sub-systems? An origin-destination constrained interaction model and descriptive statistics are used to address these questions. Preliminary results provide sufficient evidence to disaggregate the complexity of the migration flows into two levels comprised of local and global systems.

KEY WORDS: Urban restructuring, globalisation, migration path ways, spatial interaction model, urban GIS, stage of unification.

INTRODUCTION

On the whole, in Germany large urban communities shed population (Gödecke-Stellmann). This loss is especially strong within urban core areas, while their peripheries stagnate at a high level of turnover. This general trend can be seen in the changing level of land use competition within the core and inner-city areas, which in general decreases from the core towards the urban periphery. Although sometimes this relationship reverses (Braun 1989), in most recent

¹ We would like to thank Richard Preston, University of Waterloo, Canada, for all his valuable criticisms and suggestions on this manuscript. We extend our thanks to the "Statistisches Landesamt Berlin" for providing the migration matrices.

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publications these trends are interpreted as an indication of a process of restructuring. Restructuring currently relates to (i) the process of internationalisation of production and capitalisation of investments, (ii) the introduction of new technologies, (iii) the increasing flexibility of production and labour markets, and (iv) the ongoing deregulation of traditional institutionalised land use planning (Borst, Krätke, Sassen, Schmid). These vertical processes change correspondingly both the horizontal organisation of cities and of cities within cities². The result is a new pattern of multilayered, partly fragmented hierarchies based mainly on changing relationships between globalism and localism.

This paper concentrates on the role of migration-flows within Berlin and on how far they indicate processes of either fusion or restructuring. In the course of such restructuring we can anticipate an overlay of at least three different vertical (contextual) and horizontal (spatial) layers. These processes superimpose global functions, first, on the regional and then on the local scale. Consequently, they create a new organisation within the cities.

In the case of Berlin these layers can be interpreted as projections of the global and dependent regional principles of restructuring combined with a transformation and merger of Berlin's two different socio-economic systems. Knapp states first, that the traditional local processes described by mainly endogenous urban development reflect cycles of concentration and deconcentration. However, he also argues that this process will be outflanked by poly-centralisation and fragmentation. In this study, this spatial disintegration can be observed at least in the initial stages of the new urban organisation in Berlin.

The main focus of this paper, therefore, is to identify by means of a migration analysis the present stages of Berlin's integration into (i) the global system, (ii) the German urban system and (iii) the formally unified local economy. In order to achieve this goal, we must start from the following assumptions: Inter- and intra-urban migration matrices, in a time-space resolution, express these processes and are used to describe their complexity. These matrices have to be available.

To provide the context for this study, we elaborate on hypotheses derived from the postfordist urbanisation and regulation theory, urban system theory and the system theory of cities within cities. Where possible we illustrate these hypotheses empirically by an exploratory spatial data analysis and by descriptive statistics (Bailey and Gatrell). Furthermore, we employ an augmented doubly constrained interaction model implemented as a log-linear model (Tiefelsdorf and Boots). This spatial model allows us to simultaneously evaluate the interrelations between a set of spatial objects and their relative locations.

² Numerous publications, especially in demography, which are focused on interrelations between contextual and spatial patterns, describe these structures as vertical and horizontal analogies.

THEORETICAL BACKGROUND

Urban restructuring can be best understood from the macro-scale perspective as a reaction to economic-technological changes which, under time-space compression, reduce the impact of spatial barriers (Fig. 1). On the micro-scale, local activities are regarded as reactions and reflections of global initiatives. Local activities gain momentum only if they represent potential local niches which pose outstanding resources and qualities compared to their competitors. Socio-economic change at the local level becomes obvious with the superimposition of global functions. Elements of urban globalisation are: (i) the global-local substitution of spatial functions, (ii) the increasing loss of traditional local identity through its replacement by modern social milieus, and (iii) the de-materialisation of culture as a new form of competition for material advantages (Knapp). Most importantly, we can anticipate a new and clear hierarchy of global and local functions within a city. The global functions are core-located while the local functions are pushed out of the core and are re-located in fragments at intersections of traditional suburban areas. In this way, the *global horizontal and vertical relationships* create a new order in the local structure in which forces representing global space restructure the “spatiality“ of the local society (Knapp). It is this overall process that we hope to model in this study.

Urban evolution can be seen as predominantly a direct consequence of economic development. The theory of regulation ties the structure of development of societal change, political identity, social structure and cultural milieu together with the long-wave cyclical structure of the global economy (Borst, Hübner, Knapp, Krätke, Leborgne and Lipietz). Specific functions of economic production are interrelated with similar structures of political, social, cultural and administrative organisations (Krätke 1991). Societies accumulate in specific integral regimes: (i) all the attitudes of structures, (ii) forms of organisation, (iii) power, and (iv) values. These four regimes are supposed to guarantee further economic profit. By way of regulation, these aspects are linked by institutionalised and non-material rules. Space, together with its specific structures (i.e., spatiality) is one of the materialised resources of the socio-economic homology between space and society. Such accumulation and related regimes are most easily identified during stable phases. In times of social instability and economic crises, the formation of accumulated structures and attitudes starts changing and forces space and society into a restructuring process and finally into a new equilibrium and conformity. Fordist societies change into postfordist compositions. As a result of changing technologies, which are manifested in time-space compression, flexible accumulation replaces fordist structures like (i) economies of scale, (ii) centralistic-corporative administration, and (iii) middle class superiority which is traditionally spatially organised within cities in a radial ring pattern. In contrast, the new horizontal and vertical structure tends to develop towards (i) economies of scope, (ii) deregulation and (iii) dual society in which the traditional suburban

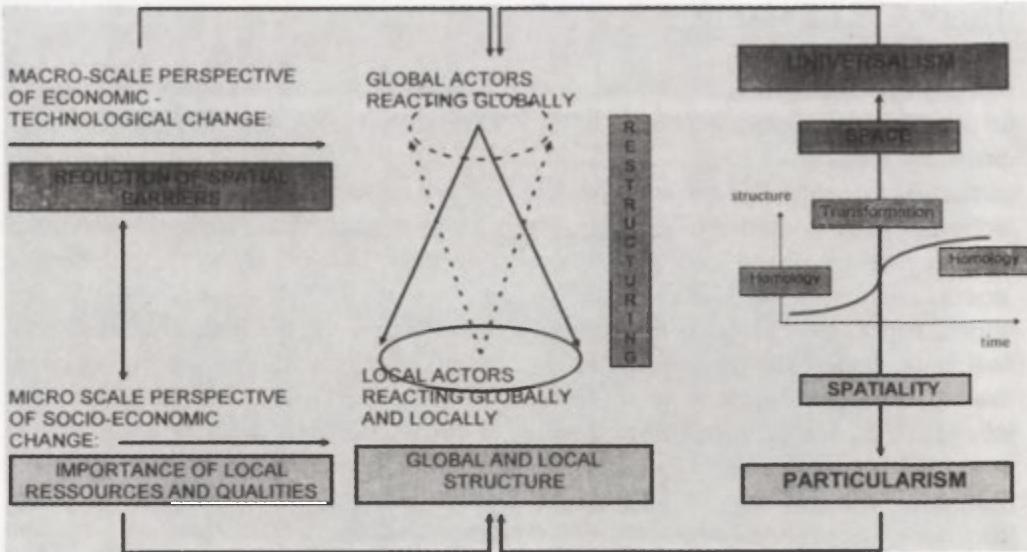


Fig. 1. Transformation and Homology between Space and Society

zone becomes spatially reorganised into specialised fragments and small scale segregated, quartered cities.

The diminishing relevance of spatial barriers leads to a renaissance in the importance of local space, its specific resources and qualities. The greater the competition between those locations the more diversified they become. In the long run, the exchange between the locations converts these locations into new systems of accumulation which after all creates a new structural conformity within the locationally competitive environment.

This process embeds intraurban interactions into the superior interaction between different urban centres. Under these conditions cities develop as open systems. Changes in their structure are not only influenced by local actors but also by global control and influence. The locations of global economic control, more specifically the centres of entrepreneurial control, are spatially unevenly distributed. Therefore, global society is organised in different cities via flows and networks rather than being territorially coherent. Nevertheless, as parts of national and international systems as well as of large scale economic organisations they influence their subordinate systems in their entirety. These global conditions dominate in a top down hierarchy the range of local development. However, the local ability to adjust to the new conditions and to integrate them, based on unique locational resources and qualities, guarantees the general stability of the global system. This *top down – bottom up* interdependent process creates a new hierarchy of specialised cities. Within the individual cities these processes result in changing demographic patterns and social restructuring.

At the present stage of data analysis a dynamic analysis of Berlin's interaction system can not be conducted. After the unification Berlin's interaction system has

Table 1. Transformation from Time to Space by Globalisation

	Fordism	Postfordism
Scale	local	global
Economy	economies of scale	economies of scope
Politics	centralistic	deregulation
Social organisation (vertical)	medium class superiority (welfare society)	high vs low class superiority (dualistic society)
Social organisation (horizontal)	ring-radial pattern	fragmentation
Time/space	time dominance (time-space compression)	space dominance (increasing sensibility for space)

not reached a stationary stage yet and the time-series of the united Berlin is not sufficiently long. Furthermore, due to missing exogenous variables on the district or census tract level no explicit link neither to the internal structure of Berlin nor to its suburban zone, which is located within the Land of Brandenburg, can be given (Statistisches Landesamt Berlin). Figure 2 describes the key topological and structural features of Berlin. Notice the Wilhelminian Ring as the interface between the core and the periphery. The former wall indicates both parts of Berlin as different subsystems with 12 districts in the former West and 11 districts in the former East.

HYPOTHESES RELATED TO THE NEW URBAN STRUCTURE

In summary, flexible accumulation creates new locational patterns and regional interactions and a new urban hierarchy manifested in a revised internal economic structure of cities (Fig. 3). This internal structure converts into polycentric regions while the radial-ring pattern dissolves into smaller specialised fragments. A city embedded in the global system develops towards a dual city, with the global village forming the new core, and with the local village represented by quartered subcities of different degree of specialisation. The interactions between these subcentres grow sometimes to a higher extent than the interactions between the former central core and its subcentres. Zones of gentrification and ghettoization reflect the interface between the new core, based on the global functions, and subcores containing dispersed local functions. In this way, as the subcores become specialised, highly segregated social groups and types of households come to terms with these new cores. Within the dual city pattern formerly suburban zones receive partly local centrality while formerly core areas tend to slip structurally into the vast new urban periphery.

Applying this restructuring process to the migration system of Berlin after unification, we can anticipate a superimposition of at least four different processes, each resulting in a different spatial pattern (Fig. 4):



Fig. 2. Urban and Topological Structure of Berlin

- Process 1: At the *local village scale* the process of amalgamation of the formerly different socio-economic systems in the East and West splits the migration flows into two categories. The first contains the *regular pattern* (small dashed lines) which shows stepwise migration towards the urban periphery within individual radial sectors and not among sectors. Within sectors, leap frogging into the zone of transition coincides with in-migration or re-urbanisation. In both parts of the city this pattern was expected to appear. In the Eastern part this process is accompanied by the re-establishment of land use competition, a housing market, social segregation and free mobility. In the Western part the same process has created an adjustment to an open competitive system without subsidies.

- Process 2: The second category of flows applies to the *merger* of the two formerly independent economic systems (grey lines). In the process of the re-establishment of the core areas and their specialised functions and in the process of the new integration of the former suburban zones into the migration system, we anticipate a leap frogging pattern of flows between the East/ West subsystems and their associated hinterlands. The related spatial pattern depends either on the existing socio-ecological pattern in the West or on the future housing market potential which is re-developed in the East. Since W. W. II the process of suburbanisation was interrupted and later stopped by either the island situation in the Western part of Berlin or by the socialistic planning ideology in the Eastern part.

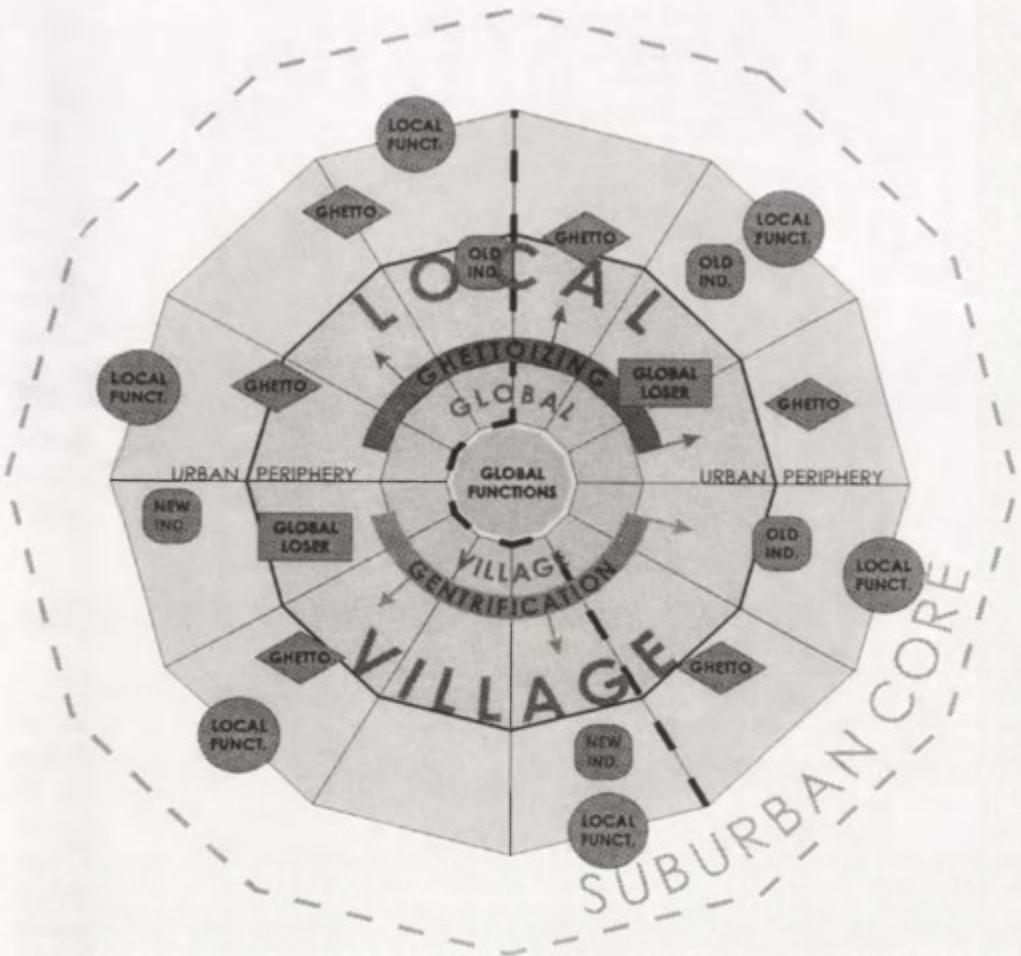


Fig. 3. Spatial Organisation of the "Global" - "Local" Village

- Process 3: At the *global village scale* the migration flows are again split into two categories which partially overlap and substitute for the processes at the local scale. While the overall process of *fragmentation* is only in the stage of take-off, the historical polycentric structure of Berlin and the creation of independent socialist cities in the East both clearly support this fragmented pattern. The spatial structure of those flows imitates leap frogging or a stepwise pattern respectively. Its spatial reorganisation is not in a core-peripheral direction in general but towards local core systems developing specialised functions.

- Process 4: The second globally affected category of migration flows acts in a *new urbanism* (solid lines) and reacts in *displacement* (thick dashed lines). The new internal order of global and local villages within global cities creates not only the development of local cities and suburban cores but also zones of gentrification within the global village urban core (Fig. 3). These zones of gentrifica-

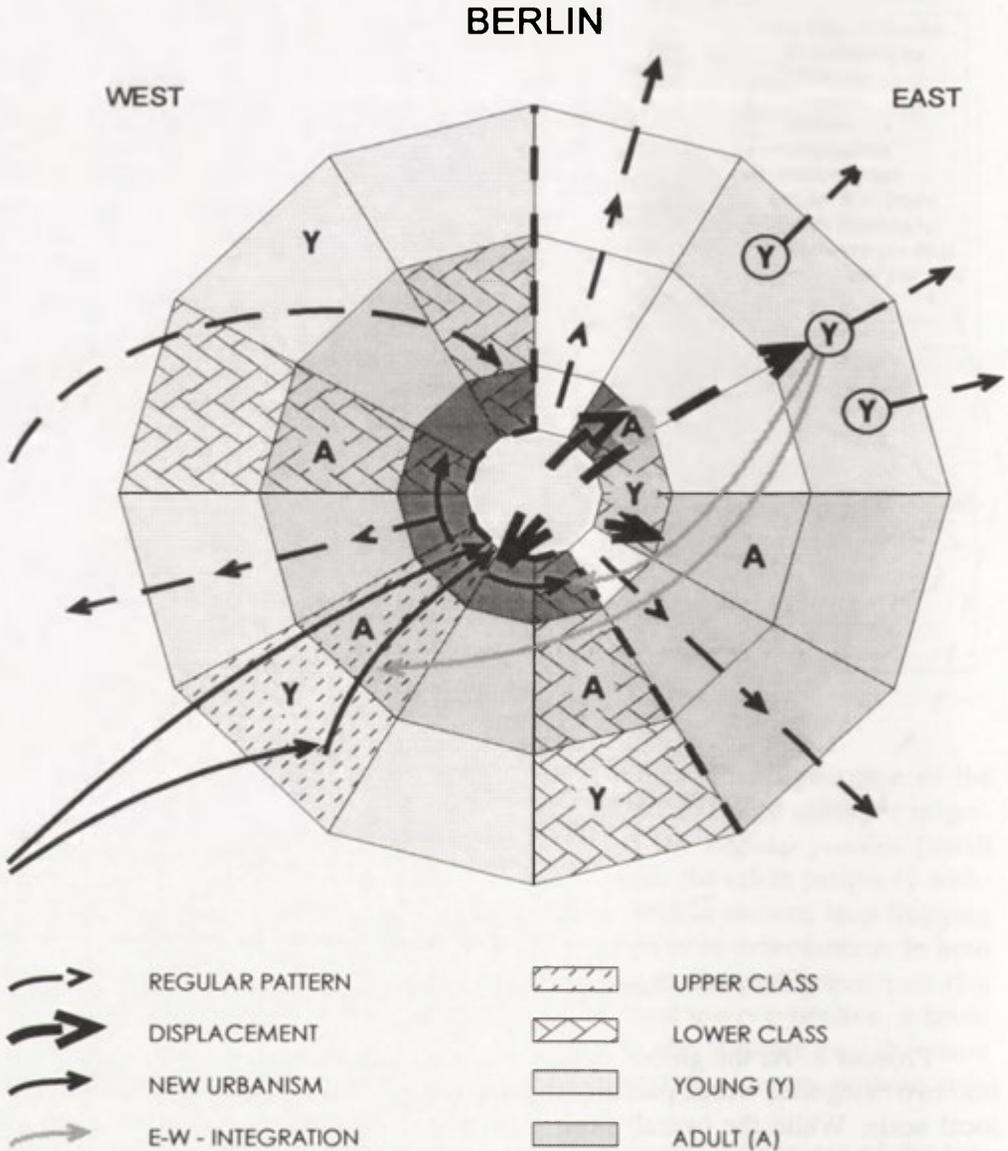


Fig. 4. Hypothetical Migration Pattern

tion displace the zone of transition towards the new urban periphery and segregate people into various marginalised groups. The top-groups originate from global in-migrants and local internal upper-class migrants and tend to concentrate within either the gentrified zones or the traditional upper class sector. The bottom groups, which are the main global losers, are displaced and ghettoised in the ecliptic zones within the polycentric structure of the quartered city.

RESEARCH PROCEDURE

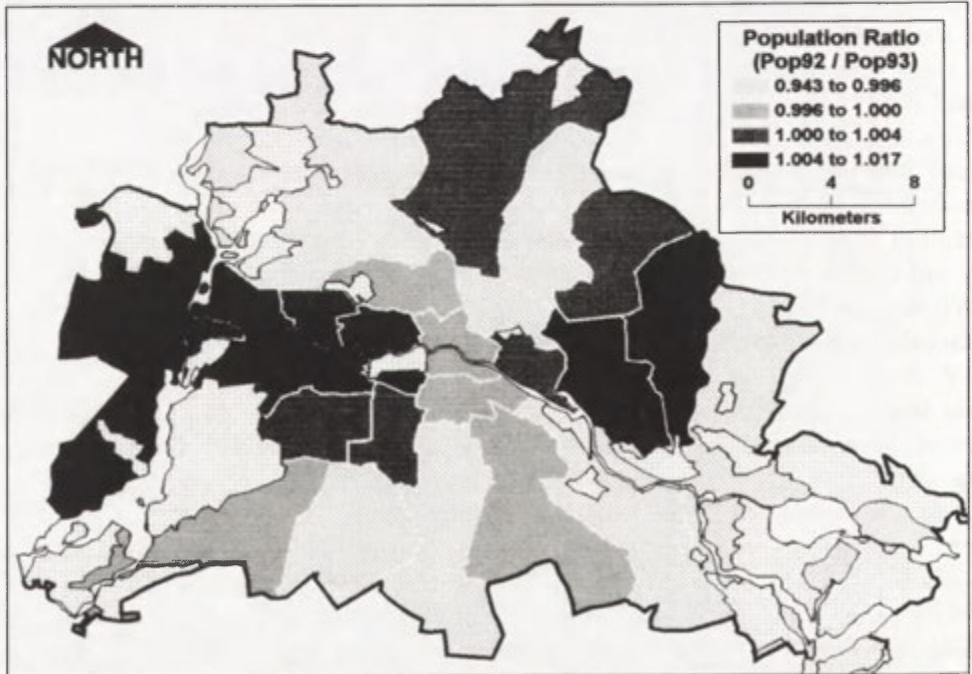
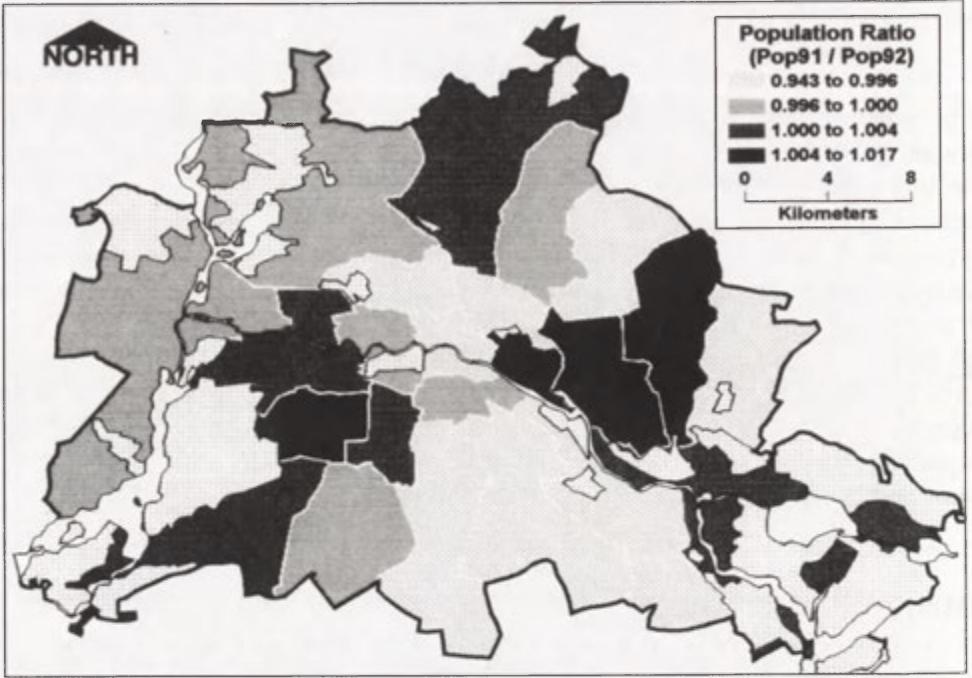
The four processes and their related spatial patterns will be analysed next. Our data base consisted of four temporally consecutive 23 by 23 interdistrict migration matrices for the years 1991 to 1994³. Preliminary tests on the integration at the local and global scale were conducted by a univariate comparison of the location specific in- and out-migration rates for all 23 districts of Berlin. The hypothetical migration pattern was also analysed simultaneously for the four study periods using a doubly constrained interaction model. In the doubly constrained model the observed overall out-migration from a district matched that of the estimated out-migration and vice versa for in-migration into a district. Therefore, the model gave unbiased estimates of the migration figures, which were adjusted for distance decay effect. Furthermore, the interaction model was augmented by separate indicator variable that captured the differences in the East- and West-subsystems and their mutual interaction.

EMPIRICAL RESULTS

The first insight in the spatial pattern of Berlin's migration turnover was given by an analysis of time series based on change in the absolute number of people residing in the districts (Fig. 5). It should be noted that the fertility rate in both of the former subsystems of the city converged immediately after unification. A ratio "below one" ($r < 1$) indicates a population gain whereas values "above one" denote a population loss. At the beginning of the five year period growing districts are located either parallel to the former inner-city wall (e.g. Treptow, Neukölln, Wedding, Prenzlauer Berg) or in the Eastern new towns that were still under construction (Hellersdorf, Hohenschönhausen). These gains are mainly the result of internal migration. Districts with negative population development lost by out-migration from the city. The high income SW-sector in the Western part (Wilmersdorf, Zehlendorf) and the East-sector (Friedrichshain, Lichtenberg, Marzahn) are characteristic for this trend. Over time this radial pattern and the E-W contrast appears to have converted into a concentric pattern with population loss in the core (CBD and Wilhelminian Ring) and in the former socialist new towns (Marzahn, Hohenschönhausen), and with population gains in the surrounding ring.

Several key trends are illustrated next in Figure 6. (i) In general, this pattern of core-periphery conversion has taken place in all German cities and appears again in Berlin even with its two subsystems (East and West). (ii) Note that before unification the migration system of West-Berlin is best characterised as closed system showing an almost regular migration pattern (Fig. 6 II). In con-

³ A detailed discussion on this data base is given in Braun and Tiefelsdorf 1996.



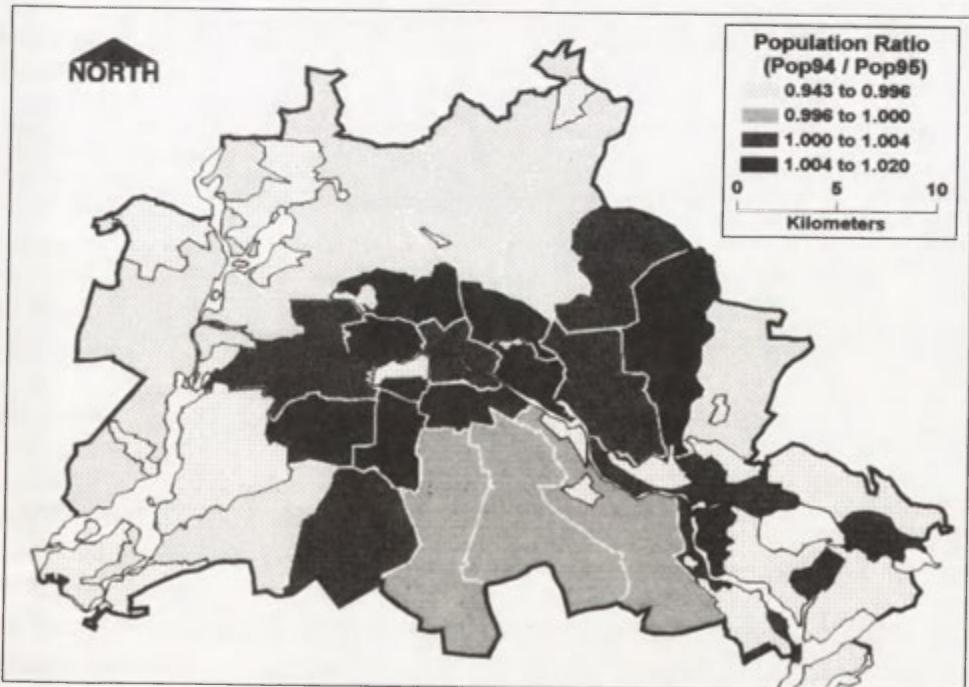
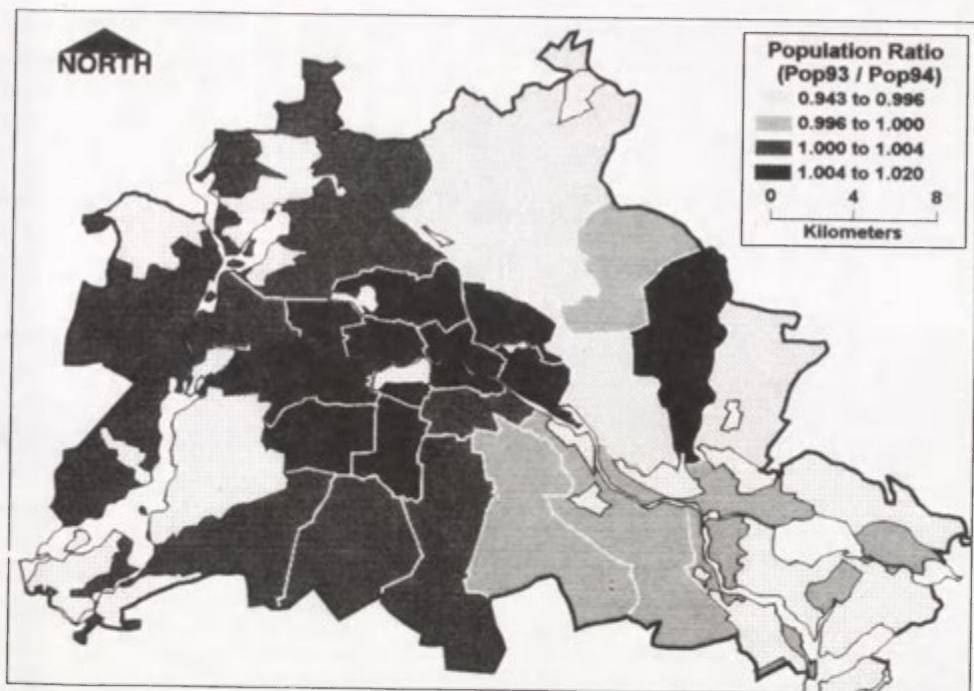
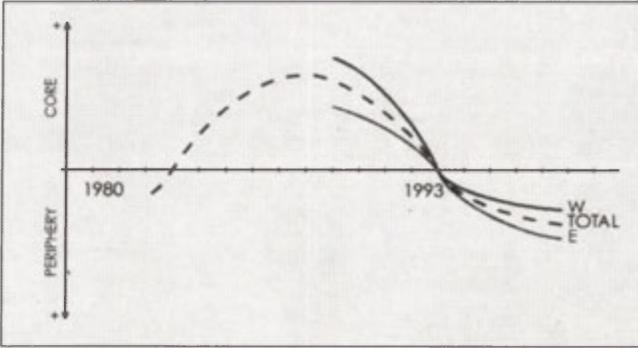
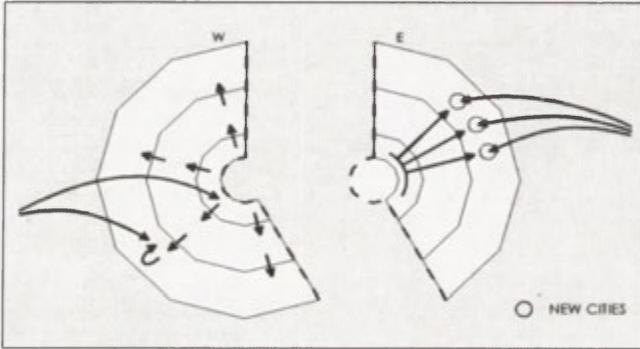


Fig. 5. Population Development within the Districts of Berlin (1991–1995)

I GERMANY: CORE-PERIPHERY POPULATION DEVELOPMENT

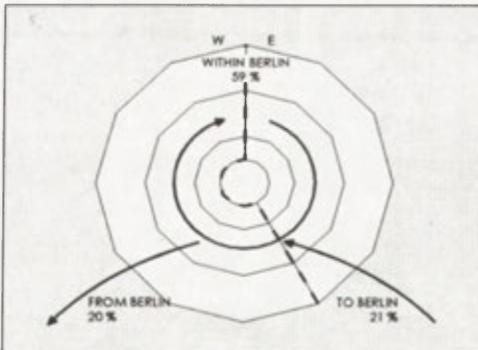


II BERLIN: INTER- / INTRA-URBAN MIGRATION BEFORE UNIFICATION



III BERLIN: INTER- / INTRA-URBAN MIGRATION AFTER UNIFICATION

A. TURNOVER (1994)



B. W-E INTERNAL- AND IN-MIGRATION RATIOS

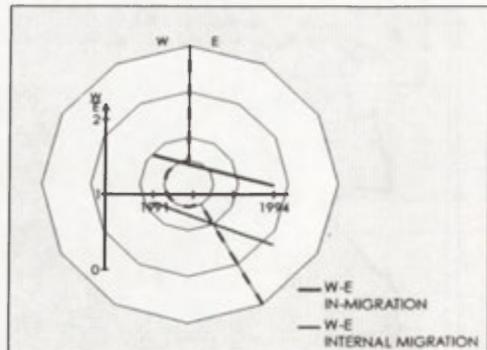


Fig. 6. Schematic Trends and Spatial Levels of Migration Pattern in Berlin

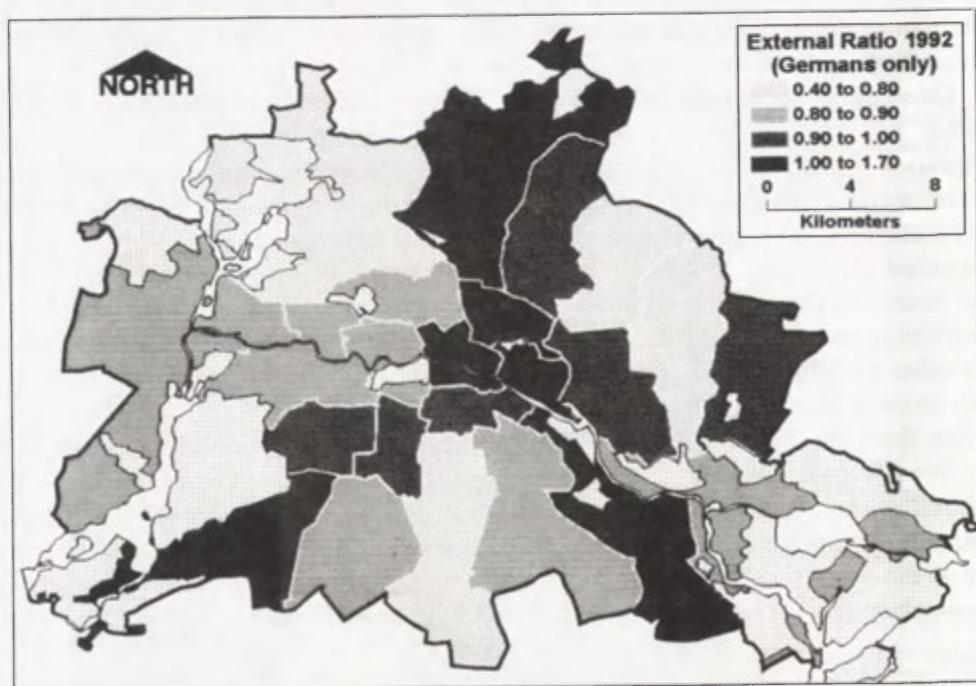
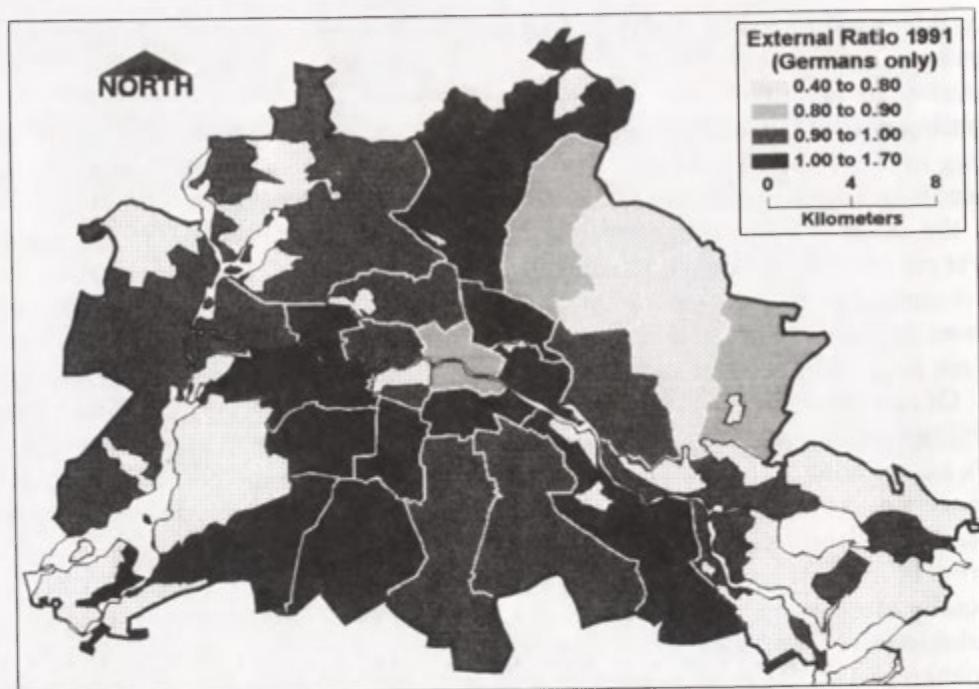
trast, in Eastern Berlin the inner city almost bled to death for the benefit of the new socialist cities at the periphery. (iii a) These different conditions and housing capacities in both parts of Berlin prior to unification result in different attractivities and disadvantages to migrate or to stay after the unification. (iii b) Without

considering the social stratification of migrants, the rate of in-migration converges between E and W (Fig. 6 III B, black line). However, Berlin's internal flows develop in favour of the Eastern districts because of lower rents and lower housing demand in the East and higher stress of restructuring in the Wilhelminian Ring in the West (Fig. 6 III B, grey line). Thus far, the pattern of spatial adjustment is similar for both subsystems. It is not necessary to show the spatial pattern of the internal migratory exchange coefficients (district specific in-migration over out-migration from and to the other districts of Berlin, respectively) because it is similar to that of population change (Fig. 5). The overall pattern is one of losses in the core, gains at the periphery and a transition zone in between. This is not surprising because the fertility rates in East and West are similar.

Of relevance for the globalisation hypotheses are the external migration ratios of Germans moving from and to Berlin's districts and from and to outside Berlin. We have excluded the non German population because this group is too heterogeneous; i.e. it ranges from the broad groups of refugees to guestworkers or to members of the diplomatic corps. The time series of the external migratory ratio forms in the first phase zones of gain either parallel to the former wall or in the socially attractive SW-sector (Fig. 7). For the Western subsystem this pattern is shrinking over time back to the upper class zone of new urbanism in Zehlendorf, a pattern called for by the theory in Figures 3 and 4. For the Eastern subsystem districts with intra-migration gains are Prenzlauer Berg, Friedrichshain, two districts of the Wilhelminian Ring, and Weißensee. All other districts are losing German population by out-migration either to the urban fringe or to other cities. These links are not examined in this study.

Of special importance are (i) the ratio of internal turnover (i.e. migration within a district to the population of the district) and (ii) the ratio of external migration within Berlin (i.e. number of persons moving into the reference district to the number of persons moving out of the district)⁴. In the case of an advanced integration of both subsystems of Berlin, similar variations in these ratios are expected. According to the general migration theory, in a stable migration system the distribution of both ratios are considered to reflect the ratios of peripheral districts at one end of the scale and those around the urban core density crater at the other end. In the case of complete integration a joint scatterplot of both ratios will show a diagonal slightly deviating from the vertical axis. However, Figure 8 (for the year 1994) still shows a marked heterogeneity between the East- and the West-subsystem. For the East-subsystem, "internal migration ratio" variation is smaller than to the West-subsystem. This difference reflects the disparities in housing demand, rent, and rent control between both subsystems. By contrast, for the West-subsystem "external migration ratio" variation is smaller than in the East-subsystem. Over time, the variation in the external ratio of the East-subsys-

⁴ For the variable 'external migration ratio' a logarithmic transformation has been chosen to give positive and negative deviations the same weight.



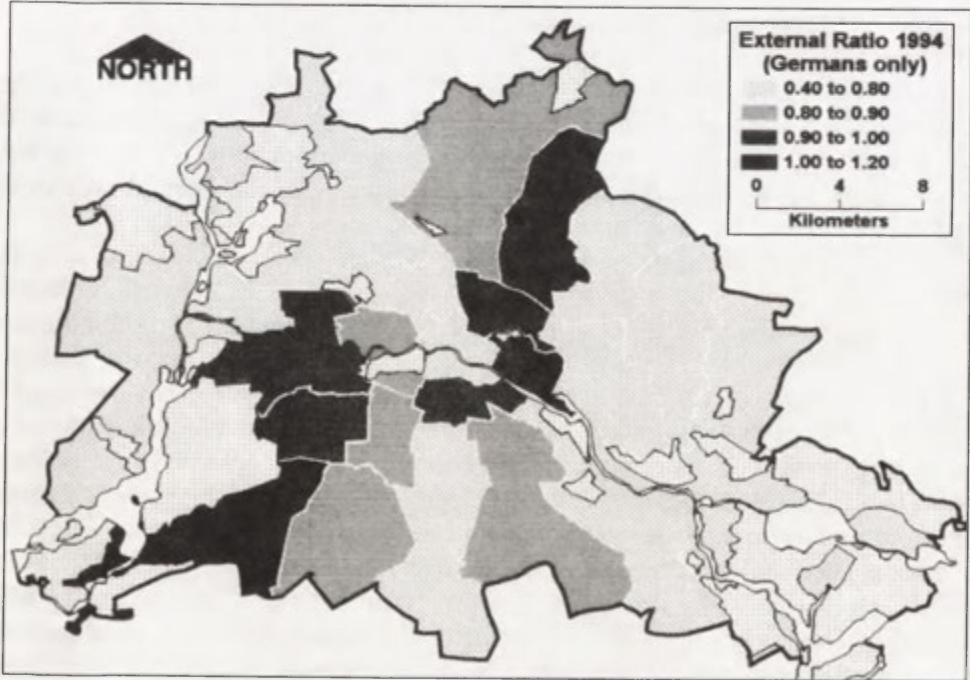
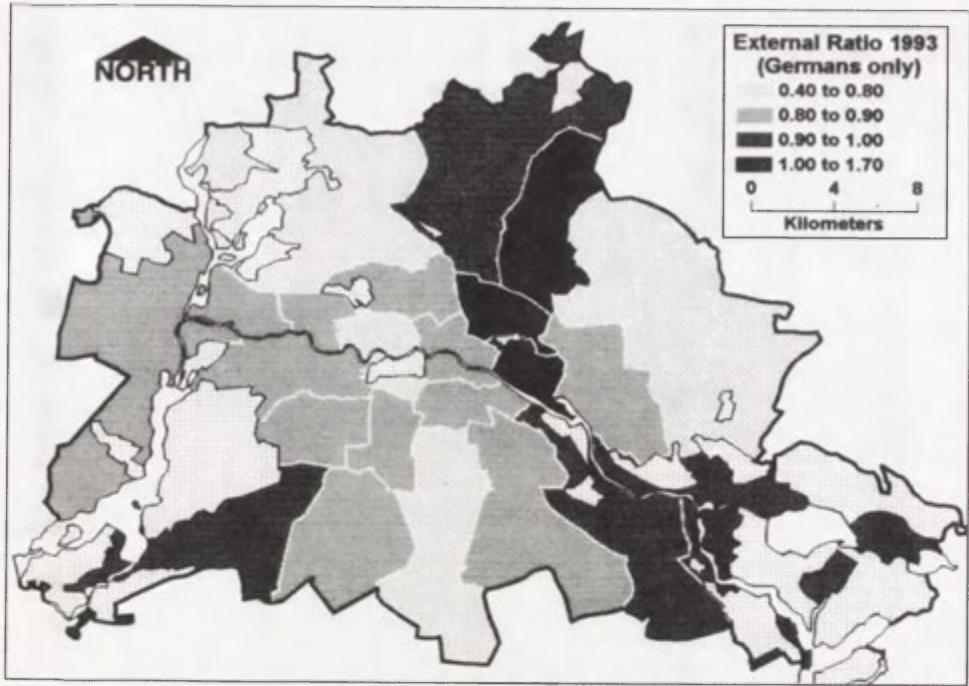


Fig. 7. External Migration Ratio (In-/Out-Migration) of Germans to and from the Districts of Berlin (1991-1994)

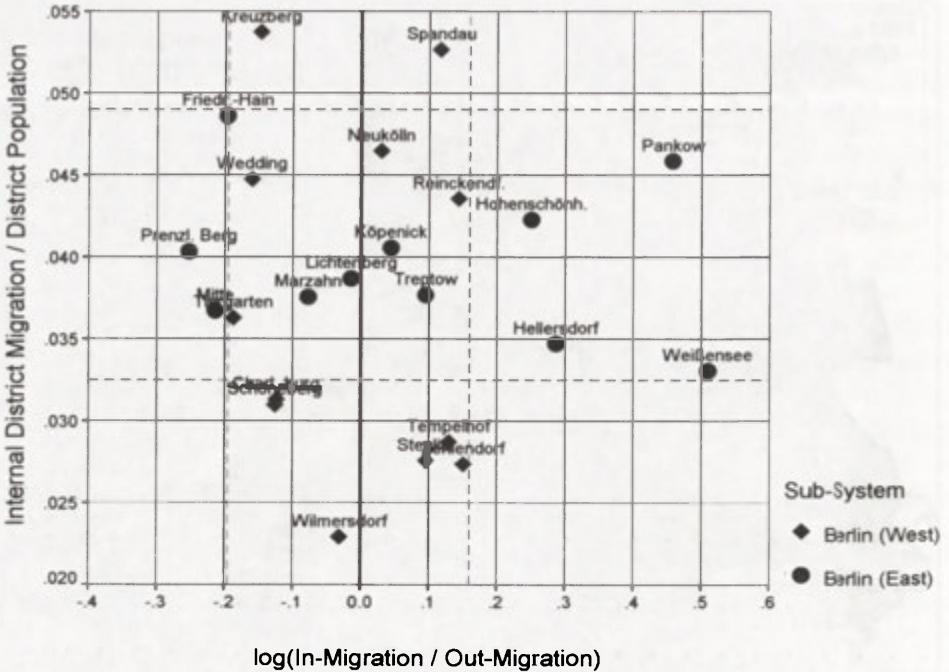


Fig. 8. Heterogeneity in the Migratory Subsystems of Berlin (1994)

tem is declining. Structurally similar districts within the Wilhelminian Ring in East and West begin to show similar numbers for both ratios. Based on this trend in the variation of the ratios it can be concluded that a general adjustment between both systems is on its way. Because of the smaller variance of the internal ratio in the East-system it can also be assumed that a detailed adjustment will take longer.

The results presented so far are based on uni- and bivariate simple descriptive indices. However, a specific individual decision to migrate from one place to another one is assumed to be preceded by a great number of evaluations of possible alternatives prior to actual migration decision. The fact, for example, that the propensity to migrate between two adjacent districts can be low, may be explained by a situation where both districts represent incompatible patterns of social organisation. In particular, this is expected to be the case for the interaction between the East and West subsystems. Therefore, we have augmented the interaction model by an indicator variable for three types of interaction, i.e. within the East-subsystem, within the West-subsystem and between both subsystems. Since the distance between the districts varies for all three types of interaction we have controlled statistically the effects of migration distance. For the two subsystems we found that the interaction propensity in the Western part of Berlin is larger than in the Eastern part and that the interaction between both subsystems is substantially lower. Over time we noticed a total increase in the migration vol-

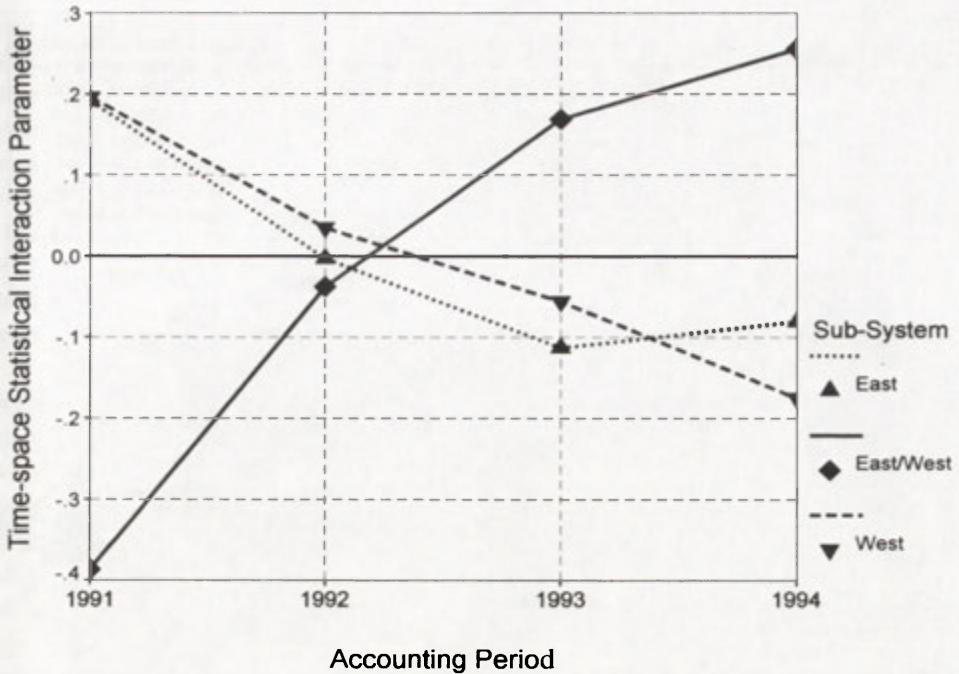


Fig. 9. Fusion of the East and West Migratory Subsystems of Berlin: Time-Space Interaction Parameters of Log-Linear Model (1991–1994)

ume in the overall migration system of Berlin. To evaluate whether both subsystems exhibited similar time-space trends we have calculated statistical interaction parameters for each combination of the three types of migration and for each of the four accounting periods. Each parameter measures the deviation from the general time-space trends and are therefore constrained to sum to zero across each time period and for each type of migration. These statistical interaction parameters are displayed in Figure 9. We can observe that interaction between the subsystems increases over time relative to the interaction within the subsystems. They indicate that both parts of the city are converging over time – nevertheless, still on a low level.

Related to the hypotheses mentioned above, these results contribute to the explanatory classification of types of migration flows which describe (i) new urbanism and displacement (i.e. migration into the SW-sector and the preferred parts of the Wilhelminian Ring (Tiergarten, Kreuzberg), while the traditionally older population will be pushed out to either the structurally similar districts like Prenzlauer Berg or to the districts with the lowest competition for the housing stock like the new towns in the East), (ii) the merger (well educated groups from the new towns in the E migrate into the SW-sector) and (iii) the regular pattern (stepwise out-migration from the core into the suburban zone or in-migration into the zone of transition).

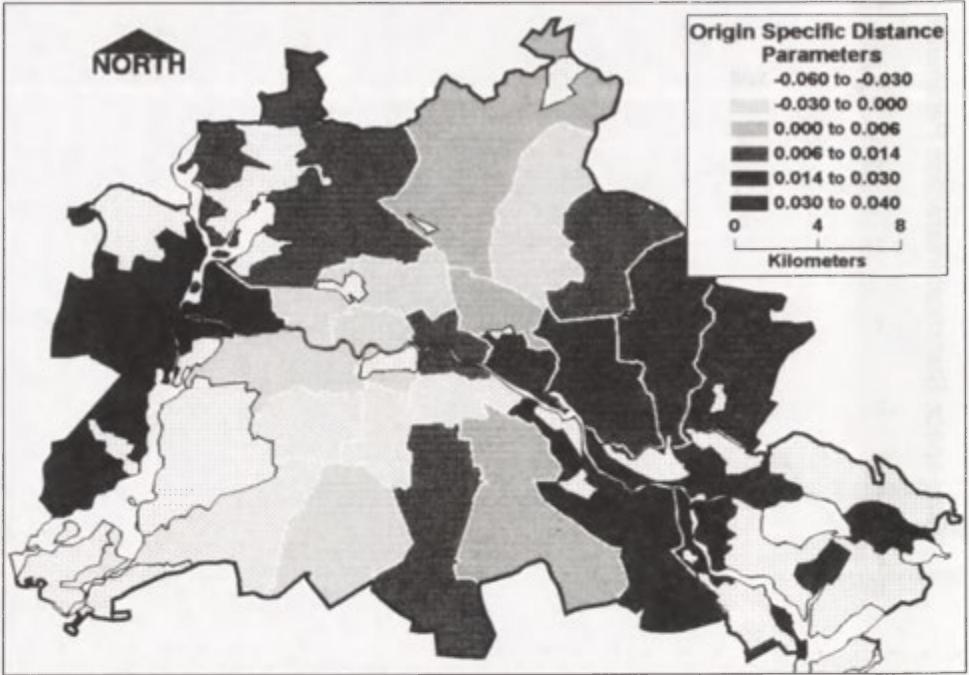


Fig. 10. Spatial Distribution of the Origin Specific Deterrence of the Distance Parameter (Averaged between 1991–1994)

The next step in the analysis investigated in how far each district had integrated into the overall migration system of Berlin (Fig. 10). The model is designed to show the perception of the deterrence of distance between origins and destinations. The origin specific distance parameters measure the district specific deviation from the overall distance parameter. The overall assessment of the distance between the districts is, as expected, negative and expresses in general the deterrence of distance in relation to the readiness to migrate for all individuals⁵. Negative deviations of the origin specific distance parameter around the global parameter indicate that the physical and psychological costs of distance hinder migration even further than the overall distance effect alone. Positive values indicate moves of longer distances than expected by the model.

Shorter distances are expected for areas which are socially established, top ranked, and are characterised by a high quality of housing. These characteristics remain despite changes in vertical (social) mobility. These structures appear in areas of high rents (e.g. Zehlendorf, Wilmersdorf, Schöneberg) and in the so-called “scene-areas” of the new urbanism (e.g. Kreuzberg). More specifically, centrally located areas with positive scores reflect either strong land use competition (e.g. Mitte, Prenzlauer Berg) or low housing qualities (e.g. Prenzlauer Berg, Friedrichshain). In both situations displacement processes can be anticipated. For

⁵ The distance exponent of the log-linear gravity model is $b = -0.09$, its t-value is -276.53

areas at the periphery with positive scores like Marzahn or Hellersdorf we examined return-migration into scene and high income core areas or into the high class sector in the SW. As hypothesised above, the well established SW-sector and the Western districts within the Wilhelminian Ring have negative scores. In general, peripheral districts with positive scores are either structurally heterogeneous, mainly because of their size (e.g. Köpenick, Treptow, Spandau, Reinickendorf), or they are shaped by strong urbanisation effects, e.g. in the new towns in the East (Marzahn, Hellersdorf). Most likely, the directions of migration are more heterogeneous for peripheral districts. These structures can be interpreted as the beginning of fragmentation.

A final analysis of migration deals with the dependency of migration decisions on the socio-economic structure of cities. Most migration decisions follow a short distance, radial and stepwise sequence migration pattern from the core towards periphery or vice versa in a leap frogging fashion. Therefore, we expected our augmented doubly constrained interaction model to over-predict the migration volume between adjacent urban sectors. In contrast, within a sector we expected our model to under-predict the migration volume. The first order graph fits best to this type of stepwise migration and to the spatial scale used in our analysis. Figure 11 displays the spatial distribution of the model residuals on the first order graph. We have selected adjusted residuals of the log-linear model because they are asymptotically normally distributed. The weight of the edges of this graph is computed as the average residuals related to the back and forth migration between adjacent districts. We used the average of the forth and back residuals because extreme residuals share the same sign. Positive average residuals under-predict the actual flows while negative ones over-predict.

Key findings were:

- In most of the radial links the model fits the actual migration flows. Their average residuals are small, except for those vectors which link the main core-periphery migration flows (e.g. between Wedding and Reinickendorf, Kreuzberg and Neukölln).
- With respect to the concentric ring pattern the model is adequately adjusted to the low level of interaction between both subsystems because we have included an indicator variable capturing this effect. Therefore, the residuals are small for adjacent East/West districts (e.g. between Wedding and Prenzlauer Berg or between Neukölln and Treptow). Strong under-predictions in the Western subsystem indicate the gentrification process within the Wilhelminian Ring. Strong over-predictions are mainly an artefact. They take place between districts which are separated by natural barriers like rivers, lakes and forests (e.g. between Zehlendorf and Spandau) but also by industrial zones (e.g. between Charlottenburg and Wedding or between Tempelhof and Neukölln).

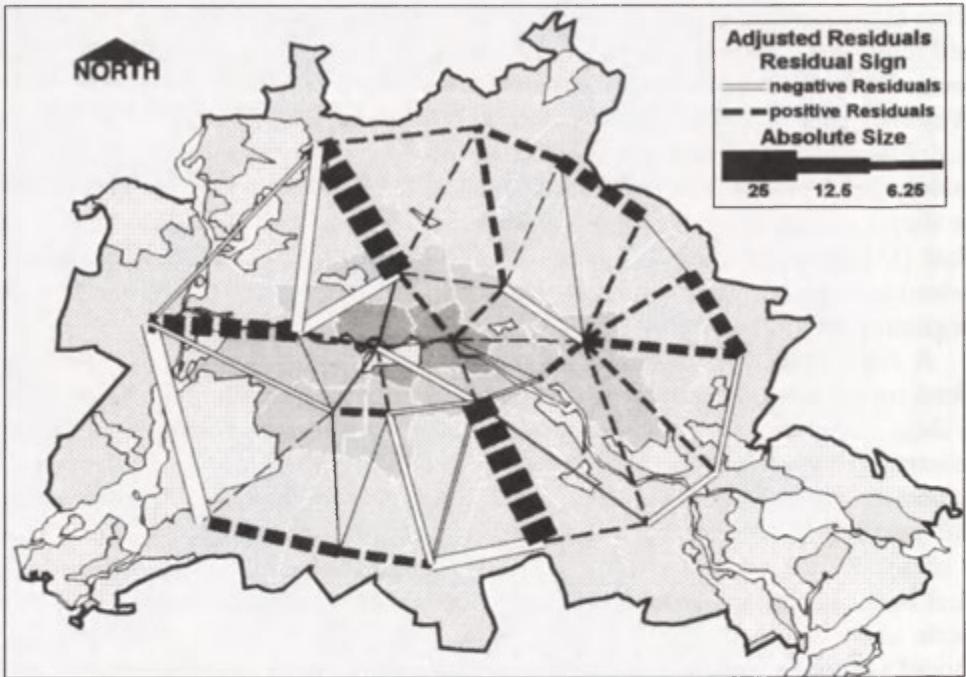


Fig. 11. Relation between the Log-Linear Regression Residuals and the Urban Spatial Structure of Berlin (1994)

CONCLUSIONS

Summing up, even while the migratory system of a united Berlin is still in an unstable state, the analyses have shown all elements of the hypothesised migration patterns. Some indicate the persistence of former processes. Others emphasise that new, predominantly global processes overlay or substitute for the processes of the formal integration of both parts of the city. It is expected that new urbanism and fragmentation will shape the future development of the city.

The major conclusion of the study are that all of the theoretically expected links developing between the East and the West systems can be positively tested. The process of unification clearly shows its hypothesised pattern at the local scale. However, the process takes more time than politicians and planers have presupposed. In contrast, at the global scale the processes of new urbanism and displacement create rapid changes of the urban structure. These processes separate the global village from the local village which is mainly formed by polycentric subcenters within a quartered city. As driving forces of this restructuring count first of all the relocation of the capital functions and the “rent gap” especially within the Wilhelminian Ring. This gap expresses the difference between the present market value and its potential which will attract major investment into

the housing stock. This rent gap grew for more than forty years in both the West and the East because of politically administered rent control. Both conditions will convert Berlin into a major centre of political and professional administration and decision making, of professional services and international relationships.

Some of the tests were based on simultaneous interaction models. For these models the data base and the level of spatial disaggregation have to be improved. Also, the links to the urban fringe of Berlin need to be included in a complete urban migration model. The goal there would be to set-up a time-space disaggregated monitoring system of the population dynamics in and around Berlin. It gives Geography its right in an urban GIS (Brown, 1996).

The results are of special importance for political decision-making processes, especially to neutralise the infrastructural disparities within and between the districts, but for the present situation of increasing reservations between East and West. The results might persuade people and politicians that global mechanisms are also shaping the new structure of Berlin. Their accompanying opportunities should not be missed.

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THE URBAN SYSTEM OF POLAND IN AN ERA OF INCREASING INTER URBAN COMPETITION

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ABSTRACT: The article discusses the prospective role and rankings of the major Polish cities within the emerging European urban system. Special emphasis is placed on the present and future impact of Berlin upon Poland's urban network. It is concluded that cities in the Western regions of Poland, such as Poznań and Wrocław, will be subject to both the positive and the negative effects related to the expansion of Berlin – the extension of its zone of influence and its metropolitan shadow. Conversely, one can expect that the development of Warsaw will not be adversely affected by its competition with Berlin. The recent successful transformation of Warsaw's economy suggests that the city, in fact its urbanized region, has been gradually assuming the role of Poland's main economic core region, the position traditionally held by the Upper Silesian conurbation. Warsaw has also good chances to become a major commercial and transportation centre in East-Central Europe.

KEY WORDS: urban systems, inter-urban competition, metropolitan functions, economic restructuring.

THE EUROPEAN CONTEXT

The recent expansion of the European Union and its deepening integration, together with new developments in communication technology and inter-urban rapid transportation (the new generation of fast trains in particular), have brought another wave of interest in comparative urban research (Pumain and Saint-Julien 1996). Increasing interdependence among major cities in Europe, emergence of centres performing important supra-national functions, and greater population mobility over space, have paved the way to the notion of the European Urban System.

A number of studies in which this approach has been adopted are prospective and policy-oriented in character. In some of the projects, such as those sponsored by the German Federal Ministry for Regional Planning, Building and Urban Development (1994) and by Giovanni Agnelli Foundation (1995), the scope of enquiry has been extended so as to include cities and urban networks in the associate EU countries in East-Central Europe, and even in Russia and other Soviet Union successor states (Grimm 1994).

Models of the present, as well as future, urban hierarchy in Europe are typically based upon variables such as city size, the presence of specialized international functions and spatial accessibility (i.e. location on main trans-European transportation routes). Increasingly the tendency is also to emphasize the general level of technical infrastructure and the integration of local economies with global markets. In the case of capital cities, the economic and population potential of the respective countries is taken into account.

THE POLISH PROBLEM

In such schemes the urban system of Poland appears as extending over a Central European periphery (see also: Dematteis 1996), a territory dominated by large external metropolises of Berlin, Moscow and, to lesser extent, Budapest. This position is mainly due to the highly deconcentrated pattern of Poland's urban system (rather than a low overall density of the urban network). This is a system characterized by a relatively small population size of the capital city (Warsaw, with 1.6 million inhabitants in its administrative boundaries accounts for only 4 percent of the national total population) and the allocation of a number of national-range functions to major regional centres, including Cracow, Poznań, Gdańsk, Wrocław, Łódź and Katowice (the main centre of the Upper Silesian conurbation – an urbanized area with the total population of approximately 4.0 million). See Table 1.

The relatively (some may claim – unreasonably) low rankings assigned to Poland's main urban centres by recently circulated hierarchical classifications of European cities, may negatively influence their future development. In the case of prospective, policy-oriented schemes one can indeed refer to a risk of a self-fulfilling prophecy. The formation of an increasingly integrated European Urban System implies growing competition among the urban regions for the allocation of new activities. With other factors held constant, the higher the hierarchical level, the greater tends to be the competitiveness of a given city vis-a-vis other urban centres within the system.

There are two basic, though interrelated dimensions of such a territorial competition. The first relates to present and future policies of the European Union. A number of scholars and planners have been advocating a stronger coordination of national policies of physical development within the EU (von Malchus et al. 1995), or even within a much broader framework of the Council of Europe (Treuner and Foucher, 1995).

Even if the adoption of this general approach (save for an implementation of more specific postulates), has a long way to go, agencies of the European Union are likely to increase their role in the domain of transportation policy, including the programming and co-financing of major projects, including new motorways, high-speed railways and tunnels. These infrastructural improvements bear upon

Table 1. Population Size of the Major Cities and Urban Regions in Poland: 1995

City	Population Number	
	Central City	Urban Region
Warsaw	1 635 112	2 416 580
Łódź	823 215	1 116 258
Cracow	744 987	1 241 423
Wrocław	641 974	1 137 655
Poznań	581 171	1 353 708
Gdańsk	463 019	1 455 868
Katowice	351 521	3 924 813

Source: *Statistical Yearbook of Demography, 1996*. Central Statistical Office, Warszawa 1996.

spatial accessibility patterns within the urban system. They have long-term effects upon the evolution of urban hierarchy. Hence, the selection of projects and the respective priorities become the object of international as well as inter-urban competition.

Once a model of the urban system of Europe, such as the one referred to above (Federal Ministry 1994) is accepted as a policy statement, then the hierarchical ranks of individual urban centres may enter among the investment criteria for major infrastructural projects. This is stated explicitly by Treuner and Foucher (1995), according to whom: "The map is of a normative character... (It) is meant to serve as a discussion basis for determining the spatial development objectives that should be pursued by the different policies, and in particular by the structural funds. The definitions of the categories (international, European, national urban centres, respectively) imply priorities for development and investment.. Two lists of investment priorities should be established: one for action programmes to strengthen selected urban centres, and a second defining the priorities of links to be developed" (Treuner and Foucher 1995, p. 15–17).

Another dimension of inter-urban competition refers to the allocation of private investments which generally tend to follow public investments. Official city classifications may be used by prospective foreign investors as a tool in their estimations of the present and future potential of local and regional markets. Such considerations are especially important in the case of those economies which are undergoing basic market transformations – when direct foreign investments bring not only a growth of employment, but, more importantly, technological and organizational progress.

Urban planners and policy makers in Poland have now learned to recognize the role of urban marketing as a factor in shaping urban development. Hence their generally critical interpretation of the positions attributed to Poland's major cities in the policy-oriented models of the European Urban System. At the same time, however, too much effort is put into national-level competition (between Cracow and Warsaw for example) and too little emphasis is given to the formulation of consistent national policies of urban development.

THE REVIVAL OF BERLIN AND ITS IMPACT UPON POLAND'S URBAN SYSTEM

The reintegration of Germany, the massive physical redevelopment and the transfer of capital functions to Berlin will dramatically alter the position of that city in the European Urban System by the end of the present decade. Such forecasts had in fact been formulated well before the fall of the Iron Curtain. For example Hall (1990) wrote in 1989 that Berlin was soon likely to assume the role of a key junction point for international traffic in Central Europe and to become an important locus of new high-level service activities.

The situation of Berlin at the distance of approximately 70 kms from Poland's western border makes these developments of particular relevance to the future evolution of the Polish settlement system. This is especially so in the view of Poland's prospective integration into the European Union as well as some still surviving (and now undergoing technical improvements) infrastructural links connecting Berlin with numerous cities in Western and Northern regions of Poland.

A body of common knowledge has already accumulated that pertains to these questions, although detailed scholarly research on the subject is still largely missing. Some popular commentators (Krzemiński 1995), in a somewhat provocative vein, are looking at Berlin as a possible future "capital of Europe", with a consequent decrease of the position of Warsaw, and other capital cities in East-Central Europe to a de facto subdominant status. Many others are interpreting the new "attracting" power of Berlin as both a challenge and an opportunity to bring about accelerated economic development in the neighbouring regions of Poland.

The influence of Berlin in fact can already be identified. The role of its citizens in patronizing extensive shopping facilities that, owing to persisting differences in prices of many goods and services between Germany and Poland have emerged on the Polish side of the border, has been well documented. Their total volume of sales is estimated at 6 billion DM annually (Werwicki 1995). This represents an important component of Poland's exports earnings. Economic effects of these developments are by no means restricted to the border zone. For example, a considerable number of firms in the region of Łódź, in central Poland, have specialized in producing textiles and garment offered for sale in the border-zone markets.

Also, the labour market of Berlin, in particular its burgeoning construction sector, has been attracting firms and workers from various cities and regions in Poland. A less known, but recently observed development, is an expansion of the range of Berlin airport services, as well as specialized tourist and financial services, over much of Western Poland. Until 1989 Warsaw enjoyed a practically monopolistic position within Poland as an international airport hub. Since then this position has become seriously eroded. Increasingly, passengers coming from

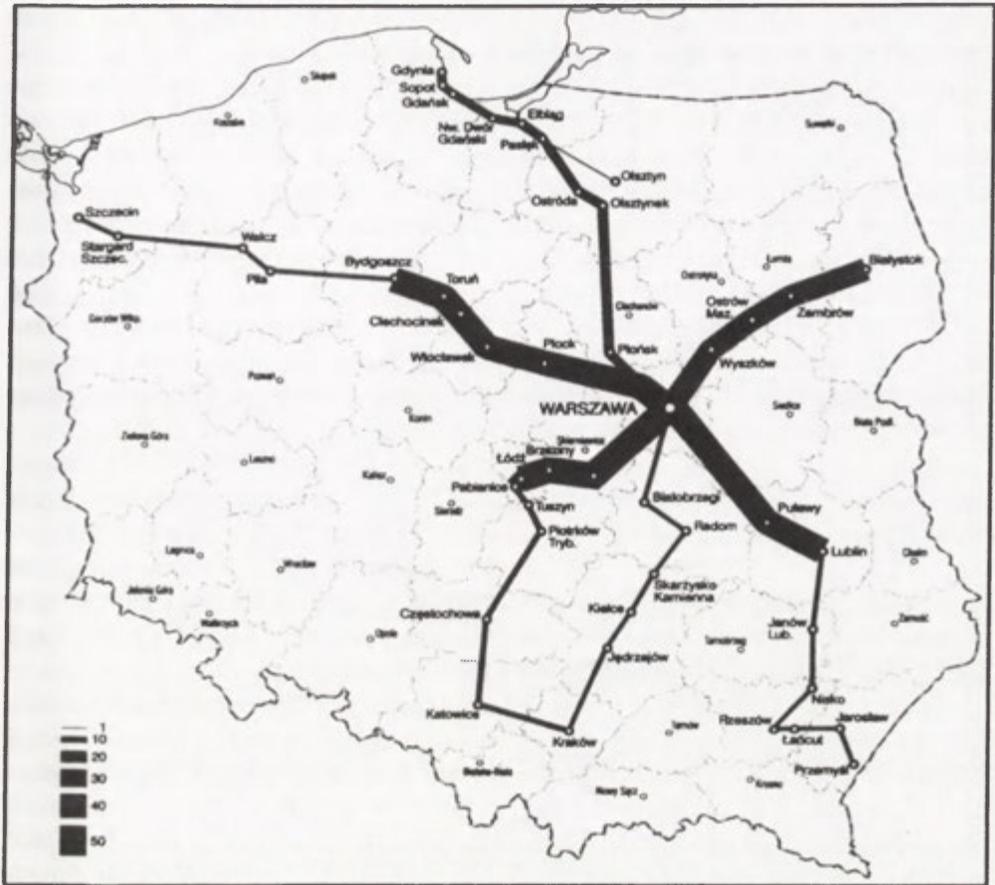


Fig. 1. Regular inter city coach lines operating from the Warsaw Airport. Number of connections per week (Spring – Summer 1996)

places in the Western regions of Poland have been choosing one of Berlin's airports as starting points of international air travel. The Polish National Airways LOT have attempted to face the challenge, among others, by offering free-of-charge transfers from the regional airports (such as Ławica Airport in Poznań) to Okęcie International Airport in Warsaw. In spite of this, the market area of the latter has shrunk in the recent years so that it now corresponds basically to Central and Eastern Poland. This is illustrated by the pattern of regular inter-city coach services operating from the Warsaw airport (Fig. 1).

There are a number of outstanding questions that pertain both to the future position of Berlin within the Federal Republic of Germany, and its external, international role. The first question concerns the relation between Berlin and the established, large urban centres in the former Western Germany, i.e. Frankfurt, Munich, Hamburg, Cologne, Duesseldorf, and Stuttgart. Whether Berlin becomes just "the first among the equals" among these metropolitan centres, or assumes

as the capital a clearly dominant position within the urban system of Germany in a longer term, remains an open question.

Interrelated with this question is one pertaining to the future evolution of the main functions of Berlin. While its role of the principal political and cultural center of united Germany is unquestionable, its overall future economic profile is rather uncertain. Will firm headquarters, financial institutions, and tourist functions gradually replace the once prominent manufacturing functions of Berlin?

Another relevant question pertains to the extension of the zone of immediate influence of the city. On which geographical sector is this expansion going to be focused? Is it the Berlin–Hamburg axis, or in the direction of Magdeburg–Hannover? Or, will the spatial pattern of economic change and urbanization become relatively isometric, i.e. involving also the North-Eastern and Eastern sectors extending towards Frankfurt an der Oder and Szczecin?

Finally, are earlier demographic forecasts for the city of Berlin and its surrounding region, i.e. a gradual contraction of the total number of inhabitants reflecting an ascendancy of negative natural population change over net immigration, still appropriate? If population growth should be predicted instead, which territories might become the origins of increased migration towards Berlin? Is it the traditional migration shed in former Eastern Germany? Or, is it Poland and other countries in East-Central Europe, or the Middle East?

One can find different answers to the above questions in the current scientific, as well as popular literature. German authors are generally quite cautious when it comes to evaluations of the future population size of Berlin and the expansion of its economy. They are aware of the meagre demographic prospects for Berlin and its region. They tend to focus on infrastructural and organizational improvements and the quality aspects of the changing built-up environment (Keim 1995). They also emphasize the sustainability of the polycentric character of the urban system of Germany in which the established metropolitan centres in the “Old Lands” (such as Frankfurt, Cologne and Munich) continue to perform important national-wide as well as international functions (Maeding 1995).

Such a pragmatic approach remains however in stark contrast to much more “optimistic” scenarios painted by some Polish authors who tend to see Berlin as a new gravity centre on the map of Europe, generating important innovations, and pulling a lot of new economic activities towards Central and East-Central Europe, away from the dominant London–Milan axis. Hence, Berlin is seen as an agent of the possible future shift of economic potentials within Europe. While most of the emphasis is placed on the growth-generating aspects of the new developments, some potentially negative effects, namely those referred to by the traditional concept of core and periphery, as well as by the old geographical notion of metropolitan shadow (Berry 1960), are generally overlooked. These are briefly examined in the next section.

SHIFTING ECONOMIC AND URBAN POTENTIALS WITHIN POLAND: IN SEARCH OF A NEW CORE REGION

Aside from external developments, the future ranks of Poland's major cities within the European urban system will also, if not primarily, depend upon endogenous factors. These include the transformation of the national economy and the spatial allocation of new high-level functions. Growing inter-regional economic disparities and shifts in the urban hierarchy are among the important consequences of Poland's present-day economic transformation.

Under the so-called centrally-planned economy the national economic core region typically coincided with the main industrial agglomeration. Such was definitely the case in Poland where the Upper Silesian Industrial District, and the corresponding urban conurbation with its centre in Katowice, represented the largest concentration of urban population and, during extended periods of time, the real locus of economic decision making and political power (Rykiel 1995).

The first years of market reforms have witnessed a gradual erosion of the economic base of the Upper Silesian region, one dominated by the traditional coal and steel industries. Adjustments to the challenges of the market economy have been the most rapid in the polyfunctional urban regions, namely those of Warsaw, Poznań, Cracow, Wrocław and Gdańsk (Korcelli 1995). While Poland's economy has become increasingly oriented towards international markets for goods and capital, the interdependence within the national urban system has somewhat declined. This is manifested by a contraction of commuting-to-work fields of the major cities, as well as the disappearance of many of the former inter-industry linkages connecting various urban places within the system. Whether this trend will continue, or whether the urban system will undergo a reintegration in the future depends on a large extent upon the location and attracting power of a new core region. More specifically, the question is whether the urban region of Warsaw will succeed in replacing the Upper Silesian conurbation as Poland's new economic core and the main hub of its urban system.

If this development does not occur, then the centre of gravity of Poland's economy may shift to western part of the country – the region characterized by a rather balanced and technologically (relatively) advanced economy. This region is now oriented around the commercial and industrial urban centres of Poznań and Wrocław. Owing to its geographical location as well as some structural characteristics it is likely to be increasingly attracted into the orbit of Berlin, in particular after Poland's prospective entry to the European Union. Such a development would accentuate a bi-polarity in Poland's urban system – a division between the western and the eastern subsystems. It might also perpetuate the traditional economic development gradient that runs across Poland's territory in the west-east direction.

More specific future trends concerning the major cities in Western Poland, such as Poznań and Wrocław, can not be easily established on the basis of the

available concepts and data. As a consequence of their geographical situation within the potential zone of influence of Berlin, these urban centres will be exposed to factors that stimulate growth, as well as to various growth-limiting factors. The former may include a spillover of industrial activity from Berlin towards lower-wage locations in the metropolitan hinterland, an expansion of tourism-related services and an increase of real estate values in a number of urban centres. Among the growth retarding factors one can identify a dominance of Berlin in the sphere of higher-order functions and corporate control, as well as a pull of its labour market, resulting in a selective migration of members of professional and other highly-skilled labour categories from the regional centres towards the nearby metropolis.

In the case of Warsaw, the influence of Berlin will not be felt as strongly as in the case of Poznań or Wrocław. The range of certain functions performed by Warsaw may contract in the westerly direction, as it has already occurred with respect to its airport services. Nevertheless, in the process of inter-urban competition Warsaw has a good chance to improve its overall ranking within the European urban system. This is mainly due to the good performance of the Polish economy in the recent years, and the growing economic potential of Poland within East-Central Europe. The economy of Warsaw has been a leader in market transformations (Zalewski 1997). Proximity to political decision making, which has turned out to be an important locational factor during the period of market reforms, a concentration of universities and research institutes, as well as the accessibility to the changing East European markets, represent the main locational assets of the Polish capital city.

Two other major cities, namely those of Gdańsk and Cracow, face a potential enlargement of their interaction fields, and an expansion of their leading commercial, cultural and educational functions in the future integrated European urban system (Dutkowski 1996; Kołodziejcki 1997). One may also expect a gradual decline of the role of the industrial conurbations of the Upper Silesia and Łódź, both on the national and an international scale.

These trends and possible developments should become the object of national urban policy. Such a policy should identify long-range objectives and make certain choices with respect to major infrastructural investments. At the same time it should try to answer questions now being posed in various studies and documents elaborated by the European institutions.

CONCLUSIONS

Questions concerning the evolution of urban systems, in particular its relation to the processes of global restructuring, have been the focus of intense scholarly interest in recent years (Bourne 1995). This interest has been reinforced in the European context by the expansion and the deepening integration of the Euro-

pean Union. The scope and range of inter-urban competition has extended from a national to an international scale. The patterns of functional specialization of cities and the long-established urban hierarchy are exposed to new external forces.

Consequences of these developments have spread to East-Central Europe. This paper has looked at these consequences in the case of Poland. The growing role of Berlin is seen as a major factor of the future evolution of the Polish urban system. This brings about numerous implications for national urban and transportation policies. Also, the emerging cross-border patterns of inter urban interaction will play a significant role in the evolution of the system. Future rankings of individual cities will be increasingly determined by their ability to compete at an international level. In this inter urban competition the growing emphasis will be placed upon the so-called soft locational factors; those related to the quality of natural and human environment, culture, education, as well as standards of local political leadership.

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HIERARCHICAL DISTORTIONS WITHIN THE ROMANIAN URBAN SYSTEM

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ABSTRACT: The consequences of the state intervention in the layout of some towns, or categories of towns, show up in the general configuration of the urban hierarchy in Romania. The main distortions are due to the disproportionate ratio between the town and its adjacent area and to the communist conception that the economic stability of the former is based upon relations only within an overcentralized system. Since the progress of each town was not connected with the functioning of the whole urban system, the latter, together with the regional systems, began showing distortions: e.g. an undersized national urban hierarchical basis, an overdeveloped median sector, an underdeveloped upper sector and an oversized capital, Bucharest. Regional systems, in their turn, are either under- or oversized compared to the next lower-rank towns. There are indications that such distortions will be gradually eliminated. It is imperative to promote a clear-cut policy for the development of rural settlements with centrality functions, and of large cities (regional centres) in order to enable them to take over some of the functions released by decentralisation at national level, simultaneously with the economic restructuring of medium-sized centres – the county capitals. The analysis is focusing exclusively on the hierarchical distortions occurring at national and regional levels.

KEY WORDS: hierarchical distortion, distortion genesis, urban system, Romania.

INTRODUCTION

In 1995, the population of Romania numbered about 22.7 million inhabitants; 12.46 million (54.9%) lived in the urban area, being concentrated in 262 towns, of which 25 had over 100,000 inhabitants (ca 57.4%).

The present urban pattern has suffered the direct influence of the administrative hierarchy imposed over the past fifty years, mainly in the last 30 years. The new administrative organisation, introduced in 1966, raised the number of counties to forty-one instead of sixteen, which had been traditional until that year. So, with new administrative functions in place, the urban hierarchy underwent a radical change, the new county capitals gaining prominence.

As far as functional structures are concerned, despite the major changes brought about by extensive industrialisation and the decline of services, the big

regional systems continued to gravitate around the centres of historical provinces. A new category of towns emerged, intermediating relations among urban centres. These were the towns of industrial co-operation, regional structures in themselves, supporting a system built such that it could, if necessary, function independently.

The evolution of the Romanian urban system has been closely intertwined with the historical, socio-economic and political life of this country (Cucu 1970). The urban system is the outcome of the merging of three urban subsystems which by and large correspond to the three great historical provinces: Walachia (Muntenia), Moldavia and Transylvania. The first two became united in mid- 19th century, the last one joined them in the second decade of the twentieth. The national urban system does not have a unitary hierarchical structure throughout the country. Out of a total of 262 towns at present, only 25 have more than 100,000 inhabitants. The great upheavals, that have marked inter-town relations during the past 50 years, have generated distortions in the urban system both at national and regional levels. These distortions are largely the work of the state's intervention in the physical and functional town pattern.

MAIN CAUSES OF HIERARCHICAL DISTORTIONS. ONSET AND INTENSIFICATION

Some elements from the pre-war urban system did play a certain role in the onset of distortions, e.g. the gap between the capital and the next ranking city. However, what multiplied and augmented them, were the socio-economic and political-administrative decisions implemented by the centralised regime. These decisions had both an indirect and a direct impact. An indirect impact is exemplified by the socialist industrialisation drive and the collectivisation of agriculture. More direct effects were the promoting of localities to townships, the assigning of new functions and the policy of town and territorial planning (Ianos 1987).

Industrialisation was a large-scale action, the ideological groundwork of social-economic development in the view of communist regimes. The megalithic units of the metallurgical, machine-building and chemical industries placed preponderantly in the urban area, multiplied their attractivity for the rural population. Hence, the explosive growth of towns in general, and of the small and medium ones, in particular. The only driving force in the upsurge of urban population (by over 30% over 1948–1990) was industrialisation actuated by such principles as “harmonious development of all of the country's zones”. The population working in industry and construction represented nearly 40% throughout the country, with over 60% in the urban area alone. The impact of large units, with over 3,000 employees as a rule, on the demographic increase in towns had all of a sudden altered their hierarchical ranks, sharpening existing distortions and engendering new ones.

The collectivisation of agriculture led to the depopulation of the countryside, the labour force migrating to the newly-created industrial jobs in town. But towns could not cope with the economic dimensions placed upon them overnight. The majority population of many of the small towns lying in dominantly rural areas was engaged in agricultural practices. In these localities there was no secondary sector, and only an insignificant tertiary one. Nevertheless, in defiance of the internationally accepted definition of town, they were listed under “towns with agricultural functions”.

Another direct impact upon the urban system was *the promotion of some localities to township*. An isolated phenomenon before 1966, such promotion had been based on the existence of special industries, of national interest as a rule (Campia Turzii, Ocna Mures, Cugir, Otelu Rosu, etc.). After that date, the assigned township rank would be not on an individual basis but rather in a group system (e.g. 51 in 1968, 23 in 1989) often underlain by subjective criteria (e.g. the village birth-places of some leaders). Before and after 1968, but especially before that year, towns were built on empty tracts of land (Victoria, Stei, Onesti, Motru, Rovinari, etc.). As a matter of fact, the newly-promoted towns did help to attenuate urban imbalances, particularly at the basis of the hierarchy.

But the most dramatic impact was from *the establishment of new county-seats* under the political-administrative reform of 1968. These were towns never before assigned that function (only 16 out of the 41 county-seats had been regional capitals). Although reduced numerically, they would amass both labour and material resources due to a favourable geographical position and big state investments. Becoming overdeveloped by comparison with other localities, they created new tensions in the urban system, as well as hierarchical and territorial upheavals, with disastrous effects upon some small towns and rural settlements which suffered a population drain.

The urban and territorial planning policy was among the direct causes of amplified distortions within the Romanian urban system. The county-based development programmes concentrated on county-seat level, especially on the low-developed counties. Turning overnight as it were, small- and medium-sized towns into important urban centres of the national settlement system led to fundamental changes in the internal structure and influence zone. Setting up big industrial units, building new residential districts to house the village workforce, demolishing and re-making the central area of these towns brought about major distortions and even loss of their urban identity.

MAJOR HIERARCHICAL DISTORTIONS WITHIN THE NATIONAL URBAN SYSTEM

The development of towns through excessive industrialisation in comparison with other urbanisation factors, coupled with a policy of town and village plan-

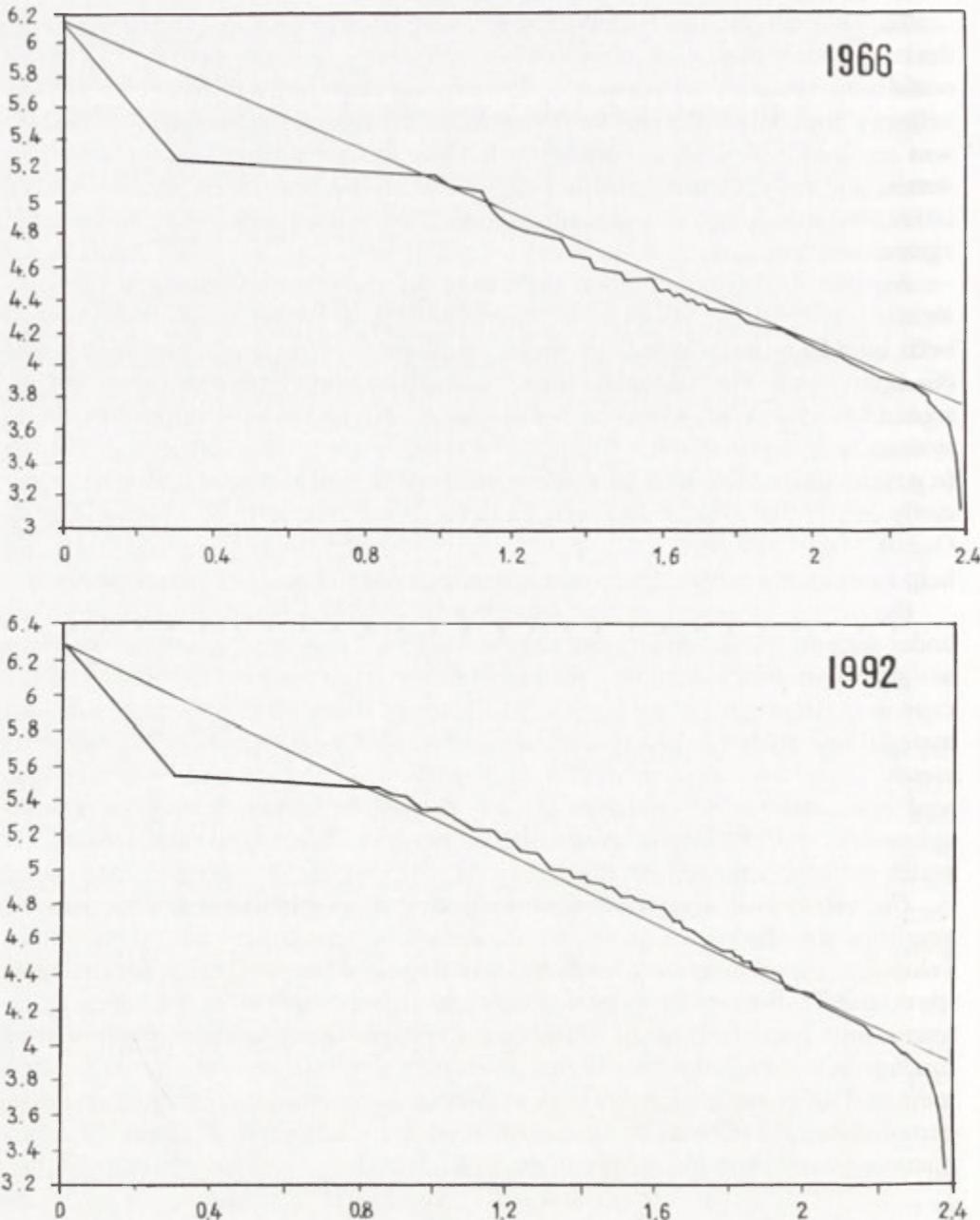


Fig. 1. Rank-size distribution of Romania's towns as revealed by the 1966 and 1992 censuses

ning aimed at a segregated development of localities, has engendered some large-scale distortions in the urban hierarchy and in the territorial pattern of the national network of settlements. Currently, a distortion means an order, other than the

normal one, imposed upon a system, which can be maintained only through powerful intervention into its workings. In the case of the urban system this intervention is materialising in an urban policy that puts up structures in ignorance of the functioning of the whole. In centralised political and social-economic systems funds use to be allocated preferentially to certain groups of towns. This has a strong impact upon the towns themselves and upon the local and regional systems they belong to. If their number is fairly high, the national hierarchy, which is known to be quite stable, is disturbed and compensatory measures must be initiated to re-balance it.

Taking a comparative look at the rank-size distributions in the years 1966 and 1992 we see positive dynamics in the median sector of the hierarchy (Fig. 1). Bearing in mind that these distributions have great stability in time, we would say that this hierarchical sector of the Romanian urban system has experienced a far too sudden and exaggerated change, which inevitably caused at least one notable distortion in addition to numerous others that had been inherited.

Macro-scale anomalies (that might be associated with some distortions) include: a weak hierarchical urban basis; abnormal development of the median sector; no clear-cut hierarchical differences in the upper sector; an oversized capital-city. The above differentiations rely on the classical separation of the urban hierarchy into large cities (over 100,000 inhab.), medium-sized towns (20,000 – 100,000 inhab.) and small towns (under 20,000 inhab.), which is still relevant for Romania.

a). *An undersized urban hierarchical basis* means that the lower sector is weakly represented. This reality becomes more obvious if we look at the urban systems of other countries. The Romanian network of settlements comprises 262 towns and nearly 14,000 villages. While the spread of large cities is relatively well-balanced, small and medium towns tend to concentrate in important areas (Prahova Valley, Hunedoara-Jiu Valley, southern part of Dobrogea etc.) or lie scattered across the country, hence significant territorial disparities. Urban polarisation of the rural area, therefore, shows wide differences. A town's influence area covers on average 50 villages, but bearing in mind town locations, we find vast rural territories with few or no towns at all. In addition, the number of villages – successively amassed by administrative measures – is far greater than the capacity of small towns (still little more than developed rural settlements), to exert a real polarising impact.

A comparison between Romania's and other countries' urban systems highlights the need to stimulate small towns and increase their number. There is often a striking disparity between the territorial functions discharged by some towns and their actual potentialities, as well as between the functions of some rural settlements and their "village" status. Reconciling these dysfunctions means recognising that rural localities with central-place functions have in effect urban features. According to estimates, and considering the number of its population, there should be at least 800–850 towns in Romania.

One often finds an obvious gap between the territorial functions discharged by some towns and their actual potential on the one hand, and the functions carried out by some rural settlements and their “village” status on the other hand. Although less obviously emerging from the 1992 rank-size distribution, where normally, the towns occupying the lowest hierarchical ranks show great deviation from the ideal adjustment line, the fact that small towns are weakly represented in the urban system could be viewed as a distortion caused by an altogether incoherent urban policy. The fact is that rural localities, that had not the attributes required by a township status, were promoted to that rank, while settlements with obvious urban functions were maintained under a “village” status. Also a distortion is a weak representation at the basis of the national hierarchy, considering the extension of the median and upper sectors and the need to balance the entire urban system.

b). *An oversized urban hierarchy median sector* was created in the years 1973–1978 and continued afterwards. The phenomenon was not general, but involved only a small group of towns subject to demographic explosion due, in the main, to their county-seat rank, newly-acquired in 1968 (Ianos, Talanga 1994). That promotional policy was materialised in big investments earmarked to industry and housing schemes. This caused the abnormal development of these towns, far beyond the carrying capacity of their surrounding environment. This group of towns, which distorts the population size/town rank ratio is particularly evident at county level, where the county-seat / second-in-rank town ratio, increased to the benefit of the former. This is the situation characteristic of Salaj, Ialomita and Olt, in which the ratio between the first two towns in the present hierarchy increased between 1966 and 1994 by 3.3; 2.7, and 2.6 times, respectively.

After the collapse of the centralised system, the towns, in which industrial investments had given rise to explosive growths, have been the ones most affected. Basically, industrial restructuring has brought unemployment, so they suddenly became unattractive for the labour force. People recently settled there have returned to their native villages. On the other hand, second-in-rank towns appear to increase their population, particularly in the case of former (inter-war) county capitals. In general, there is a trend to return to the inter-war urban structure, even though the latter has experienced fundamental changes.

c). *An undersized sector in the upper urban hierarchy* is revealed by the rank-size correlation, which takes into account the distribution of towns in relation to the capital-city and the overall number of urban centres. Hierarchical dysfunctions among Romania’s large cities are the consequence of a chaotic conception of inter-regional and regional development. As the role of historical provinces’ polarising centres was waning, and a new regional pattern was put in place after 1968, large cities, especially those located in deeply rural areas (Craiova, Constanta), would record similar developments.

The administrative county pattern (resulting in the loss of regional-seat functions) and the law prohibiting people’s settlement in a number of fourteen large cities (extent in 1968) have reduced the chances of differentiation. So, these cities

began competing for the second rank in the national urban hierarchy. This had a negative impact on themselves as a whole, and on the urban system, generally. The rank variation of the first six largest cities of Romania (after Bucharest) is only 25,000 inhabitants, which means that they come very close in point of number of inhabitants, with no real prospect for any of them so far to detach itself. As importantly, however, the smallest variation in the number of population of any of them may bring about significant changes on this hierarchical level.

Any selective development option concerning the towns in this category must aim at the hierarchical stabilisation of this sector. In this light, the position of towns in the regional hierarchy could be an argument in favour of those centres which at this level are still undersized (e.g. Cluj-Napoca in Transylvania's urban system). Such centres need to be stimulated, because they do not engender regional imbalances, on the contrary, they could contribute to the ordering of the upper segment of the national hierarchy.

d). *An oversized capital* is not a singular situation in Romania, but if the process is accelerated, it might put the national urban system in jeopardy because of excessive functional centralisation. The relation between Bucharest and the second ranking city has always been, with fairly significant variations, in favour of the former. Maximum (8.83/1) and minimum (5.7/1) values were recorded in 1948 and in the mid-1980's, respectively. Present trends indicate an increase of this ratio (5.91/1 in 1994), and in time, the functions and multiple attractions of this metropolis will certainly raise the flux of immigrants during the transition period, in particular.

In the conditions of a market economy (Bucharest listing high in the preferences of foreign investors), the capital is expected to consolidate its position as Romania's economic leader, with inevitable demographic adjustments. On the one hand, the number of inhabitants may sharply increase; on the other hand, the ring of economic satellites expected to surround the capital, will diminish its attractiveness.

At the same time, in order to prevent Bucharest from recording spectacular growth over the next stage, it is not unlikely that another urban centre, enjoying a better geographical position and greater attractiveness should grow into a capital city, taking over Bucharest's functions. The more so, as individual households, especially in the countryside, are facing enormous economic hardships. In this case, Bucharest (still the country's economic metropolis) will cease hypertrophying, giving a chance to the second-in-rank town to come to the fore, thereby rehabilitating the upper hierarchical segment.

HIERARCHICAL DISTORTIONS WITHIN REGIONAL URBAN SYSTEMS

As in the national urban system, regional imbalances have been generated (sometimes older ones become acute through the state interference in favour of

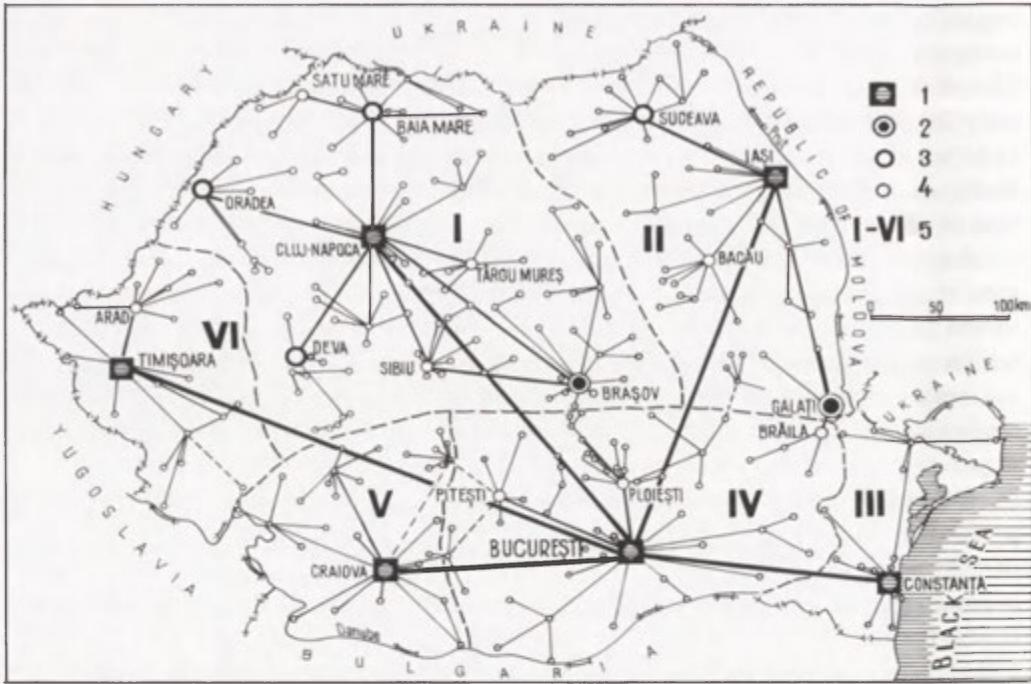


Fig. 2. General scheme of the Romanian urban system and its regional systems (centering around the cities of great historical provinces):

- 1 – Regional metropolises; 2 – Regional cities; 3 – Towns with regional functions;
- 4 – Towns; 5 – I–VI, Regional urban systems: I – Transylvania; II – Moldavia;
- III – Dobrogea; IV – Muntenia; V – Oltenia; VI – Banat

certain regions or categories of towns). An objective scrutiny of the situation at macro-territorial level should not ignore the magnitude of the regional urban systems, when assessing disparities. A 50 town urban system inevitably behaves in a different manner than a 10–15 town one. Since all these urban systems centre around towns of the same size, our analysis can proceed. A county-based analysis has no relevance because confined to the administrative boundaries alone, it fails to follow the functional relationships among urban centres.

Our regional analysis focused on the main sub-systems circumscribed to towns coming second-in-rank after the capital (Fig. 2). By and large, the boundaries of these sub-systems, overlap the country's historical provinces.

Distorting elements of regional urban systems are the oversized co-ordination centres, the undersized median sector, the oversized lower segment, and the competition among first-rank towns of the regional urban hierarchy.

Hypertrophic co-ordination centres are specific to small regional systems and the capital-based system. After an interval of continual attenuation, the ratio between the co-ordination town and its second in line, registered slight increases (as from 1990). This situation is very likely to create some hypertrophic regional

centres, e.g. Constanta (now the second largest city after Bucharest), Craiova or Timisoara. The ratio between these cities and those next in line is 3.57; 2.59, and 1.74, respectively. The same happens with Bucharest regional centre, which tops Ploiesti (second place) by 8.1. The hypertrophic tendency manifest within the regional systems of Transylvania and Moldavia is reflected by the number of inhabitants over the 1966/1990 period, which very rapidly registered close values (Cluj-Napoca / Brasov from 1.14 to 1.01; Iasi / Galati from 1.06 to 1.04). Now, as regional co-ordination centres (Cluj-Napoca and Iasi) tend to resume their traditional functions, differences could quickly widen (Ianos et al. 1996).

The median sector of the Banat regional system is underdeveloped and it contains only two towns: Lugoj and Caransebes. It is a singular case of oversized small towns, especially in Arad-based sub-system, where all six towns of Arad county have below 13,000 inhabitants each, with the corresponding disparity between them and the co-ordination centre Arad, which has a population of 190,000.

The oversized median sector is obvious in the Moldavian system, where half of the 41 towns are medium-sized. Small towns represent 44 per cent. This means that the basis of this regional urban system needs to be enlarged by way of promoting some villages (with a numerous population, discharging centrality functions by now) to townships (Liesti, Vicovu de Jos, Cudalbi, Stefanesti-Prut, Falcui, etc.) (Ungureanu 1980).

The other regional urban systems show *a certain equilibrium between the median and the lower hierarchical sectors*, the only distinction reflecting in their development scales. For example, the fact that the Dobrogean system has few towns, distinguishes its general hierarchical pattern from that of Muntenia or Transylvania, where towns are very numerous.

Competition among upper-rank towns is particularly fierce within Transylvania's urban system. Primacy is disputed by two cities: Cluj-Napoca and Brasov. Since they come very close both in point of inhabitants and territorial functions, it becomes very difficult for one of them to spring forward. The fact that they lie at a great distance in space prevents direct competition, and Cluj-Napoca's traditional cultural supremacy is attenuated in part by Brasov's industrial sophistication or tourist availabilities. Apparently, however, Cluj-Napoca will regain its position of major co-ordination centre of the Transylvanian urban system due also to its central geographical position.

A similar picture is shown in the Moldavian urban system, where Iasi might compete with the Danubian city-port of Galati, situated at the southern periphery of Moldavia and dominated by metallurgical industry. Obviously, Iasi has far more assets, first of all due to its geographical location and moreover to its cultural and economic potential.

NEW ELEMENTS IMPACTING HIERARCHICAL STRUCTURES

Right after the fall of the centralised regime, the self-organising of the Romanian urban system acquired new dimensions. This was due to the abrogation of three restrictive laws: the pro-natality law, the law prohibiting the settlement of people in cities with over 100,000 inhabitants, and the emigration law. Immediately, population growth in the large cities became spectacular (e.g. in Constanta by over 14%, within a six-month interval, promoting it to the second place in the national hierarchy; over the same interval, Bucharest gained 80,000 inhabitants more; on the other hand, Brasov lost five seats through the mass emigration of some 30,000 German ethnics). The small- and medium-sized towns registered significant demographic falls.

The mass emigration of the German population from the towns of Banat or Southern Transylvania (irrespective of size) had a direct impact on their demographic evolutions, entailing wide-ranking changes at regional hierarchical level.

The Land Law, in its turn, enhanced the urban-to-rural migration, a phenomenon characteristic of towns affected by industrial restructuring. As a matter of fact, the over 10% increase in the farming population, besides the sharp decrease in the number of commuters (by one-third) comes also from the fact that part of the urban population is returning to their native villages. The restructuring of the big industry and the closing down of industrial mammoth units is expected to have a direct bearing on urban demographic evolutions, primarily on the small and medium-sized towns, which are wholly dependent on this type of manufacturing unit. We would estimate that the major changes expected to take place in the national and regional hierarchies might lead to new distortions. Despite possible social costs, which some of these changes might entail, costs hardly predictable at these stage, changes are nevertheless absolutely necessary if the human and economic potential of each and every town is to concord with the local or regional resources and with the position in the national or regional systems it belongs to.

Another major element in the evolution of the present hierarchical structure could be the steps taken toward the administrative reorganisation of the national territory. We mean the re-establishment of a number of 20 counties under pressure from a very "aggressive" local patriotic lobby and a comeback to the inter-war administrative pattern. Given the impact of such a step on the evolution of county-seats, in particular, one may speculate on a new change in the median sector of the urban hierarchy, to the detriment of small towns and existing county capitals. Twenty towns which, in all probability, will become county capitals, is a fairly large number liable to altering the present configuration of the hierarchy of regional urban systems in the first place.

Since foreign investments are preeminently placed in the large cities, or in small specialised urban centres, some of them may improve their positions within the national or regional hierarchies. With over 53% of these investments having

been made in Bucharest, the city runs the risk of oversizing. Similarly, with foreigners putting their money largely in the Western part of Romania and in the big city-ports, disturbances in the future evolution of the national urban system are likely to occur.

CONCLUSIONS

Summing up, we would say that the main hierarchical distortions in the Romanian urban system are the consequence of a selective policy of industrialisation, which set up huge units in certain towns only, and of the urban development policy promoted after the Second World War. The present restructuring of the economy and the efforts to build a democratic society and a market economy in Romania will inevitably resettle the urban system, placing the deficient sectors of its national and regional hierarchies on a healthier basis.

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**TOWNS AND METROPOLITAN AREAS
IN SWITZERLAND: A CENTRALITY
IN METAMORPHOSIS THROUGH MUTATIONS
IN THE WORK FORCE AND SELECTIVE MIGRATIONS**

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ABSTRACT: Even if the urban centres of Switzerland appear to have avoided the problems assailing those of neighbouring countries, they are none the less suffering from the effects of a profound economic mutation which is changing the face of Switzerland's economic evolution and altering the perceptions that the Swiss and their political authorities have of their urban future. In recalling this evolution, we are moved to the observation of a socio-spatial recomposition (the expansion of urban areas towards metropolitan space) that is significant from an economic point of view, as well as of the emergence of new social and ecological imperatives which bring the established relationships between public action, social structures and territorial distributions radically into question. In this federalist country with its unique tradition of direct democracy, any urban policy inevitably finds itself in confrontation with a whole range of conflicting territorial interests: institutional, economic and socio-cultural. A minute analysis of these interests – conducted on the basis of data gathered at the communal level throughout the urban areas of Switzerland and defining the structures and the quality of the work force – demonstrates that they are linked to correlates – both territorial and behavioural – which are determinant in the emerging relationships of social and environmental change active at different levels throughout Switzerland. These overlapping conflicts of interest may well prove dangerous to national cohesion in the long term.

KEY WORDS: Globalisation, metropolisation, centrality, mobility – division of labour, professional qualification, selective migration, social exclusion, Switzerland.

A COUNTRY FREE FROM URBAN BLIGHT?

To anyone interested in the state of the organisational model of urban life in Switzerland and in its future, interested in comparing it with what may be observed in neighbouring countries, the first reaction is to consider Swiss towns as having been spared the dire consequences of contemporary urban experience, even if in doing so one puts this down to the fact that Swiss towns – with the exception of Zurich – have not achieved in size the so called “critical threshold”. This was certainly the conclusion reached in 1984 by the economic historian

from Geneva, Paul Bairoch, following an extensive study carried out at a world-wide scale which focused on the identification of an hypothetical “optimum urban level”. Without being able to pronounce himself in a scientific way on the value of any given population threshold, Bairoch demonstrated that “if what one wished to promote was the primacy of the quality of life in town, then one might consider that over and above a level of 300,000 to 400,000 inhabitants, the inconveniences outweigh the advantages”. Whatever indicator is considered, whether it is pollution, criminality, transport, leisure, housing costs, public and private amenities or even mental health, the study concludes that Swiss towns in their immense majority have indeed escaped from the effects of the negative side of the contemporary urban experience in the western world. This is in line with the study’s conclusion which imposed the observation that over and above a population level of 500,000 to 600,000 inhabitants, whereas a town’s economic attractiveness continues to grow, the quality of life for its inhabitants objectively declines along with essential factors such as educational standards, levels of political participation, public and private services and even general levels of health in the population.

Even if false and nostalgic representations related to the archetypal image of the “Swiss village” do still survive in the minds of the country’s inhabitants, as well as in those of its visitors, yet for the overwhelming majority of the Swiss population today, the urban has taken possession of the whole of their social space and has become the landscape of their daily lives; it has become the practical framework which Swiss society uses to delimit its vital territory and the “*blueprint and matrix*” (Piveteau 1995) of what they are and of what they shall become: citizens living in a country in the process of generalised urbanisation. It is true, of course, that Swiss administrative and political institutions have failed as of yet to realise the consequences of an evolution which certain analysts were already foreseeing as early on as 1932. The country’s cantonal and federal structures, though they are indubitably responsible for a large part of the relative stability of the Swiss urban system, do yet limit to an important extent the developmental autonomy of the towns, which through the ancestral inertia of the same federal system find themselves with disproportional small voice in the balance of national affairs. One example of this will suffice to illustrate the point: in the breakdown of voting on the occasion of the anti-european referendum of the 6th December 1992, the urban areas voted yes (for Europe) on both sides of the French/German linguistic frontier, the rule of the double majority of individual votes cast and of cantons, however weighted the result in such a way as to give to each vote cast in the rural canton of Appenzell a value equivalent to sixty eight votes cast in urban Zurich.

In this federalist country with its unique tradition of direct democracy, any urban policy inevitably finds itself in confrontation with a whole range of conflicting territorial interests: institutional, economic and socio-cultural. A minute analysis of these interests – conducted on the basis of data gathered at the com-

munal level throughout the urban areas of Switzerland and defining the structures and the quality of the work force – demonstrates that they are linked to correlates – both territorial and behavioural – which are determinant in the emerging relationships of social and environmental change active at different levels throughout Switzerland. Will these overlapping conflicts of interest prove dangerous to national cohesion in the long term? They certainly require the emergence of a new reflection:

- 1 – on the logic of urbanisation (reorganisation of the institutional structures of urban areas),
- 2 – on the management of inequalities,
- 3 – on the mechanisms of integration.

THE PRINCIPAL AXIS OF THE SWISS URBAN SYSTEM: A CENTRALITY IN METAMORPHOSIS

The central idea of the *megalopolisation* of Switzerland – traced by some back as far as Jean-Jacques Rousseau, who in his *Reveries du Promeneur solitaire* (1763)¹ equated, long before the advent of industrial and tertiary modes of production, the territory of Switzerland with urban space – predominates nowadays in the minds of all our researchers and in those of a great many of our politicians and administrators, though it is perhaps useful to state that we mean by this a many-headed metropolis of international importance and more than 4 million inhabitants, perhaps unique in the world, and managed as a system of flows. “A megalopolis within whose boundaries farming land, lakes and mountains are included” as wrote A. Corboz in his preface to the fine study which the historian F. Walter (1994) committed to the historical phenomenon of urbanisation in Switzerland, *La Suisse urbaine de 1750 a 1950*.

Urban and metropolitan regions, diversified urban groupings formed of small or medium sized industrial or tertiary towns, intersected in some cases by interstices of agricultural land, emerge around the large towns (Schuler and Bassand, 1985; Leresche, Joye and Bassand 1995). The process of metropolisation is marked by intense flows between the principal urban cores following a network structure which has developed along two principal axes that are conditioned by the relative locations of the two metropolitan regions (Zurich and Lake Geneva basin) as well as the urban region of Ticino, the trans-frontier metropolitan region of Basle and the federal capital of Berne (Fig. 1). The first, the north-south axis, stretches from Basle to Lugano through Zurich, the second – and this is the principal axis of the Swiss national territory, links all the towns of the *Moyen*

¹ «The whole of Switzerland is like a great city... divided into thirteen quarters, of which some are the valleys, others are the hillsides, still others are the mountains... there are quarters which are more or less densely populated, but all of them sufficiently so that whatever the nature of the quarter we may find ourselves in, we are still and always in the town».

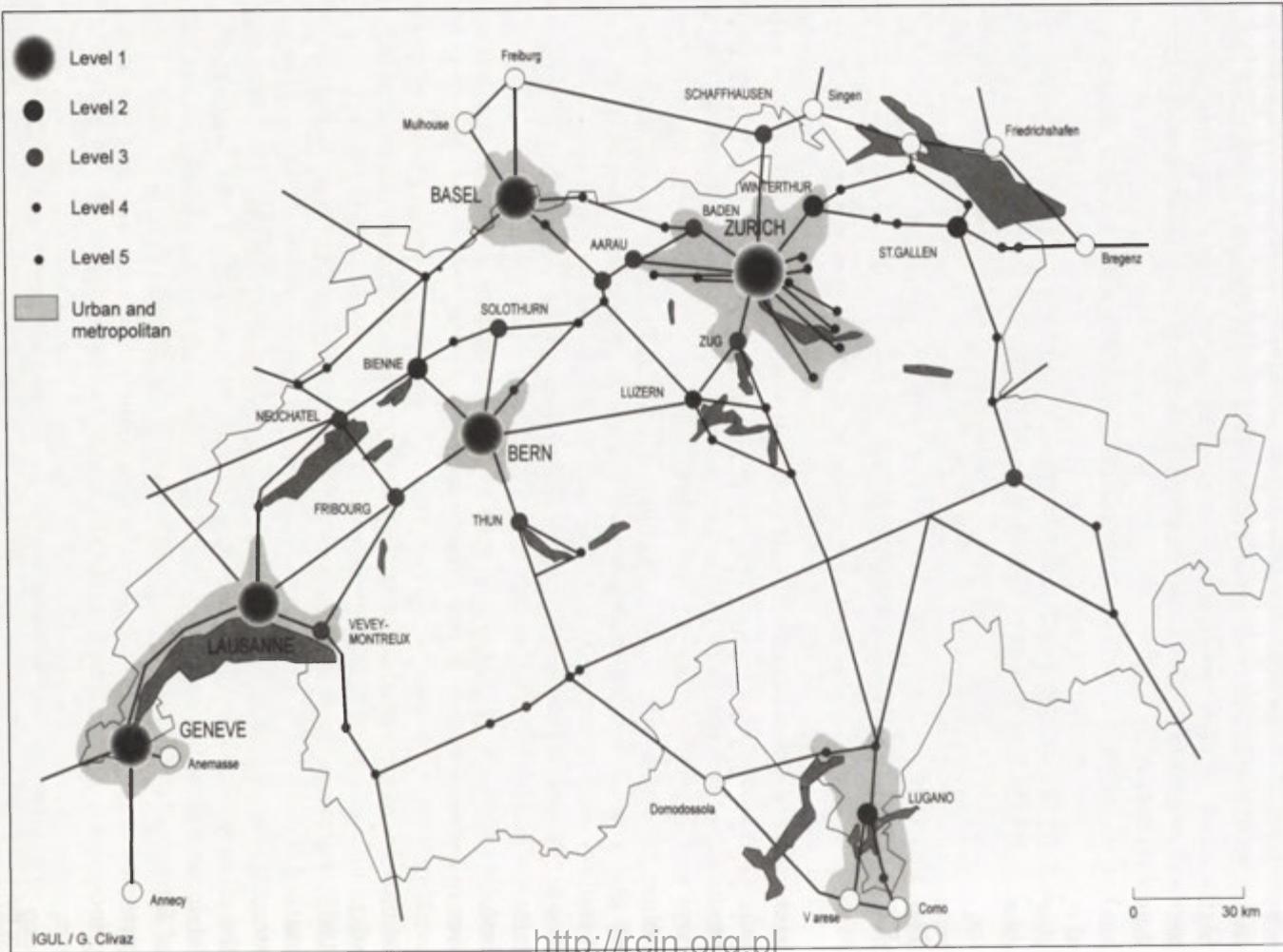


Fig. 1. Urban hierarchy and polarity networks

Pays (the Middle-Land) from Geneva to St. Gallen, passing by the agglomerations of Lausanne, Berne and Zurich. The formation of metropolitan zones marks the interaction of three morphogenetic principles: the growth by economic densification of an existing urban core, the growth by extension and deconcentration of the economic and residential fabric starting from a central pole and the growth by enlarging reproduction of a grouping of complementary centres organised into a network. The results in terms of spatial distributions of these interactions can be described from the assessment of a few specific territorial entities, namely: Zurich and its peripheral metropolitan region; the bi-polar metropolitan region of the Lake Geneva basin; the diffusely urbanised region of Ticino; the unipolar metropolitan areas of Berne and Basle (Cunha and Racine 1992).

THE PRINCIPAL HIERARCHICAL LEVELS OF THE SWISS URBAN SYSTEM

Whatever may be the terminological hesitations concerning the “metamorphoses of centrality” and the “territorial reconfigurations” that are associated with it (Cunha 1995), the most classical analyses of the Swiss territorial system show that it comprises seven distinct hierarchical levels: the lowest level of 2,177 communes of less than 5,000 inhabitants and 47 communes of 5,000 to 10,000 inhabitants surrounding 21 towns of 10,000 to 25,000 inhabitants; these in turn are superseded by a category of 15 medium-sized towns and urban zones of 25,000 to 50,000 inhabitants, by eight agglomerations of 50,000 to 75,000, while the system is crowned by the two upper levels of the system – the master-network comprising eight urban concentrations of 75,000 to 225,000 inhabitants and, finally, the five large agglomerations of more than 225,000 inhabitants (OFS 1994; Cunha 1996a).

The three upper categories structure the urban ribbon of the Middle-Land and command the principal regional axes, the fourth level marks the emergence of a subsidiary network of secondary poles in the regions and around the major agglomerations. The twin axes (north-south, east-west) of the Swiss urban structure are particularly evident at this level. The fifth level provide focal poles to the more peripheral regions and to the intervening spaces of the Middle-Land. The sixth level expresses more particularly the state of demographic disequilibrium existing between the eastern region of Switzerland – well furnished with small communes of between 5,000 and 10,000 inhabitants and the remainder of the country. Finally the seventh level is defined by the exclusion of all of the preceding categories: it is in its way the quintessential expression of the peculiar diffuseness of urbanisation in Switzerland, accounting as it does for a total of 1,816,064 inhabitants, representing no less than 26.4% of the resident population (Fig. 2).

Figure 3 allows us to visualise the dynamics of long term demographic evolution with a thus defined territorial system. While the total resident population was multiplied by 2.88 between 1850 and 1990, that of the large agglomerations increased sixfold. These are the agglomerations of more than 50,000

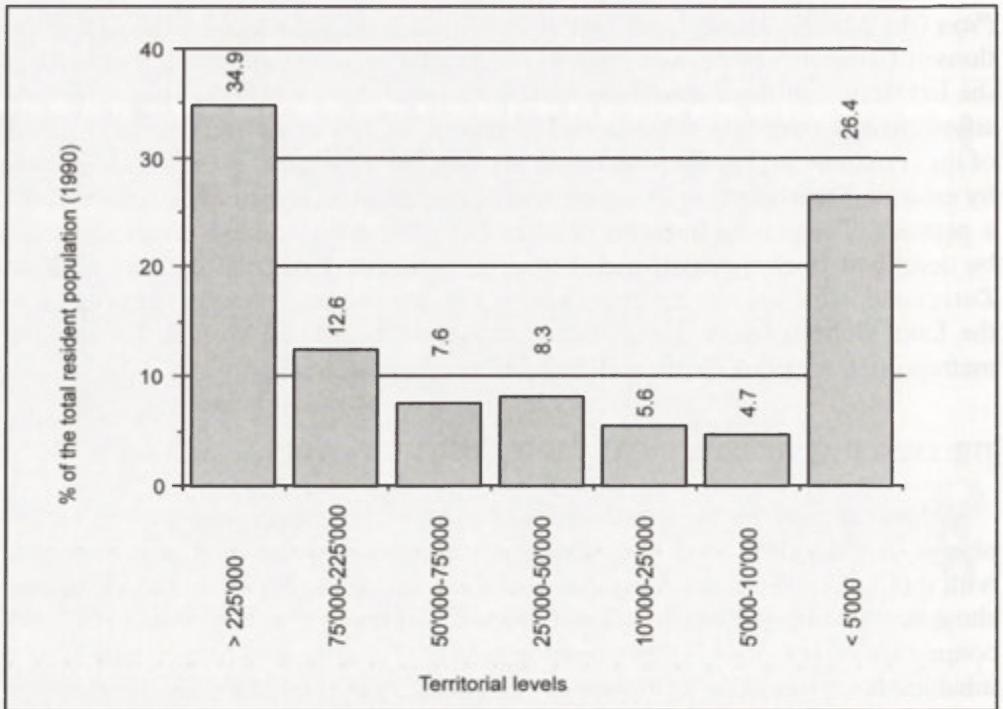


Fig. 2. Relative demographic values of the seven levels of territorial analysis, 1990

inhabitants which register the greatest population growth. We would further note the considerable population growth in towns of 10,000 to 25,000 inhabitants, significantly greater than that of towns in the 25,000 to 50,000 inhabitants category.

This evolution translates a process of secular territorialisation that has already been widely explained by Swiss historians, geographers and economists (Rossi 1983; Piveteau 1990; Racine and Raffestin 1990; Cunha 1994; Walter 1994) in terms of its different and well identified phases: urbanisation, relative suburbanisation, periurbanisation and, finally, absolute suburbanisation. We will content ourselves with remarking that since 1970, Switzerland is undergoing a period of urban *transition characterised by the demographic reduction of urban cores* and by corollary demographic growth in suburban communities. The seventies were marked by the passage from a process of relative suburbanisation (growth in the centres combined with even stronger growth in the surrounding belts) to a phase of absolute suburbanisation (shrinkage of the centres and growth in the surrounding belts. Evidently the processes of urbanisation are evolving in Switzerland in line with the modalities of a poly-centred urban concentration, modalities which are founded on the progressive focusing of the urban cores along with a dilation of their fields of influence both with and beyond the boundaries of their greater metropolitan zones.

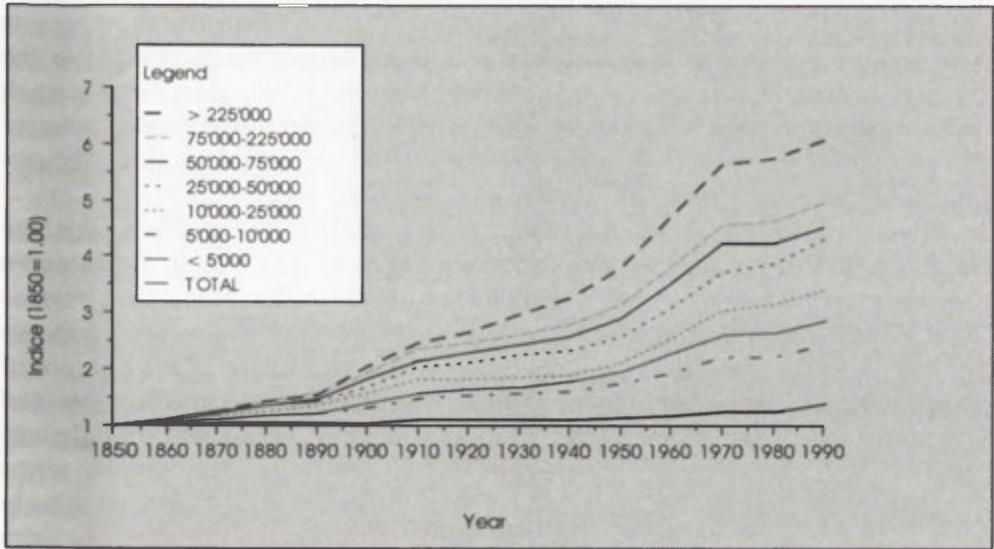


Fig. 3. Demographic evolution for the seven levels of territorial analysis, 1850–1990

These demographic evolutions are naturally produced within a context of structural economic changes that are principally characterised by an important tendency towards the disindustrialisation and tertiarisation of the apparatus of production, a tendency which has manifested itself selectively over the territory (Cunha and Racine 1992). The core centres of the agglomerations have progressively specialised their tertiary activities, focusing on financial services and, more generally, on producers services: the outlying ring zones and some alpine towns have registered on the other hand important growth in personnel services (retail trades, hotels and restaurants, maintenance etc.). While the phenomenon of the tertiarisation of the economy has distributed itself according to various modalities and at differing intensities over the surface of the territory, the industrial deconcentration continued throughout the period 1975–85 in favour of the smallest and within a general context of disindustrialisation of the productive apparatus (Cunha 1993).

The results are clear: tertiary activities are more densely concentrated in the urban zones in relation to industrial activities and to the population. Services to firms and distribution services (which spatially are closely correlated in Switzerland) are more “urban” and more tightly linked to the availability of qualified labour (the former in the hypercentre, the latter rather associated with the emerging secondary centres and the urban outer rings) than are the social and personnel services which for their part follow the migration of the residential population towards the urban periphery and the rampant spread of the urban consumer’s field of activity.

These results, which in general reflect trends observed in other western, developed countries, are related more to theories of the *territorial division of labour* (Aydalot 1985) than to that of *central places*. This is not so much because the established hierarchy of central places has been brought into question, but

rather because it is clear that the phenomenon of *urban centrality is at present undergoing a process of metamorphosis*; it is no longer simply linked to the accomplishment of services to its residents, but also to the capability of each town to provide a matrix of specifically qualified labour correlated to more or less specialised groupings of tertiary activities which are aimed not just at household needs but also at those of enterprise.

The comparative analysis undertaken by P. Daniels (1993) confirms this: the diversity of human resources, their level of education and training, their foreign language capabilities, their mobility, their familiarity with national and international institutions and affairs, etc., are essential assets for the major urban agglomerations. This realisation enables a more exact definition of the concept of urban centrality, demonstrating as it does that the decision-making role and capacity of the major urban centres continues to grow and extend its influence over the whole of the national territory even as – in strictly demographic terms – the towns which represent the urban cores of the same centres are seen to be in decline. This state of affairs is also observable in the spatial distributions since 1970 of the different levels of education and training in the population and of socio-professional categories. The results of all the studies carried out in Switzerland also confirm the same hypothesis: *the gradient of levels of education, training and professional qualifications against the size of towns and urban areas, clearly seems to favour the redeployment of the large agglomerations and their metropolitan areas*. If, however, by being best placed to capitalising in this global age on the principal economic dynamics, the large urban agglomeration remains the great multiplier of economic and social alternatives and the preferential site for communications and social interaction, and therefore the engineroom of the current economic restructurations, *they are also the focal point for all the problems of economic precariousness, poverty and exclusion that are linked to it*.

Globalisation is an economic process founded not only on the disenclousure of types of space, on the multiplication of exterior exchanges and on market interdependence but also on the rationalisation of the assets and resources of companies who are to a greater and greater extent subject to a productivist ideology which accentuates economic precariousness and social inequality. Globalisation, metropolitanisation, tertiarisation, selective qualification and economic dynamism are surely positive aspects but they have their negative side effects: the fragilisation of employment and social marginalisation. The social geography of Swiss metropolitan zones confirms the significance of all these phenomena while at the same time it shows how they are, in part at least, subject to influence by certain regional factors.

THE PRINCIPAL SOCIO-SPATIAL COMPONENTS OF THE SWISS URBAN SYSTEM AND THEIR HIERARCHICAL, REGIONAL AND BEHAVIOURAL CORRELATES

As we have already seen, the emergence of the metropolitan phenomenon is linked to the crucial role played by a few favoured centres and their outer rings.

An analysis of this phenomenon focusing on the principal components of a basket of demographic, economic and social attributes, clearly demonstrates the existence of an underlying system of linkages, generally present and recognised throughout the western world, but which lend to a strong regional flavour to specific socio-spatial forms of Swiss metropolitan urbanisation.

One of these components clearly demonstrates the indexation of the differential centrality of communes. This is the combined expression of the importance of employees on their place of work, of the relative preponderance in communes of their role as places of employment over that of places of residence, of population density, of the percentage of foreigners and of working women resident in the commune. Liberal and managerial professions are taken into account along with employees and unqualified labour working at home. The agglomerations all find themselves among the highest scores, but respectively their first rings (Meyrin in the case of Geneva, Kloten in that of Zurich, Renens for Lausanne, Birsfelden for Basle, Oestermundigen for Berne, Paradisio for Lugano) also score very highly. Geneva obtains the highest Swiss score, at 2.94 standard deviations from the mean, but the phenomenon of centrality is one which is at present spreading out beyond the traditional limits of the city-centre into those communes with a mature stage of development. Definitely, this state of affairs identifies the level reached in the urban hierarchy by a particular urban centre. But it also expresses in spatial terms the emergence of developing corridors and predicts the demise of a mono-nuclear urban model that is in the process of metamorphosis towards a network structured centrality.

A second refers more specifically to socio-economic groupings and oppositions among the inhabitants of the different communes. This component is represented by the factor identifying those communes in which the dominant classes are concentrated, a factor which is defined by taking into consideration the following population parameters: percentages of high revenues, university graduates, academic and managerial professions and the upper management and professional classes of the stockbroker belts of the large towns (particularly Geneva and Zurich), and by taking into consideration, on the other hand, the percentages of working class and low revenue group in the populations of the outskirts of the small agglomerations of the cantons of Valais, Graubunden and Berne.

It is clear that we have here a genuine "socio-spatial class" which defines itself on a local and regional scale. One should note that in the score hierarchy, the city centres of the principal agglomerations are all neutral except Geneva (+0.83, which represents an exception), the periurban communes linked to the major agglomerations, however, stand out strikingly. Those linked to Geneva first of all (Cologny, Dully, Vandoeuvres, Commugny being the most marked in this regard, standing at more than three and even four standard deviations from the mean) and then two communes in the Lausanne region ((Jouxkens-Mezery and St. Sulpice) and two communes in the Zurich region (Zumikon and Uitikon)

two communes again around Basle and Bern. The first commune in the ranking not to be linked to one of the five major urban zones, appears at only the 55th position.

The third dimension is indexing a socio-spatial class that is a corollary to the preceding one and which contrasts the distribution of skilled manual trades to the unskilled workforce – the first group contains all those having undergone a professional or intermediate vocational training and commanding revenues in the second category of the salary scale (this is a group containing a large proportion of women; the information concerning them have been collected either in the work place or at home), the second group contains all those having received only minimum legal schooling and are no vocational training at all (information collected either in the work place or at home). The second category contains a high proportion of foreigners and low salary earners. There is no question in this case of being able to identify an analogous correlation between the hierarchy of urban centres and the score values of the factor, not even on average. Quite clearly in this case, the regional nature of the phenomenon, and particularly its link to the German speaking part of the country, is far more influential than any relationship it may bear to causes of scale and levels of metropolisation. In this respect, if Berne and Zurich – the country's central axis – maintain an equilibrium position in the spatial distributions between the positive pole of those professions associated with the higher earning categories and the negative pole of the under-qualified, low-paid categories, Basle, Lausanne and, particularly, Geneva are positioned outside a certain geographical perimeter in what we are forced to recognise as being – perhaps paradoxically in view of their situation when examined in the light of the first factor – a sort of social outskirts when compared to the values registered for the central axis.

This distribution of pockets of relative social exclusion exists within each of these centres as well; it is the symptom of the growth of chunks of social deprivation within the heart of these urban areas; it is the clear expression of the emergence of a two track society. And it is the French speaking region of Switzerland which quite plainly is the most seriously effected by the phenomenon when compared to the situation prevalent in urban spread of the professional qualifications in trades we find in the German speaking “Middle Land” which favours its trained apprentices more highly than it does those who have obtained higher school qualifications – which, it may be said is not without incidence on general attitudes in society.

At this level of analysis, nothing apparently distinguishes the urban cores of the large agglomerations neither from the surrounding suburbs nor from the centres of minor agglomerations. We enter here into the field of a poly-centred metropolisation, where the relationships between different centres of the metropole are more significant than the relationships of these centres with each of their natural hinterlands, hinterlands which together comprise a global and relatively deprived peripheral zone.

The fourth component, the secondary/tertiary division, enables us to position the five major urban zones together on the positive pole – though Basle, because of its concentration of chemical industries, is somewhat more balanced between the two sectors than the others – It is noteworthy that some of their suburbs are not only far more heavily given over to tertiary activities (Bettingen around Basle, Zollikon in Zurich), but also remarkable for their absence of secondary industry and manual workers. As for those communes at the top of the score hierarchy, they all belong to the tertiary/tourism category.

There remains finally a fifth component, which indexes the particularities of the spatial distribution of what we may call a feminine factor. Contrary to what we might expect given the results of the other analyses, this does not bear witness – as yet – to a relationship to any metropolitan phenomenon: the major urban areas are relatively unaffected (maximum, Basle 0.54, minimum, Zurich 0.20), only about a hundred communes are situated between plus or minus one standard deviation and among these there is nothing to indicate any urban specificity in their grouping. A part from one or two exceptions (such as the commune of Le Locle, specialised in watchmaking) there are all small communes of which locations may be very well of an arbitrary nature.

In propounding the hypothesis that these five dimensions express the basic structures underlying the differentiation of the Swiss work force, one may inquire as to what extent this differentiation confirms other more detailed representations (Cunha and Racine 1987) of the components of the Swiss productive system. One might also hypothesise that it intervenes to confirm or explain a differential process in the rhythms and the localisations of economic growth, while at the same time and finally associating with it certain individual population characteristics such as marital status or ethnic origin, or even political affiliation.

The component contrasting those communes conforming to the image of Switzerland as a country of “trades and artisans” to those in which are concentrated the “servant classes” and the unskilled is in close negative correlation with the distribution of the foreign population, who demonstrates a clear tendency to gravitate towards those areas associated with the least skilled, even though they also tend to establish themselves in the same communes as the intellectual and managerial population or those directly adjacent to them. It is further interesting to note that these communes appear to be politically oriented to the left ($r = 0.42$) with the results of the socialist referendum calling for a more generous social security system (1994). It is therefore not without interest to re-examine at this juncture, theme by theme, and independently of any regional specificities – which have been examined in greater depth elsewhere (Dessemontet, Racine 1996) – the analysis of the differentiating role of urban scale and eventually of the role of regional and linguistic affiliation in the overall dynamics of the urban phenomenon. Suffice it to note that the regression analysis coupled to an analysis of variance bearing on the differences between agglomerations taken as statistical individuals demonstrates that in terms of size, it is proved that *the greater the*

importance of an urban agglomeration, the greater the chance that one will witness the emergence of phenomena specific to it.

Clearly: *the country's dominant classes are not uniformly distributed through the Swiss urban agglomeration, but are concentrated only in a few of them – of which Geneva stands out at the top of the scale, at almost two standard deviations from the mean.* All the urban agglomerations of the Lake of Geneva basin are situated on the positive side along with the metropolis of Zurich. As for the contrast between the distribution of the skilled manual population and that of the unskilled, it reveals even greater variations: *underlining a clear opposition between the country's economic heartland (the Golden Triangle) and the peripheral regions, notably the French and Italian speaking minority regions.* Viewed at the communal level, however, the contrast remains clear between service employment preferentially located in the urban cores of the major cities as well as, secondarily, in the outer residential suburbs, while secondary production is sited in the inner urban rings. This is the case whatever the size of the agglomeration in question. In other words we observe a concentric structure: strongly biased towards the tertiary in the centre, strongly secondary in the inner ring which represents the first historical outskirts and then rather tending towards the tertiary in subsequent rings outwards.

As for the factor of women's employment, as it is indexed in the fifth component, it varies considerably from one agglomeration to another. This is due in part to the high percentage of women employed in the watchmaking industry as well as in eastern Switzerland in the textile industry, while on the other hand the percentage of women employed is very low in Ticino. Such a pattern of regional variation is obviously linked to the historical specialisations of the industrial basins in question and is therefore little influenced by factors of urban scale. What influence we find – women's employment being somewhat more developed in small and medium sized agglomerations than in large ones – is probably due to the fact that the areas where women's employment is the most marked – Jura, eastern Switzerland – there are also areas containing predominantly agglomerations of that size. In general, however, the analysis does confirm that if urban size does indeed stimulate the discrimination between the communes of a given agglomeration, and stimulates therefore a certain level of social segregation between those communes, it does not play any role in the spatial distribution of the industrial activities themselves. It does, on the other hand, play a very considerable part in the distribution of the different classes of residents; this is in part compounded by a marked regional effect for some of the classes in question.

Finally, it becomes apparent that the *percentage of dominant classes* in the population as a whole varies according to a double thematic: firstly as a function of the size of the urban agglomeration and secondly as a function of the region in which the agglomeration is situated. The same is true for the middle population groups with high levels of trade and vocational training, though once again in this

case the regional effect and the over-representation of the German-speaking area weakens the simple correlation.

When grouped and re-examined on the basis of language zones, the results once again confirm that the regional variations are particularly influential on the distribution of the component indexing the contrast between dominant classes and manual workers. The French-speaking region has a much higher proportion of managers and intellectuals than the German- or Italian-speaking regions. The strongest regional differentiation however concerns the second component, which identifies the socio-economic and geographical distribution of a Switzerland of skilled tradesmen and artisans. Here the predominance of the German-speaking region over the French and Italian zones in the percentages of these classes in their respective populations is striking. Does this represent a new expression of the infamous *roesti curtain* or *roesti graben* (roesti: a traditional German Swiss dish of potatoes) which is so often evoked in the aftermath of Swiss referenda, particularly those touching on Swiss relations with the exterior (UNO, Europe, citizenship for foreigners)?

URBAN CENTRALITY, PROFESSIONAL QUALIFICATIONS, SOCIO-PROFESSIONAL STATUS AND SELECTIVE MIGRATIONS

The relationship between levels of education and training and the size of urban agglomerations is plain and proves the often evoked principle that “the larger a town, the more qualified the workforce”. The population group defined by the possession of a higher school certificate or an advanced level professional or technical training is also overrepresented in the major agglomerations (13.53%) as well as in those of over 75,000 inhabitants, without the differences between the group being so marked as in the previous case however. The comparison (Fig. 4) between the indicator of localisation for group 4 and those for group 1 (no professional qualification, primary and lower secondary schooling) clearly demonstrates the effects of nodality and centrality on the levels of professional qualification. This relationship has been evident since 1970, even if general levels of education and training have improved everywhere since then.

The evolution and the distribution of professional qualification profiles reflects those of socio-professional statuses and is related to a concept of urban centrality which can no longer be sufficiently defined in terms of the number and diversity of services offered, but rather in terms of the concentration of specialised activities, concentration around which the territory as a whole is organised, produced, imagined and observed. It is also defined in terms of the constitution and the mobilisation of the resources of the different social groupings. *Such a sociological translation of the notion of centrality can be easily observed through the analysis of professions within the system of towns and urban agglomerations.*

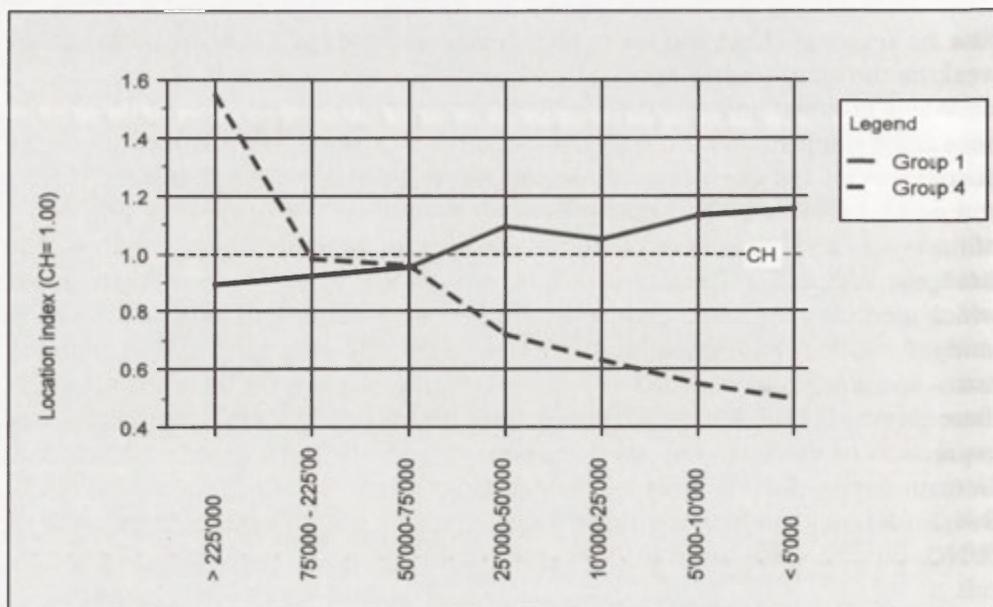


Fig. 4. Indicator of localisation of the highly educated and trained (group 4) and for the unskilled (group 1)

These analyses show that in the major agglomerations, the tertiarisation of urban zones generates quite characteristic combinations of social groupings. The social group comprising tertiary employees and that comprising intermediate professions account for almost half (48%) of the populations of the five major urban regions, while manual workers account for only 9.6%, whereas these manual workers account for 16.7% of the population in communes of less than 5,000 inhabitants. But the most significant point without doubt is the relative preponderance of the major agglomerations in the distribution of the higher managerial and liberal professions. They attract between 45 and 49% of those exercising central managerial and decision making functions, a proportion infinitely greater than their demographic importance in relationship with the country's population as a whole. The graphs of the localisation of the socio-professional categories including directors, liberal professions and intellectual professions on the one hand and manual workers and the unskilled on the other are contrasted in exactly the same way that those taking into consideration opposite levels of education and training are contrasted.

On the other hand, it is not uninteresting to note that, while the position in this respect of those communes of between 5,000 and 10,000 habitants along with the smaller towns and agglomerations has been eroded over the last ten years, the most striking element in terms of structural change has been the reinforcement of intermediate professions and tertiary employment in the small agglomerations and communes of less than 25,000 inhabitants. The phenomenon here is related to the replacement by these categories of farmers and other independent trades-

men whose numbers are in relative decline, particularly in the very small communes. As for the reinforcement of the presence of manual workers in communes and agglomerations of between 5,000 and 25,000 inhabitants, it reflects the development of indigenous industrial employment in these communes as well as the delocalisation of urban enterprises which is related to the phenomenon of diffusive industrialisation that we have identified in previous research (Cunha and Racine 1992; Cunha 1993). On the whole, however, it is clear that levels of education and training in these communes are lower than in the urban and metropolitan regions which underlines a deficiency in the number of qualified positions offered, as the major agglomerations tend to attract the most highly qualified sections of the population. Though it should be added that the increasing distances covered by commuters and the analogous growth of the periurban phenomenon is provoking for the higher classes, an inversion of residential preference towards the outskirts.

In addition to the already banal, and generally proven, hypothesis that the hierarchic system of central places structures the intensity of migration flows – the major agglomerations generate the chief part of those flows over short or long distances, all of this leads us to posit a more interesting hypothesis namely: *that the hierarchical system of central places also structures the quality of migratory flows.*

It is true that since 1970 the global attractivity of the five principle agglomerations has been progressively eroded – a slight respite in 1980 notwithstanding – so that in 1990 they attracted 29.2% of the inter-level flows and the arrivals from abroad, while they represent at the same period 34.9% of the total population of the country. If this erosion has occurred, however, we must remember that their geographical sphere of influence has tended to increase. They do still attract 41.8% of foreign immigrants, which represent 59% of their non-indigenous growth, as opposed to 47.3% in 1970. At the same time the small communes chiefly attract Swiss residents that the economic dynamics tends to expel from the centres and turn them into commuters (see Figs. 5). In fact, all the different levels of the scale of urban size are losing part of their population to those communes with less than 5,000 inhabitants. The relative force of attractivity (proportion of new arrivals/proportion of the total resident population of the country) has tipped towards communes situated outside the official urban network, reflecting the extension of the influence zone of the periurban in relationship to the larger towns and urban areas.

The quantitative needs to be qualified however. It is not only apparent that those persons having benefited from a higher level of education and training are relatively more mobile, but that the relationship between the size of urban areas and the level of education and training of new arrivals is established. Out of the 751,760 migrants aged 4 and over, and coming either from a Swiss commune or agglomeration, or from abroad (persons involved in full time education or training not included), 7.9% of them have completed a university education, but

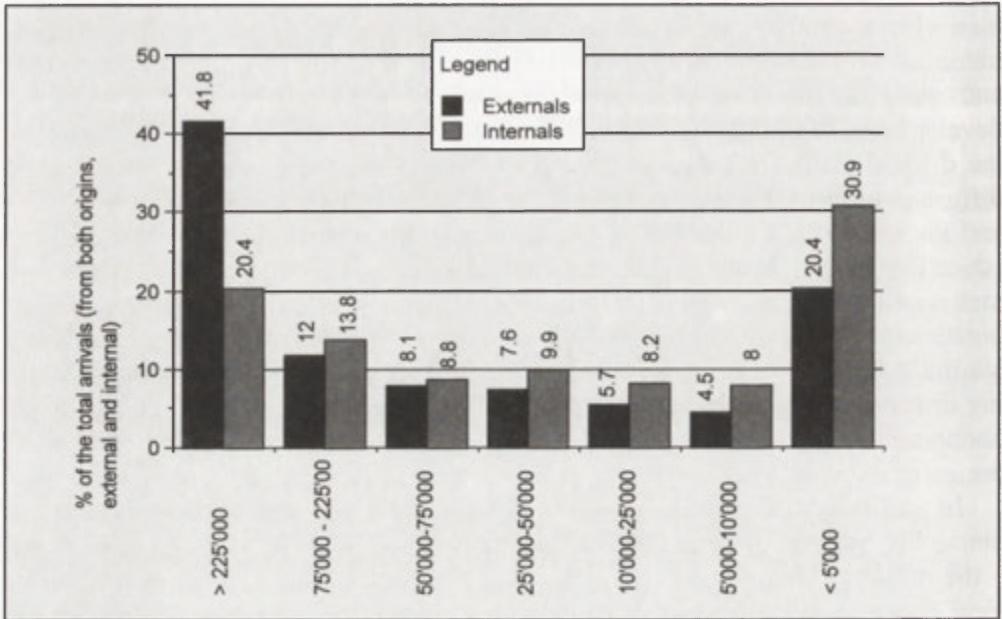


Fig. 5. Arrivals, internal and foreign as percentages of the total of the seven categories of urban size, 1990

12.5% of them choose to establish themselves in agglomerations of over 225,000 inhabitants, as opposed to 8.35% in those of between 75,000 and 225,000 inhabitants, 8.2% in those of 50,000 to 75,000 and less than 5.8% for inferior categories.

To the axiom “the bigger the town, the more qualified the work” should be added another, namely: “the higher the level of education and training, the greater the mobility towards the larger urban centres”, bearing in mind the proviso that we also observe significant differences between hierarchical levels and the mobility of individuals having received much longer levels of education and training.

Thus it is that those individuals having completed a professional training (second degree) have a tendency to migrate towards smaller communes and agglomerations. These two models are undoubtedly to be understood in relationship to the processes of localisation and/or delocalisation of economic activity. *The tertiarisation and the specialisation of the large urban centres attracts to them the most qualified elements of the workforce; the relative deconcentration of industrial activity towards small scale towns and urban areas relocates a proportionately greater part of those professions for whom the distance between home and work place is traditionally small.*

It is noteworthy finally that the individuals belonging to two professional categories (on the one hand unskilled workers of whom 53.6% are of foreign origin and on the other vocationally and trace trained, a mere 10.3% of foreign-

ers) function in terms of mobility within the framework of an inversed centre-peripheral model: the better qualified tend towards agglomeration of between 25,000 and 50,000 inhabitants specialised in industrial activities and/or in low qualified services. The unskilled tend rather towards the major agglomerations with which is associated a “major agglomeration” mobility model which brings into play the two extremes of education and training scale (see Fig. 6).

The process seems to occur in such a way as that internal mobility feeds the labour markets of urban zones for intermediate training groups, the international market complements the urban workforce in its needs for highly qualified labour, but also for unskilled labour. In other words, the hierarchical system of central places acts as a filter selecting and fixing mobile individuals according to the needs of the productive apparatus. The selective mobilities contribute in the long run to the qualitative reinforcing of the higher levels of the urban hierarchy.

This analysis can be extended by the analysis of the duality and complementarity of the international labour market founded on the examination of the origin, internal or external, of migrational flows.

Privileged by the diversification of their economic functions, the large agglomerations appear to have been able to assimilate the effects of disindustrialisation and tertiarisation, while at the time reinforcing over the last few years the quality of their workforce in relation to that of other Swiss towns and urban areas as a whole. A more detailed analysis reveals, however, two behaviour patterns of residential localisation linked to this process of metropolisation: well trained and educated *foreign migrants* tend mostly to establish themselves in the five major agglomerations, *while the mobility profile of indigenous migrants of the same educational level tends to be more varied*. The periurbanisation of small communes is correlative with the rise in the level of mobility of the better trained sections of the population. It is as though internal mobility feeds the needs of urban zones for intermediate training, while the international market complements the urban employment market both in unskilled and highly skilled labour, and all this to the particular benefit of the largest towns who owe to these different sources the totality of their overall growth. If the first strategy is the expression of a process of internationalisation of the economy, the second – that of the indigenous migrants – reflects in all probability choices of residence and of lifestyles in keeping with relatively high social group whose high revenues allow to residential investment in the small suburban communes close to working zones. In other words, well trained foreigners arrive to reinforce the centres which are progressively deserted by the Swiss (as well trained as the foreigners) who are reestablishing themselves in the periurban zones. Whether they are “cosmopolitan” or “periurban”, however, the highly qualified play an essential part in the metropolisation of the Swiss territory. This is confirmed, were such a confirmation necessary, by the analysis of flows according to socio-professional categories.

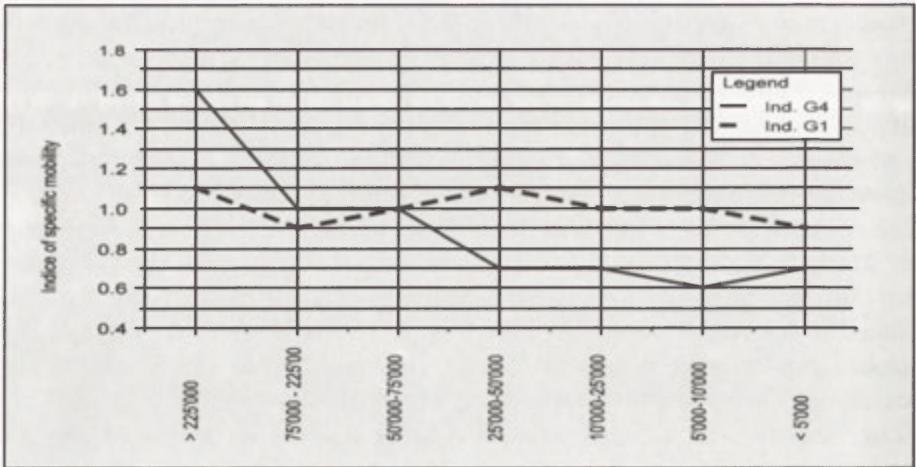


Fig. 6. Large agglomeration type of mobility: specific mobility indicators; minimum secondary schooling (G1) and university education (G4), 1990

The relationship between spatial mobility, *size of urban zone, socio-professional affiliation and even the place of origin, internal or external of immigrants is also verified.*

In fact then, there are four apparently complementary phenomena which are characteristic of the economic functioning of the highly centralised large urban zones and which permit the interaction of the description of observed mobility profiles with that of the processes of the division of labour:

- The globalisation of the economy which is expressed by the juxtaposition in the large towns of, on the one hand, high performance advanced industrial and tertiary enterprises which are closely connected to the international economy, and on the other, more traditional units of production that are more deeply rooted in local and regional markets and have low needs for highly qualified labour.

- The deindustrialisation of the productive apparatus has certainly been greater in the large agglomerations where the correlative growth of the tertiary sector has to a great extent expelled part of the regressing industrial employment out towards the urban outskirts and towards the smaller towns.

- The specialisation of the large centres has occurred parallel to the dualism of the tertiary sector, and the juxtaposition in the major agglomerations of the structures of production of highly specialised services and the units of production of banal service aimed at households and inhabitants.

- The externalisation of accessory functions which is expressed by the simultaneous presence of major public and private enterprises along with small and medium sized peripheral companies who mobilise a pool of low skilled labour.

These processes go together with the rationalisation of the means and resources of enterprises which are, more and more, the hostages of a productivist

ideology that accentuates social inequalities and precariousness and incites the analyst to question himself about the relationships between metropolisation, the fragilisation of employment and the growth of social exclusion. Typical examples in Switzerland occurred when the first six months of 1996 were marked by three capital announcements in the fields of economy and labour. In the chemical industry the fusion of Ciba and Sandoz into the new giant Novartis, a process which is expressed by the loss of 3,500 jobs. 3,500 is also the proposed number of job losses involved in the restructuration of its international trading division by the Swiss Credit Bank. At the end of June, the Federal Railways declared its intention to reduce the salaries of all its staff by 2 to 4%.

METROPOLISATION, FRAGILISATION OF EMPLOYMENT, SOCIAL EXCLUSION AND ECOLOGICAL PRESSURE

The globalisation of the economy, industrial and tertiary delocations, technological change and the flexibility of work and working practices have created a situation in which unemployment and the fragility of employment have become structural components of the Swiss economy. This state of affairs seems to be associated with the emergence of new social problems: apart from unemployment, the number of homeless is on the increase; as is delinquency and drug addiction. It would seem to confirm that the effects of the incertitudes which weigh nowadays on the markets for goods and services tend to concentrate on the unskilled and least qualified sectors of the urban labour pool. All of this brings us to affirm that the analysis of urban poverty can no longer allow itself not to undertake a reflection on the relationships between technological change, the system of education and training, professional qualifications and the functioning of local employment markets. At the very same time that some inhabitants subscribe – willingly or not – to dynamics issued from the current economic mutations, others, by disqualification, suffer directly or indirectly, the effects of the flexibilisation, the deregulation and fragilisation of socio-professional statuses. Those excluded by the interactivity, by the speed, by the mobility and by the flexibility are disorientated by new working conditions that insist on the rapid execution of tasks which are more and more often rhythmised by the precepts of “just in time” management.

Of course the evolution towards the fragilisation of employment appears slower in Switzerland than elsewhere in the western world. There are many reasons for this but one in particular has played a preponderant role. Switzerland’s politics concerning foreign labour has greatly contributed in the past to cushion the negative effects of successive restructurations of the employment market. Foreigners – as well as women – had come to the aid of the employment market (Mazzi 1987). Any lessening in the volume of work was to a large extent compensated by the exporting of unemployment and by the partial retirement of

women from the employment market. These two sources of flexibility, which played an efficient role during the recessions of 1975–1976 and 1982–1983, now seem to have reached the limits of their usefulness – even if some cantons still register simultaneous falls in unemployment and numbers employed.

Today, levels of unemployment are particularly high in those segments of the employment market in which the proportion of unqualified labour is high. The tertiary sector of Swiss towns is probably the principal reservoir for unqualified employment (retail trading, restaurants, hotels, maintenance) or for employment disqualified by the recent evolution towards computerisation, rationalisation, standardisation of working methods and the flexibilisation of all forms of organisation in all sectors. Of course, all sorts of professional qualifications and functions have been touched by the recession. But the re-emergence after a period of unemployment is more and more difficult for the least qualified whose numbers go to swell progressively the already existent pockets of poverty. All the analyses converge on this point: between 1987 and 1995, unemployment – while keeping things in proportion – hit women harder than men and foreigners harder than Swiss nationals. The long-lasting nature of the current crisis is tending to attenuate the imbalance between the sexes, but accentuate that between the nationalities. Those subject to partial unemployment tend overwhelmingly to be women.

The percentage of the long-term unemployed is constantly increasing. Actually there are about 65,000 of them and their number has increased eightfold since 1992. Age and the lack of adequate training constitute the principal handicaps for these job seekers (Aeppli, Hotz, Hugentobler and Theiss 1996), but it is also apparent that on a geographical level, unemployment is concentrated in the urban zones: 53% of the unemployed reside in the 37 (20% of the total) most urban districts; it is clear that it is in those regions characterised by a strong urban centrality that unemployment hits the hardest. A positive relation of $r = 0.60$, significant to 0.01, exists between the gradient measuring the level of the cantons' urban centrality and the rate of unemployment. This is a correlation which tends to be reinforced by the passage of time ($= 0.27$ in 1988, $= 0.42$ in 1991, $= 0.57$ in 1992, $= 0.60$ in May 1994). If the towns and metropolises are the locomotives of the national economy, they are also the places where the phenomena of isolation, alienation and exclusion show themselves most profoundly. All the more so as other factors associate themselves – either in parallel or in combination – with the fragilisation of the fabric of urban employment: the individualisation of our way of life; the increase of the single-person household; the increase in divorce; the inversion of the age pyramid; the growth in the numbers of the homeless; the increase in the incidence of delinquency and drug abuse. All these phenomena tend, when spatially combined, to produce a deficiency of social cohesion in relationship to its milieu. If work is the great integrator in our societies, procuring revenue, status, identity, social relationships and if it is around the basis of work that our social security system has been con-

structed, then social disqualification starts often by disqualification from work which is extended and reinforced by a social context comprising the fragilisation of family ties, a crisis of legitimacy, a crisis of public finance and welfare, the rise of individualism and the political crisis.

Urban and metropolitan Switzerland has not escaped from the dualist model as our factorial analysis has clearly demonstrated at many levels – from the national level through the intra-metropolitan level to the intra-communal level. On the one hand there are the “ins” (part of the network, those we would have called the “haves” just ten years ago), who are integrated in the world of work, benefit from a qualified position, switched into the social network and enjoying a comfortable life-style, on the other hand, there are the “outs” (excluded from the network, the “have nots”), those who have no access to employment, who suffer the state of economic precariousness and social isolation. It is clearly in urban society that the process of exclusion functions the most vigorously.

The metropolis is at once motor and mirror of our societies. The problems of poverty and spatial segregation which characterise large agglomerations, the lack of adequate infrastructures and services as well as the ecological degradation which blight some of them, the difficulties in adjusting locally to technological change, these are all signal problems that lie at the heart of the debate about durable urban development and they are problems which in their turn the hitherto “unscathed” Swiss towns will have to learn to confront.

We will not examine here the numerous questions provoked by the metropolitan system in the area of the environment (Stren, White, Whitney 1992), even if the IGU Commission on *Urban Development and Urban Life* has inscribed this aspect in its agenda. We will come back to this during the next Commission term. Let it suffice to simply state some examples here: the fact that in Switzerland the constructed habitat and infrastructure accounts in all for a surface area equivalent to that of the canton of Ticino and that a considerable part of this area constituted until recently agricultural land situated close to urban areas. The extending hold of habitations and infrastructures on the land surface is due in part to the periurban process and to metropolitan extension as well as to residents’ growing mobility between different kinds of space which tend to specialised affectation.

Between 1950 and 1990, in the five large Swiss agglomerations, the number of persons leaving their commune of residence daily to go to work has increased by a factor of six and now exceeds a total of 600,000 commuters. A. Dozio (1995) has recently demonstrated that the spectacular propagation of daily mobility is intimately related to the dispersion of the urban population in the large metropolitan regions and to the changes in the economic organisation of production and commercial exchange. It is generally agreed that the social cost of urban traffic is high, and that its private component – the private automobile – is by far the principle cause. As far as goods traffic is concerned, haulage by road is growing faster than haulage by rail. Since 1970, road haulage increased from 35 to 72% of total goods haulage, while rail haulage decreased from 62 to 28% in

the same period. It is plain that all these studies can only demonstrate the close interdependence between urban waste products, production, private consumption, energy use, air pollution and the impossibility of solving the problems related to an urban “ecological stamp” which greatly exceeds the limits of our resources in purely technological terms. Long term sustainable development in this respect evidently requires a new mode of “governance”.

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THE INTERNATIONAL FUNCTIONS OF THE ITALIAN URBAN SYSTEM IN THE EUROPEAN CONTEXT

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ABSTRACT: The paper summarizes the main findings from an empirical analysis of the international integration of the Italian urban system in the European context. The nationwide distribution of the international functions is examined; the international profile of the cities forming the metropolitan level of the Italian urban system is then defined, and a taxonomy of the cities of non-metropolitan level is provided. From this, the co-existence of two different patterns of European integration through the international functions within the Italian urban system emerge, reflecting respectively the “interconnected networks” model and the “hierarchical networks” model.

KEY WORDS: urban internationalisation, Italian urban system, European integration.

INTRODUCTION: SOME CONCEPTS CONCERNING URBAN “INTERNATIONALITY”

The study of the internationalisation of cities appears to be of major importance for the analysis of the relations between the phenomena that develop on a local scale and those that occur on a supralocal (“global”) scale in the context of urban networks. Over time, therefore, a wide field of studies concerning the structure and the evolution of the *international cities* has developed. In this framework, the internationalisation of cities has mainly been studied on a world scale within the processes of the rise of the global cities (Hall 1966; Friedmann and Wolff 1982; Knight and Gappert 1984; Ewers, Goddard and Matzerath 1986; Moss 1987; Hall 1990; Proulx 1990; Sassen 1991; Soldatos 1991). However, the theme of urban internationality within the European context has also been analysed (Labasse 1981; Soldatos 1990; Fere-Consultants 1991; Jeger 1991; Bonneville et al. 1992; Jalabert et al. 1993).

In particular, it has been maintained that, even though the internationalisation process of the urban areas is a long-term one, some elements have emerged in recent years that indicate the rise of a *new generation of international cities*, characterising the last part of the 20th century, and possessing a number of specific features (Soldatos 1990 and 1991).

On the other hand, it has been underlined that, in reality, it is not really possible to establish an unambiguous definition of an international city, since “a single model of international city does not exist: there are different international levels and geographical scales. It would be more appropriate, therefore, to talk about the *cities’ international functions* rather than of international cities, as various types of internationality exist: internationality is, in most cases, sectorial and incomplete” (Rozenblat 1992: 38).

This statement thus identifies two important analytical dimensions of the cities’ internationalisation: the degree of *sectorial diversification* of the international functions and their *geographical range*. By applying these two criteria together, a simple typology of international cities can be obtained, so to distinguish:

- specialised continental international cities, characterized by a low degree of diversification of international functions, mainly operating at a continental scale;
- specialised global international cities, presenting a low degree of diversification of international functions, operating at a global (world) scale;
- “complete” continental international cities, with a high degree of diversification of international functions, operating mainly at a continental scale;
- global cities, possessing a high degree of diversification of international functions, operating at a world scale.

A third element in the interpretation of urban internationality is the degree of *embeddedness of the international functions in the urban context*, i.e. the extent of their integration with the components of the city’s economic and social system. This allows two types of situations to be differentiated: those in which the international functions give rise to systematic relations of exchange between the local context and the global networks (situation of “deep embeddedness”), and those in which the international functions tend to develop autonomously from the local context, thus leading to a limited integration of the latter in the global networks and the rise of phenomena of “dualism” of the urban economy and society (situations of “poor embeddedness”).

A last interpretative dimension of urban internationality concerns the attitude of the local actors. Again in this field, two different situations can be identified (de Lavergne and Mollet 1991): on the one hand, those in which a “pro-active” attitude is shown by the local actors (the City, companies, public and private organisations of various kinds), cooperating for the definition and implementation of *explicit* strategies of internationalisation, as components of the urban development policies; on the other hand, those in which this widespread awareness does not emerge, and the processes of internationalisation assume an *implicit* nature, where the initiatives of the individual actors are not part of a general internationalisation strategy defined *ex ante*, but (may) find an *ex post* coherence in the general process of evolution of the city.

AN ANALYSIS OF THE INTERNATIONAL FUNCTIONS OF THE ITALIAN URBAN SYSTEM IN THE EUROPEAN CONTEXT: ASSUMPTIONS AND METHODS

This paper will briefly summarize the main findings from an empirical analysis of the distribution of the international functions within the Italian urban system. The study has considered the international relations of the Italian cities *in the context of Western Europe* (that is the 15 countries of the European Union plus Norway and Switzerland), *in a number of different fields*, namely productive functions, financial functions, scientific and higher education functions, air links, trade fair and hotel functions, political and diplomatic functions (see Table 1). Among the analytical dimensions quoted in the previous section, only the one concerning the sectorial diversification of the international functions has thus been investigated, while the one concerning the geographical range requires an extension of the analysis to the relations with all countries in the world, and those regarding the local embeddedness of the international functions and the attitude of the local actors could be dealt with only by carrying out specific case studies on single cities.

The analysis was carried out on a nationwide scale. Thus, not only the main cities have been considered, but the whole Italian territory, subdivided into 784 Daily Urban Systems defined as Local Labour Market Areas, i.e. on a daily commuting flows basis (Fig. 1). Two different levels of the Italian urban systems according to the endowment of international functions have therefore been identified: the metropolitan level and the non-metropolitan level.

In this short exposition of the main results of the analysis, we will start by considering the overall nationwide distribution of the international functions, both in absolute terms and in relative terms (referring to the population). Secondly, the “international profiles” of the cities included in the metropolitan level of the Italian urban system will be analysed. Then, we will examine the non-metropolitan level of the Italian urban system, defining a typology of daily urban systems on the basis of the degree of diversification of their international functions, and analysing the nationwide spatial organisation deriving from this. Finally, some general conclusions will be drawn, in terms of the major issues and problems emerging from the analysis, for the European integration of the Italian urban system through the international functions.

THE SPATIAL DISTRIBUTION OF THE INTERNATIONAL FUNCTIONS IN ITALY

Figure 2 shows the distribution of the international functions in Italy, according to a synthetic index of endowment, obtained by summing up, for each daily

Table 1. *The variables of the analysis*

<i>A – Productive functions</i>	<ul style="list-style-type: none"> – number of subsidiaries of foreign industrial companies – number of headquarters of Italian industrial companies holding subsidiaries in foreign countries – number of exporting firms with a turnover of over 5 billion lire – number of foreign Chambers of Commerce – number of Italian bodies participating in the BC-Net networks – number of Italian bodies participating in the BRE networks – number of import/export companies
<i>B – Financial functions</i>	<ul style="list-style-type: none"> – number of branches of foreign banks – number of headquarters of Italian banks possessing branches in foreign countries – number of branches of foreign insurance companies – number of headquarters of Italian insurance companies possessing branches in foreign countries
<i>C – Scientific and higher education functions</i>	<ul style="list-style-type: none"> – number of Italian bodies (companies, public research institutions and Universities) participating in the European Union R&D cooperation networks – number of international cooperation agreements of the Italian Universities – number of Italian organisations granting scholarships for studies and research abroad.
<i>D – Air links</i>	<ul style="list-style-type: none"> – number of flights with international destination per week
<i>E – Trade fair and hotel functions</i>	<ul style="list-style-type: none"> – number of fairs and exhibitions with an international nature – number of top class hotels
<i>F – Political-diplomatic functions</i>	<ul style="list-style-type: none"> – number of consulates – number of seats of foreign and international organisations – participation in the international cooperation networks between cities supported by the European Union (number of networks)

urban system, the standardized values of the 20 variables expressing the endowment of international functions in the different fields listed above.

From this, the presence of two different spatial patterns of internationalisation within the Italian urban system stands out.



Fig. 1. The daily urban systems in Italy (1991)

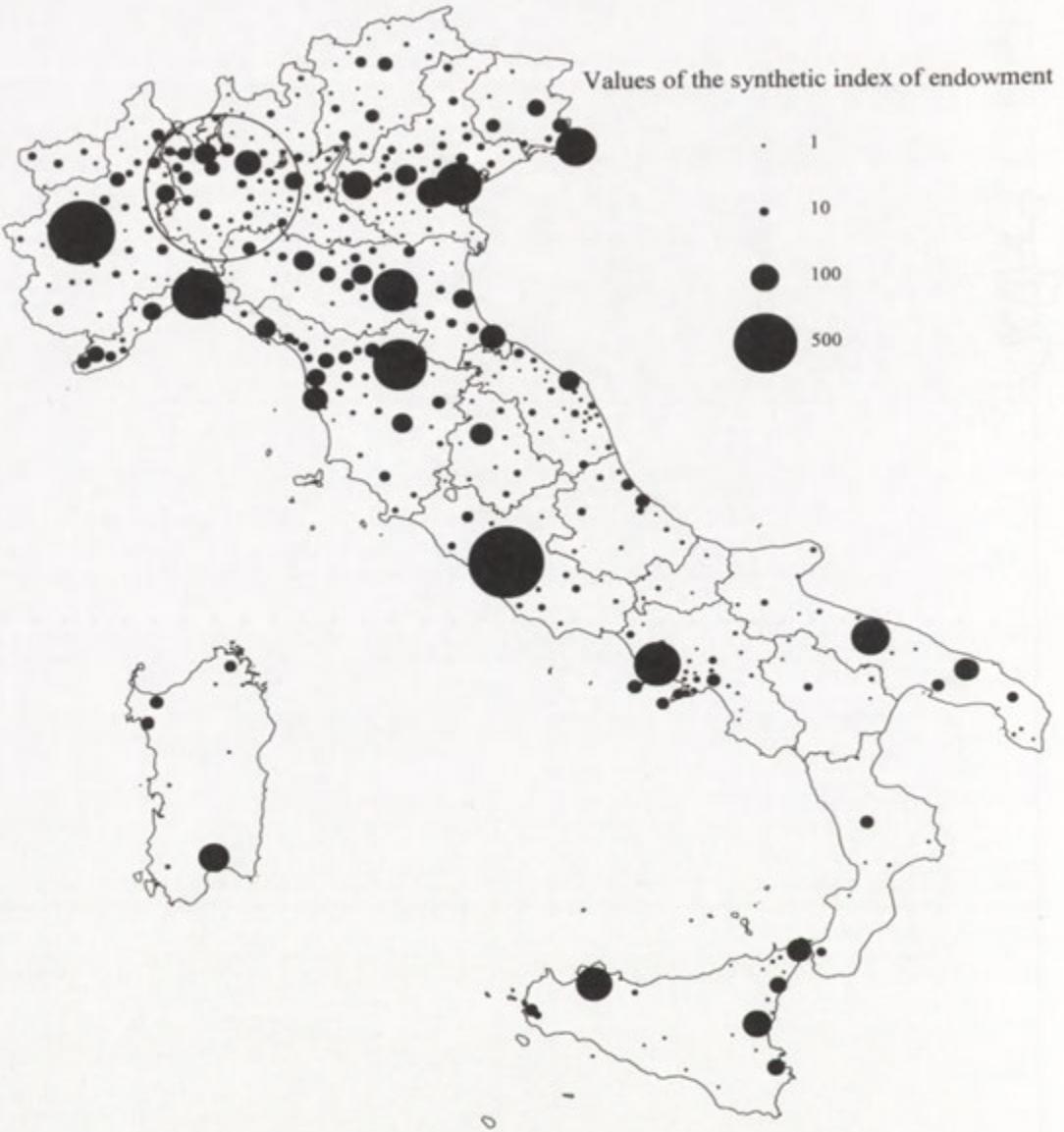


Fig. 2. Total daily urban systems' endowment of international functions



Fig. 3. Total daily urban systems' endowment of international functions in relation to the population

The first pattern, which can be found mainly in the regions of Northern and Central Italy excluding Lazio (Rome's region), is characterized by the existence, alongside the remarkable endowment of the metropolitan centres, of a wide-



Fig. 4. Deviations of the daily urban systems' total endowment from "theoretical" endowment based on their populations

spread diffusion of international functions also within the system of medium and small sized centres.

This pattern is structured along three main axes: a Po valley axis (running from Torino to Venice and Trieste), an Emilia-Adriatic axis, that branches off

from the previous one (running along the Via Emilia and the Adriatic coast of Romagna and Marche, reaching the coast of Abruzzo), a Tyrrhenian axis (including the coast of Liguria and northern Tuscany and the hinterland along the Arno valley up to Florence).

On the other hand, a second pattern is predominant in Lazio and the regions of Southern Italy and the two major islands. Here, a more polarised distribution of the international functions in the main cities and a limited involvement of the medium and small sized cities can be observed (even if some different situations emerge, as in the area around Naples).

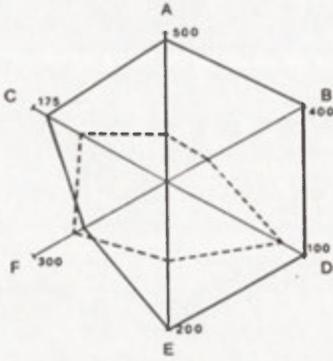
Alongside this “absolute endowment” of international functions, the “relative endowment” has also been considered, by taking into account, for each daily urban system, the ratio of the value of the synthetic index of endowment to the population at the 1991 census. The distribution of the values of this simple “relative endowment index” (Fig. 3) seems to confirm the preceding remarks: in fact, a negative North-South gradient emerges, the only notable exception to this situation being represented by Puglia.

In addition, from the observation of the deviations of the real (absolute) endowment of each daily urban system from a theoretical endowment determined on the basis of its population (Fig. 4), it is possible to argue the existence of a “functional indivisibility” and “critical mass” effect concerning the endowment of international functions. In fact, most of the major centres of the Country are included in the group of the 72 daily urban systems with a positive deviation: among them, 12 out of the 15 cities defining the metropolitan level of the Italian urban system according to the analysis carried out, and 22 other provincial capitals. The other daily urban systems with a positive deviation are mainly tourist-based ones, characterised by low values of population.

THE INTERNATIONAL PROFILE OF THE METROPOLITAN URBAN SYSTEMS

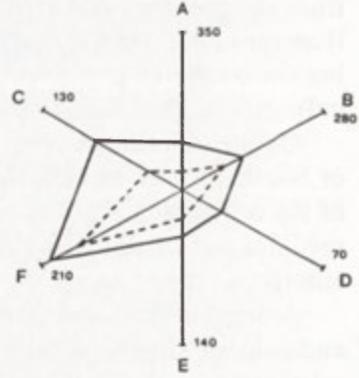
As we have just recalled, from the analysis 15 cities emerge as forming the metropolitan level of the Italian urban system (the 12 metropolitan areas defined as such by a national law, and, in addition, Verona, Padua and Trieste). These can be classified, according to their total endowment of international functions, in three different levels: a top level, formed by the two main urban poles of Milan and Rome; a second level, including Turin, Genoa, Venice, Naples, Florence and Bologna; a third level, including Verona, Padua, Trieste, Bari, Palermo, Catania and Cagliari.

Figure 5 shows the sectorial profiles of these cities in terms of their international functions. In diagram “a” we can observe that the endowment of Milan is much larger than Rome’s one for all the different sectorial typologies of func-



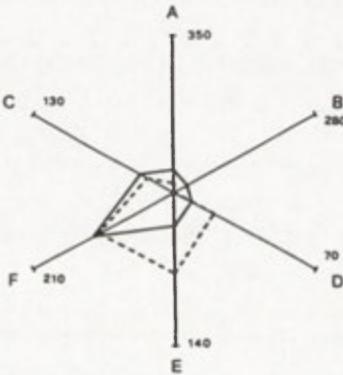
— Milan
 - - - Rome

a



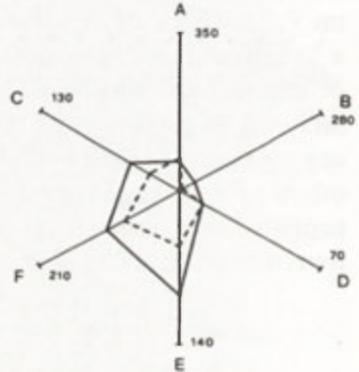
— Turin
 - - - Genoa

b



— Naples
 - - - Venice

c

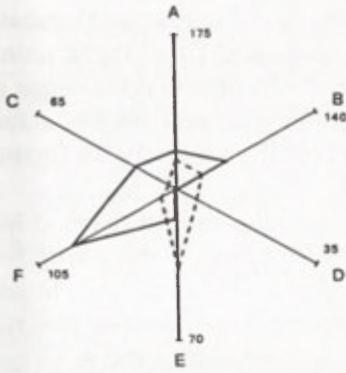


— Florence
 - - - Bologna

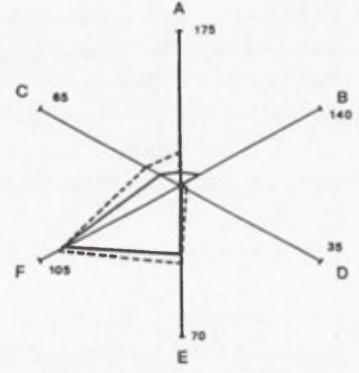
d

tions, except the political-diplomatic ones. Milan can thus be defined as a “complete” city from the point of view of its international functions, while the endowment of Rome appears to be more specialised or “incomplete”, presenting a specific relative weakness in the field of productive and financial functions.

Within the second metropolitan level (diagrams “b”, “c” and “d”), the sectorial profiles seem to group together on the one hand the capitals of regions with a “polarised” urban system (Turin, Genoa and Naples) and on the other hand the capitals of regions with a more multcentred urban system (Venice, Florence and Bologna). In fact, the cities of the first group present a common specialisation in



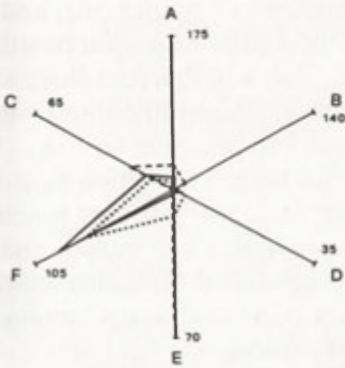
e



f

— Trieste
- - - Verona

— Palermo
- - - Bari



g

— Cagliari
- - - Padua
..... Catania

A - Productive functions
B - Financial functions
C - Scientific and higher education functions
D - Air links
E - Fair and hotel functions
F - Political-diplomatic functions

Fig. 5. The sectorial profiles of the metropolitan daily urban systems

political-diplomatic functions and, to a lesser extent, in scientific and education functions. Turin shows in addition a fairly good endowment in all the remaining categories of functions, Genoa a relative specialisation in financial functions and a relative weakness in the other three sectorial typologies, and Naples a fairly good endowment of fair and hotel functions and a specific weakness in financial functions and international air links.

The cities of the second group share instead a specialisation in fair and hotel functions (Bologna being mainly endowed with fair functions, Venice with hotel functions and Florence with both) and in political-diplomatic functions. In addition, they have a fairly good presence of scientific and higher education functions and a poor endowment of financial functions. A difference among the three cities can be observed in the fields of productive functions and air links: as far as the latter are concerned, Venice appears to be relatively well served and Bologna and Florence are less favoured, while for productive functions the opposite is true.

Coming to the third metropolitan level (diagrams “e”, “f” and “g”), one can see that the sectorial profiles of Verona, Trieste and Padua show the existence of some “functional complementarity” within the urban system of North-Eastern Italy: Verona presents some relative specialisation in productive, financial and fair functions, which are weak in the case of Venice; Trieste has a relative specialisation in political-diplomatic functions owing to its border role, and Padua shows a fairly good endowment of scientific and higher education functions.

In addition, within the third metropolitan level, Bari and Palermo share similar sectorial profiles, characterized by a relative specialisation in political-diplomatic fair and hotel functions, and by the absence of international air links (Bari showing a fairly good endowment of scientific and higher education functions and productive functions, and Palermo possessing some international functions in the financial field). Finally, Cagliari and Catania show a low overall endowment of international functions, and fairly similar sectorial profiles, characterized by a strong specialisation in political-diplomatic functions and some endowment in the field of the scientific and higher education functions.

THE INTERNATIONAL FUNCTIONS IN THE NON-METROPOLITAN URBAN SYSTEMS

Below these 15 cities, are the other 400 daily urban systems endowed with international functions according to the analysis carried out, forming the “non-metropolitan level” of the Italian urban system. They have been classified in a simple typology on the basis of the degree of sectorial diversification of their endowment of international functions. Six groups of non-metropolitan daily urban systems have thus been obtained, which have been further subdivided into different levels, according to the quantity of international functions possessed in the different fields (Table 2).

Table 2. A typology of non-metropolitan daily urban systems according to their endowment of international functions

1. Complete non-metropolitan daily urban systems:	<ul style="list-style-type: none"> – first level: Bergamo, Vicenza – second level: Livorno
2. Diversified non-metropolitan daily urban systems:	<ul style="list-style-type: none"> – first level: Como, Parma, Perugia, Biella, Brescia, Ancona, Messina, Modena, Pisa, Bolzano, Siena, Trento, Novara, Lucca – second level: Salerno, Ravenna, Pesaro, Udine, Ferrara, Cremona, Sassari
3. Relatively diversified non-metropolitan daily urban systems:	<ul style="list-style-type: none"> – first level: Piacenza, Pordenone, Cesena, Lecce, Ivrea, La Spezia, Sesto Calende, Brindisi, Taranto, Potenza, Lodi, Prato, Rimini, Borgomanero, Arezzo, Sanremo – second level: Reggio Emilia, Varese, Alessandria, Forlè, Faenza, Palazzolo sull'Oglio, Cosenza, Aosta, Verbania, Portogruaro, Foggia, Viterbo, Sorrento, Follonica, Pescara, Jesi, Cuneo, Ventimiglia, Grosseto, Taormina, Carrara, Alghero
4. Bi-specialised non-metropolitan daily urban systems:	<ul style="list-style-type: none"> a) in productive and scientific/higher education functions: <ul style="list-style-type: none"> – first level: 22 daily urban systems – second level: 48 daily urban systems b) in productive and fair/hotel functions: <ul style="list-style-type: none"> – first level: 6 daily urban systems – second level: 22 daily urban systems c) in productive and political-diplomatic functions: <ul style="list-style-type: none"> – first level: 3 daily urban systems – second level: 5 daily urban systems d) in productive and financial functions: <ul style="list-style-type: none"> – first level: 2 daily urban systems – second level: 2 daily urban systems e) in scientific/higher education and fair/hotel functions: 1 daily urban system
5. Monospecialised non-metropolitan daily urban systems:	<ul style="list-style-type: none"> a) in productive functions: <ul style="list-style-type: none"> – first level: 19 daily urban systems – second level: 31 daily urban systems – third level: 35 daily urban systems – fourth level: 19 daily urban systems b) in fair and hotel functions: 16 daily urban systems c) in scientific and higher education functions: 3 daily urban systems d) in financial functions: 1 daily urban system e) in political-diplomatic functions: 1 daily urban system
6. Exporting non-metropolitan daily urban systems:	<ul style="list-style-type: none"> – first level: 25 daily urban systems – second level: 24 daily urban systems – third level: 23 daily urban systems – fourth level: 30 daily urban systems

The “complete” non-metropolitan daily urban systems are those endowed with all the sectorial typologies of international functions except air links (since only Olbia, among the 400 non-metropolitan daily urban systems, is served by some international air links), while the “diversified” ones are those endowed with

four sectorial typologies. These two categories together form a small group of 24 daily urban systems, all provincial capitals, mostly located in the regions of Northern and Central Italy (21 out of 24).

We then have a group of 34 “relatively diversified” daily urban systems (endowed with three sectorial typologies of international functions), including both provincial capitals and other cities: among the provincial capitals we find a number of daily urban systems located in Southern Italy, while among the centres that are not provincial capitals we can observe a similar situation to that found in the previous group (that is, they are mostly located in Northern and Central Italy).

In the bigger group of the “bi-specialised” daily urban systems (presenting two sectorial typologies of international functions) we find mainly those bi-specialised in productive and scientific and higher education functions (70 daily urban systems) and those bi-specialised in productive and fair and hotel functions (28 daily urban systems). This group includes also some “atypical specialisations”, such as those in productive and political-diplomatic functions (8 daily urban systems), in productive and financial functions (4 daily urban systems), and in scientific and higher education and fair and hotel functions (one daily urban system).

Within the “monospecialised” daily urban systems, the most numerous group is that of the centres which are monospecialised in productive functions, since the most widespread functions are, according to the analysis carried out, the productive ones (and specifically some variables, such as exporting firms and import/export companies). This group may furthermore be divided into two clusters, each including about a hundred daily urban systems: those possessing international productive functions not limited just to exporting activities, and the “exporting daily urban systems”. The other monospecialisations emerging from the analysis are those in fair and hotel functions (16 tourist and leisure centres), in scientific and higher education functions (3 daily urban systems), and in financial and political-diplomatic functions (one daily urban system each).

From the observation of the nationwide distribution of these different typologies of daily urban systems (Fig. 6), some elements for a tentative definition of some general features of the spatial organisation of the international functions in Italy can be drawn: firstly, we can observe in some areas that the distribution tends towards the form of concentric circles, where around the metropolitan centres a number of “rings” characterized by a gradually declining degree of sectorial diversification of the international functions can be found (according to the classification proposed here, complete and diversified daily urban systems, relatively diversified daily urban systems, bi-specialised daily urban systems, mainly in productive and scientific and higher education functions, and monospecialised daily urban systems, mainly in productive functions).

This spatial configuration combines with (and is consequently modified by) two further tendential patterns, which can be expressed in the form of gradients.



Fig. 6. The spatial distribution of the different typologies of daily urban systems (DUS) according to their endowment of international functions

On the one hand, there is a negative West-East gradient concerning the continuity in the sequence of the rings: for example, in Northern Italy a tendentially higher sectorial diversification can be found in the areas of the North-West (Piedmont, Liguria and Western Lombardy) if compared to the areas of the North-East

(Eastern Lombardy, Veneto and Trentino-Alto Adige), which have nevertheless been the most economically dynamic in recent years. On the other hand, there is a negative North-South gradient, concerning not only the continuity in the sequence of the rings, but also their “thickness”, and, in addition, the presence of centres of metropolitan level (in terms of international functions) and their mutual complementarity.

CONCLUSIONS: PROBLEMS AND ISSUES FOR THE EUROPEAN INTEGRATION OF THE ITALIAN URBAN SYSTEM THROUGH ITS INTERNATIONAL FUNCTIONS

From the analysis carried out, some conclusions can be drawn, in terms of the general features of the spatial organisation of the international functions in the Italian urban system and the main problems and issues arising from these.

As we have seen, two models of integration in the European context co-exist within the Italian urban system, prevailing respectively in Northern and Central Italy, and in Southern Italy and Lazio: the model of the “interconnected networks”, characterized by high levels of spatial articulation and integration, and the model of the “hierarchical networks”, where a greater spatial polarisation can be found (Dematteis 1996). The former, in which the medium and small sized cities are able to gain direct access to the international circuits, characterizes the “European semi-peripheries undergoing integration”, while the latter, in which the medium and small sized centres do not have direct access to the international circuits but need the mediation of the closest regional and national urban poles, is typical of the “poorly integrated European peripheries”.

The main problem concerning the European integration of the Italian urban system thus appears to be the poor level of integration currently existing in some areas of the Country, and the prevalence in most of them of the “hierarchical networks” model.

As a consequence, policies in this field should try to promote the creation of international relations and functions in the areas which currently present a low degree of integration in the European context, and to support the start of a transition to the “interconnected networks model” in those areas where the “hierarchical networks model” currently prevails. These aims require an orientation of territorial and sectorial policies, on the one hand, towards the valorisation of the specialisations already existing though not fully developed (such as, for example, those in scientific and higher education functions in Lazio and, to some extent, in Abruzzo, in productive functions in Puglia, in tourist functions in Sicily and Sardinia, and the mix of productive, scientific and higher education, and tourist functions in Campania), on the other hand, towards the development of new functions, grounded in local vocations and specific features of the different milieux.

The feasibility of these policies depends of course also (even if not only) on infrastructural factors, i. e. on the processes of updating and improvement of the communications networks so as to reduce the accessibility gap compared to the continent's central and semi-peripheral areas. In this field, it could be useful to give priority to forms of communication such as air links and telecommunications networks, rather than to "heavy" infrastructures such as the extension of the high-speed rail network or a further intensification of the North-South road and highway system. In fact, if the improvement of the rail and road networks could probably achieve the integration of semi-peripheral areas in the European context (such as Northern Italy, French Midi, Cataluña, Northern England), this does not seem sufficient to bridge the geographical gap of the truly peripheral areas (such as the South of Italy and Spain, Portugal, Greece, Scotland and Ireland), while air and telecommunications links seem instead to reflect to a lesser degree the geographical disadvantage of the more peripheral areas (BfLR 1994). The support for the process of European integration of these areas through the improvement of these forms of connection would thus seem to be in line with the transition from the "core-periphery" model to the "distributed multi-centrality" model in the European context, expressed by Kunzmann and Wegener through the image of the transition from the "Blue Banana" to the "European Grape" (Kunzmann and Wegener 1990).

In addition to these policies for the areas disadvantaged in terms of European integration, some policies concerning the areas currently in a better situation within the national context should, of course, also be implemented. These (territorial and sectorial) policies should support the continuation and the strengthening of the process of European integration, in particular by promoting the achievement of a higher degree of sectorial diversification by those areas that appear to be, to some extent, specialised in specific typologies of international functions, and by supporting the consolidation of the process of transition towards the "interconnected networks" pattern in the spatial distribution of international functions.

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DEVELOPING REDEVELOPMENT:
A PROJECT, A CITY IMAGE, A PLANNING PROCESS.
THE CASE OF THE “NEUE MITTE OBERHAUSEN”

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ABSTRACT: This paper looks at a major urban redevelopment project in the city of Oberhausen, Germany, trying to establish the reasons for successful implementation in the face of a severely competitive climate among the municipalities of the Ruhr. It is shown that strong political forces underlie any official planning process. An adoption of modern planning techniques seems important as far as internal management capacities and official planning processes are concerned. But in terms of receiving final planning approval from neighbouring municipalities, the regional planning council and the provincial government, personal and political factors seem more important than project contents or organisation.

KEY WORDS: urban redevelopment, decision-making, politics of planning, city image, planning process.

THE “NEUE MITTE” AND THE CITY OF OBERHAUSEN

On the 12th of September 1996 the Centro shopping centre opened its doors in the old German steel city of Oberhausen. This up-to-date shopping centre with a net retail space of 70,000 m² is the commercial heart of an ambitious urban redevelopment project which has become known as “Neue Mitte Oberhausen”. This new consumer paradise is supposed to bring the “post-modern” experience of leisure shopping to what is traditionally one of the most working-class cities of the Ruhr. In order to make this happy symbiosis of leisure and shopping come true, a number of high-class recreation and leisure facilities have been planned around the Centro project: a 12,000 seat multi-purpose indoor arena; the new grounds of Oberhausen’s first division tennis team including a centre court and hockey field; a Warner Brothers multi-screen cinema complex; a park with lawns, lots of water, some funfair-type rides and a few pubs and restaurants; and the so-called “promenade”, a long building full of specialized cafés, theme restaurants and pubs, specifically designed in conjunction with cinema and arena to draw the crowds even after shopping hours.

The city’s ambitious plans also envisage a belt of commercial buildings around the mall, a new residential area including some 300 apartments, a marina on

the Rhine-Herne-canal, a big seawater aquarium and two hotels (one has already been built). Just to the north, the former grounds of the Osterfeld coalmine are being transformed into the 1999 North Rhine-Westphalia garden and flower show, and a new studio complex using high-definition-TV-technology is being built right next door.

The developer of the “Neue Mitte” and most of its commercial functions is an Englishman by the name of Edwin Healey, who also built and runs the Meadowhall shopping centre near the M1 motorway in Sheffield, England. Similar to Sheffield, he has chosen a former steel industry site of around 100 ha for his project, in a city that has experienced a comparable history of industrial decline. The city of Oberhausen (population 225,000) lost some 39,000 manufacturing jobs between 1961 and 1987 (Strasser & Pawellek 1991) and has a current unemployment rate of 14.5% (June 1996). Once a heavy manufacturing centre of world reputation, Oberhausen has witnessed the slow and agonizing disappearance of its coalmining and heavy manufacturing base over the last 40 years. Its former image of smoking furnaces and honest, hard-working labour was transformed into an image of grime and dirt, of decline and crisis, as structural economic change turned Oberhausen into a city of the past but with little future – the epitome of the negative image of the Ruhr as a whole.

URBAN REDEVELOPMENT IN OBERHAUSEN IN PERSPECTIVE

Considering this recent past, it seems strange that the city of Oberhausen should become the planned location for such a major retailing and urban redevelopment project, and furthermore, that plans and ideas are successfully transformed into built reality in the face of a fiercely competitive climate among the municipalities of the Ruhr, all hungry for investments and jobs. Why should “Neue Mitte” take place in Oberhausen? Why does it happen now, when only a few years before the Canadian Triple Five group failed in its attempt to realize a similar, though more gigantic project on this very site¹? What factors explain its successful implementation. Finally, how important is the role of image and urban marketing?

The theoretical background to these questions can be sketched rather briefly. Changes in the world economic system over the last 20 years have led to a new global urban system, emerging from capital’s search for investment opportunities and locations offering high returns. In view of an increasing mobility of capital and further reductions in transport and communication costs, a new and heightened international competition has been hypothesized (Krätke 1990). National

¹ Triple Five approached the state government of North Rhine-Westphalia in the autumn of 1988 with plans for a combined shopping, conference and leisure centre based on the concept of its West Edmonton Mall in Canada.

governments, less and less able and willing to influence or regulate these developments, have left cities increasingly to fend for themselves. In this new phase of inter-urban competition, new factors of location explain success and failure in attracting investment for urban development. Cities now have to offer amenity above all; an attractive physical and cultural urban environment as well as a positive investment climate including a work force and city administration willing to please potential investors. Flexibility, competence, and a “will do” attitude, as well as the image of a dynamic, livable and friendly city have become of overriding importance.

This entails a change of perspective for politicians and planners alike, with urban development focussing less on quantifiable infrastructure (“hardware”) and more on qualitative aspects and processes (“software” or “people-ware”). It also has meant a significant role change for planners, especially in the context of European and more specifically German planning history, with their traditional state-controlled planning approaches (von Oertzen 1993). Not surprisingly, new methods of initiating, organizing and guiding urban development have been devised and tested, generally trying to adopt more business-like processes and attitudes. The catchwords – “urban marketing” and “urban management” – reflect these trends only too well (Helbrecht 1994), with communication and negotiation replacing inflexible and bureaucratic regulation as the model for planning practice (Healey 1992). Planners and politicians are increasingly attempting to forge alliances or partnerships between the city (its political and administrative system) and its key economic players (the big companies).

Public-private partnerships and inter-urban competition, however, emphasize the political dimension of urban development and planning, especially within the context of multi-tiered political systems where municipal governments do not possess the supreme and only power of decision-making. This is especially relevant for Oberhausen. The municipalities of the Ruhr, forming an agglomeration of some 5.5 million people², belong to three separate regional districts³. The interplay of intra- and inter-municipal, regional and state-level politics and planning makes the Oberhausen case both complex and intriguing.

To shed some light on the questions laid out above, more than forty interviews were carried out with politicians, planners and public officials at all levels of government. In addition, a wide selection of secondary sources were used, ranging from local newspapers and minutes of council meetings to governmental and planning documents.

² This population figure refers to the “Kommunalverband Ruhrgebiet”, in terms of data availability and planning history the most useful delineation of the Ruhr.

³ The western cities and counties of the Ruhr – including Oberhausen – are part of the Düsseldorf regional district (“Regierungsbezirk”), while the northeastern parts of the Ruhr belong to the Münster, the southeastern parts to the Arnsberg regional district. All three regional governments have their seats outside the Ruhr.

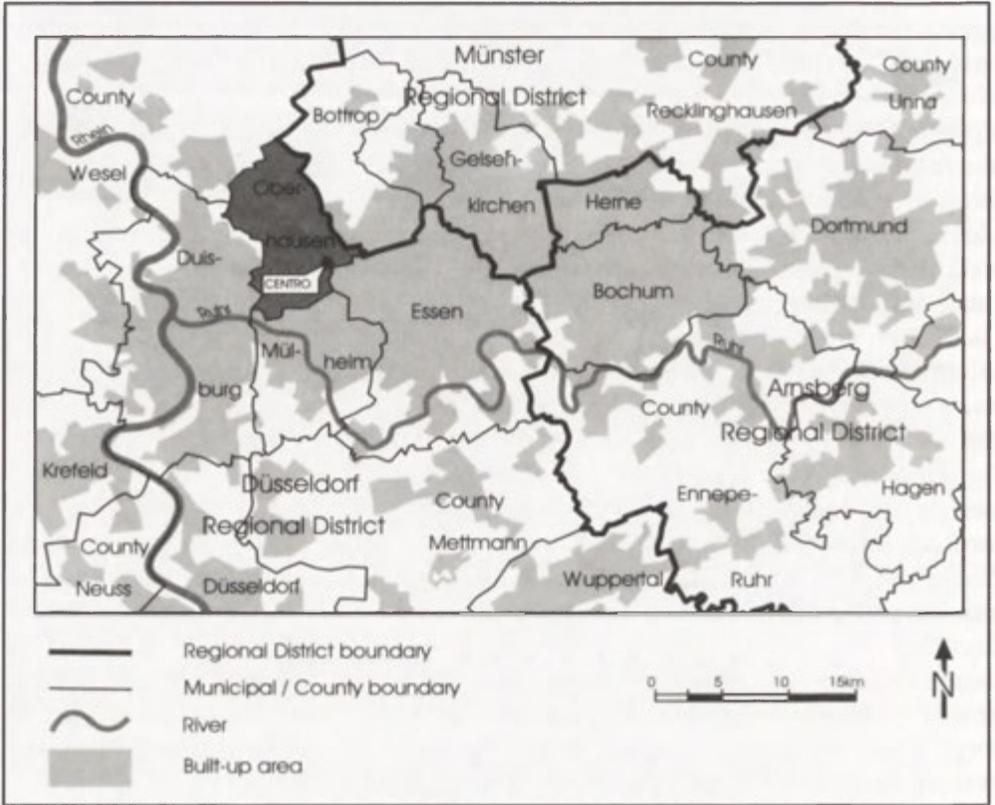


Fig. 1. The city of Oberhausen in the Ruhr

PROCESSES OF DECISION-MAKING: ARENAS AND PLAYERS

One of the central points in the “Neue Mitte Oberhausen” project is the successive emergence of different arenas in which both political and planning processes took place. Organizing the interplay between players in these arenas and controlling the timing of their involvement was one of the key factors in successful implementation.

The starting point was Düsseldorf, the seat of the state government of North Rhine-Westphalia. The Triple Five approach in the autumn of 1988 had been to the state government but the plans had become public very soon. This set off a heated debate during which the neighbouring municipalities and some cabinet ministers put up fierce resistance to the proposals. When the state cabinet finally rejected the Triple Five project in June 1989, the city of Oberhausen turned its attention to lobbying for some form of compensation for the golden opportunity missed. The state government, finding itself in an arbitrator’s role between the municipalities, responded by declaring a state interest in developing the site,

thereby effectively letting itself be drawn into the task of municipal economic development. Even more telling was the decision to put the minister of finance in charge of that job, the only cabinet member from Oberhausen and one of the local political strongmen. For the next twenty months until March 1991, Düsseldorf was the only arena of activity while the city of Oberhausen was waiting for things to happen.

During this time the ministry of finance started to negotiate the land purchase from the Thyssen steel conglomerate and set up a finance plan. The job of finding an investor with a project was given to a newly-formed private project developing company, the so-called GEG⁴. Initially a subsidiary of the real estate branch of the state bank – and staffed by its development experts – GEG-ownership was soon split between the state itself, the state bank, and the city of Oberhausen, combining private legal status with a degree of public control. Throughout this phase of searching for an investor, however, the players in Düsseldorf were working behind closed doors, keeping only the top city officials informed about their initiatives and progress. No official planning process was instigated. Hence the neighbouring municipalities and the general public were kept guessing.

This set-up was only modified in March 1991 when the GEG presented Edwin Healey and his Stadium group as a potential new investor. The meeting brought together the key players in the Düsseldorf arena with the city of Oberhausen. Here, only two weeks previously, a new “Oberstadtdirektor” (chief administrative officer)⁵ had come into office, a dynamic and ambitious man, allegedly hand-picked for the job by the finance minister. He immediately declared the new project his own personal priority, thereby effectively bringing the city of Oberhausen into the game. Keeping only a handful of politicians and senior bureaucrats informed, he took a mediator’s role between the investor and the state bureaucracy.

In this role, he contacted the state ministries responsible for urban development and spatial planning to check out any possible problems at that level so as to avoid a repeat of Triple Five’s failure. These early talks – before any official planning process was initiated – had two tangible results, one material and one primarily procedural. First, the shopping centre, as envisaged by Healey, was downsized from 95,000 m to 70,000 m net retail space. Secondly, three external consultants were hired: town planning consultants created a master plan to demonstrate how the “Neue Mitte” would actually become an integrated town centre; transport consultants analyzed traffic flows and laid out proposals for managing

⁴ GEG = “Gebietsentwicklungsgesellschaft Oberhausen”, a limited liability company.

⁵ In the state of North Rhine-Westphalia, the “Oberstadtdirektor” is the chief administrative officer elected by council- comparable to a North American city manager. His political counterpart is the lord mayor, whose tasks include all the more ceremonial and representational duties. Though the latter obviously wields significant political power, his influence on city hall staff is only indirect. Following constitutional reforms in North Rhine-Westphalia, new style lord mayors will combine these responsibilities in the future.

increased car traffic, and expanding and adapting the public transit system; and market researchers revealed a substantial net outflow of spendable income from Oberhausen into the neighbouring municipalities. According to their calculations, the proposed shopping centre would only keep that money within the municipality and thus conform to the central place hierarchy of the state's spatial planning law.

Through these preliminary talks, the "Oberstadtdirektor" received clearance in principle from state planners. By the end of September 1991, the ministry of finance and the GEG had also managed to secure the land deal as well as financing for redevelopment⁶. After half a year of rather secret negotiations, the project was finally presented to the public in October 1991, thus officially informing the neighbouring municipalities for the first time.

Due to the extensive work of external consultants in combination with the early discussions with state planners, the city was able to open official planning processes shortly afterwards. Hence, at the time of involvement of the neighbouring municipalities (as prescribed by planning law), Oberhausen had already set the timetable for what was to come. In Oberhausen, municipal plans had to be drawn up. On the level of the regional district the regional development plan had to be modified.

The drawing-up of municipal plans was influenced by two significant structural changes in city hall. In early 1991 the "Oberstadtdirektor" had established a central coordinating office, directly under his control, empowered to work across traditional departmental lines. Now, in October, a working group was set up with the sole task of making "Neue Mitte" happen. In weekly meetings planners, surveyors, environmental protection officers, engineers, fire officers, lawyers and health and safety officers of the city came together with external legal and town planning consultants, the public transit company and the police. The central aim of this round table was to get those officials actually working on problems to discuss and solve them directly as a team, rather than losing time and motivation through paper work filtering through traditional hierarchies. Some decisions were taken by general vote but the ultimate decision lay with the "Oberstadtdirektor" who also chaired the meetings. This working group saw through the entire planning process to the eventual adoption of the municipal plans by council and contributed significantly to the maintenance of a tight timetable.

The regional development plan, while drawn up by planners at the regional district, can be modified or adopted only by the regional planning council, a quasi-parliament made up of city council members from the municipalities of the district. This reveals the strongly political dimension of the regional develop-

⁶ A new finance plan had to be constructed shortly afterwards when it became clear that the deal would still have to be signed in 1991. Since insufficient funds had been budgeted for 1991, a new scheme, using mainly money from European regional development funds, was drawn up in a speedy and rather innovative way.

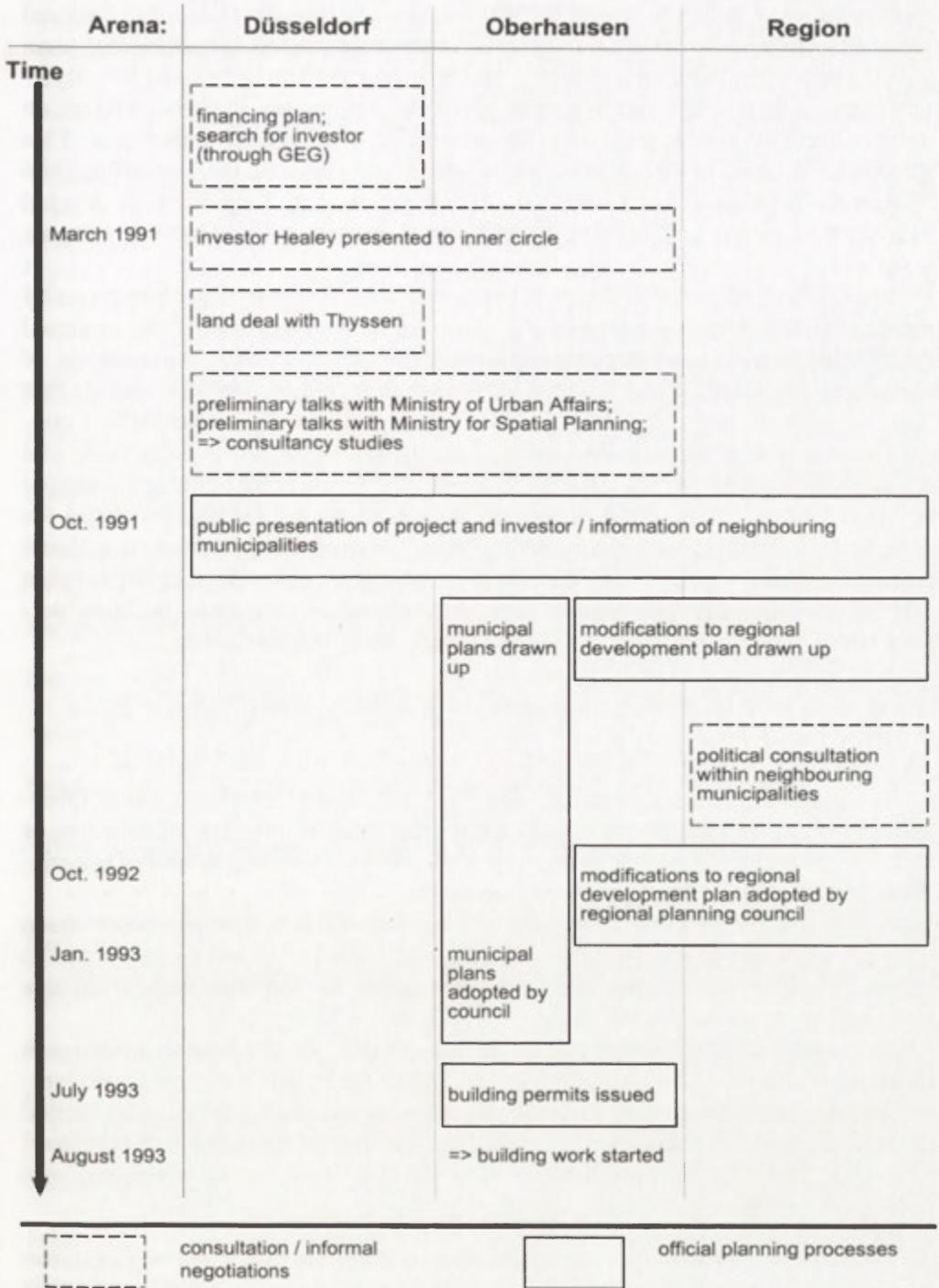


Fig. 2. Consultation and decision-making processes of the “Neue Mitte” project

ment plan. Due to this potential pitfall and an ambitious timetable, the regional planners consciously decided to adopt a mediator's role and to strive for a regional consensus. With their help the neighbouring municipalities and the city of Oberhausen formed a joint working group to discuss the negative effects on neighbouring shopping areas and city centres as well as traffic problems. This forced Oberhausen to have another two consultancy studies done, quantifying the expected reduction in retail sales in the neighbouring municipalities. It also led to a legally binding declaration by the city of Oberhausen, that any future expansions of the shopping centre would require inter-municipal consent.

But underneath this fulfillment of apparently factual planning obligations by the city of Oberhausen, emerges a clearly political dimension of the eventual "yes"-vote in the regional planning council in October 1992. An analysis of council and committee meetings in all neighbouring municipalities reveals that the Social Democrats, the long-time majority party in all municipalities concerned and at state level in Düsseldorf, managed to generate a party-wide and region-wide support for the Oberhausen project. In all neighbouring municipal councils and in the regional planning council all Social Democrats voted for a general acceptance of Oberhausen's plans⁷, seemingly overcoming traditional inter-municipal rivalries. After the modification of the regional development plan and the consequential adoption of Oberhausen's municipal plans, building permits could be signed, and construction started in late August 1993.

CONCLUSION

To understand the "why here?" and the "why now?" of "Neue Mitte Oberhausen" requires viewing the project not simply as a question of location or strategic planning but primarily as a political process involving complex negotiations between different players and arenas.

No doubt, modern methods of planning organization (project-based team work, flexible use of external consultants, mediation techniques) contributed to successful planning. But the essential prerequisite for implementation remains political power of the key players.

Two main political backers arose during the project: the finance minister in Düsseldorf and the "Oberstadtdirektor" in Oberhausen. The will at state government level, to find a new project for Oberhausen and not let it fail, was carried through the finance minister who mobilized substantial financial and personnel resources. This top-level political backing was also essential to ensure regional political acceptance.

⁷ All council resolutions from the neighbouring municipalities were in one way or another critical of various aspects of the proposals. However, in spite of this, not a single municipality rejected the plans, since Social Democrat majorities could vote down any opposition statements. Yet, neither locally nor regionally did a unified opposition emerge.

The “Oberstadtdirektor’s” role was no less political as his strategic control and timing of information given to the neighbouring municipalities proves. Without this, and without the clearly expressed will of the ruling party, the essential decision of the regional planning council could have gone against Oberhausen.

In the end, the flexibility, competence and resources of key power brokers as well as their willingness to work with a potential investor, emerge as the central requirements for winning new private investments for urban redevelopment. For the location decisions of many investors, a city image of amenity and liveability remains secondary to the known and proven competence and dynamism of city hall.

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HOME-WORK DISTANCES AND THE URBANIZED SOCIETY: A MACRO-MICRO LEVEL QUESTION

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ABSTRACT: In the Netherlands, commuting, and the traffic congestion which is caused by it, has increased steeply over the past decades. The process is related to ongoing suburbanization of households, mainly families with children, and to an increased complexity of the home-work relationship and the suburbanization of employment. Moreover, individual life cycles have become more differentiated which has resulted in an increase of one-person households and two-income households. This paper describes changing home-work distances over time and in different region types in the Netherlands.

KEY WORDS: home-work relations, suburbanization, mobility.

INTRODUCTION

As in most European countries there has also been an enormous growth of traffic and mobility over the past decades in the Netherlands. Large traffic congestion problems have resulted, especially in the Western part of the Netherlands. The main contribution to congestion comes from commuter traffic. During peak hours approximately 60% of all traffic is related to home-work trips. However, commuter traffic does not make up the largest part of total traffic (Fig. 1). The modal split of commuters has changed considerably in favour of the car: in 1971 only 29% (CBS, 1981) of the commuters went by car or motorbike; in 1981 49% (CBS, 1984), and in 1995 62% (only car drivers) (CBS, 1995).

The Dutch government aims to reduce the expected strong growth of car traffic in order to decrease traffic congestion and the emission of exhaust-gas (Ministry of Transport, Public Works and Water Management, 1990). Traffic congestion causes considerable financial losses to Dutch enterprises in transport and to businesses. For this reason the reduction of commuter traffic has a high priority. Although the government has the instruments to regulate traffic, it is a very complex task. Increasing fuel prices have little effect on modal split. Increased fuel taxes have proved to be effective only when they were very high and longlasting (Vleugel 1994; Bovy 1994). So far, no substantive measurements have been taken against commuting. In spite of the contemporary policy to stimulate carpooling and the use of public transport, and a slight increase in fuel

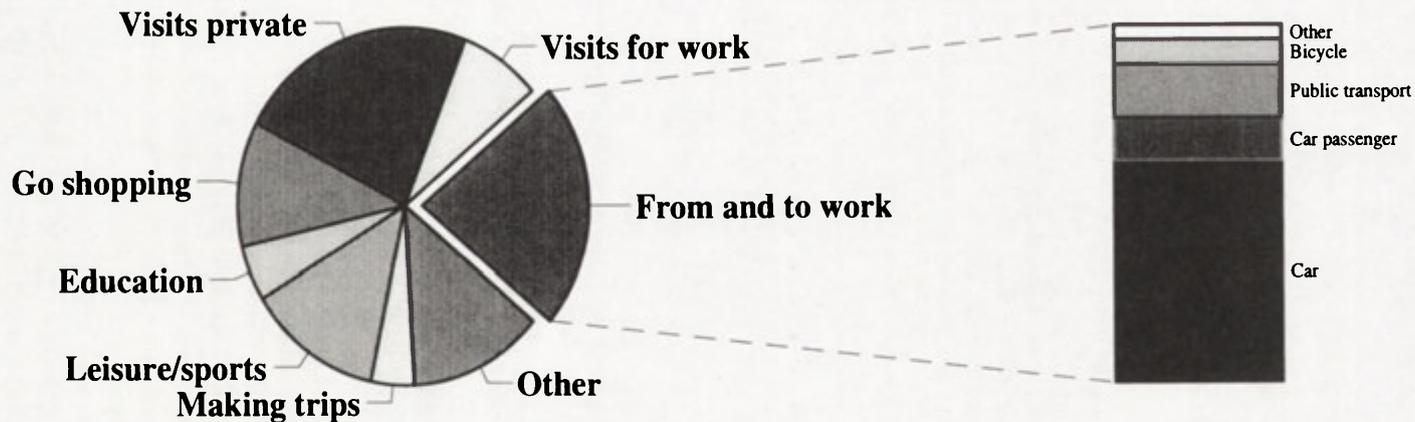


Fig. 1. Daily distance by motive and transport in 1995

Source: CBS, 1995

taxes, most people commute by car on their own, supposedly because it gives them more comfort and costs less time than the use of public transport. Besides, many commuters are compensated by their employer for travel expenses or can drive a company car or they do not have to deal with congestion at all. In addition, current demographic and economic developments in the Netherlands still conduct to more commuter traffic.

Urbanization trends point in the same direction. Population growth after World War II resulted in a shortage of the housing stock. Dutch planners were afraid of increasing population densities in the big cities in the Randstad. A population prognosis of a 100% increase by 2000 was the doom scenario in the fifties. Even emigration to countries such as Canada, Australia and New Zealand was encouraged by government. Uncontrolled suburbanization led to one big megalopolis in the Western part of the Netherlands. Therefore a planned growth of suburban centres, away from the direct neighbourhood of the largest economic centres, was the strategy of the spatial planners for several decennia. This growth centre policy mainly had to protect the 'Green Heart', the rural area of the Randstad, from suburban developments (Ostendorf & Musterd, 1996). This process of suburbanization of households, first uncontrolled, later controlled, was followed by a process of spatial decentralization of economic activities. Firms increasingly tended to split off parts of production to locate them at accessible and cheaper suburban locations. New firms also tended to settle in a wider area, sometimes far from central business districts.

The macro-demographic and the macro-economic growth, together with increased car-ownership led to an increase in commuting. Suburbanization households, firms and new settlement patterns of economic activities led to a change of the spatial structure and the infrastructure and resulted in larger distances between home and work. This constellation is the main drive of the call for policy aimed at changing the urban structure to reduce mobility. Whether this policy is realistic or not remains to be seen. First of all more information is needed about individual home-work relations, since the potential to reduce mobility is not only dependent on macro-level processes, but first of all on micro-level decisions. The home-work relationship is indeed dependent on the home and the work and of population growth in general, but also on the changes at household level. These changes regard the household career, the labour market career and the willingness to adapt to the situation by moving to another house (location) or changing (the place of) work. In this paper, following the introduction, I would like to address the commuting problem as a macro-micro level problem. First, attention will be given to the development of commuting at an aggregate level (section 2); this will be followed by a sketch of recent demographic and macro-economic trends related to commuting (section 3). The urbanization process will then be described in some detail (section 4). From there on changing home-work distances over time and in different region types at the micro-level will be put to the fore (section 5). Some conclusions follow in section 6. The data for the micro-

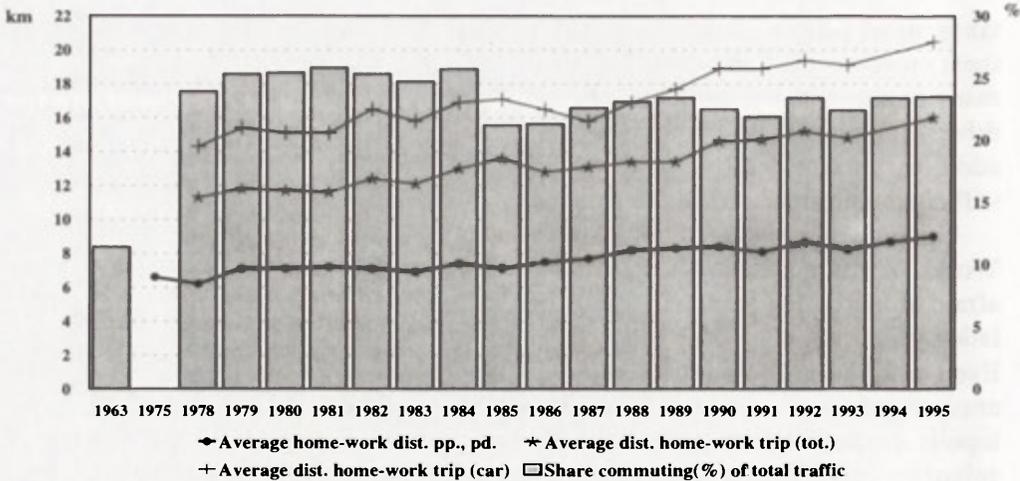


Fig. 2. Main changes of commuter traffic in the last few decades
 Source: CBS, 1980 + 1978–1995, Louw, 1991; Batenburg & Knulst, 1992

level analyses are obtained from a number of longitudinal files¹ with retrospective information of ± 2000 to ± 3000 respondents.

HOME-WORK DISTANCES

With some minor exceptions, the average home-work distance has increased steadily over the past decades (Fig. 2).

Table 1 shows indices of car ownership, length of different types of roads and person car kilometres. It is clear that proportionally the absolute increase of the use of cars was much higher than the absolute increase of total road-length but not more than car ownership. Car use for commuting, however, increased substantially, both in absolute and in relative terms.

Commuting not only increased, but also gradually diverged to smaller (sub-urban) employment centres (Van der Laan, 1995). In the less densely populated parts of the Netherlands, where the smaller number of commuters cause less traffic problems, the commuters nowadays cover longer home-work distances (Van der Laan, 1996). From a nation-wide survey on mobility, it has appeared that particularly between 1980 and 1988 car use for short distances of persons working 25 hours a week or less and within the own municipality has increased greatly (Gommers et al., 1992). Furthermore, car use increases when people work

¹ This data set is carried out by the Telepanel Institute by order of the (former) Institute of Social and Cultural Sciences (SSCW) of the Dutch organization of Scientific Research (NWO). Subject of the used first tranche is 'Social and labor mobility' and is held in 1992. There is an underrepresentation of respondents below 19 years old and 70 years or more. This has not much consequences for the analyses because that concerns only respondents who have had minimal one job.

Table 1. Indices on numbers of cars, length of roads and car kilometres (1960 = 100)

Number of cars		Length surfaced roads			Traffic performance person-cars	Total car-commuter kilometres
		Outside built-up areas	Inside built-up areas	Length freeways		
1960	100	100	100	100	100	100
1965	250	104	115	100	233	345
1970	472	107	133	171	456	1000
1975	646	116	158	200	544	1553
1980	833	119	179	257	697	2289
1985	904	122	196	286	765	2224
1990	1021	126	215	300	924	2618
1995	1107	128	236	329	1010	3026

Source: CBS, 1965, 1966, 1967, 1973, 1976, 1981, 1986, 1987, 1992, 1993, 1994, 1995, 1996.

more days a week. Commuters who do not have a permanent job generally depart to their jobs outside the rush hour. Moreover, many commuter trips are combined with other activities (multi purpose trips). NEI (1992) noticed in 1988 that 35 % of all commuter related trips were not just simple home-work trips. The observations of the Ministry of Transport, Public Works and Water Management (1995), however, were that mobility patterns have not become more complex. The flexibility of travelling by car makes it possible to combine commuting trips with leisure or business related trips in an economical way. Reducing car mobility will have as a consequence that this advantage will be seriously affected.

BACKGROUND OF CHANGED HOME-WORK RELATIONS

The underlying processes of the increased mobility are plural, demographic and spatial. The most important developments are:

- higher welfare,
- shorter working weeks (more time to travel),
- higher labour participation of women,
- individualization,
- increase of the number of households as a result of population growth, ageing of population, smaller households.

However the number of births decreased 35%, the number of inhabitants grew from 12,4 million in 1965 to ±15,5 million in 1996. Furthermore the spectacular increase of the number of households (100%) together with a decrease of the number of household members has resulted in a larger consumption of space for housing and an increase of the demand for jobs. Smaller households are a result of the fact that more people have started to live on their own in the age categories of 18–25 years and 30–45 years. Couples postponed having children or stayed without and more couples divorced.

Besides increased diversity between households, living patterns of individuals and living conditions in society (Vijgen & Van Engelsdorp Gastelaars, 1991), macro-economic changes at the labour market have contributed to the increase in home-work distances. The grown number of potential (professional) workers could apparently not entirely be absorbed by the labour market which caused an increase of registrated unemployed workers that are dependent of social support or unemployment benefit from 35.200 in 1963 to 305.000 in 1992 (Tab. 2). Also with regard to unemployment the problem of home-work distances may be an important factor as there seems to develop an increasing discrepancy between residential locations of unemployed potential workers and job locations such as industrial and rural areas.

Table 2. Unemployment and demographic pressure

	Registrated unemployment of labour population (as % of labour popul.)	Labour population (age 15–65)	Population	% age 65 +
1971	1.3	4,697,000	13,300,000	10.3
1987	8.5	5,743,000 ¹	14,615,100	12.5
1993	7.5	6,406,000 ¹	15,239,200	13.0

¹ Works 12 hours/week or more.

Source: CBS, 1973, 1987, 1993 (EBB)

Since 1960 the participation of working women on the labour market has almost doubled (Tab. 3), but women still commute less and have shorter home-work distances than men. That they commute less has largely to do with the fact that women often work part-time (Tab. 4). It should be noted that women less often continue to work when a residential move take place.

Table 3. Labour participation (%)

	Men	Women	Total
1971	75.5	26	50.8
1993	71.2	42	56.6

Source: CBS, 1976, 1993

Table 4. Men and women by labour participation in 1994 (%)

	Hours per week			
	< 12	12–19.99	20–34.99	35+
Men	5.3	2.1	6.8	85.7
Women	17.3	12.9	31.9	37.7

Source: CBS, 1996

The changes in the labour market like the increased demand for higher-educated employees, the ageing of the population and the recent trend of working

married women not to have children in the Netherlands, causes higher total mobility which is evident from the fact that higher educated people have larger home-work distances as do two-earner couples overall.

Recently job mobility has risen and it seems that people for this reason even are less inclined to change residence. As a consequence this will further increase the home-work distances.

URBAN STRUCTURE

From 1950–1965 there was first mainly suburbanization of the higher income class. From 1965–1980 also the less prosperous middle income families could suburbanise and moved to one family houses in the suburbs and new towns. In this period suburbanization reached its culminating-point (Vijgen & Van Engelsdorp Gastelaars 1991; Jobse & Musterd 1992).

The urban centres in the most urbanized Western part of the Netherlands, called *Randstad*², traditionally were the largest centres of employment for the surrounding region (Fig. 3). Intended employment in the new towns strongly stayed behind, which consequently also increased the commuter traffic, especially of men (Van Engelsdorp Gastelaars & Ostendorf 1991). After 1980 large-scale suburbanization was over. Since years the end of the decreasing population of the four largest cities was a fact.

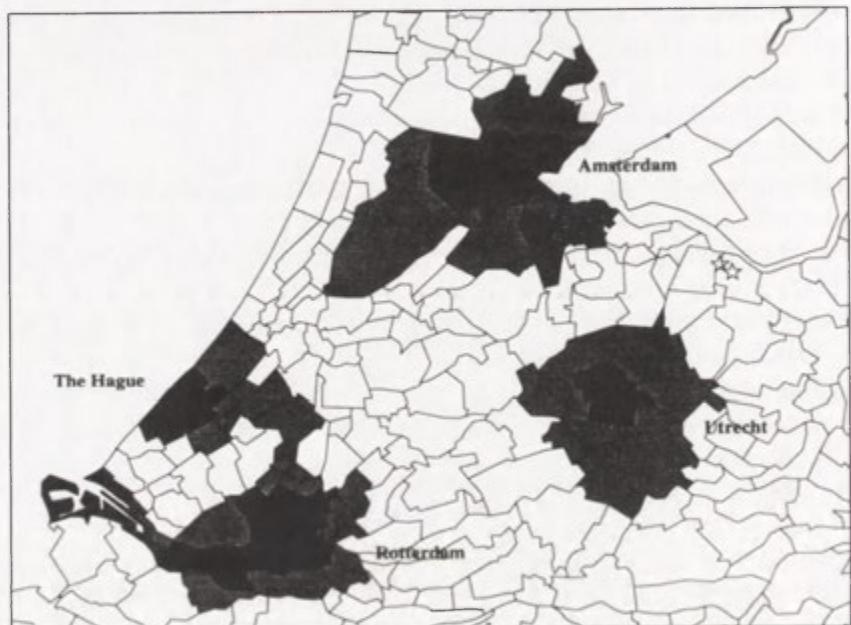
While, especially after the second oil crisis in 1979 the Dutch government built one-family houses on a large scale in suburban growth-centres, the investments after 1985 in (social) housing in these growing centres were considerably reduced. A new policy of *compact cities* was introduced with the aim to revitalize the big cities; new houses were planned near and in the old urban centres with a good access to public transport. The new housing locations that are planned for the future, the so-called VINEX locations, also have to have good public transport nets (Ministry of Housing, Spatial Planning and the Environment, 1990). The purpose of this reversal is to build more compact again in order to avoid further cutting up of green lands and to reduce travel distances. The government also wants more investments of the private market sector in the existing towns. However, the market seems to be more interested in the suburban area's (Musterd & Ostendorf 1996).

Economic development of the big cities in the Randstad has now priority, examples are the stimulation of the two mainports Amsterdam Airport and

² The Randstad conception has its origin in the 1930's which marks the ring-shaped urban area (e.g. Utrecht, Amsterdam, Haarlem, Leiden, Den Haag, Rotterdam, Dordrecht) in the Western part of the Netherlands. Since then it is described in various ways; in the most narrow context with only the agglomerations Amsterdam, Rotterdam, Den Haag and Utrecht to the most broad context included the provinces Noord-Holland, Zuid-Holland, Utrecht, Flevoland and parts of Noord-Brabant and Gelderland.



a



b



c

Rotterdam Seaport. At the same time however the Green Heart has to be preserved. This apparent paradox is being called the *Dutch planning doctrine* (Faludi & Van der Valk 1994). The observation can be made that investments in such traffic intensive projects are contrary to the need to reduce CO₂-emissions.

There is a suburbanization of employment going on (Dingemans 1993; Van der Laan 1995). Deconcentration of companies and residential sites are described as the transition of an industrial to a post-industrial production structure. More and more people couldn't find jobs in their local areas. Together with the increase of part-time and temporal employment contracts, this decentralization reduced the chance to have a residence near the work location. Population growth in the new towns has slowed down in the eighties, but satellite towns near the donor cities are still growing (Bargeman et. al., 1991). Which consequences this will have for home-work relations in the future is also dependent of new locations of companies.

Changing commuting distances go together with changes in housing and labour market structure, with residential and job locations and with attitudes of individuals themselves. Fluctuations of home-work distances also are related to conjuncture, unemployment numbers and the (pressured) housing market. The residential mobility has fluctuated strongly between the different post-war periods. An explanation for this fluctuations can be found in the postwar industrialization and the decentralization of industry and the suburbanization (Deurloo et. al., 1981). Furthermore influences of conjuncture resulted in strong fluctuations in job mobility (Mekkelholt, 1993).

Whether a compact city leads to a reduction of mobility compared to a polycentric urban region or not is not, clear yet (Gordon et. al., 1989; Cervero 1989). Specific theories on home-work behaviour, also theories on urban structure as a result of these changes are not valid anymore. However, structural changes of cities are difficult to verify and can only be defined by circumscription (Jobse & Musterd 1994).

For 2015 there are about two million new houses planned in the Netherlands, of which one million in the Randstad. The expected growth on the number of jobs will also be concentrated in the Randstad. Dependent on locations and qualities of new houses and employment a better or worse match in terms of home-work distances will be the result. The increased number of employed within households (women), the increased number of part-time and temporal jobs and more spatial spread of jobs, should theoretically make the location of the residence location dominant over job location (Hanson & Pratt 1987).

Fig. 3. Original Randstad (a), the agglomerations of the 4 biggest cities (b) and the Randstad in a more broad sense (c)

HOME-WORK DISTANCES AT THE INDIVIDUAL LEVEL

Characteristics of different groups are important explaining variables for home-work distances. *Time* and *costs* are the main aspects in accepting a certain distance between origin and destination. Profession, age, income and household position have proved to play a dominant role in this consideration (Verster & Mulder 1983; Van Wee 1994). The average ultimate values of acceptance-levels could increase or decrease in the future as a consequence of other norms or other household positions and labour market positions. Moreover important is the (natural) resistance to move because of social ties.

Studies about migration motives concluded that short distance moves were merely based on residential motives and long distance moves on job motives (Van Wee 1994). Hollander et. al. (1996) pointed out that migration to (VINEX-) locations, which are the new housing locations near the largest urban centres, can decrease home-work distances, however it is not clear how it will turn out in the long run.

Job changes are not always necessary relocation of workplace, also another job within the same company or a (temporary) period of unemployment is incorporated. The starting point of the observations is the start of the first job and the residence at that time. The home-work distances were measured for each change in residence or job and weighted by the sum of years.

Table 5 represents the differences of home-work distances for three types of regions. First, the urban agglomerations all over the country including the new towns and satellite towns. Second, the regions near the urban agglomerations in or around the Randstad area which are (still) preponderant rural like the green heart of the Randstad. Third, the rural regions further away from the Randstad. In the urban agglomerations distances most increased after 1985, but still are less than in the rural areas. Striking is the sharp fall of home-work distances after 1985, of commuters living in the near urban areas. Obviously, more companies have settled down further away from the central cities, but more close to the areas around the cities.

The rate by which changes occur has also been changed. During 1901 till 1945 the average duration of the home-work distance, in other words the time between the follow-up changes of a residence or job, was 22 months in the urban agglomerations. For the other regions there are less than 30 cases in this first period (Fig. 4).

Career steps like residential and job relocations can be expressed as the sum of job mobility and residential mobility. From 1950–1980 job mobility and residential mobility were quite stable, but from 1980–1985 both job mobility and residential mobility increased, while after 1985 they decreased. However the mobility level was higher than before 1980 (Smit 1997).

In the urban agglomerations has been the highest residential and job mobility, except for the period 1980–1985. After 1985 also the other regions show an increase in the average duration of home-work distances, especially the rural

Table 5. Distances by region type and period

	Average home-work distance (km)	Stand. Dev.	Max	Min	N	% Plus 15 km
Urban agglomerations						
1901-1945	8.7	17.8	87	0	593	22
1945-1960	9.8	22.0	100	0	4355	17
1960-1970	9.6	21.0	99	0	3196	17
1970-1980	9.6	20.8	98	0	3649	16
1980-1985	8.4	16.9	92	0	886	15
> 1985	10.3	18.5	99	0	1842	22
Near rural regions						
1901-1945	1.8	3.4	10	0	43	0
1945-1960	14.6	22.2	94	0	663	32
1960-1970	12.0	19.1	89	0	770	18
1970-1980	13.3	20.3	95	0	867	26
1980-1985	15.4	23.7	94	0	235	32
> 1985	11.4	17.6	89	0	462	25
Rural regions						
1901-1945	11.1	24.3	81	0	58	16
1945-1960	11.6	21.1	95	0	1035	19
1960-1970	8.1	16.2	90	0	1156	18
1970-1980	8.6	14.2	90	0	1390	20
1980-1985	13.2	21.1	95	0	347	27
> 1985	13.1	19.9	95	0	774	26

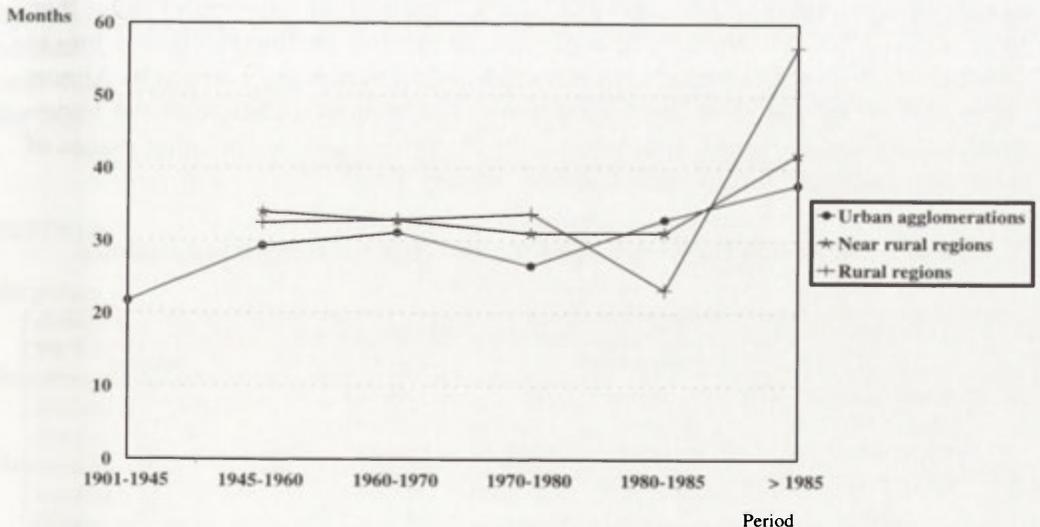


Fig. 4. Home-work distance by residential duration

regions. Probably this all has to do more with the housing market than with the labour market.

When people move to another house or get another job, their home-work distances might also be changing. Whether it will increase or decrease depends on the circumstances of that particular moment, but also on circumstances of the (near) future. For example when a couple expecting a baby they will move to

Table 6. Percentage decrease/equal/increase in home-work distance after changing job or residence by period

	Change of					
	job			residence		
	home-work distance (av. %)					
	decrease	equal	increase	decrease	equal	increase
1901–1945	10	61	29	5	91	4
1945–1960	25	58	17	10	77	13
1960–1970	22	56	22	11	78	9
1970–1980	26	44	30	14	75	11
1980–1985	24	45	31	11	80	9
> 1985	32	38	30	11	79	10

a bigger house. When someone is forced to move for another job he would consider for example the type of contract of the new job, his type of residence now and social ties. In table 6 the change of home-work distances after job and residential shifts are shown by period.

The relation between residential shifts and changing home-work distances is less strong than the relation between changing places of work and changing home-work distances. After a change of job, distances increase more often than after a change of residence. So people indeed are less inclined to take a longer home-work distance in serious consideration when accepting a new job. Almost the whole period the most residential moves are without a change of the home-work distance at the municipality level. On the other hand, at changing places of work the municipal level is less and less playing a role.

Table 7. The average home-work distance before changing both job and residence at the same moment

Period*	Home-work distance (av. %)		
	decrease	equal	increase
1945–1960	21	63	16
1960–1970	5	82	13
1970–1980	16	67	17
1980–1985	11	70	19
> 1985	18	67	15

* 1901–1945: < 30 cases.

Finally table 7 shows that when people are changing both job and residence, the average changing home-work distances are more often increasing than for only residential changes, but less often decreasing than for only job changes.

CONCLUSION

It may be concluded that there is a strong relationship between commuter mobility on the one hand and macro level processes (economic, demographic, spatial) and micro level behaviour (different events during life) on the other hand. It is not always clear how these are related. It is clear that several developments like higher economic standards, emancipation, flexibilization of labour market and a shifting at the housing market to more home ownership, has made increased commuter traffic and probably will do so in future.

Commuting is a consequence of existing spatial asymmetry between residential and job locations and the continuous changing urban structure. Changes of home-work relations of individuals seem to go much faster than the changes which can be reached in planning and adjustments in the spatial structure. Differences of home-work distances between the urban agglomerations and the near rural areas are getting smaller. People in the more rural areas still have larger home-work distances. Although the participation on the labour market of women grew and there were more part-time jobs, after 1985 home-work distances changed less often than before. After a change of job, distances increased more often than after a change of residence. So short distance moves were indeed merely based on residential motives and long distance moves on job motives. Changing home-work distances in different periods and region types in relation to the household stage, the housing stage and the stage of the professional career is the next stage in the research of home-work relations with the aim to contribute to the understanding of home-work relations of individuals and households.

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SPATIAL CHAIN PATTERNS OF INTRA-URBAN MIGRATION

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ABSTRACT: This research analyzes quantitatively the track of individual chain-type migration of many residents to determine how they move in response to changes in their lives, i.e., whether there is spatial regularity on the chain patterns of intra-urban migration. The study area for this research is the industrial city of Yokkaichi, Japan. The study helps us to understand the state of intra-urban migration at the non-aggregate level for all residents during a 15-year period. Special attention is given to the age at which a resident relocates, and to the interval between two successive movements, i. e., the stationary period.

KEY WORDS: Spatial chain, migration, Japan, urban system.

INTRODUCTION

PREVIOUS RESEARCH AND PURPOSE OF THIS STUDY

Generally, the process of relocation involves four types of changes in social status or life event: entering a higher level of school, obtaining or changing occupation (including transfer to another office), marriage, and retirement (Lewis 1982; Clark 1987). These four sequential movements account for most of an individual's migration history. Some sort of spatial regularity is believed to exist in these sequential movements which respond to the socio-economic characteristics of individuals and families. In discussing these spatial chains, we must consider whether movements are confined to one urban/metropolitan area or not, that is, whether movements are recognized as intra-urban migration or interregional migration. Most interregional migration is due to one of the four changes in social status mentioned above. On the other hand, as Wolpert (1965) has suggested, most intra-urban migration is made to improve one's so-called "place utility" (Brown and Longbrake 1970).

The improvement of place utility is a concept similar to “housing adjustment” which Clark and Onaka (1983) have thought to be a significant factor of migration. “Housing adjustment” refers to changes in type of housing, neighborhood, and/or accessibility. Specifically, it entails movements to new housing, movements to improve one’s neighborhood environment (such as better public facilities), and movements to be closer to one’s job or school. Thus, migration to improve place utility generally is not induced by changes in social status. This migration, however, is often simultaneous with a change in life cycle. For example, perhaps a young person finds work close to his or her parents’ home but moves from the home at the same time to begin an independent life. This movement is not essential to the change in his or her social status, that is, finding work. We should perhaps treat the social change not as a reason but as an “opportunity” for the movement. It is believed that similar cases occur in short-distance movements such as intra-urban migration. On the other hand, intra-urban migration resulting purely from changes in social status is, with the exception of marriage, limited in number.

From the above discussion, we can see that the spatial chains shaped by intra-urban migration are going to exhibit more complex patterns than those by interregional migration. In a number of intra-urban migration studies, geographers and demographers have referred to the relationship between migration chains and life courses by classifying intra-urban movements according to several attributes of movers (e.g. McCarthy 1976; Clark and Onaka 1983; Gober et al. 1991). There have also been studies that, in consideration of directional bias of migration, mention the relationship between migration patterns and life cycle changes (Adams 1969; Abler et al. 1971; Donaldson 1973; Hartshorn 1992). Thus the spatial chains (or channels) of intra-urban migration have attracted the attention of many geographers and demographers. However, the migration chains which have been handled in these studies are not channels traced by individual migration histories. Rather they are channels analogically inferred from the aggregate of “one-time migration”, i.e., non-chain migration of numerous residents. To the best knowledge of the authors, no research has undertaken systematic or detailed corroborative analysis of spatial chain patterns by tracing individual movements of numerous residents. The greatest reason for this is the lack of sufficient origin-destination data for the routes of individual movements.

Therefore, this research will quantitatively analyze the track of individual chain-type migration of many residents to determine how they move in response to changes in their lives, i.e. whether there is spatial regularity on the chain patterns of intra-urban migration. The study area for this research will be the industrial city of Yokkaichi, Japan. The study should help us to understand the state of intra-urban migration at the non-aggregate level for all residents during a 15-year period. Special attention will be given to the age at which a resident relocates, and to the interval between two successive movements, i.e. the stationary period.

STUDY AREA AND MATERIALS

Yokkaichi is an industrial city of 274,530 people (1989) located in the Nagoya Metropolitan Area, one of the three largest urban areas in Japan. It is situated approximately 40 km SW of Nagoya along Ise Bay and is topographically comprised of coastal lowlands and interior uplands. Numerous industrial complexes in the coastal lowlands have been constructed next to pre-existing built-up areas. Large-scale housing complexes were built in various locations in the upland areas mainly from 1965–1980.

Yokkaichi is divided into 23 administrative districts, or “ku” (see Fig. 1). These divisions are roughly equivalent to the old “choso” (i.e. town and village) boundaries of the city. Of these 23 districts, Chubu (District No. 1) and Kyohoku (No. 23) comprised Yokkaichi when it was first designated as an official city in 1897. The CBD is located in Chubu.

The raw data used in this study are from the 15-year period 1975–1989 and were supplied by the Yokkaichi City Office from individual change-of-address notices. The data sets consist of a personal ID code and age and sex of the relocating party(s), as well as origin and destination codes. Here, the origin and destination will both be within the 23 administrative districts. The raw data were realigned by individual ID code to gain a thorough understanding of the migration chains of residents. From this realigned data, we can see that during the 15-year period, there were 2862 people making 4 consecutive intra-urban movements (i.e. all movements were made within the city); 941 people making 5 successive movements; 331 people with 6 successive movements; 127 people with 7 successive movements; 51 people with 8 successive movements; 18 people with 9 successive movements; and 31 people moving within Yokkaichi at least 10 consecutive times. These raw data indicate a great degree of mobility in Yokkaichi. The authors have previously touched upon the demographic features of Yokkaichi as well as intra-urban migration patterns in this city (Murayama and Inoue 1989).

METHODOLOGY

ANALYTICAL UNIT REGIONS

To facilitate visual analysis from quantitative analysis and mapped data, the 23 districts were grouped into several analytical unit regions using Ward’s Method of cluster analysis. These regions were established as follows: First, the data used in the cluster analysis were composed of the rates of male in-migration, male out-migration, female in-migration, and female out-migration per district in 1989. In other words, a 23-row, 4-column geographical matrix was created using these four migration variables as the columns and the 23 districts as the rows.

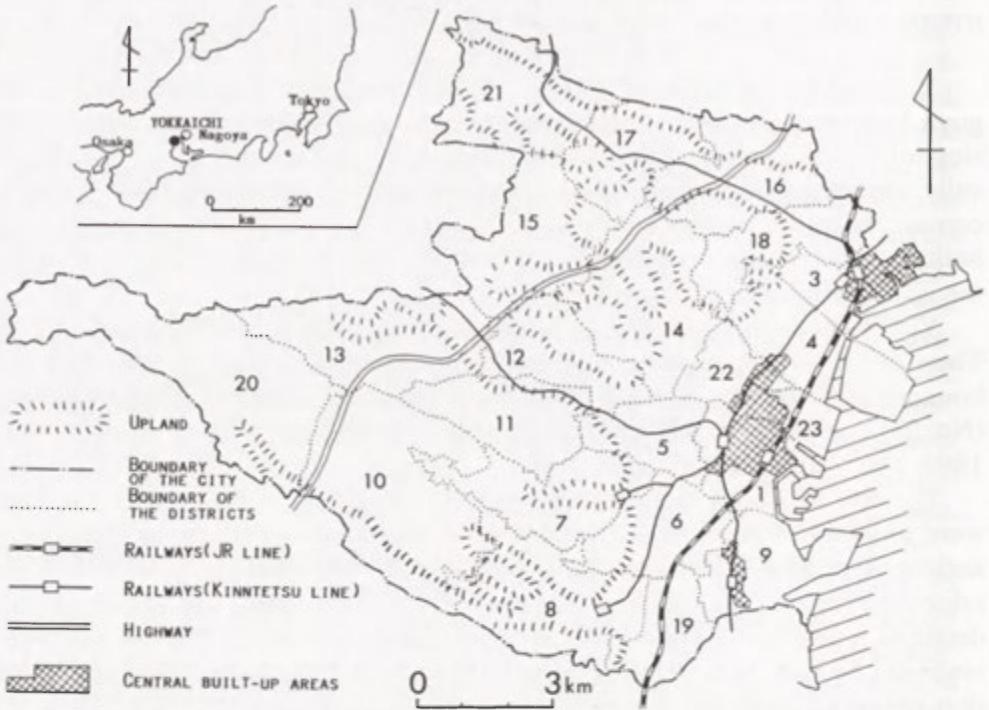


Fig. 1. Study area

- 1 – Chubu, 2 – Tomisuhara, 3–Tomida, 4 – Hazu, 5 – Tokiwa, 6 – Hinaga, 7 – Yogo, 8 – Uchibe, 9 – Shinohara, 10 – Oyamada, 11 – Kawashima, 12 – Kanzaki, 13 – Sakura, 14 – Mie, 15 – Agata, 16 – Yasato, 17 – Shimonono, 18 – Ooyachi, 19 – Kwarada, 20 – Suizawa, 21 – Hobo, 22 – Kaizo, 23 – Kyohoku

The formulas for calculating the migration rate for each district are shown in Figure 2. The results of the analysis, in which the 23 districts were grouped into five unit regions, are shown by the dendrogram in Figure 3. Figure 4 shows the five new aggregate regions.

As we can see by the average values of migration rates in Table 1, each of the unit regions thus established maintained its homogeneity, i.e. high degree of similarity of migration characteristics. Region numbers correspond to the ones in Figure 4. We can define the characteristics of these regions as follows:

Region 1 is the urban core, the central region of high population density. Here considerable migration is observed, with high rates of in- and out-migration for both males and females. Region 2 is a transition area surrounding Region 1, showing somewhat lower mobility than the central region. This is an area of comparatively large numbers of apartment houses. Though Regions 3 and 4 are both located on the outskirts of Yokkaichi, Region 3, an “area of increasing suburban population”, is witnessing rapid in-migration by both males and females. The region is a new housing area of numerous single-family homes located along the relatively convenient Kintetsu Railway line. Region 4, on the other hand, is an

$$MO_i = (\sum_j MM_{ij}) / MP_i$$

$$MI_i = (\sum_j MM_{ji}) / MP_i$$

$$FO_i = (\sum_j FM_{ij}) / FP_i$$

$$FI_i = (\sum_j FM_{ji}) / FP_i$$

MO_i: male out-migration ratio in district *i*
MI_i: male in-migration ratio in district *i*
FO_i: female out-migration ratio in district *i*
FI_i: female in-migration ratio in district *i*
MM_{ij}: male migrants from district *i* to district *j*
FM_{ij}: female migrants from district *i* to district *j*
MP_i: male population in district *i*
FP_i: female population in district *i*

Fig. 2. Formulas for calculating migration rates

“area of stable suburban population” where in- and out-migration are in equilibrium and the mobility of residents is low. Finally, Region 5 is a rural area with even lower mobility.

MIGRATION CHAIN UNITS

This analysis involved migration chains, that is, consecutive intra-urban movements (i.e. two or more consecutive movements within the Yokkaichi city limits) during the 15-year period from 1975 to 1989. Naturally, this 15-year period allows us to understand only a fraction of an individual migration chain. Nevertheless, we can estimate the overall individual migration chain for the life course by connecting migration chains which different age groups made during this period.

Obviously, the migration chains observed during this period comprise various numbers of movements, that is, they vary in size. The following problem arises in treating various-size migration chains in their entirety; that is, the total stationary period for an observed migration chain is shorter on average than for the other

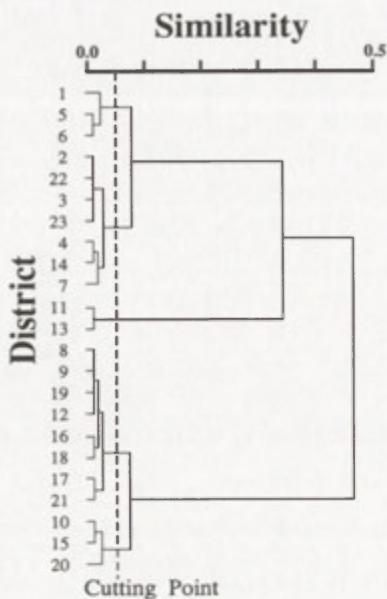


Fig. 3. Dendrogram

non-observed chains of the same size, and furthermore, this tendency to be shorter increases as the size increases. Therefore, in this analysis, migration chains have been divided into minimum-size linkages, the basic units for data formulation. For example, Figure 5 shows that a migration chain from Region i through Regions j , k , and l to Region m consists of four successive movements, that is, three linkages ($i-j-k$, $j-k-l$, $k-l-m$). We can consider each of these three linkages as a migration chain unit.

CREATION OF A GEOGRAPHICAL MATRIX

The migration chain unit, as defined in the previous section, can be thought of as a pair of intra-urban movements. In other words, the most fundamental migration attributes of one unit are the relocater's sex, age at which the first movement was made, age at which the second movement was made, the original residence (i.e. the first origin), the first destination¹, and the second destination. Considering these six fundamental attributes, we quantified the migration chain units and created a geographical matrix which was directly subjected to mathematical analysis.

First, the ages at the times of the first and second movements were classified into 14 age groups of five-year intervals: 0–4, 5–9, 11–14, etc., up to 65-and-over. Consequently, the relocation's stationary period between the first and sec-

¹ Naturally, this corresponds to the point of origination of the second movement.

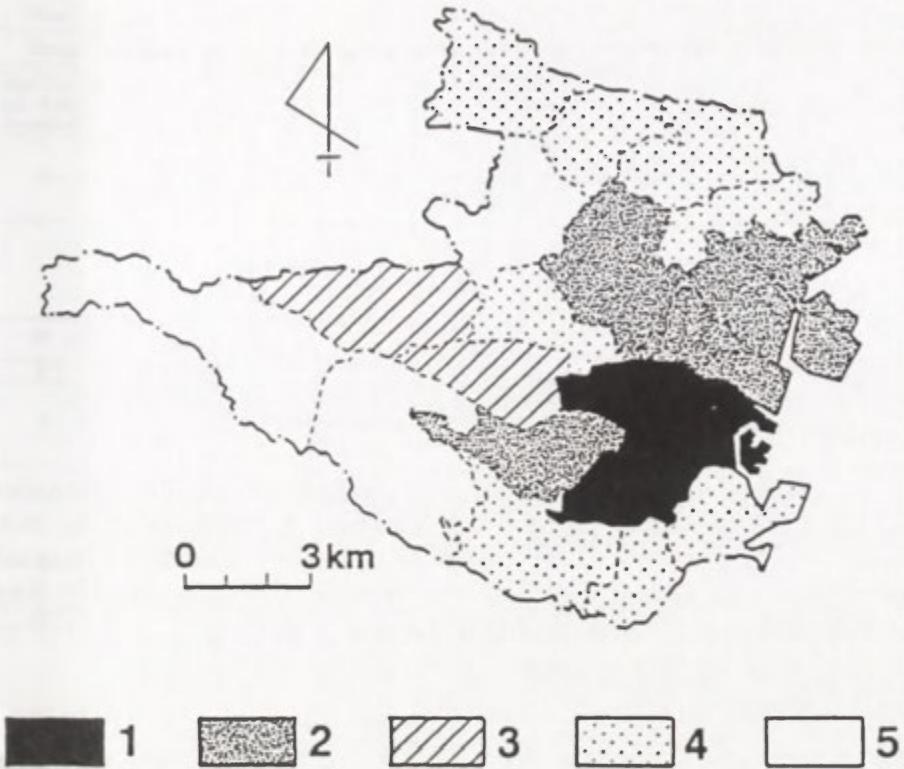


Fig. 4. Classification of the 23 districts of Yokkaichi
1, 2, 3, 4, 5 – Number of Regions

ond movements could be determined by a shift between two age groups. The shifts, however, were restricted to those having not more than three steps (e.g. a shift from 20–24 to 35–39), because this study was concerned with data from a 15-year period. Therefore, 50 possible pairs of age groups were generated each for males and females, for a total of 100 pairs. These 100 pairs of age groups were distributed in the rows of the matrix.

Next, combining the three regions of the original residence, the first destination, and the second destination, we expressed the spatial patterns of migration chain units. Since there were five unit regions in this study, there were 125

Table 1. Average values of migration rates

Region	Out		In	
	Male	Female	Male	Female
1	6.47	6.40	6.00	5.70
2	5.34	4.96	4.41	4.33
3	3.05	3.25	8.90	8.45
4	3.48	3.69	3.58	3.71
5	2.03	2.60	2.47	3.10

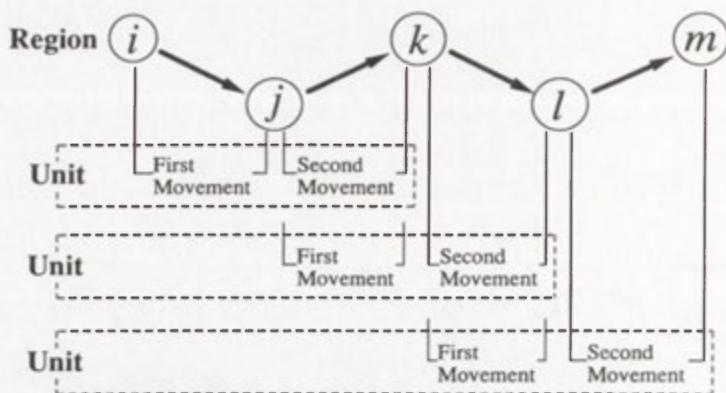


Fig. 5. Units of migration chains

(= 5x5x5) of these regional combinations (hereafter called O–D combinations). These 125 O–D combinations were distributed in the columns of the matrix. Naturally, the components of the matrix represent the number of intra-urban migrants. From the above procedure, we constructed a 100-row, 125-column geographical matrix for the migration chain units (Fig. 6).

STANDARDIZING THE MATRIX

Geographical matrices are usually standardized by means of standard deviations in application of factor analysis. This method, however, is not appropriate for standardizing the matrices which, like the above geographical matrix, include many zero-value components. This is because the method may not maintain the contrast between zero-value components and non-zero components. Thus we adopted the method by which the square sum of each column (i.e. each of the 125 O–D combinations) of a geographical matrix was standardized at 1.0. The conversion of every zero-value component into itself is a distinctive characteristic of this standardization².

If the ij -component of the geographical matrix constructed in the preceding section is represented by x_{ij} ($i = 1, 2, \dots, 100$; $j = 1, 2, \dots, 125$), the standardized value z_{ij} for all i, j is derived from

$$z_{ij} = x_{ij} / \sqrt{\sum_i x_{ij}^2} . \quad (1)$$

Using this operation, we obtained a matrix, Z , whose component was given by the standardized value z_{ij} , and where the square sum was 1.0 for each column.

² Please refer to Hashimoto (1992) regarding the effectiveness of the square sum standardization.

First Movement		1 → 1		5 → 5		
Second Movement		1 → 1	1 → 2	5 → 4	5 → 5
Sex	Age Group of the First Movement	Age Group of the Second Movement		<div style="border: 1px solid black; padding: 10px;"> <p>Geographical Matrix for the Migration Chain Units (100 rows, 125 columns)</p> </div>			
Male	0 - 4	0 - 4					
		5 - 9					
		10 - 14					
		15 - 19					
					
60 - 64	60 - 64	60 - 64					
		65 -					
		65 -					
Female	0 - 4	0 - 4					
		5 - 9					
		10 - 14					
		15 - 19					
					
60 - 64	60 - 64	60 - 64					
		65 -					
		65 -					

Fig. 6. Data matrix

CALCULATING FACTOR LOADINGS

Matrix *Z* is composed of 100 rows (age group pair × sex) and 125 columns (origin × first destination × second destination). Matrix *Z* and its transposed matrix ^t*Z* provided a 125-row, 125-column product sum matrix *M* (equation 2)

$$M = (1 / 100) {}^tZZ. \tag{2}$$

Next, eigenvalue analysis was performed on the product sum matrix *M*,

$$M = EU^tE \tag{3}$$

giving us matrices *E* and *U*, where *E* is an eigen vector matrix of 125 rows and *n* columns, *U* is the diagonal matrix with the eigen value as a diagonal component, ^t*E* is the transposed matrix of the eigen vector matrix *E*, and *n* is the number of factors related to O–D combinations. In addition, giving the diagonal components of matrix *U* as ($\lambda_1, \lambda_2, \dots, \lambda_n$), then ($\sqrt{\lambda_1}, \sqrt{\lambda_2}, \sqrt{\lambda_3}$) provides us with diagonal matrix *V*. Multiplying this matrix *V* by the eigen vector matrix *E* gives us the initial loading factor matrix *F* (equation 4)

$$F = EV. \tag{4}$$

The rows of this initial loading factor matrix F are composed of origin \times first destination \times second destination, while the columns contain the factors related to O–D combinations. In addition, the number of factors was determined as the number of eigenvalues greater than the average value calculated from the standard deviation of each column of the standardized square sum matrix Z . To simplify interpretation, factors were subjected to varimax rotation

$$L = FT, \quad (5)$$

where L signifies the factor loading matrix after rotation and T is the rotated matrix of the initial factor loading matrix F .

Finally, factor scores were calculated. To do this, weight matrix W was obtained from the following equation:

$$W = L ({}^tLL)^{-1}. \quad (6)$$

As shown in equation (7), factor score matrix S was generated by multiplying the weight matrix W by the standardized data matrix Z

$$S = ZW \quad (7)$$

The factor score matrix S is composed of 100 rows (age group pair \times sex) and n columns (factors related to O–D combinations). Although S was obtained in the form of a standardized square sum matrix, to facilitate interpretation, we further standardized the matrix S using standard deviations, that is, conventional factor analysis method³.

RESULTS OF THE ANALYSIS

As a result of factor analysis, the migration chain patterns within Yokkaichi could be broken down into six factors. Table 2 shows the variance and the ratio for each factor. In addition, Table 3 and Figure 7 depict the distribution patterns of standardized factor scores and factor loadings, respectively. Table 3 shows the age group pairs (i.e. ages at the time of the first and second movements) with a factor score over 1.0. Figure 7 illustrates factor loading patterns in the form of migration chain units divided according to resident's first destinations. The thin arrows indicate routes giving factor loadings of 0.5–0.7, while the thick ones denote routes giving factor loadings over 0.7. Using Table 3 and Figure 7 as a base, we interpreted the migration chain patterns of the six factors which had been identified.

³ This standardization gave us a factor score matrix where the average value and standard deviation of each column was 0.0 and 1.0, respectively.

Table 2. Variance of each factor

Factor	Variance	Proportion (%)
I	0.6992	55.94
II	0.0831	6.65
III	0.0455	3.64
IV	0.0355	2.84
V	0.0297	2.38
VI	0.0258	2.07

FACTOR I

The variance of Factor I accounts for 55.94 percent of the total variance. Accordingly, a substantial portion of chain migration within Yokkaichi can be explained by Factor I. Every age group pair with a factor score of more than 1.0 is a combination of the same age group. Furthermore, with one exception, every pair is a combination of youthful age groups from 15–19 to 25–29 (Table 3). Factor I, therefore, shows a period of less than five years between the first and second movements for these young groups, indicating a rather short stationary period. Finally, we should note that female factor scores show much higher values than male ones.

The most obvious loading pattern of Factor I in Figure 7 is that which provides several routes through Region 1 toward Region 2. When the regional characteristics of Regions 1 and 2, as well as the migration attributes of Factor I (age level of mover, length of stationary period) derived from the factor score are taken into consideration, this migration chain pattern is believed to represent the following scenario: Young people move from all areas of the city into the central area, then head toward apartment houses and other such housing in the surrounding area almost immediately thereafter. Hence, we can see that this migration chain pattern is basically a reflection of taking action to obtain higher education or employment for the first movement, and to improve place utility for the second.

Additionally, in the loading patterns of Factor I, there is a considerable number of cases in which people return to their original residences after having spent time in Region 1. In other words, all patterns in which people move from Regions 2, 3, 4, and 5 to Region 1, then return to their original residences show, with the exception of Region 3, high factor loadings above 0.7. These migration chain patterns indicate that young people were moving from other regions in the city to the central area, then almost immediately returning to their original residences. Here, the first movement, like the pattern previously reported, appears to be connected with securing higher education or employment. We can think of the second movement as being a kind of U-turn migration, even though “U-turns” are usually observed in interregional migration. These U-turns naturally result from life events such as commencement of new or different employment. Never-

Table 3. Factor scores

Factor I				Factor II			
Sex	Age Group		Score	Sex	Age Group		Score
	First Movement	Second Movement			First Movement	Second Movement	
Male	20-24	20-24	3.70	Male	20-24	25-29	3.75
	25-29	25-29	2.84		25-29	30-34	2.81
Female	0-4	0-4	1.33		30-34	35-39	1.99
	15-19	15-19	1.77	Female	20-24	25-29	6.84
	20-24	20-24	5.89		25-29	30-34	1.28
	25-29	25-29	3.35				

Factor III				Factor IV			
Sex	Age Group		Score	Sex	Age Group		Score
	First Movement	Second Movement			First Movement	Second Movement	
Male	65-	65-	4.67	Male	0-4	0-4	4.71
Female	65-	65-	7.82		0-4	5-9	1.89
					5-9	5-9	1.32
					25-29	35-39	1.23
					30-34	30-34	2.62
					30-34	35-39	1.95
					35-39	35-39	1.31
					35-39	40-44	1.17
				Female	0-4	5-9	1.52
					5-9	5-9	1.01
					25-29	25-29	2.82
					25-29	30-34	1.28
					30-34	30-34	2.60

Factor V			
Sex	Age Group		Score
	First Movement	Second Movement	
Male	0-4	10-14	1.81
	20-24	20-24	1.27
	25-29	30-34	4.98
	30-34	40-44	1.01
Female	20-24	20-24	2.33
	25-29	30-34	2.30
	25-29	35-39	1.70
	30-34	40-44	1.63

Factor VI			
Sex	Age Group		Score
	First Movement	Second Movement	
Male	10-14	15-19	1.10
Female	10-14	15-19	1.43
	15-19	15-19	1.35
	15-19	20-24	5.39
	25-29	30-34	1.56

Note: Standardized factor scores over 1.0 are shown.

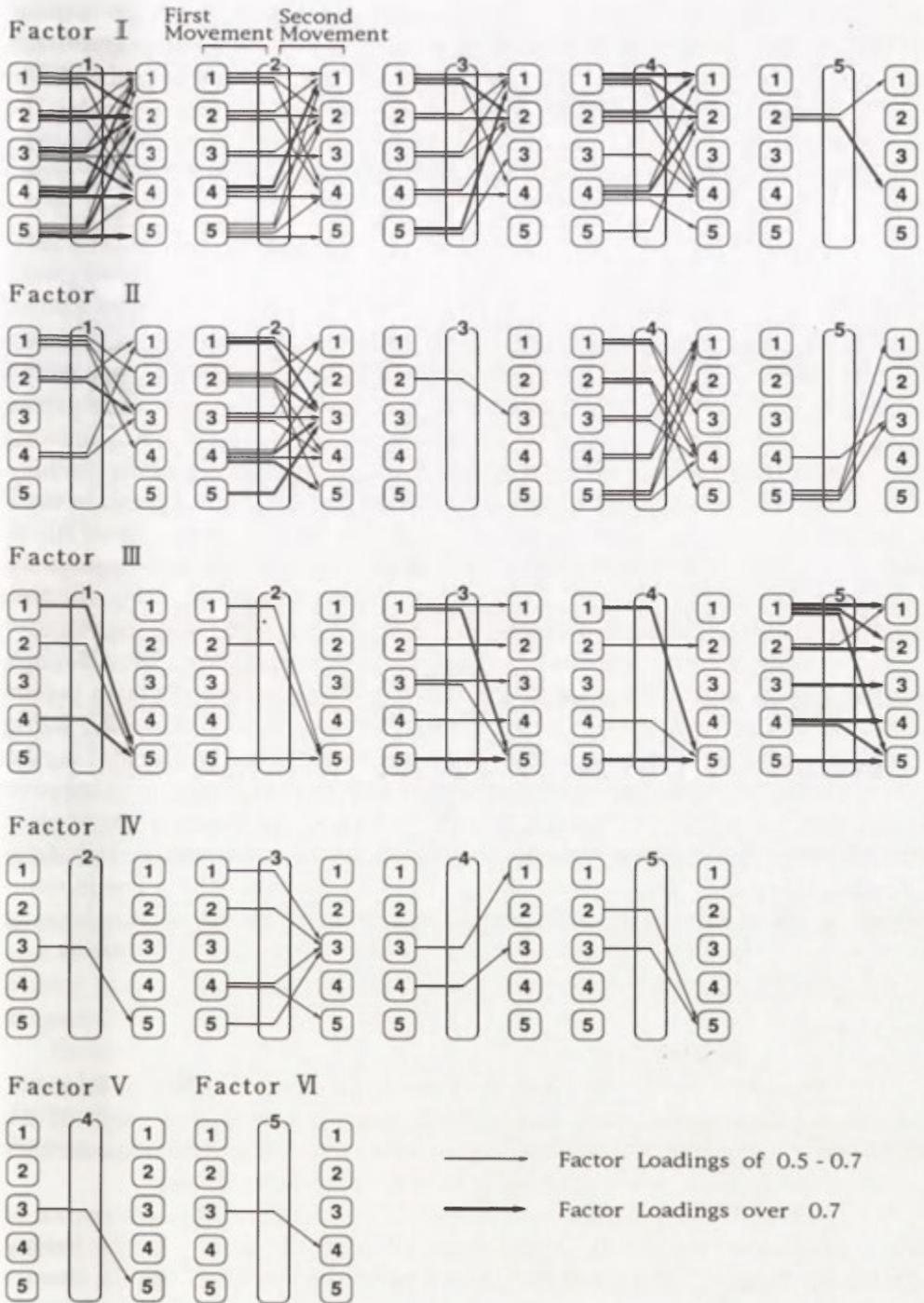


Fig. 7. Factor loading patterns
 Note: Factor loadings over 0.5 are shown

theless, the likelihood that the second movement is necessary to life cycle changes is rather low, since the movement is small-scale migration within one urban area. We consider, therefore, the movement as an effort to improve place utility. Finally, because the factor scores for females are higher than those for males, the second movement may be effected by female marriage or preparation for marriage. In factor I, there is very little movement through Region 5 (farming areas) to other regions.

FACTOR II

In comparison with Factor I, the variance of Factor II is very low, accounting for only 6.65% of the total. According to Table 3, the average stationary period is about five years longer than that of Factor I. Moreover, the age group pair in Factor II, being a combination of age groups from 20–24 to 35–39, is somewhat older than that in Factor I. In the scores of Factor II, female values are strongly biased toward the young age group pair of 20–24 and 25–29 in contrast to male values, which not only contain such young pairs but also the older pair of 30–34 and 35–39. These male-female differences in the score distribution of age group pairs correspond well to those in the age distribution of marriage in Japan⁴. This indicates that either the first or second movement is connected with marriage.

Figure 7 shows that there is a very conspicuous pattern of migration through Region 2 to the outlying Region 3. This reflects the migration of young people into a rapidly growing peripheral area of mostly single-family homes after living some time near the city center. Although there are various reasons for making the first of such movements, the second possibly results from marriage, or to improve place utility in response to childbirth or both. As a result, the improvement of place utility is believed to involve mostly housing, especially the acquisition of single-family homes. Movement chains going through Region 3 are distinctively few in number. Since this region is experiencing rapidly increasing population and new housing construction, it is not a temporary housing area but a permanent destination.

FACTOR III

The variance of Factor III at 3.64%, is somewhat lower than that of Factor II. As Table 3 clearly illustrates, this factor represents a migration chain of the 65-and-over age group. Furthermore, considering the different life expectancies of males and females, women naturally have a higher factor score.

The most distinguishing characteristic of factor loadings is the emergence of migration patterns of elderly people from all parts of the city to the mostly agricultural Region 5 or back to their hometowns (see Fig. 7). Given the charac-

⁴ The average age of marriage in Japan in 1988 was 29.7 for males and 26.8 for females.

teristics of Region 5 and the movers in this age group, we can assume that the first movement is very likely made after retirement, although it is somewhat difficult to make a judgment concerning the second movement.

FACTOR IV

The variance proportion of Factor IV, at 2.84%, is quite low. Age group pairs with a factor score exceeding 1.0 are clearly divided into two generations; combinations of the youngest groups under 10 years of age and combinations of groups from 25–29 to 40–44 (Table 3). Obviously, Factor IV represents migration of parents accompanied by their children. Moreover, we can conclude that the stationary period is comparatively short. The distribution of these age group pairs shows males with a wider range in the upper levels, suggesting that this factor is the result of household relocation.

Factor loading patterns here are much simpler than those up to and including Factor III; furthermore, there are no migration chains giving a factor loading over 0.7. This pattern indicates that the first movement is directed toward the new housing areas of Region 3, while the second movement tends to be made within Region 3. Consequently, this migration appears to be made by young families who seek to improve their place utility by changing residences. There is apparently the movement back to the urban core (Region 1).

FACTORS V AND VI

The variance proportions of both Factors V and VI, at the 2% level, are quite low. Moreover, since there is only one O–D combination which can be obtained from each factor loading, the two factors will be treated together in this section.

Factor V, like Factor VI, shows migration of parents accompanied by their children, though the factor is dissimilar from Factor IV in that it shows a wider age difference in each pair of age groups, that is, a longer stationary period. Factor loadings greater than 0.5 are found only in the migration chain from Region 3 through 4 to 5.

Factor VI represents migration of young women within a ten-year period; the score for the age group pair of 15–19 and 20–24, at 5.39, is particularly striking. Factor loadings in excess of 0.5 are found only in the migration chain from Region 3 through 5 to 4.

DISCUSSION: LIFE-COURSE PATTERNS

In the previous section, six factors were identified from migration chain patterns within the city of Yokkaichi, then the distinguishing characteristics of

each factor for this migration were investigated. Specifically, from the score and loading of each factor, we could gain an understanding of the migration attributes (movers' age groups, stationary periods, movement routes, and so forth) which in turn allowed us to suggest reasons for relocating. The concentration of movement chain patterns into 6 analyzable factors suggests a strong interrelationship among age, stationary period, route of movement, etc. The matrix was derived from the data of minimum-size migration chains, that is, migration chain units. We must, therefore, not only take the unique patterns of each factor into account, but also understand the various patterns from a holistic standpoint in order to discuss the lifelong chain migration of individuals. Thus, this section will compare and investigate the migration chain patterns of all factors together. It will also attempt to find the typical life course of the residents of Yokkaichi.

Examining the factor loading patterns in Figure 7, we can see that several age groups tend to move along their own peculiar channels. For example, Factor I shows that there is a notable tendency for young people in their late teens and early twenties to migrate from some region through Region 1 to Region 2. According to Factor II, people in their twenties and thirties show a strong inclination to relocate through Region 2 to Region 3. In factor IV, many residents in their late twenties to early forties, after moving into Region 3, relocate within Region 3. These spatial patterns indicate that intra-urban chain migration in Yokkaichi has "spatial directionality". Furthermore, when these spatial chain patterns are exhibited not simultaneously by some age groups but sequentially by one cohort, we can combine the several chains into one long chain. This allows us to derive the following typical migration history:

First, people in their late teens and early twenties move into the central area from all other regions in order to receive higher education or find employment, then move to neighboring regions in an effort to improve their place utility (Factor I). Next, residents in their late twenties and thirties mostly use marriage and/or childbirth as an opportunity to move into new housing areas in the surrounding regions (Factor II). Subsequently, people in their thirties and early forties move with their children within these new housing developments (Factor IV).

As mentioned above, we could find that the spatial directionality appears in chain migration and then, by developing this idea, we expressed our views on the relationship between chain migration patterns and life histories. In addition to these inclinations, the loading patterns of Factors I and III show that "spatial regression" occurs in chain migration within Yokkaichi. In other words, even if young people in their late teens and twenties move to Region 1, they return to their original residences (Factor I); while people aged 65 and over eventually return to their hometowns, even if they first spend some time in Region 5 (Factor III). Such spatial regression suggests that many migration routes of young and elderly people, before turning to their origins, converge on the central area and outlying agricultural areas, respectively.

CONCLUSION

This study has attempted to confirm spatial chain patterns of intra-urban migration corresponding to the life cycle changes of residents, i.e., the spatial regulation of migration chains within a city. To achieve this objective, the industrial city of Yokkaichi, which offered 15-year data on the intra-urban movements of all residents which could be understood at the non-aggregate level, was selected as the study area, and the track of individual chain migration of numerous residents was quantitatively analyzed.

This study integrated the several channels of migration having spatial directionality into the following typical migration chain: First, young people in their late teens and early twenties move into the city center from all other regions to receive higher education or secure employment, then move into adjacent areas to improve their place utility. Next, in their late twenties and thirties, they move from the adjacent areas into new housing developments, mainly as a result of marriage and/or childbirth. Thereafter, as adults in their thirties and early forties, they relocate with their children within these housing developments.

This study was also able to verify a trend toward spatial regression in the above mentioned migration chain patterns, in which young and elderly movers tend to return to their original residences after staying in the central area and outlying agricultural areas, respectively.

From the above results, we can see that two of the distinguishing features of chain patterns for migration within the city of Yokkaichi are spatial directionality and spatial regression. Moreover, we know that these two tendencies manifest themselves in their own peculiar age group pairs and O-D combinations. This study has discussed the reasons behind the appearance of these distinguishing migration characteristics chiefly in terms of place utility and changes in social status; however, since no data were available from movers concerning their incentives to relocate, part of the discussion has admittedly been based on conjecture. Therefore, in order to conduct a more thorough discussion of the spatial regularity of migration chains, we should obtain migration data which include movers' incentives at the non-aggregate level, and develop methods for quantitatively analyzing these migration data.

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THE CHANGING CONTEXT OF RACIAL SEGREGATION: AN EXAMINATION IN METROPOLITAN DETROIT

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ABSTRACT: The study of racial segregation has long been an important theme in urban geography, encompassing a broad range of topics, from static racial patterns to the emphasis on race as a political and social construction. The present study takes a broader approach, focusing upon the changing contexts (national and metropolitan) within which a city's urban racial patterns evolve. More specifically, this paper (a) raises some questions concerning the nature and assumptions of some of the segregation literature, (b) looks at the changing racial patterns of one city, Detroit, in terms of their social and historical context, and (c) considers some of the social implications of the contemporary spatial pattern of race within the metropolis. The postwar spatial pattern of Detroit's black population can be divided into four distinct periods, described as (a) spatial confinement, (b) spatial release, (c) spatial stability, and (d) spatial diversity. The racial pattern in each period is placed in its local and national context, and related to broader contemporary socioeconomic processes and problems which are molding the metropolitan landscape. In the 1990s, these problems are quite different, but no less severe than in the past, and might well include a spatial division within the metropolitan black community itself.

KEY WORDS: national/political context, socio/economic context, power relationships, polarization, spatial separation.

Racial segregation has long been an important topic in urban geography. Traditionally, geographers have accepted race as a given, documenting its existence, and its relationship to a wide range of societal phenomena. The focus has been upon measuring and mapping residential segregation, showing how this phenomenon has restricted the access of colored people to a wide range of urban services and amenities (Clark 1986). More recently, there has been a change in thought and approach, toward a greater concern with the "meaning" of race, and the complex system racial ideologies (Smith 1989). The present paper does not attempt explicitly to contribute to this recent dialogue. Rather, it has a more traditional focus, using residential segregation as a point of departure. The paper takes a broad approach, emphasizing the *context* within which different forms and patterns of segregation take place, and how that context (and the related forms of segregation), changes through time.

The study focuses upon Detroit, which consistently ranks as one of the most segregated metropolises in the nation, and where statistics on racial issues tend to be extreme. The paper looks at the historical and spatial contexts within which

Detroit segregation patterns have evolved. Specifically the paper (a) considers some recurring questions related to geographic studies of segregation, (b) traces the pattern of Detroit's black population through several distinctive periods of recent history, and (c) places these periods in a national, metropolitan and local context, suggesting the dominant social implications associated with each respective context.

SOME RECURRENT QUESTIONS

The term segregation has been utilized in many ways, from describing racial spatial patterns to attributing the term with deeper meaning (racism, prejudice, racial ideology). There is little wonder that geographic studies of segregation have raised controversy, uncertainties, and unanswered questions. A few are raised here, which (a) appear to be recurrent through the literature and (b) are relevant to the present paper.

A most relevant question today might be phrased as "What are you measuring?" In the United States, where most social statistics are collected with a designation of race, study after study emphasizes the negative socio-economic status of the nation's black population, whether it be income, unemployment, educational attainment, homicide rates, or single-parent households. These inequalities raise a problem when segregation patterns are being interpreted. What do these patterns describe – race or class? Wilson's (1980) thesis that the continuing disadvantage of blacks is less a reflection of direct racism than of the legacy of the black historical experience in the United States, has been and continues to be widely debated and criticized (Fainstein 1986; Creigs and Stanbeck 1986). The question takes on crucial importance because it determines the direction of public policy. It underlies the debate on Affirmative Action, which recently has become an issue at the congressional and presidential level.

Among the most controversial questions are those related to causes (of segregation). At one extreme it is argued that segregated areas reflect nothing other than the desire of people with similar backgrounds and common interests to associate with each other. (Whatever happened to the volumes of research on intraurban migration and residential search of the 1960s?) At the other extreme is the argument that segregation results from an inherent prejudice of white people against persons of color (Darden 1989). Variations of these extremes are well represented in American urban geography.

Such questions (concerning causes and interpretations) become subject to historical distortions and exaggeration. Postwar suburbanization in America, for example, was a social revolution brought about by a complex of causes, ranging from unintended government policies to the myth of the "American dream". Race was certainly involved. Time, however, perhaps influenced by general accept-

ance and usage of the term “white flight”, has given the racial dimension an importance which probably is out of proportion. In Detroit, virtually every contemporary description of white outmigration (and with it population decline) emphasizes, and indeed attributes it to, the 1967 race riots. Yet, outmigration (and population decline) was well underway before the riots. Indeed, there is good reason to suggest that the riots were a result of, rather than a cause of, the suburbanization process.

Another set of questions concerns the ways in which segregation is manifested. Do stable sharply-defined racial boundaries represent the same phenomenon as white flight and racial transition? In Detroit there has been a different experience between the East side, where closely-knit working-class ethnic neighborhoods have maintained their identity and resisted racial change, and the Northwest side, where less cohesive and more mobile residents have moved out, inaugurating a rapid process of racial transition. An extension of these differences is noted to-day in the suburbs, as Easterly suburbs exhibit more sharply-defined racial boundaries than Northwesterly suburbs, where recent black suburbanization is taking place. Do these divergent manifestations tell us anything about the nature of racial segregation? Is the East side more or less segregated than the West side? And which one of the two manifestations of segregation is more indicative of racial prejudice?

A related question concerns the “exposure factor”. Studies of segregation tend to focus upon the racial dividing line or transitions zone. Racial friction undoubtedly recedes with distance from the ghetto edge. But distance has another effect. It frequently leads to isolation and ignorance. Ignorance in turn leads to misunderstanding, which effects social attitudes and actions. Mistrust of whites probably is greatest in the heart of the black inner city, where contact with whites is limited. White ignorance of and prejudice against blacks is greatest, not in the central city nor inner suburbs, but in distant exurban areas, where contact with blacks is virtually non-existent. If racial segregation and separation can be attributed to prejudice, the opposite is also true. Prejudice itself can be a consequence of segregation and increasing separation. Inevitably, such a situation becomes self-perpetuating.

Finally, questions might be raised concerning the generality of racial segregation. Is there a single uniform process?.. *the black ghetto, white flight, the transition process*. Granting that there are indeed universals, there are significant variations in space and through time. Frey and Farley (1993), in an encompassing national study of recent data, point out important regional variations. Recent declines in segregation, they find, are related to (1) region, (2) economic base of the metropolis, (3) age of metropolis, (4) “secondary” immigration of blacks (e.g. corporate job shifts), (5) amount of recent residential construction, (6) percentage of black population, (6) black per capita income. Acknowledging some redundancy in these measures, they suggest the variation to be significant in predicting future trends.

Variation and change also underly the present paper. The theme is straightforward, namely that the patterns, manifestations, and the very nature of racial segregation vary through time and space. The paper focuses upon the changing contexts within which racial segregation has evolved in one metropolitan area. It does not explicitly address the questions which have been discussed. But they are implicit in what follows.

CHANGING CONTEXTS OF SEGREGATION IN METROPOLITAN DETROIT

Metropolitan Detroit, with a total population of 4 1/2 million, ranks consistently as one of North America's most segregated metropolises. The city of Detroit, with one million people, has a higher percentage of blacks (76 percent) than all but one major U. S. city. In the adjoining three-county area (not counting Detroit) that percentage is eight percent. In several larger Detroit suburbs, the proportion of blacks is less than one percent. Clearly Detroit is an arena where racial segregation patterns are striking and visible (Fig. 1).

Although Detroit has had black residents almost since its founding, and although the numbers of blacks increased greatly with the growth of the automobile industry in the early decades of this century, the present analysis begins in the early 1940s, when the labor demands of wartime production brought a massive

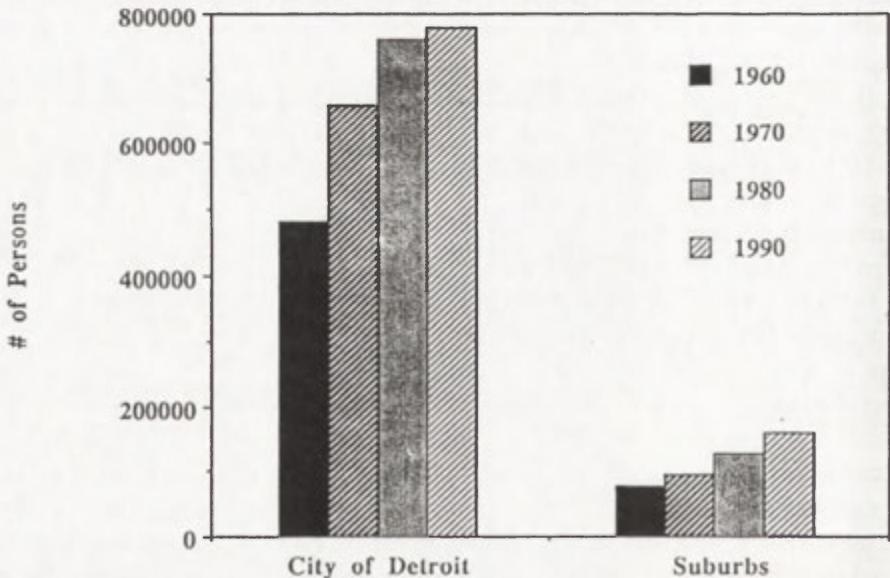


Fig. 1. African American population 1960–1990 City of Detroit and Detroit Suburbs

influx of Southern blacks to the city. A major spatial transformation of black residents took place with the postwar suburbanization movement of the 1950s. A significant turning point for Detroit's black population was reached in the early 1970s, as Detroit became a predominantly black city, with a black administration. Finally, there was a noted change in the condition of Detroit's black population during the late 1980s, as the metropolitan economy adjusted to the postindustrial age. These transformation and turning points provide the framework for this paper, which looks at the context of racial segregation during four periods, defined here spatially as (1) Confinement (1940–55), Expansion (1955–70), (3) Stability (1970–85), and Diversity (1985–2000) (Tab. 1).

RELEVANT BACKGROUND

Detroit had a black population almost from the time of its founding as a French Fort in 1701, when a few slaves were brought by marauding bands of Pro-French Indians from English plantations in the South. (Anderson 1969). In the 19th Century, Detroit was an important terminal on the Underground Railway, attracting Negroes seeking freedom and prosperity. It was not until the 20th Century, however, that blacks migrated in large numbers from the South, attracted by the lure of high wages in the automobile industry, coupled with a decline in immigration from the traditional source of unskilled labor, namely Eastern and Southern Europe. Although the racial dynamics of this early period will not be covered here, the spatial legacy should be noted. A distinctive Negro ghetto formed in a restricted area on the near east side of Detroit's inner city. (Fig. 2). This area became the anchor of later ghetto expansion, not to mention a source of nostalgia ("Paradise Valley", "Black Bottom") for succeeding generations of Detroit's blacks. However, even at this early period, there were pockets of black population in several isolated suburbs (Inkster, Mt. Clemens, Pontiac, and River Rouge), where blacks filled the specific labor needs of local factories or foundries.

WORLD WAR II AND ITS AFTERMATH (1940–55)

The situation changed dramatically in the wartime years of the early 1940s. Detroit was a major recipient of the massive migration of Southern rural blacks, which transformed the society of America's northern industrial cities. Between 1940 and 1950, Detroit's black population more than doubled and the black percentage of the city's total population increased from nine to sixteen percent. The incoming black population found jobs, many of them high-paying jobs, in the city's booming wartime industries. For the most part, those jobs were close-by, in the city or adjacent suburbs, and highly accessible by the city's excellent public transportation system.

Table 1. The changing context of segregation

	Wartime Growth 1940–1955	Postwar Expansion 1955–1970	Consolidation 1970–1985	Current Change 1985–2000
<i>National Context</i>				
Economy	Industrial	Industrial	De-industrialization	Post-industrial (Restructuring)
Migration	Massive Black Migration to North	Slowing of Black Migration	Cessation of Black Migration	Sling Reverse Migration
Legislation		School Busing	Fair Housing Legis- lation	Affirmative Action
<i>Metropolitan Context</i> (Demographics)	<i>Urbanization</i>	<i>Suburbanization</i>	<i>Extended Suburbani- zation</i>	<i>Exurbanization</i>
Metropolitan	Rapid Growth	Rapid Growth	Slow Growth	Slow Growth
Central City	Rapid Growth	Decline	Decline	Slight Decline
Suburbs – Outer City	Growth	Rapid Growth	Rapid Growth	Growth
<i>Racial Dynamics</i> (Central City)	<i>White Majority</i>	<i>Racial Transition</i>	<i>Black Majority</i>	<i>Black Majority</i>
Spatial Dynamics	Confinement Conge- sted Ghettos	Ghetto Expansion Block Busting, Ra- cial Steering	Continued Expan- sion of Black Popu- lation	Relative Stability
Associated Events	Wartime Housing Shortages	Urban Renewal Fre- eway Construction	Residential Blight and Abandonment	Residential Blight
Housing Practi- ces	Housing Discrimina- tion (Overt) Rescricted Cove- nants	Housing Discrimination (Co- vert) Redlining	Minimal Housing Discrimination	Minimal Housing Discrimination
Power Relation- ships	White Control of lar- gely White City	White Control of lar- gely Black City	Black Control of Black City	Black Political Con- trol
Race Relations	Racial Violence Riots	Racial Friction Riots	Racial Friction	Racial Stability
<i>Socio-Economic</i> <i>Conditions</i> (Black Population)				
Income/Class	Poor Low/Middle Income	Poor Low/Middle In- come	Poor Low/Middle Income Middle Class	Poor Middle Class Polarization
Prevailing So- cial Problems	Housing Exploitation Racial Conflict	Exploitation Racial Conflict	Unemployment Social/Infrastructural Deterioration	Unemployment Spatial Job Mismatch Social/Infrastructur Deterioation Underclass
<i>Segregation Types</i>				
Race	Inter-Race	Inter-Race	Inter-Race Within Race	Inter-Race Within Race
Location	Within City	Within City	City-Suburban	City-Suburban Within Suburbs

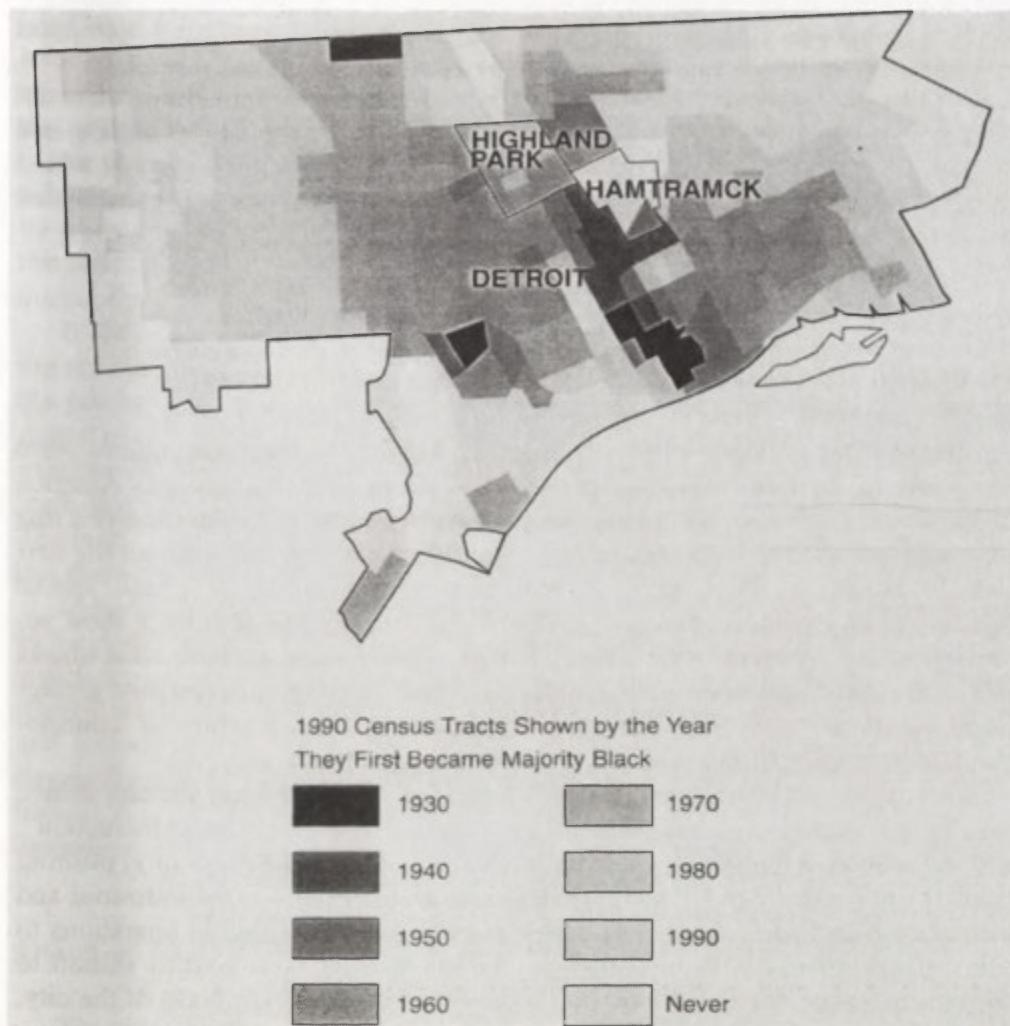


Fig. 2. Growth in Majority Black Areas, 1930 to 1990: Detroit, Hamtramck and Highland Park

What the black population did not find was housing, as residential construction virtually ceased during the war years. A housing shortage existed, for whites as well as blacks. Moreover, housing discrimination was still legal and widely practiced, so that blacks were excluded from what housing was available. The explosive growth of Detroit's black population was largely confined to existing black neighborhoods, which were overcrowded, congested, and often offered appalling housing conditions. Essentially, these were in the same restricted ghetto of the 1930, which housed blacks of all incomes, including those earning high wages in the booming factories. The tense situation was intensified by the repressive attitude of a largely white police department. Inevitably, this "confine-

ment” of the black population led to racial friction, which reached a high point the race riots of 1943.

In sum, a complex of national and local processes led to a form of racial segregation which can best be characterized as confinement. Overcrowding and congestion was the norm, in a ghetto which housed a Negro population of mixed classes and incomes. Hostility and discrimination between races was exacerbated by competition for housing space in a tight housing market.

POSTWAR EXPANSION (1955–1970)

A transformation took place in the 1950s, as racial segregation patterns were impacted by the suburbanization movement that engulfed metropolitan America (Sinclair 1972). The scale of suburban outmigration in Detroit soon exceeded that of immigration from the South, so that the city’s population declined for the first time in its history. More pertinent here, this process brought a virtual “spatial release” of the black community. After facing one of the country’s most restricted housing markets throughout the 1940s, middle and working class blacks in Detroit were presented with living space and housing opportunities greater than in any other city in the country. The “ghetto” changed from one of ‘confinement’ to one of “expansion”.

The expansion was exacerbated by a number of other social developments. This was a period of misguided “urban renewal” and “freeway construction”, which eliminated housing (an estimated 38,000 units) in the inner city, pushing residents into other parts of the city. It was also a period of rapid industrial and commercial decline in the city, as the automobile industry shifted operations to a set of suburban industrial corridors, and as commercial activities sifted to newly emerging suburban malls. As blacks incorporated larger areas of the city, the city’s economic base was eroded.

The spread of black population was rapid. During the period under discussion from 5,000 to 7,000 Detroit households changed from white to black every year. Spatially, the change was one of contiguous expansion rather than integration. The expansion was associated with the well-documented manipulation of an unscrupulous real estate industry, and misguided and misused mortgage policies of Federal Housing Departments. (Sinclair and Thompson 1977). It gave rise to a new vocabulary in the social sciences, such as “tipping point”, “racial steering”, “blockbusting” and “blight by announcement”. From the standpoint of racial segregation, the process had two significant results. First, Detroit’s black population spread through ever larger areas of the city, with a corresponding decline in population density. Secondly, the devastating physical and social legacy of the process of racial change brought a decline in the quality of many of the neighborhoods which underwent the transition process.

The change in Detroit's racial make-up in the postwar period was not paralleled by changes in the city's administrative structure. Decision making remained in the hands of a white administration, living in outlying middle class residential districts of the city. The police force remained largely white. A large proportion of the city's professionals was white, commonly commuting to their jobs from suburban residences. A city which was rapidly becoming black was "controlled" by white decision makers. This situation was directly related to the 1967 race riot, the most severe of the racial disturbances which occurred in American cities during the late 1960s.

It should be emphasized that these developments took place in a period of unprecedented prosperity. Well paid jobs were available to blacks, even though the job base was shifting to suburban industrial corridors. Black workers commuted outward to those jobs. In time, this outcommuting became more difficult, as industries moved further from the city, public transportation systems deteriorated, and the information network about the job market receded from the city. The term "spatial job mismatch" was not part of the jargon of the postwar period, but there was an early warning of things to come.

In summary, the context of racial segregation in Detroit changed dramatically in the post war period, in keeping with a series of revolutionary spatial processes which transformed metropolitan America. The problems of Detroit's black community were no longer a matter of space and housing. They were more complex, and including (a) the continuing frustration of white external control, (b) the devastating physical legacy of urban renewal, freeway construction and the racial transition process, and (c) the abandonment of the city by its taxpaying and job providing constituents.

SPATIAL CONSOLIDATION AND STABILITY (1970–1985)

The context of racial segregation in Detroit changed again during the 1970s and early 1980s. White suburbanization and black ghetto expansion continued, but the momentum slowed as the former process ran its course, and as black population growth began to stabilize. The major demographic fact was a continued rapid decline in the city's total population.

The nature of segregation in this period was influenced more by three other interrelated developments. These are (1) a reversal in political roles, as black political control replaced white control within the city, (2) a changing economic situation, as the process of de-industrialization impacted the automobile industry, and (3) the changing fortunes of a political dynasty.

The change from white to black political control was rapid. The election of the city's first black mayor in 1973 placed political power solidly in black hands. Administrative appointments, city contracts, multilevel city jobs, and most significantly, executive positions and jobs in the police department came into the

hands of blacks in a remarkably short time. This brought an expansion in the ranks of the city's black middle class. There was a restoration of black pride within the city.

The assumption of black power, however, was paralleled by a change in the economic fortunes of the metropolitan area. The Detroit economy was doubly impacted by the forces of de-industrialization (Detroit was solidly within the "rust belt"), and by the particular problems of the automobile industry. The black population suffered in two ways. Manufacturing jobs in the industrial suburbs were greatly reduced, and blacks were handicapped by distance in obtaining or keeping those that were available. Secondly, there was a continued depletion of the city's own businesses, as time-honored Detroit institutions closed down or moved to other locations.

The Coleman Young "era" in Detroit's history has been the subject of books, political analyses, and much controversy (Rich 1989). It is pertinent here to focus upon four aspects. (1) The early years of the Young administration were years of pride among the black population and optimism within the city. With the sympathetic ears of the Carter administration, Detroit received large quantities of federal funds. This was also a period of city-corporate "partnerships", formed to stimulate the city's economy. The term "renaissance city" was born, expressed most vividly in the river front Renaissance Center which was to anchor the "new downtown". (2) The optimism of the early years eroded with the economic crisis of the 1970s, and more abruptly with a change in administration in Washington. Detroit ceased to be a favored recipient of federal aid. (3) The development policies of the Young administration, which emphasized the construction of costly, impressive building projects. As funds were diminished, resources were diverted to those projects from neighborhoods and from basic city services, until Detroit became nationally known for its blighted neighborhoods, abandoned spaces, and poor services. The city became fiscally bankrupt, and imposed the highest local taxes (income and property) of any city in the nation. (4) Finally, the increasingly confrontational attitude of the mayor himself had negative effects. As the city's fortunes declined, the mayor indiscriminately blamed "white racism", alienating colleagues, suburbanites, and important allies in the state government.

In summary, during the period of the 1970s and early 1980s the nature of segregation in metropolitan Detroit changed in important ways. The city's black middle class expanded greatly, and improved its economic and social condition, as blacks took over the city's administration and much of the city's professional life. The condition of the city's black poor worsened as the economy declined and many basic services disappeared. Deteriorating services and high taxes persuaded more residents, white and increasingly black, to leave the city. Lastly, political antagonism between the city and the remainder of the metropolitan population increased. In many respects, racial segregation changed from an intra-city phenomenon, to a city-suburban one.

SPATIAL DIVERSITY 1985–1995

Although many aspects of the previous period remained through the early 1980s (including the continued presence of the Young administration), the nature and problems of racial segregation in metropolitan Detroit were impacted by a set of new developments.

Metropolitan Detroit participated in the restructuring process which has transformed the national and global economy. Following the de-industrialization of the 1970s, the regional economy changed from a heavy emphasis on blue-collar factory goods production, to more of a postindustrial one, mixing industry with research and technology, advanced business services, administration, financial and professional services. As this took place, the region's economic center of gravity shifted from the nearby industrial suburbs to a crescent of growth suburbs stretching far into the hinterland of the region's northern and western counties (Sinclair 1994). Concomitantly jobs, both high income and low income, moved farther away from the central city. Upper income blacks were more able to accommodate to the new situation, either by moving to suburban residences, or by long commutes. For the low income blacks, the available service jobs became difficult, and often impossible, to reach. The spatial mismatch in service jobs was immense (McLain 1994).

Racial problems were also influenced by the increasing presence of new immigrants. Detroit was not greatly affected by the influx of Asian and Hispanic immigrants, which have engulfed many American Western and Coastal cities. However, recent immigration to the city has been substantial, particularly from the Middle East and from Eastern Europe. The impact upon racial patterns is twofold. First, non-black ethnic enclaves within Detroit have been consolidated and expanded, diversifying to some degree the city's ethnic pattern. Secondly, foreign immigrants have taken over much of the retail and wholesale business in the city, restricting the number of retail service opportunities available to blacks.

The most widely-discussed event of this period, with implications for the future course of racial segregation in Detroit, is a new administration (in 1994), promising a significant change in policies, style and attitudes. The administration has replaced secrecy with openness, confrontation with accommodation, and distrust with dialogue with respect to the suburbs. Moreover, renewed dialogue has taken place with Washington, expressed in a tangible way by Detroit's success in obtaining federal funding under Empowerment Zone legislation. It is too early to assess the impact of this new administration upon the course of racial segregation in Detroit.

The above developments changed the course of racial segregation in Detroit in important ways. The most striking is the worsening condition of the black poor. Today an estimated forty percent of Detroit's population is below the federally-defined poverty line, with the economic, social, and psychological deprivations of this condition. This population is increasingly isolated, socially and spatially, from the remainder of the metropolitan society.

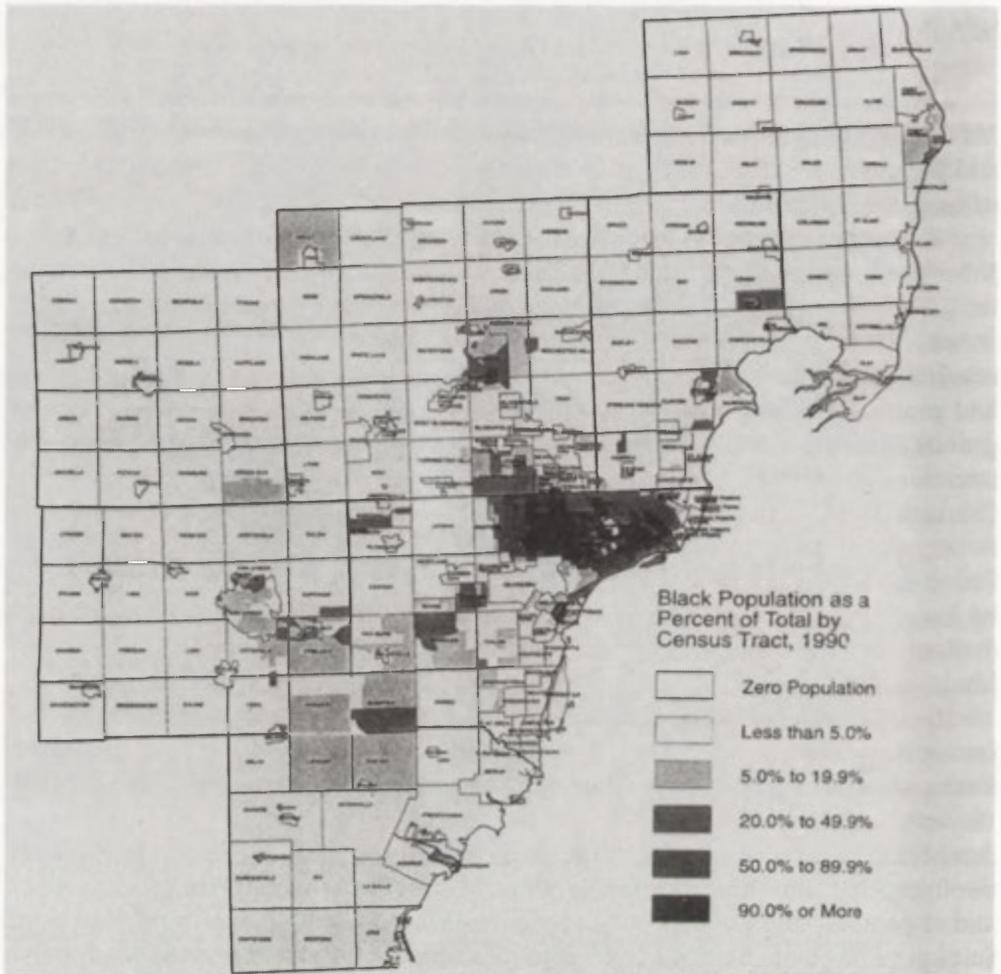


Fig. 3. Metropolitan Detroit. Percent black population, 1990 (By Consus Track)

Another development is the expansion of the black middle class, as well as an upgrading in the conditions of this class. This reflects the continued occupation by blacks of civic, professional, and educational occupations within the city, but also the increased numbers of educated blacks entering the higher-level positions of the postindustrial economy.

A third development is the increasing number of blacks living in suburbs (Fig. 3). Many blacks are moving into adjacent suburbs in Oakland County, contributing to what some have called the "spillover" effect. A smaller number have moved to predominantly white suburbs, generally in the more affluent areas. Moreover, an increasing number of blacks are moving directly from other parts of the country into administrative and executive positions. Many of these newcomers move directly into prestigious white suburbs, where class and professional affiliation, rather than race, are the important location factors.

But the most significant development is the growing cleavage between the black middle class and the black poor. Middle income blacks, in the city and in suburbs, are removed socially and spatially from low income blacks, who increasingly comprise the area's underclass. There is little indication and little reason (Hacker 1992) that the cleavage between low income and middle class blacks is any less than between them (low income blacks) and middle income whites. Polarization, a characteristic of today's urban society, is a fact within the black community. On a broad scale, it raises the question as to what is being referred to in the term "two societies". More pertinent here, it complicates the analysis of racial segregation in metropolitan Detroit.

The developments described above suggest one other development which might be the most significant fact in the future of racial segregation. This is the growing spatial distance between new residential developments and the central city. A suburban (exurban) society is developing which finds its jobs, social life, and life-style in distant parts of suburbia which are separated by sheer distance from both the central cities and older suburbs. Whether upper and middle income blacks become part of that society remains to be seen. What is clear is that this society is isolated from and ignorant about the remainder of the metropolitan area, particularly of its black population.

CONCLUSION

This paper has examined the nature and patterns of racial segregation in Detroit over the postwar period. The central fact, namely the presence of segregation and its destructive consequences, has not changed. What is emphasized is that the nature of segregation, its manifestations, and its overriding problems, change according to the context of the time. Segregation in Detroit today is quite different from what it was even a short time ago.

In the mid-1990s, 21 percent of metropolitan Detroit's population is black. Eighty percent of the region's black population live in the city of Detroit, which has only 25 per cent of the region's total population. But the character of black residential areas varies greatly. Within the city of Detroit there is a class segregation between a growing black underclass, concentrated largely in the central areas of the city, and the black middle class. A significant proportion of those middle income blacks live in integrated neighborhoods along with the city's middle class white population. But black occupancy is not contiguous throughout the city. There are areas of lower income white residence in several parts of the city. These are generally older East European ethnic areas, which maintained their identity through the racial transition period of the postwar years, and are now being rejuvenated by new immigrants. Southwest Detroit, originally a working class neighborhood of Hungarian and Polish residents, is now Detroit's major Hispanic neighborhood. Hamtramck, long the symbol of Detroit's Polish and

Ukrainian population, is now the focus of new immigrants from the Balkans. The proportion of blacks in those areas has recently decreased.

Black residential areas in the suburbs also vary significantly. Working class black neighborhoods in industrial suburbs like Pontiac and River Rouge, as well as unique black suburbs like Inkster and New Haven, have existed through much of the century. "Black suburbanization" normally refers to the more recent movement of middle class blacks into suburbs contiguous to Detroit, such as Southfield and Oak Park. Whether such suburbs are being integrated or segregated spatially is still open to question. Finally higher income blacks, often new arrivals from other parts of the country, are increasingly moving to some of the area's more prestigious suburbs. It is not easy to generalize about the nature of racial segregation in Detroit.

Two overwhelming problems are derived from the above patterns. One is the growth of the black underclass. This population is isolated, socially and spatially from the rest of society, including the black middle class, and the cleavage is increasing. The second problem is the sheer distance between new metropolitan residential developments and the remainder of the city. In time, this distance breeds ignorance, which is often the source of social attitudes. Racial misunderstanding in metropolitan Detroit is greatest, not at the edges of segregated areas, but in areas far remote from the black population.

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PLANNED SEGREGATION: CAPE TOWN AND BRASILIA

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ABSTRACT: The paper examines the role of architects, urban geographers and planners in urban planning and city management. We stress that those are political acts. Therefore, there are no longer technically correct judgements but only political decisions. Hence, the paper assesses the negative examples of urban conception, through the case study of two towns in the Southern Hemisphere, in order to enhance the importance of technicians in the processes of devising new cities or managing preexisting urban spaces. The paper concludes that urban technicians should be capable of reconciling the *superordinates'* dream cities with the *subordinates* realities and economic constraints.

KEY WORDS: urban planning, segregation, races, social strata.

INTRODUCTION

In an urbanized society, face-to-face contact between people of different cultural, economic and racial status is inevitable by the very nature of the economy. And yet, some cities have suffered legally enforced segregation devised to "protect", on a personal and group level, the "superordinates" from their "subordinates" (Western 1981).

Segregation is a mechanism through which superordinates appropriate some exclusive domain over a more or less desirable territory in order to maintain social distance and hence retain higher status than their subordinates.

The allocation of segregated, remote and badly equipped land to the poorer, to the culturally and socially inferior layers of society, the named "subordinates", has been a natural process in many developing countries. It has been a natural process in some developed countries too. The critical question confronting the urban planner, the architect, and the urban geographer is whether that segregation should be morally and culturally accepted when conducted through legislation, or whether debate on the acceptance of institutionalized differences should become a path towards change.

The approach to planning during the post-war period has been based on the concept that the professional planner is a "neutral" adviser to the local authority, and should act as an unbiased referee between competing interests in the control

of land development (Devas 1993). However, there has been an increasing necessity to plan according to the real needs and aspirations of those who have to live in the cities.

This issue becomes increasingly important in a decade dominated by our measurable and often successful influence upon the urbanization policies. However it requires the feedback of past experiences, mostly negative ones, in order to promote conscious behaviour in the task of reshaping urban spaces.

Let us examine what happened in two towns in the Southern Hemisphere. As a case study we selected Cape Town (South Africa), the first European settlement built on the edge of Africa (1652), between two oceans and several cultures: the West-European Dutch and later British mercantile imperialism; the Southern African black tribal cultures; and the Eastern rich and exotic peoples like Indians or Malays. The second example is Brasília, capital of the largest Latin-American country. The city was built about 1,000km from the Atlantic seashore, in a clear attempt to integrate interior regions in one of the fastest growing economies of the post-war years.

APARTHEID CITIES: CAPE TOWN

South African control of the ownership and occupation of property in urban areas arose from white concern for orderliness and security in the face of increasing African urbanization in an era marked by industrial growth (Davenport 1991). However, apartheid did not represent segregation for its own sake. It meant domination of some few over too many. It was a tool by which the increasingly outnumbered White ruling group maintained distance from, and hegemony over, other groups in South African society (Western 1981).

The Afrikaans word¹, apartheid, became, in the late 1940's, the nomenclature for legalized and enforced racial and ethnic discrimination in the fields of job opportunity, political rights and residential segregation (Christopher 1994). The latter was particularly evident in urban areas and generated massive forced population movements.

Cape Town, in a setting justly famed for its beauty, is the mother of South African urbanization processes. Under the *Group Areas Act* the town was remodelled. The rearrangement of space, the reclassifying of small spaces was either radical, as in the former District Six (an old and lively Coloured neighbourhood located downtown whose inhabitants were shifted to new sites and drastically reorganized in the sixties), or gradually accepted, via the creation of ghettos, like the Malay quarters, situated in one of the oldest areas of the city².

¹ Afrikaans is the language spoken by the descendants of the first Dutch settlers.

² Formerly an European District, this area displays some examples of the once dignified flat-roofed town houses of the early nineteenth century (Scott 1955). Under a 1957 Proclamation

The principle of apartheid policies was of White domination over the more favoured residential areas, while the intent to proclaim as much land as possible for the white group was clear in most of the cities. Hence, from the first proclamation onwards (1957) the government devised a highly segregated urban space in the Cape Peninsula (Fig. 1).

Europeans dominated the seashore; they dominated the slopes of Table Mountain, Cape Town's *ex-libris*, thus occupying higher, better drained sites and enjoying the best coastal and mountain views. They dominated the green, fertile valleys surrounding Table Mountain and Devil's Peak, controlling the so-called Southern Suburbs, along the railway to Simon's Town where the Southern False Bay beaches awaited their White customers (Fig. 2).

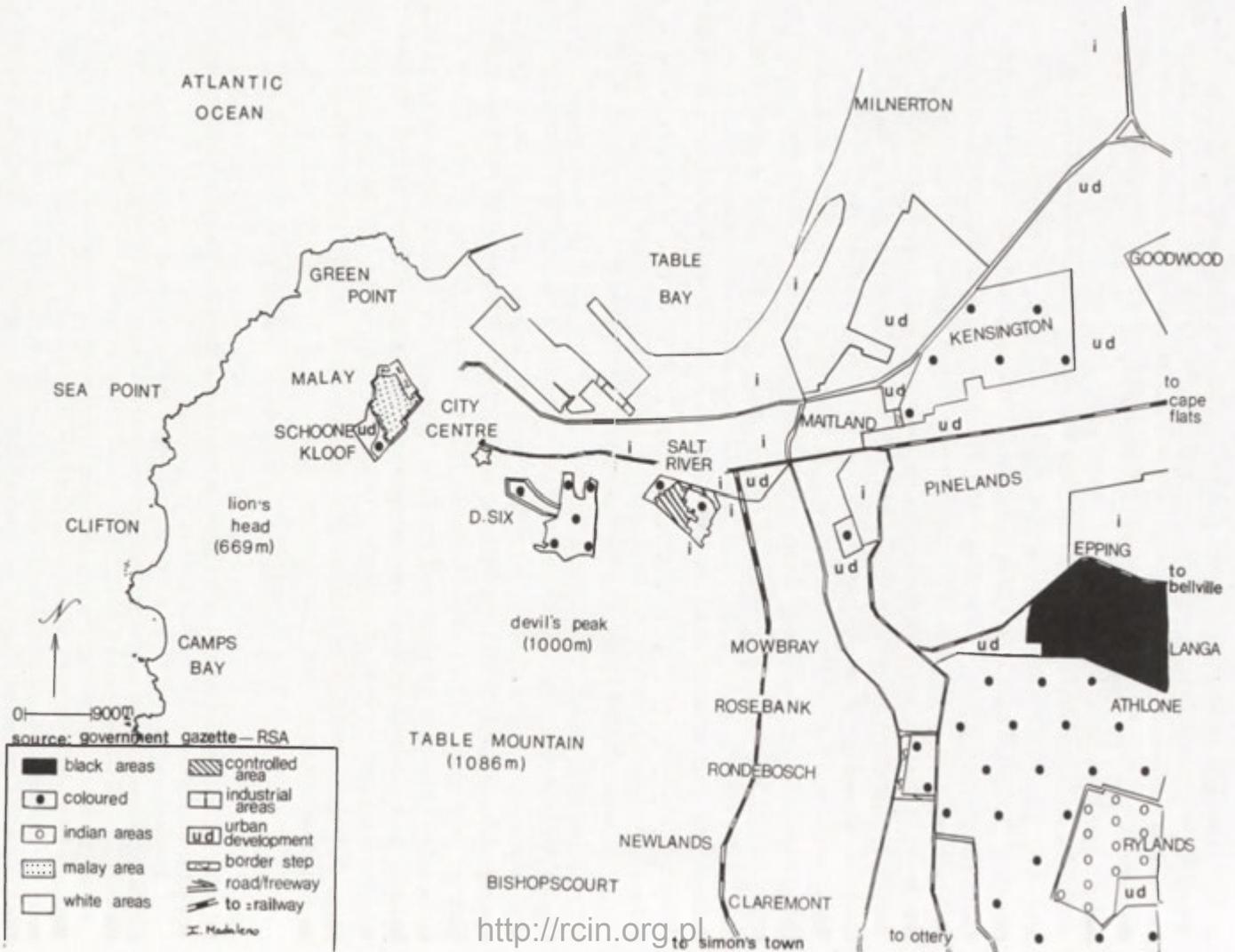
The Coloureds were permitted to settle near Cape Town harbour (Table Bay), in areas of low-grade housing, framing the industrial areas of Salt River and Woodstock, South of Milnerton, or they shared the Eastern tracts of territory with Indians and Blacks. The Black domain was, however, the Cape Flats, the plain, sandy and windy surfaces connecting the peninsula to the mainland. It is located South-East from the centre of Cape Town. These easily controlled areas were deliberately distanced far away from the high-class white residences and left to develop on scrubby and dry lands, such as the black township³ of Langa dating from 1923.

In fact, one should emphasize that most of black townships were established either prior to apartheid or emerged as a result of separate legislation, since the Group Areas Act prevented Blacks from owning land in freehold tenure outside their homelands⁴. "The Group Areas Act for most purposes therefore was only specifically applied to the non-Black population" (Christopher 1994: 105). Strange as it may seem, under apartheid Blacks were even denied the right to citizenship. It was common word between White South Africans that "Blacks belong to the bush". As history Professor D. W. Krüger remarked: "Events which no longer could be changed had made South Africa the common home of races differing so radically from each other that there could be no question of assimilation" (Krüger 1975: 240).

the so-called Schotzkloof Area, was declared the propriety of the Cape Malays, sometimes described as the aristocracy of the Cape Coloured.

³ Townships as defined by Alan Mabin, are "formally planned areas, usually separated by significant distances from the cities and towns in which their residents work and shop, intended by the authorities for African and other black occupation" (Mabin 1991: 45).

⁴ Under British imperial rule, South Africa had "Black reserves". After the Group Areas Act they were first transformed into "Homelands" and, later, into "States". The development of Black states furthermore, attracted away Blacks living in White cities. According to Jill Nattrass, ten Black States had more than 14 million inhabitants in 1985. The most populous was KwaZulu with 4,412,000 and the less populated QwaQwa, totaling 214,000 inhabitants. However the attraction was greater to states where the GNP per capita was more favorable, mainly in gambling States like Bophuthatswana, where the famous Sun City Casino was built (Nattrass 1988).



<http://rcin.org.pl>

Yet, in the twentieth century, expanding industry demanded an ever-increasing supply of cheap black labour. So the Bantu migrated from their reserves to the White industrial areas, creating political and social “problems” for their White superordinates. The seriousness of the situation was revealed when the population statistics of 1951 were published (Krüger 1975). The total population of the Union in the year 2000 was projected as 26 million of which more than 16 million or 62.4 per cent would be Bantu and 6 million or 23.5 per cent White⁵.

The minority complex was one of the reasons why the National Party had won the 1948 elections. “Separate development” of ethnic groups was a synonym for the old Roman “divide et impera” rule⁶. Based on the promotion of consciousness of ethnic differentiation between non-Whites, with the creation of separate Bantu homelands and, later on, states these were clearly devised in the interest of the White government (Western 1981).

Blacks were divided, Whites were united. Blacks were encouraged to remain in their homelands and the ones already living in the cities were given no property and no new settlement buildings. As far as their superordinates were concerned, the Black subordinates were “temporary” workers.

Consequently towns were divided into group areas for the exclusive ownership and occupation of Whites, Malays, Indians and other Coloured groups. Only when black tenants became too numerous, did White concern for security force them to introduce Black sectors. Rarely ghettos, usually sectors, for they should not need to traverse any White residential area when travelling to work. And yet, paradoxically, they were welcomed as domestics in White homes. White South Africans were not prepared to pay the full bill of total apartheid!

The process of Group Areas planning was long and complex, involving the formulation of the municipalities’ proposals, public enquiries, Board recommendations, and ministerial approval. Hence a gap was generated between the publication of the Act and the final diffusion of the Proclamations by the Government Gazette (Christopher 1994).

In matter of fact, South African planners had a particularly difficult task in Cape Town. The pre-existing urban settlement, prior to apartheid laws, was intricate and had historical constraints. In reality the Cape Town White popula-

⁵ In 1991 South Africa had about 31 million inhabitants. The White population only amounted to approximately 16 per cent (5,068,110), thus there had been an underestimation of its growth and an overestimation of the proportion of Whites in the 1951 census.

⁶ In 1994, before the elections which gave the presidency to Nelson Mandela were held, a survey was directed by the University of Cape Town, backed by the World Bank. It showed that the average South African Black household had a monthly income of R1 005 (US\$287) as compared to R6 394 (US\$1 827) for Whites. Moreover, 58.5% of the Blacks earned less than R10 000 (US\$2 857) per year, while only 5.1% of the Whites were in this income category. Simultaneously, 20% of the Whites showed an annual household income of more than R100 000 (US\$28 571), while only 0.2% of Blacks could claim the same. Additionally, the average black spent 54 minutes on a single journey to work, in the Cape area, while the average of the Whites was 24 minutes (Sunday Times 1995).

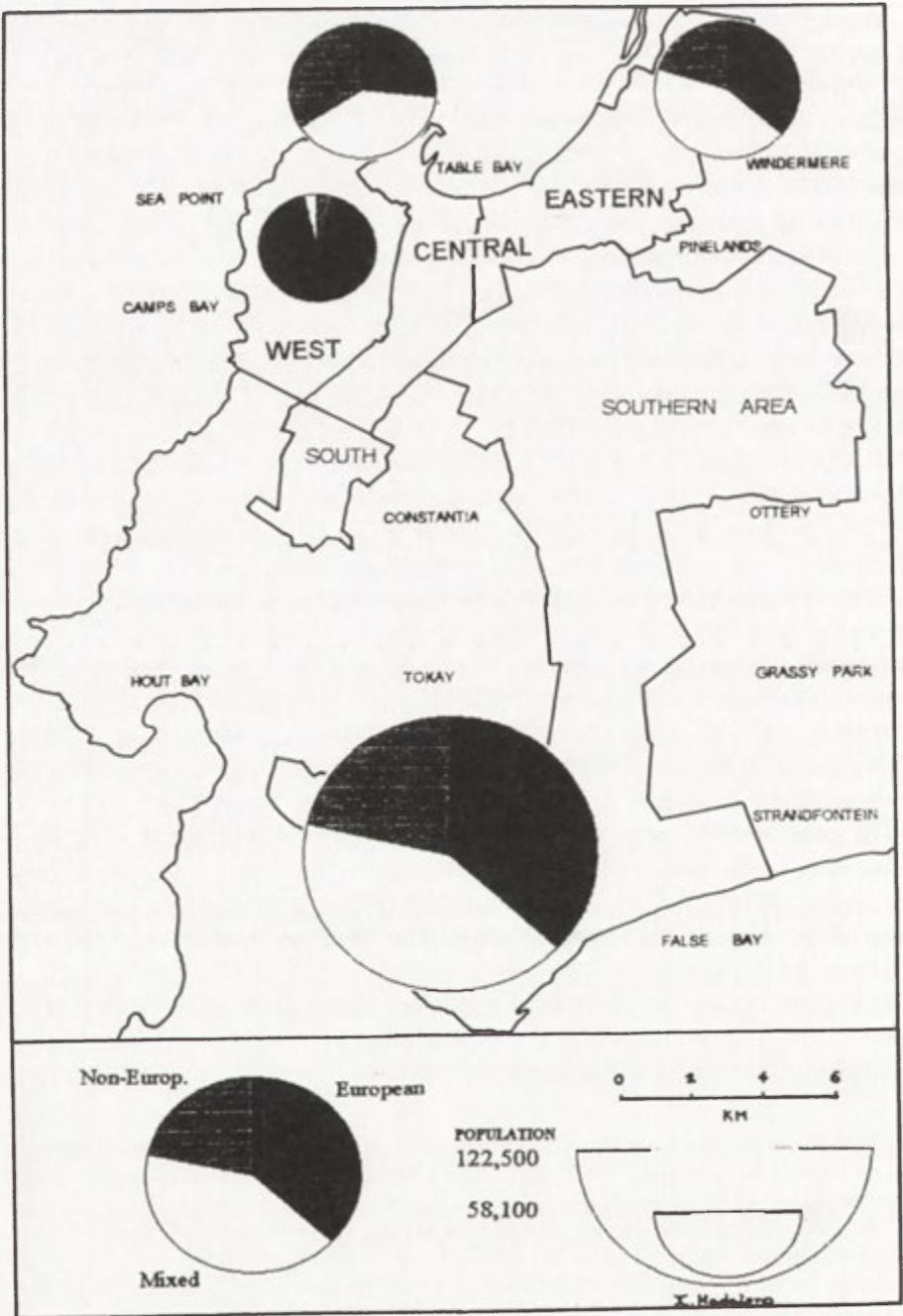


Fig. 2. Percentage distribution of residential areas, Municipality of Cape Town – 1936

tion had always been very liberal as compared to that of other major cities in Republic of South Africa. Mixed residences dominated downtown and in the suburbs. Unlike other South African towns, restrictions to Coloured property ownership were non-existent here.

In 1936, twelve years before the National Party institutionalized apartheid and fourteen years before the Group Areas Act, the municipality of Cape Town had a notable dominance of mixed residences in the Central, Southern and Eastern areas (Fig. 2). Only in the West, at Sea Point, Clifton, Camps Bay did there exist a large percentage of Europeans (92%), living in high-standard houses and apartment blocks, sheltered from the winds by an elongated system of mountains, ranging from Signal Mountain, Lion's Head, Table Mountain to the Twelve Apostles (Batson 1947).

Through Proclamations 190 and 191 this Western area became exclusively White in 1957. The beaches also became exclusively White in 1968. Other areas followed with unacceptable consequences for its not so wealthy residents, who were unable to afford more distant accommodation.

In 1966, the Central District Six (D. Six, Figure 1) was also formally proclaimed an area for White settlement. Unlike the Western Area its officially enumerated 33,500 inhabitants were mostly Coloured. They were granted one year in which to prepare for eviction. About 6,122 properties were frozen, and the erection or alteration of building structures was prohibited. Some 1,094 premises were owned by Coloureds, 655 by Indians and 4,373 by Whites. The latter were, however, occupied by a large number of tenants and even subtenants who were to be displaced to homes built in townships like Rylands, Belhar (near Bellville) or Hanover Park more than 20 km away (Hart 1988).

This was one of South Africa's most famous cases of resistance to apartheid laws, in which a small part of the White community also participated. It was indeed the place where important action and group boycotts persisted against eviction. Hence, it took not one year but at least 15 years to relocate all the residents and completely clear the district. Moreover, in 1983 a small area located between the newly built Cape Technikon and the boundary road, Eastern Boulevard, was deproclaimed White and returned for Coloured occupation.

Yet, in general, the impotence of tenants and property owners was evident here and elsewhere in the Cape Peninsula. Despite all protest the predominantly poor Coloured families were evicted to the far distant Cape Flats, and were replaced by lower-middle-class Afrikaans speakers and overwhelmingly state employees (Hart 1988).

In synthesis, the manipulation of urban space was as effective in Cape Town as it had been in other South African cities. In 1991, when the apartheid laws were finally banished, the urban legacy to planners of the new South Africa was a racially-segregated Cape Town partially reproduced in figure 1. Except for two small pockets of Coloured and Malay quarters in the old city, the city centre was zoned as part of the White Group Area, while industrial and harbour areas were

dominantly Coloured. In general, most of the non-Whites were residents of peripheral eastern areas (Kensington, Langa, Athlone and Rylands), isolated by means of urban development areas (parks, commons, sports fields, cemeteries), by border steps or railways and freeways.

Whites, as we remarked, dominated the western coastal neighbourhoods (Sea Point, Clifton, Camps Bay) and the green and fertile southern suburbs (Bishopscourt, Rondebosch, Newlands, Claremont). They were the sole proprietors of the Atlantic beaches, where tourism flourished.

Under apartheid proclamations and urban planning, social contacts between White, Coloured, Blacks and Indians were, thus, reduced to a minimum and competition for urban space legally eliminated.

BRASILIA: THE CAPITAL OF THE SIXTIES

Another remarkable example of planned segregation from the Southern Hemisphere is Brasília, the capital of Brazil. It is a multi-racial capital where the part played by ethnic factors is less significant, but income is the social determinant.

In fact, the maintenance of the superordinates' economic and social status, together with ambiguous national defence and security measures, related to its federal capital role, has supported an unfair division of the urban space.

Brasília was conceived by the best architects and urbanists of the Brazilian modernist school. It was located in the centre of the country, in the middle of nowhere, in the site of an old cattle farm. The plan, which won in the 1957 contest, was devised by the urbanist Lúcio Costa, and is based on the crossing of two axes. Its shape shows an extraordinary resemblance to an airplane drawn symbolically in an era of tremendous industrial growth of the littoral South-Eastern regions of Brazil.

The industrial revolution of the country was mainly directed at home markets (Furtado 1992). But, these markets were, in many instances, only accessed by air, as Brazil lacked railways and the pre-existing system of roads was both insufficient and deficient. So, the largest South American country was only able to assemble an efficient distribution system by using the most modern means of transportation. Hence, the plane... and the new capital itself.

Brasília was built about 1,000 km from the seashore, in a gentle amphitheatre sloping towards the artificial lake of Paranoá, a setting of beauty but also a locus of entertainment for the most wealthy (Fig. 3). From the start, the protection of the capital against the invasion of the poorer classes was clearly evident. The grand scale of its architecture and the orderliness of its urbanity were not conducive to intermingling with low style residences and undesirable shanty neighbourhoods (Kubitchek 1975).

Moreover, according to modern architectural ideals, the city was devised to have an implacable zoning of economic activities, totally separated from residen-

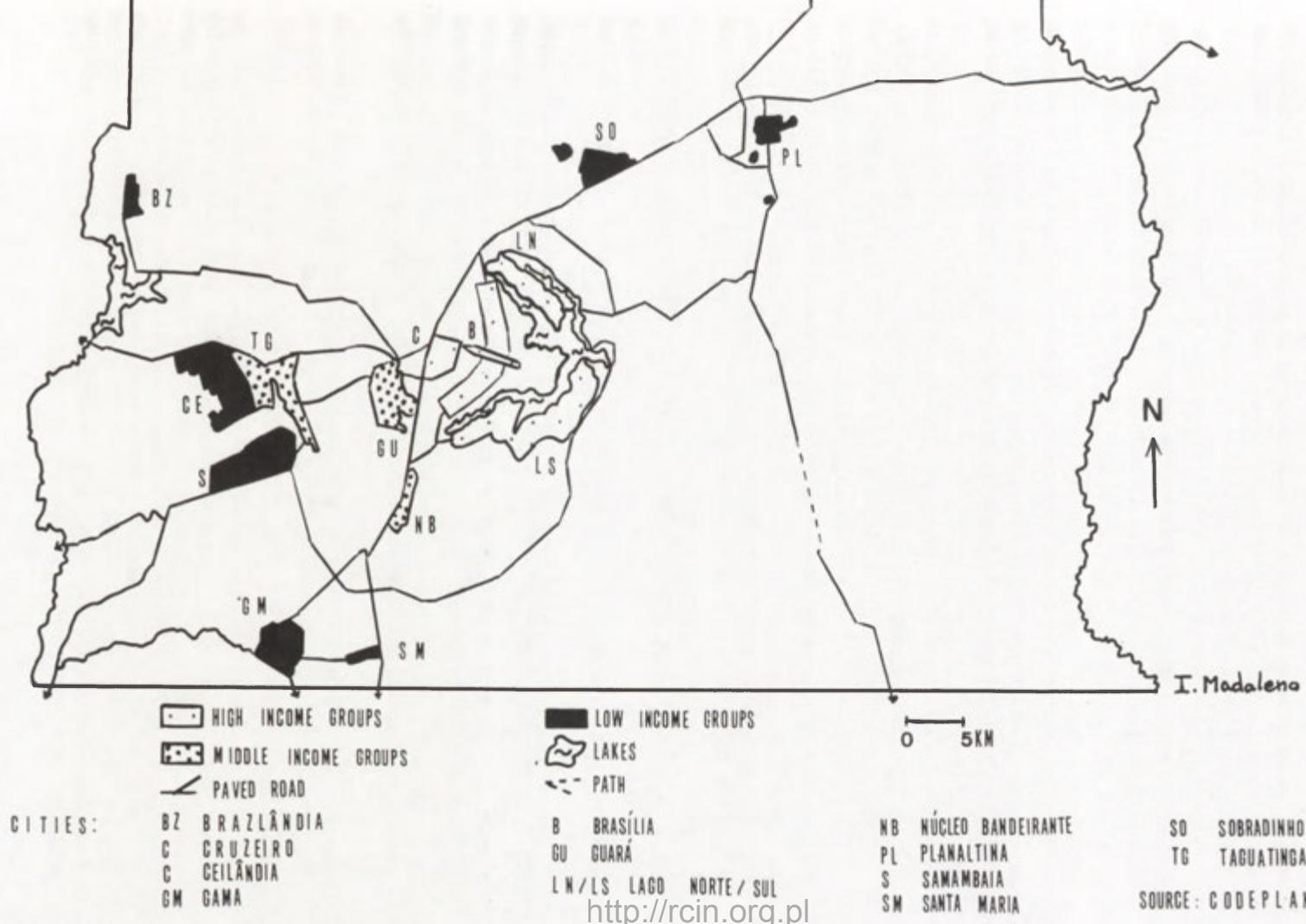


Fig. 3. Planned segregation in Brazil's Federal Capital District – 1994

ces. The concept of the town was based on the aesthetics of Le Corbusier and the CIAM⁷, a generation of European architects who sought monumental solutions uniting garden cities in linear-geometric rows, combined to form an urban unit (Kultermann 1993).

The “*airplane*” was thought to have the country’s administration in the cockpit, and other activities where passengers are seated. The residences, consisting almost exclusively of blocks of apartments, were located on the wings, sheltered from the axes of circulation by bushes and trees. Administrative activities were organised in a fashion that permitted efficiency and control over space. At the head of the central axis were the ministries, aligned in military parade along an enormous green avenue; then proudly stood the Three Powers Square consisting of the National Congress, The Federal Supreme Court and the Executive Palace, named “Planalto”.

The whole set of buildings was projected as a space of objects, planned to permit supervision and total state control over urban residents (Holanda 1985).

Niemeyer was the architect, known for his ability to draw rectangular as well as anti-rectangular forms; to intertwine open and closed spaces; and, to associate wall waterfalls, ponds and fountains with crystal façades (Kultermann 1993).

The city was built in record time – little more than three years. The need to accommodate thousands of administrative clerks, politicians, of bank employees, among others, generated a lack of apartments, from the start. It was considered normal by the urban planners and local authorities, therefore, that *airplane’s wings* apartments would be carefully reserved for the high-functionaries. The same implacable logic expelled the low-grade functionaries and less wealthy traders to pre-existing towns (Planaltina, Núcleo Bandeirante) or to new distant settlements⁸.

Furthermore, the rich immigrants, together with a qualified class of diplomats, were given the opportunity to buy generous portions of land on the Eastern margin of the lake. These created one of the richest suburbs of Brazilian metropolises, named the “Lakes”, the Northern and the Southern Lake (see Lago Norte and Lago Sul in figure 3). As to the less fortunate, they were settled further and further away from the capital, to the furthest settlement built inside the Federal District’s borders located 53 km from Brasília.

The approach to planning the new capital was based on the precept that its size should be limited, avoiding the urban sprawl of poor residences, as well as

⁷ In 1933 modernist architects lead by Le Corbusier devised “La Carte d’Athènes” after the fourth “Congrés International d’Architecture Moderne” (CIAM). They shared radical approaches to architecture, planning and housing, mainly proposing large blocks of flats towering over open space, and decongested circulation axes, with total separation of residences and working places.

⁸ Some authors argue that neither Costa nor Niemeyer were the source of these segregationist principles. However their monumental town was suitable for the promotion of difference and that was considered normal practise from the day the city was inaugurated, the twenty-first April 1960 (Holston 1989).

the intertwining of barracks (favelas) as in big Latin-American metropolises. The use of a green belt was proposed by the creator, Lucio Costa, along with the suggestion that new towns be dispersed around the Federal District, once the core, or mother-city, reached the threshold of 600,000 inhabitants (Costa 1991).

However, long before Brasília was overcrowded, even before it was completely built, new distant satellite towns were developed by the master planners. With poor quality housing, poor domestic commercial services, ill equipped and located far away from the main employment centre.

This socio-economic apartheid (Buarque 1991) has not generated many significant waves of protest, mainly because the poor immigrants were "given" small lots in the so-called satellite towns. As Nick Devas remarked in his study about cities in developing countries: "The critical constraint for people trying to provide their own shelter is access to land. Thus, the issue is not about house construction, nor even the provision of services, but about obtaining land." (Devas 1993, p. 83). Providing the mechanisms by which the poor obtain access to land within the Federal Districts borders, the managers of the new Brazilian capital minimized the importance and impact of shanty towns, either by transforming them, through legislation, into satellites of Brasília, or by transferring their residents to distant and more "favourable" locations.

These new towns were, whenever possible, devised like Brasília with similar zoning and separation of land-uses. Even though the separation of economic activities from residences is also a heavy burden on the poor, the government has been insisting on the orderliness and virtues of this modernist type of urban planning.

With regard to economic activities, apart from the administration and commerce already mentioned, there are light industries, the majority being established on the edge of Brasília so that the workers, coming from the distant satellite towns, need not traverse any residential area of the capital. Simultaneously, industrial capitalists and their qualified staff, residents in the *Lakes* or living in the *wings* of the *airplane*, can travel to work without inconvenience whilst enjoying pure and clean air, and also a "quantum of silence" (Le Corbusier 1984: 67) at home, once the industrial areas were positioned at a convenient distance.

Distance is a key word in Federal Capital District urban planning. In fact, it may be noticed that while the Brazilian Congress has been deliberating in such an atmosphere of unflustered calm, in an ambience of palpable beauty and order, the political, and above all economic situation has been deteriorating.

Brazil suffered a military dictatorial regime from 1964 to 1985. During times of urgency, such as strikes and riots, and more recently the beach mobs of beggars (arrasto), robbers and prison escapes and revolts, the peace of the *cockpit* of Brasília felt far away from the centre of crisis and dynamism in the republic: São Paulo and Rio de Janeiro.

Moreover, as remarked before, even inside the Federal Capital District borders no successful demonstration against poverty and unemployment has been

held in 36 years... That is because the distance in spirit is immeasurably greater than the mere 20 km to 53 km of physical distance that separates the ornamental avenue walks and impeccable lawns of the Ministries, or the monumental Three Powers Square, from the poor satellite cities of Brasília.

Western European and North American societies “continually stress the conventional wisdom that somehow a “mix” of social strata and of races in a given area is societally wholesome” (Western 1981: 84). This was not the opinion of Brazilian planners and managers at the time their new capital was born.

CONCLUSIONS

At the end of 1994, Cape Town and environs had about 2,000,000 inhabitants. That was also the figure for Brazil’s Federal Capital District metropolis. However this was not the only coincidence between the two cities. Both are beautiful and monumental, but present a highly segregated urban space. Coincidentally this segregation started being drawn around 1957, in both urban spaces.

Security and orderliness were always argued as reasons for the separation of status and/or race. Political and economic reasons seem more plausible. Particular political and economic conditions, as the ones described, generated their own appropriate forms of government intervention.

One might ask whether in a context of elite dominance and popular exclusion from policy formation, it would be possible for the urban planner to be neutral. And if not, whether he/she could be invulnerable. Yet, city management and planning are political acts. And they are political “not only in the sense that they produce *outcomes*, from which some gain and others lose, but also in the sense that they are *political processes* for conciliating interests which cannot all be equally satisfied.” (Batley 1993: 177).

Therefore, there are no longer technically correct judgements, but only political decisions. Urban planning and management should be processes of negotiation. The role of the architects, planners, urban geographers and city managers should be analytic and continuous. Master plans, grandiose monuments for living in, and radical urbanistic solutions should be carefully adapted or possible of change according to fluctuating local needs and opportunities.

In this way, we stress that the power of conception should be given to people technically highly qualified, but also engaged in bringing about change in favour of the needs of the poor. Technicians should be capable of reconciling the *superordinates’* dream cities with the *subordinates* realities and economic constraints.

In synthesis, approaches to change should always come from dialogue between the interested parts and favour a mix of races, of economic (non “dirty”) activities with residences, and of social strata inside the cities. Zoning has to be very cautious for it gives rise to unfair division of space.

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POVERTY INDICATORS IN A METROPOLITAN CITY: HYDERABAD

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ABSTRACT: Urban poverty, signified by the presence and growth of slums, is widespread in rapidly growing cities. This paper examines the quality of life, impact of the public distribution system, and effect of environment on health of the poor in Hyderabad. Large households, low literacy and educational levels and concentration of workers in the lowest order economic activity of mainly unskilled work are features observed. An overwhelming majority live below the poverty line, displaying a wide range of living standards and health problems. The variations in poverty, trends in transition to improved life and possibilities of reducing poverty are highlighted in the conclusion.

KEY WORDS: slums, characteristics, hierarchy, poverty alleviation.

INTRODUCTION

Urbanisation and the various parameters characterising it are similar in most developing countries. A major force causing a boom in the growth of primate cities is rural poverty and uncontrolled rural-urban migration. It may be noted that nearly half the poor of the Developing World are in Asia. [World Development Report, 1992 p. 28], mainly in India. In the Developing World almost 12.2 million children under 5 years age are reported to be dying. Most of the adults suffer from malnutrition and great susceptibility to communicable diseases, reflecting wide variations in socioeconomic characteristics, and in resilience to poverty.

Numerous yardsticks have been applied to define poverty. The most simplistic definition of poverty, offered in the World Development Report (1990, p. 26) is '... the ability to attain a minimum standard of living'. The interpretation of this definition cannot be generalised, given the extremely wide ranging income levels and living standards across the world and within Developing Countries. Even within a single nation like India, the highly heterogeneous social structure together with the wide disparities in natural resource endowment and prices of commodities, with their strong impact on economic status compel the rejection of a common definition of poverty.

This paper however relies on the I L O (International Labour Organisation) and Indian Planning Commission's definition of poverty. The I L O in its Basic

Needs Approach (World Employment Conference, 1977) has identified two criteria: a) a certain minimum requirement of a family for private consumption viz. adequate food, shelter and clothing and certain household equipment and furniture, b) essential services provided by and for the community, for example, safe drinking water, sanitation, public transport, health, education and subsidies. With these parameters in view, the Planning Commission of India has drawn the poverty line at Rs. 264 per capita per month for urban India (1991). The rationale of this definition needs a critical evaluation, through careful examination of the quality of life and sources of sustenance for the poor. Metropolitan Hyderabad (South India) is taken as the study area for this appraisal.

The analysis rests on the following hypothesis.

1. Slum population has been growing at a slower pace than total population of metropolitan Hyderabad.
2. Urban poverty is complex and multilayered.
3. Transition to better living standard is step wise but can be direct.
4. Government and non-government institutions serve as effective catalysts to poverty alleviation.

The objective of this paper is therefore to examine the growth and characteristics of slum households, to see whether they project any hierarchies in degree of poverty, and if any shift between hierarchies is observed.

GROWTH AND DISTRIBUTION OF SLUMS

Indian Metropolises have a large proportion of the population living in conditions of abject poverty in areas locally as 'busties' or 'jhopad patties'. They contrast sharply with the affluent neighborhood with respect to social, economic and environmental factors and constitute conflicts in management and administration to the urban government. These nuclei of blight or slums may be defined as "densely packed areas of dilapidated buildings or houses of make – shift construction, each assembled with collected material like tins, tarpaulin, gunny bags and even thatch, housing families that are largely illiterate, and underemployed, with low incomes, and with practically no access to basic civic amenities, within an environment of perpetually unhealthy conditions".

Hyderabad, the fifth largest city in India with a population of 4.5 million has 20 percent of its population living in such slums. In almost every stage of its chequered historical evolution from feudal to modern industrial economy, it has sustained a large number of poor in the city. But the problem of poverty and slum dwellers has been aggravated in Hyderabad with the formation of the linguistic state of Andhra Pradesh and with Hyderabad made its capital in 1956. This led to the rapid industrialisation and commercialisation of Hyderabad's economy and consequently massive influx of population. During 1961–1971, Hyderabad's population increased from 1.6 million to 2.2 million and by now (1996) it is

estimated to be nearly 5 million, with a phenomenal rise in the number of slum units and slum population (Tab. 1).

Table 1. Hyderabad – Secunderabad: Growth of slums and slum population (1962–1986)

Parameters / Years	1962	1972	1981	1991
No. of slums	106	284	470	795
Slum population (000)	1584	1602	2528	4344
Slum population as % total population of Metropolitan Hyderabad	9	19	22	18

Source: 1. Alam and Alikhan (ed.) 1986: *Poverty in Metropolitan Cities*, Concept, p: 123.
2. Department of Urban Community Development, Municipal Corporation of Hyderabad.

The correlation between the phenomenal growth of population and of slums is obvious. During the period 1962–1991 both the number of slum units and slum population increased eight fold. It may also be noted that during 1981–1991, the proportion of population declined from 22.3 percent to 18 percent, but in absolute terms it has snowballed from 500,000 to 800,000, a rise of 300,000 or 60 percent within a decade.

Slum units are extensively distributed among all the regions within the twin cities but nevertheless are concentrated in the old blighted parts of Hyderabad. Many of them even patronised by different political parties and have therefore largely managed to develop on vacant lands owned by the state and central government, endowment lands under the special jurisdiction of temple, and ‘waqf’ board (land under jurisdiction of mosque and tombs) as also on private lands.

Although 795 designated slum colonies were identified by the MCH in 1991, information is available on only 589. An examination of their distribution pattern (Fig. 1) across the four distinct historic regions of Hyderabad North, Hyderabad

Table 2. Hyderabad – Secunderabad: Distribution of slums, slum population and area by regions – 1984

Regions	No. of slums	% Distribution of slums households	No. of households per slum	Area of slums (00 sq. mts)	Density of households per 100 sq. mts slum area
Hyderabad North	311	33.5	120	1173	3.2
Hyderabad South	119	24.8	232	890	3.1
Secunderabad	71	21.6	339	661	3.6
Suburban	88	20.1	255	800	2.8
Total	589	100	189	3524	3.1

Source: Computed from Urban Community Development, Hyderabad, MCH.

Note: Slum unit is taken here as a cluster of slum dwellings huddled together.

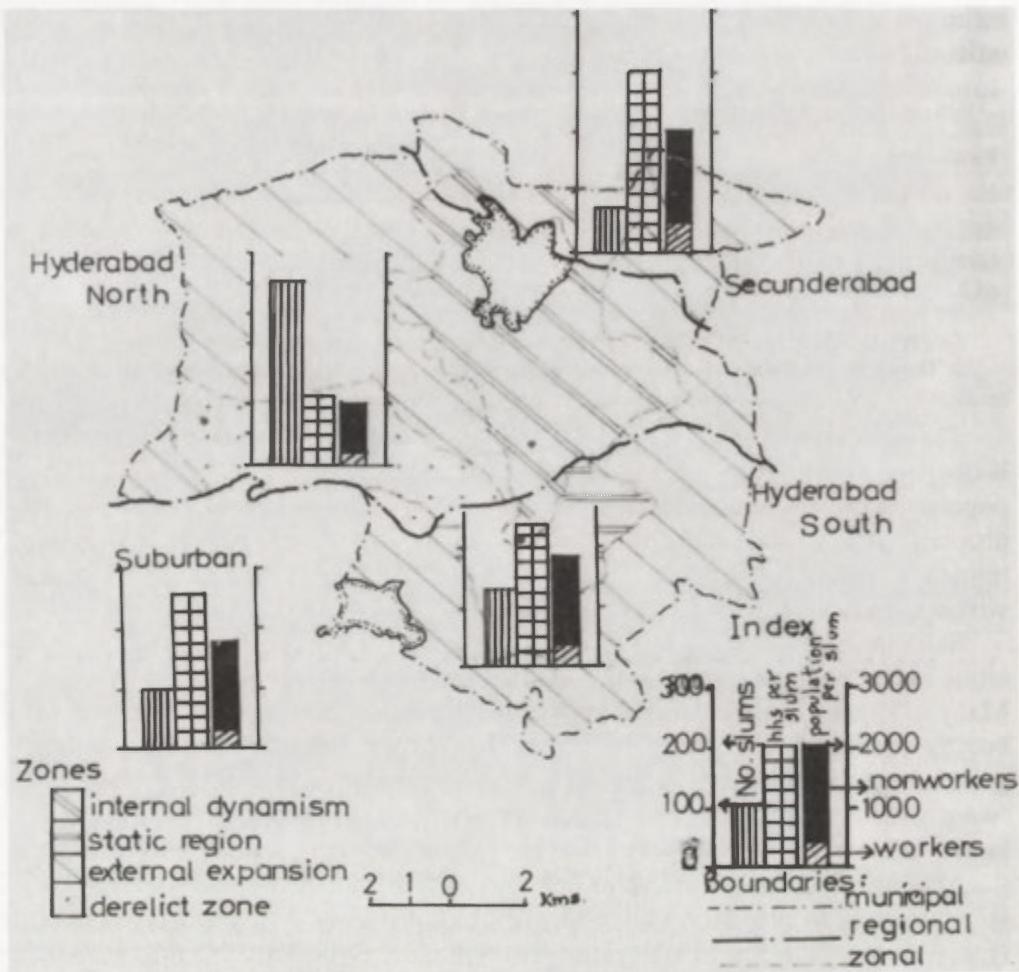


Fig. 1. Hyderabad regions, zones & slum characteristics

South, Secunderabad and Suburban areas (which emerged at different periods of history and exhibit varying historical, architectural, social and cultural characteristics) (Alam 1965), reveals that there is proliferation of slums in North Hyderabad, 33.5, where the concentration of elites of Hyderabad and principle commercial centres acts as magnets for the unemployed job seekers as domestic servants, shop attendants, office attenders etc. It may also be observed that although the average number of households per slum varies widely among the regions, the density of households per 100 square meters is not as variant. This suggests than each of these slums have reached a stage of saturation. With an average household size of 7.2 prpersons per household, they are extremely congested (23 persons per 100 sq mts).

The above mentioned historical regions are further classified into four morphological zones by Alam (1965), based on socio-economic and landuse criteria. The morphological zones cut across the historic regions and slums exist in each of these zones (Tab. 3). Of the four morphological zones, the zone of 'Internal Dynamism' is an economically vibrant area offering diverse employment opportunities to the slum dwellers as domestic servants, vendors, motor drivers and various other informal activities like transport and trading sectors. The zone with a proliferation of the slums (62.9 percent of the slum population) in the 'zone of external expansion', an extensive outlying area where development has only recently commenced. The presence of large vacant lands, as well as proximity to industries offering work opportunities account for the concentration of slum population here. In the 'static zone', most of the non-slum households are themselves in low income categories, and unable to sustain the existence of slum population, do not attract them.

Table 3. Hyderabad – Secunderabad: Distribution of sample slum households and population by city regions and morphological zones

Morphological areas	Morphological Zones														
	Total of zones			Zone of internal dynamism			Derelict zone			Static zone			Zone of external expansion		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Hyderabad North	10	149	1065	5	72	503	1	18	131	–	–	–	4	59	431
Hyderabad South	8	119	911	2	12	112	2	39	261	1	2	18	3	66	520
Secunderabad	3	31	179	1	5	30	–	–	–	–	–	–	2	26	149
Urban	4	98	692	–	–	–	–	–	–	–	–	–	4	98	692
Total	25	397	2847	8	89	645	3	57	392	1	2	18	13	249	1792

Source: Field study 1994.

Note: 1 – Number of slums; 2 – No. of slum Households; 3 – Slum Population servants.

HOUSING

Housing problem among slum dwellers is comparable to non slum areas. The incessant influx of migrants sustains the demand for rental space. The owner-occupied slum dwellings range from a maximum of 87% in Secunderabad to a minimum of 63% in South Hyderabad. The relatively low proportion of owner occupied houses in South Hyderabad is mainly due to a recent trend (with petro-dollars) to move out of the historic core of the city and to rent out the vacated houses. The quality of houses is deplorable and the rent paying capacity poor. Most of the houses are single-room tenement units with or without a ventilator (often not more than 10/20 cms in dimension) and with a single small entrance. Invariably all houses have community toilets that are ill-maintained due to inadequate water. These factors promote health problems.

LITERACY AND EDUCATIONAL LEVEL

The literacy level in India is at 40 percent while in urban areas it is 73 percent (1991 Census). In Metropolitan Hyderabad the proportion of literates in the slums is less than 35 percent. The educational levels of the slum populations is distressingly low. Ninety percent of the literate are educated up to high school or even less, where no professional skill is imparted. The technically-skilled constitute only 6 percent of the total literate population and the proportion of graduates is even less (4 percent). The scenario is equally grim in all four regions (Tab. 4).

Table 4. Hyderabad – Secunderabad: Literacy and educational by regions (1994)

Sl. No.	Geographical areas	Sample population	Distribution of literates		Level of literacy	Educational Level			
			total	%		total	up to 10th class	intermediate & technical	graduates & above
1.	Hyderabad North	1965	595	35	55.5	100	95	4	1
2.	Hyderabad South	911	584	33	63.8	100	84	9	7
3.	Secunderabad	179	114	7	63.8	100	94	5	1
4.	Suburban	692	416	25	59.9	100	88	7	5
	Total	2847	1709	100	59.7	100	90	6	4

Source: Based on Survey Data – 1994 ‘Urban Study’, IEES, Hyderabad, India.

What is most noticeable is that over 50 percent of both technically qualified and graduates are found in South Hyderabad. This is traditionally an area of working class people, whose economic status had declined over the last four to five decades. However the earnings and remittances from the Gulf (petro dollars) in more recent years had an appreciable impact on educational levels and professional skills. This feature is peculiar to the old city of Hyderabad where many people skilled in low or middle level technologies such as welding, vehicle repair etc., reside, and who have seized the employment opportunities created in the new areas of employment such as auto and mechanic repairs. Thus slum households in South Hyderabad may be said to be moving to better socio-economic standards.

OCCUPATION, INCOME AND ENERGY CONSUMPTION PATTERN

Unskilled and semi-skilled workers constitute over 50% of the total employed. They are employed in low paying technical jobs or informal activities such as welding, denting, soldering, mechanical and tyre repair, and light and heavy vehicle driving.

Table 5. Hyderabad – Secunderabad: Workers in different occupations by regions (1994)

Geographical areas	Sample population	Workers		%	Occupational Categories								Dep ratio in %
		total	%		Formal Sector			Informal sector					
					pro-fessor	tea-cher	ad-mini-stration	busi-ness	skil-led	semi-skil-led	unli-ke-d	other	
Hyderabad North	1065	245	23	100	2	11	4	13	17	20	32	1	335
Hyderabad South	911	191	21	100	3	3	5	23	24	15	24	3	377
Secunderabad	179	47	26	100	–	1	5	6	26	13	47	2	281
Suburban	692	159	23	100	6	3	4	10	22	14	41	–	335
Total	2847	642	25	100	3	4	4	15	21	17	35	1	343

Source: Survey Data 1994 *op. cit.*

Note: Dependency ratio = percent of non workers to workers.

Owing to their extremely low educational status, only 11 percent of the workers are employed in white collar jobs while 15 percent are self employed, predominantly in the informal sector. Hyderabad, like most of Third World metropolises, offers a wide range of jobs in the informal sector. The importance of the latter to the slum populations is confirmed by the concentration of an overwhelming 88 percent of the workers in this category. This is directly due to the easy access of the informal sector to the literate and the illiterate (Geeta 1994). On an average, workers constitute 25 percent of the sample slum population, giving an average dependency ratio of 343. In North and South Hyderabad the ratio rises to over 335 percent contrasting with Secunderabad. The literacy level observed in the previous table do not display any correlation with occupation, probably due to the low level of education, as well as the absence of skilled training.

Household incomes are neutralised by family sizes, as may be observed by the low per capita and per household incomes in the each of four regions. Literacy and occupational levels more or less correspond with income levels.

Table 6. Hyderabad – Secunderabad: Income distribution by regions (1994)

Sl. No.	Geographical areas	Sample population	No. households	No. earners	Total income ('000 Rs.)	Average monthly income (Rs.)		
						Per household	Per earner	Per capita
1.	Hyderabad North	1065	149	245	240.3	1613	980	226
2.	Hyderabad South	911	119	191	236.3	1986	1237	259
3.	Secunderabad	179	31	47	43.2	1394	919	241
4.	Suburban	692	98	159	1631	1664	1026	236
	Total	2847	397	642	682.9	1720	1064	240

Source: Survey Data 1994 *op. cit.*

Note: 36 India rupees = 1 US \$.

Households in the Secunderabad area are engaged mostly in informal economic activity and get smaller earnings compared to the others. Owing to their smaller household size, their per capita income rises, allowing the members to lead a life of higher quality.

ENERGY CONSUMPTION PATTERN

Low incomes and living standards have influenced the energy consumption of the 67 percent sample households engaged in lower order occupations. Almost 23 percent are exclusively firewood consumers or users of both firewood and kerosene. A comparison of the 1984 survey (Alam and Dunkerly) with the present survey (1994) indicates marked decrease in the number of households using firewood – a near total shift to kerosene. The change in occupation and income have resulted in the substitution of lower order with higher order fuels. Households in the higher order occupations indicate a shift to LPG. It is further observed that in the lower income groups the proportion of expenditure on domestic energy to income far exceeds the expenditure incurred by higher income groups. This conclusion is illustrated by tables 7 and 8 of occupations/income groups and fuel mixes.

Energy studies hitherto conducted largely support the concept of “energy ladder” (the step wise transition in energy use form inferior to intermediate to superior fuels). This study too traces a similar transition while the transition from firewood to kerosene has been quick, the second transition from intermediate fuel (kerosene) to the most efficient fuel (LPG) is very slow. Although seventy nine percent of the sample households earn a monthly income averaging at less than Rs. 2000.00 (USD 65) only 22 percent of the slum dwellers use firewood and kerosene combination for domestic energy. The use of kerosene by a large number of houses reflects the progressive increase in the preference for and accessibility of the intermediate fuel, namely kerosene. The limited access to LPG, the most efficient of the available fuels, however retards the transition from kerosene despite the willingness by the slum dwellers to shift. The trends observed in this study support the “energy ladder” concept in its initial stage.

FOOD AND HEALTH

Income, energy and environment affect nutrition and health, thereby perpetuating the poverty condition. Studies of the National Sample Survey Organisation (NSSO) have estimated poverty, with two surveys of the most reflective variables – consumer and expenditure. The mean calorie intake for urban areas emerged as less than 2100 kcal/cu, according to which, 19.5 percent of the urban population is below poverty line. For India as a whole, then this group constitutes

Table 7. Hyderabad – Secunderabad: Occupation and Fuel Mix – 1994

Sl. No.	Occupation	FW	FW & Elec.	FW, Kero & Elec	Kero	Kero & Elec.	Kero, LPG. & Elec.	Other & Elec.	Total Sample
1.	Professional	–	–	3	–	8	–	5	16
2.	Administration	–	–	2	–	7	2	1	12
3.	Teaching	–	–	1	–	4	–	3	8
4.	Business	1	3	11	6	36	6	9	72
5.	Skilled	–	4	9	2	71	–	4	90
6.	Semi-skilled	–	1	14	5	49	2	5	76
7.	Unskilled	2	14	16	16	60	2	9	119
8.	Other	–	–	–	–	4	–	–	4
	Total	3	22	56	29	239	12	36	397

Source: Survey Data 1994 *op. cit.*

Note: FW = Firewood, Kero = Kerosene, Elec = Electricity, HHS = Households.

Table 8. Hyderabad – Secunderabad: Income and Fuel Mix – 1994

Sl. No.	Inc. gp (Rs. Per capita Per month)	FW	FW & Ker.	FW, Kero & Elec	Kero	Kero & Elec.	Kero. LPG. & Elec.	LPG. Elec.	Other & FW. Kero	Total	%
1.	< 1000	3	15	26	19	94	–	–	4	161	41
2.	1001–2000	–	6	19	9	97	–	13	5	149	38
3.	2001–4000	–	1	11	1	36	5	8	1	63	16
4.	4001–6000	–	–	–	–	12	2	1	–	15	3
5.	> 6000	–	–	–	–	–	5	2	2	9	2
	Total	3	22	56	29	239	12	24	12	397	100

Source: Survey Data – 1994 *op. cit.*

Note: Inc. gp = Income group, FW = Firewood, Kero = Kerosene, Elec = Electricity.

233 million or 29.2 percent (Reddy, Vinodini et. al 1993). In Andhra Pradesh an even larger proportion of population lives below the poverty line (31.7 percent) and suffers from many health problems. Results of surveys conducted by the National Institute of Nutrition (NIN) consistently point to the occurrence of malnutrition, limited physical growth, stunting, anemic conditions (particularly among women), nightblindness, rickets and early infirmity, and great susceptibility to environmentally induced health problems like malaria, plague, diarrhoea, cholera, gastroenteritis and lung problems. The infant mortality rate is 69 per 1000 live births (1995–96) having declined from 90 per 1000 (1993–94). Immunisation, healthcare for pregnant women and lactating mothers and provision of protected drinking water (de-chlorination and purification) have obviously played a positive role in ensuring improved health condition of the urban poor. An examination of their diet revealed high nutrition deficiency levels, particularly in terms of energy, vitamin A, calcium riboflavin and iron. The diet is con-

stituted largely of cereals and disproportionately negligible consumption of essential nutrients like pulses, green vegetables and fruits, and near absence of protective foods. As stated in table 9, the daily minimum expenditure on food per person amounts to Rs. 17, or Rs. 510 (USD 15) per month, whereas the poverty line, as mentioned earlier, is drawn at an unrealistic Rs. 264.

Table 9. India – Estimated costs of daily per capita food requirement – 1995

Items	Cereal	Oil	Mil	Vegetables	Fruits	Others	Total
Cost in Rupees	5.00	4.00	2.50	2.00	2.00	1.50	17.00

Source: Based on NIN statistics, 1995. The estimates are made for one person indulging in average/or medium load work.

While the Public Distribution System (PDS) in India has attempted to alleviate poverty the quantity supplied is inadequate, particularly due to the preponderantly large size of households. An index of inadequacy has been worked out to assess the competence of the PDS (Tab. 10). Since the diet of the poor is largely cerealbased and the size of households exceptionally large, indices of inadequacy in the three sample areas – Hyderabad, Secunderabad and Suburban are high. The main reason is not only insufficient supplies, but also unreliability and poor quality. In fact, high costing pulses, the main source of nutrition are not supplied by the PDS. Kerosene, the principle source of cooking energy, is supplied in inadequate quantities, and the supply itself is erratic. In the suburban areas particularly, the situation is still worse. The slum dwellers there rely on firewood as the main fuel and kerosene as a subsidiary fuel due to supply problems. This heavy substitution of food and energy sources from the open market, digs deeply into the limited resources of the poor. Given the uncontrolled rates, the quantity that can be purchased with the limited resources is meager. The limited quantity of low nutrition food diminishes the productivity of human labor, and hastens the onset of infirmity and ill health, catapulting new households into and anchoring existing households in poverty.

Table 10. Metropolitan Slums: Index of inadequacy – 1994

Sl. No.	Items	Hyderabad	Secunderabad	Suburban
1.	Rice	31.6	25.0	33.6
2.	Wheat	67.4	33.3	100.0
3.	Sugar	68.8.	55.2	51.2
4.	Edible Oil	50.0	9.2	41.5
5.	Pulses	100.0	100.00	100.0
6.	Kerosene	67.4	58.2	100.0

Source: Reddy, Geeta and Narayan *op. cit.*

Note: 100 = Maximum and 0 = Minimum index/level of inadequacy.

Physical environment and personal hygiene greatly affect health, as can be observed in Table 11, where various health problems of the slum population are presented. Water pollution seems to be a major factor affecting health, especially in the lower income groups, where the incidence of water born diseases is highest. Among the water borne diseases, amoebiasis and diarrhoea are widespread and among the air born diseases, eye irritation and asthma predominate. Water pollution results from liquid effluents from industries, stagnant wash-off from roadside cafeterias, from clogged drains, absence of latrine facilities and lack of access to protected drinking water. Air pollution is a consequence of two parallel factors viz., the actual location of the slums near industrial areas and at transport intersection points where vehicular emissions are concentrated, and the lack of or even absence of proper ventilation in the dwellings. While the latter needs initiatives from the state, the former can largely be handled by the residents, given adequate indoctrination on health and environment and greater awareness of hygiene.

POVERTY CHARACTERISTICS AND VARIATIONS

The demographic and socio-economic characteristics of the slum population highlight the wide variations in income, education, health etc. The social system of man has since Rowntree, grown far too complex to be contained by his simplistic classification of Primary and Secondary poverty. Successive studies (Dandekar 19, Rath 19 etc.) have pointed to the need for throwing more light on the anatomy of poverty and to distinguish the various employment characteristics of the poor in the Developing Countries including India. This section makes such an attempt.

Based on the Planning Commission of India's norm of Rs. 264 per capita per month (1991), over 25 percent of the households in Metropolitan Hyderabad are under the poverty line. In the slums they constitute 71 percent (79 184) of the slum households. Given that the poverty line was fixed in 1991, the possibility of a larger number falling under this category is high. Realising that poverty is extremely complex, a multilayered structure is suggested and an attempt is made to identify existing categories within the slum households.

The slum households are divided into two preliminary groups viz., Households Below Poverty Line (HBPL) and Households Above Poverty Line (HAPL). They are mutually contrasting in terms of household sizes, education, occupation and incomes (Tab. 12).

Based on the respective occupational affiliations, the Households Below Poverty Line (HBPL) display four distinct characteristics, and are grouped accordingly. An element of transition is observable. The lowest occupational groups of unskilled and semi-skilled labor are grouped under the category of *Primary Poverty*. Households in this category are the poorest of the poor due to circum-

Table 11. Metropolitan Slums: Health problems across income groups – 1995

Health Problems	Percent of Population Suffering by Income Groups (Rs. Per Month per capita)					
	Income groups					
	Rs < 130	Rs 139–278	Rs 279–469	Rs 470–781	Rs 782–1563	Rs > 1563
	< 3 USD	USD 3–6	USD 7–13	USD 14–22	USD 23–45	USD < 45

Air Pollution

Eye Irritation	21.0	20.0	4.9	7.0	4.0	1.0
Asthma	4.0	2.0	1.3	2.3	0.5	1.0
Bronchitis	4.0	2.0	2.6	4.0	4.9	3.0
Skin Allergy	2.0	1.5	2.7	10.1	5.1	4.0

Water borne

Amoebiasis	29.0	8.0	5.0	14.0	3.8	6.0
Diarrhea	15.0	5.9	8.0	8.0	–	–
Cholera	6.0	5.0	2.0	–	–	–
Typhoid	1.0	2.0	4.0	1.0	–	–
Jaundice	1.1	2.0	–	1.0	–	1.0
Number of Households	46618	32566	17398	12380	2230	335
%	41.8	29.2	15.6	11.1	2.0	0.3

Source: Based on Satish K. (1995), *Environmental impact on Health*, Ph. D. thesis Osmania University, Unpublished.

stances largely inherited and aggravated by the influence of socio-political forces. Income of these households does not exceed Rs. 264/- per capita per month resulting in absolute deprivation of basic needs like food (often not more than one meal), shelter and clothing. This group constitutes 53.7 percent of the HBPL.

Households engaged in skilled labor constitute 19.1 percent of the HBPL, and are here classified as *Secondary Poverty*. They have almost all the characteristics of the earlier group, but are relatively better off due to their higher earning capacity. While their average household income is not too low, per capita incomes are alarmingly low, due to large household sizes. This in turn is a manifestation of the strong influence of religion and the felt need for more bread earners. Unlike the preceding category, households in this category are equipped with better education and higher income potential, have the capacity to improve but lack the initiative and will to do so. This group exhibits signs of over expenditure and indebtedness due to gambling and illaffordable expenditure on

Table 12. Hyderabad Slums: Selected characteristic of the slum households – 1994

Sl. No.	Variables	Households Below Povertyline	Households Above Povertyline	All Households
1.	No. of Households	79 184	32343	111 527
	%	71	29	100
2.	Average Households size	7.6	6.2	7.2
3.	No. of Earners	120 787	57 023	177 810
	%	68	32	100
4.	Education			
	i) % Literate	54.5	74.3	59.5
	ii) % upto 10th standard	94	78.8	89.5
5.	Occupation in %			
	i) Unskilled & Semi-skilled	53.7	34.8	48.4
	ii) Skilled	19.1	27	21.4
	iii) Business	16.3	13.0	15.4
	iv) White collar jobs	11.0	25.2	14.9
6.	Monthly Income (Rs.)			
	i) per Household	1275	3185	1829
	ii) Per earner	836	1806	1147
	iii) Per capita	168	514	254
7.	Fuel Use			
	Firewood	30.7	15.4	25.8
	Kerosene	90.0	83.3	88.0
	LPG	5.9	19.2	10.3

Source: Field Survey – 1994.

Note: Slum households whose percapita income is less than Rs. 264 per month.

rituals and festivals. Although they have risen above primary poverty, these habits retard their pace of transition to an improved lifestyle.

Households engaged in commerce and business (16.3%) are in *Tertiary Poverty condition*. Food and clothing problems have been overcome. They are educated to some extent and have comparatively high incomes. Their houses are in better condition, they have shifted to superior cooking fuel, own and use simple electric appliances and display initiatives to redirect household expenditure priorities towards more meaningful and gainful activities like children's education, better food and clothes, and saving through formal investment institutions like the LIC (Life Insurance Corporation). These changes are facilitated by a greater exposure to the changing values and priorities of the modern world. However, cultural habits continue to exert a negative influence on economic transition.

The households whose family head is in professions like teaching and administration (white collar jobs) constitute 10.9 percent of the HBPL. They are in *Peripheral Poverty* or *Transitional Poverty*. Although their environment is similar to that of the previous three groups, they have been able to get out of the vortex of low literacy and lower order occupations. Food and clothing are problems of the past. Access to higher incomes has enabled them to buy electrical and

electronic appliances and personal transport. They remain around the poverty line due to large household sizes which greatly reduce per capita incomes, by virtue of which they tend to remain in the HBPL bracket.

About 29 percent (32 343) of the slum households (111 527) fall outside the poverty line and are termed here Households Above Poverty Line (HAPL). This category has two main groups. The first is of households genuinely outside the poverty line, having attained a higher standard of living. They even own personal four wheel vehicles. Their continued residence in the slum area is motivated by two objectives viz, to avail the facilities extended by the government to weaker sections, and to a marginal extent, sentimental attachment with the place. These 20,053 households (62 percent) are in the category of *Feigned Poverty*.

A notable number (38 percentage) of the HAPL group, are poor. They are merely outside the poverty line by virtue of sheer statistical calculations. They have all the characteristics attribute to low income households – including residing in areas with access to minimum or no civic amenities, non-ownership of houses, low literacy levels and engaged in lower order occupations and perforce have low incomes. Based on their living standard, they ought to be in the *Secondary Poverty* category of HBPL. Owing to small household sizes, their per capita income gets exaggerated. Except for income, all other conditions conducive to higher living standard are absent and thus the criteria for growth (education etc.) are lacking. This group is assigned the term *Lateral Poverty* or even *Covert Poverty*.

A zone of transaction between each of the identified categories of poverty is observable. An appreciable change in the poverty level of the slum dwellers in Hyderabad had taken place with the effective role of the Urban Community Development and the proper monitoring of the funds from the Overseas Development Authority (ODA – U. K.). While poverty in Metropolitan Hyderabad has been declining, continuous influx of the rural poor has sustained poverty and the poor, and their hierarchies in Hyderabad.

Subsidies have played an important role in reducing poverty and in sustaining an appreciable quality of life. While the beneficiaries have gained, the entire target group has not benefited principally due to lack of access to the ration cards, nonavailability of rations, and inadequate and poor quality of the supplies. The State Government's financial problems have rendered subsidies a burden, while Central Government's structural adjustment programme aimed at the suspension of subsidies across the nation. In view of these realities, households that do not require subsidies can be weeded out on the basis of sub-categorisation of the poor, which can enable judicious allocation of scarce resources. As noted earlier, of the 111 527 slum households of Metropolitan Hyderabad 20 053 households in *Feigned Poverty* do not require subsidies on food items but can continue to benefit from subsidies on kerosene and electricity, if necessary. Such a strategy can go a long way in reducing the financial burden of the state government while protecting the safety net rights of the deserving group.

MAIN FINDINGS

1. Poverty is multidimensional and multilayered.
2. Poverty is not genuine but also feigned.
3. A hierarchy of income groups among the poor, suggests the existence of a poverty ladder and the active process of transition.
4. Allocative planning has effectively reduced existing poverty levels.
5. Rural and urban poverty constitute a poverty continuum in terms of space and time.

HOW TO REDUCE POVERTY – SOME POLICY IMPLICATIONS

Poverty is part of the larger environment and has a regional context. Hence a coordinated local system within a well orchestrated larger national network is indispensable. Poverty is a consequence of not just the physiographic, but also the cultural, social, political and economic climate of India, where rural poverty is not adequately addressed and where the burden of poverty is shifting to the urban areas. Countries with similar problems – Malaysia and Indonesia – have succeeded in overcoming poverty through a two-pronged strategy of poverty alleviation. The first strove to meet the minimum basic needs – access to nutritive food, health services, housing and education; the second aimed to provide opportunities to earn adequate income to live a respectable healthy life. This also included the promotion of productive use of labor by identifying and tapping related market incentives, social and political institutions, infrastructure and technology.

Both these measures, however, warrant greater accountability of allocations and care in targeting them. Rural-urban relations need to be strengthened, and given the nature of the country's economy (agro-based), the need to strengthen the rural sector with higher wage structure and improved infrastructure should be emphasised. Incentives to minimise rural-urban influx should be complemented with rigorous region-based poverty alleviation programmes. The decision of the Indian Government to enhance the funds allocated for poverty alleviation for 1997–98 is an important step in this direction. These strategies, include the recommendations of the ILO and take care of the realities observed in the Indian context.

CONCLUSION

Although the slum dwellers constitute an important component of the population of Hyderabad – Secunderabad, their share of residential area and urban amenities ranges from insignificant to nil, varying from slum to slum. The urban

economy is to a great extent sustained by the services rendered by them through informal activity. Their importance is underestimated and hardly recognized. It is slum dwellers who provide all necessary services to the doorstep without any assistance from the state, bringing all the gaps left by the public sector. On the other hand their existence is considered an impediment to development, and a drain on the resources of the state.

The socio-economic conditions of the slum dwellers is deplorable, perpetuated by the chain reaction of low literacy level, lack of technical skills and limited earning capacity. Their standard of living, highlighted by their educational levels, occupational structure, income characteristics and pattern of expenditure displays a hierarchy, as also their vulnerability. Some households, with greater awareness, have been able to get out of the poverty cycle, and the rest need exposure and the support of strong and well targeted programs under the shelter of a more realistic poverty line.

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