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## THE CHANGING INTRA-URBAN STRUCTURE OF THE BRATISLAVA CITY AND ITS PERCEPTION

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This paper aims to provide a basic picture of changing intra-urban structure of Bratislava in the transitional period of the 1990s, and its perception. The most significant processes contributing to the changes in the intra-urban structure in the five zones within the city (historical core, inner city, villa neighbourhood, housing estates, and the periphery) are briefly presented. The basic features in the perception of transformational changes by urban dwellers (university students) are identified and "the images of transformational changes" are discussed. The challenges posed by urban development, and its perception are summarized.

**Key words:** urban change, Bratislava, intra-urban structure analysis, urban environment perception, sustainable development

### INTRODUCTION

Since 1989 former socialist cities have been undergoing profound transformation, conditioned by the transition. More than one decade is too short period for a radical change in the intra-urban structures. However, there have been some significant transformations in the spatial pattern of post-socialist cities. Cities, and the processes that produce them have changed and will continue to change. It is important to try and understand the significance of these changes.

The first aim of this paper is to identify processes (by five zones within the city administrative boundaries: historical core, inner city, villa neighbourhood,

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housing estates, and the periphery), which are transforming the spatial pattern in one former socialist city – Bratislava. Another aim of the contribution is to identify basic features of changes in the intra-urban structure, and to analyse “the images of transformational changes” resulting from the perception of university students.

## THE URBAN TRANSFORMATION

The last decade of the twentieth century were years of changing intra-urban patterns, which arise from the various processes conditioned by the political, economic and social changes symptomatic for the post-socialist or transition period. The base for the study of contemporary changes in urban spatial patterns is the knowledge of internal spatial structure of “socialist cities”. There is a rich resource of urban geographical literature devoted to the internal spatial structure of socialist cities both in Slovakia (Bašovský 1964 and 1981, Verešík 1970, Bašovský et al. 1981, Radváni 1982, Ira 1984, Bezák 1987 and 1988), and other Central and Eastern European countries (e.g. Votrúbec 1965, Dziewoński and Jerczyński 1971, Węclawowicz 1975 and 1985, Barbaš 1977, Carter 1979, Mydel 1979, Kovács 1992).

Poor development of services (causing unification of the distribution of inhabitants, collectivization of land (social, but not economic value of land), the morphological structure of new cities, or the new quarters in old cities as well as changing land-use and organization of the social life of the city inhabitants by large industrial plants were significant factors shaping socialist cities (Liszewski 2000).

The most important general trends in the transition cities are the return of the importance of land rent and increasing number of actors competing for space, renaissance of self-government, the increase of social and spatial differentiation, the transformation of employment structure, reshaping of townscape, and the physical transformation of the urban space (Matlovič 2000). There are some urban geographical studies, in which background information for the explanation of changing intra-urban patterns of post-socialist cities can be found (Enyedi 1994, Węclawowicz 1997, Matlovič 1998 and 2000, Korec 2000, Sýkora et al. 2000, Ira 1998 and 2001). There is need for comparative research on post-socialist cities. One of the first attempt was a comparative study of four Czech and Slovak post-socialist cities (Matlovič et al. 2001a and 2001b). Such a type of contemporary research could be a challenge for coming years in generalization and model-building concerning the post-socialist city (Sýkora 2000).

Contemporary changes are characterized by various processes, such as revitalization of the city centre, functional fragmentation, commercialization, sacralization, deindustrialization, intensification of land-use, and other processes (Korec 1999, Sýkora 1999 and 2001, Divínský 2000, Ira 2000 and 2001, Korec and Smatanová 2000, Matlovič 2000, Sýkora et al. 2000).

## CHANGES IN THE INTRA-URBAN SPATIAL STRUCTURE OF THE BRATISLAVA CITY

There are many processes that have contributed, and are still contributing to the changes of urban patterns. It is possible to outline some implications of the

intersection of political, economic, social, cultural, demographic, technological, and other trends for urban change in Bratislava in the late twentieth century. Many of them are not only symptomatic for modern Western cities (Knox 1987), but could be seen in post-socialist cities, including the dynamically developing capital of Slovakia – Bratislava. This city is characterised by gradual development of new life styles, changes in demographic structure and behaviour, social and economic changes, polarization of society, and technological changes.

The urban change in post-socialist Bratislava has been influenced first of all by the political changes in 1989 and following transition from centrally planned to market economy. The gradual establishment of market principles of resource allocation and growing exposure to the international economy have been major factors of urban development in Bratislava. Internationalization and globalization have significantly contributed the urban change in the post-socialist city. Internationalization of the Slovak economy has influenced Bratislava, which started to play the role of gate-way for foreign firms extending their operations in Slovakia. International activities were important in the distribution and wholesale, import of goods and services and in the field of services such as financial, consultancy, real estate, public relations. Some international retail chains (e.g. Billa, Delvita, Ikea, Baumax, Tesco, Carrefour) established their country headquarters in Bratislava.

Since the 1990's, the Bratislava's economy entered substantially different phase in terms of "production". The dominant trend has been a shift away from manufacturing industries toward service activities. One of the major outcomes of urban change is, on the one hand, accelerating deindustrialization of areas in and near the city centre, and, on the other hand, tertiarization and quaternarization. The development of service sector especially affected the city centre where specialised shops, financial and business services concentrated.

In the past decade, some important demographic changes have occurred. The slowing of population growth and in the late 1990s even population decline caused by reduced birth rate will have some important implications for urban change. Changing attitudes about the status of women, the decreasing social value of marriage, consequent decline in the rate of marriage and increase of cohabitation without marriage results in the development of non traditional family structures and lifestyles (unconventional housing needs, unconventional residential behaviour and unconventional demands on urban services).

The rise of consumerism and the propagation of materialistic values is one of the dominant cultural trends. One of the aspects of this trend is the demand for ownership and the consequent emphasis on home as an expression of self and status (new middle and upper classes). The growing importance of the automobile, trends toward living in suburban homes and in new apartment complexes are all signs of this.

Technological advances that transform the way of production, interaction and living have their implications for urban reorganization. Widespread commercial development of new technologies, that emerged during the 1990s (high speed computing, advanced telecommunications) had an impact on the development of computerised business systems (banks, insurance companies, consulting agencies), new forms and standards of residential design.

In order to identify major changes in the intra-urban structures within Bratislava, a spatial historical-morphological division of city was applied. According to the criteria of historical urban development five zones were identified: historical core – centre, inner city – adjacent to centre, villa neighbourhoods – intermediate, housing estates – intermediate, and outer city – periphery (Fig. 1). The above mentioned zones were formed during the longer historical development of the city. They have different spatial extents, population densities and weights concerning concentration of population and other human activities (Tab. 1).

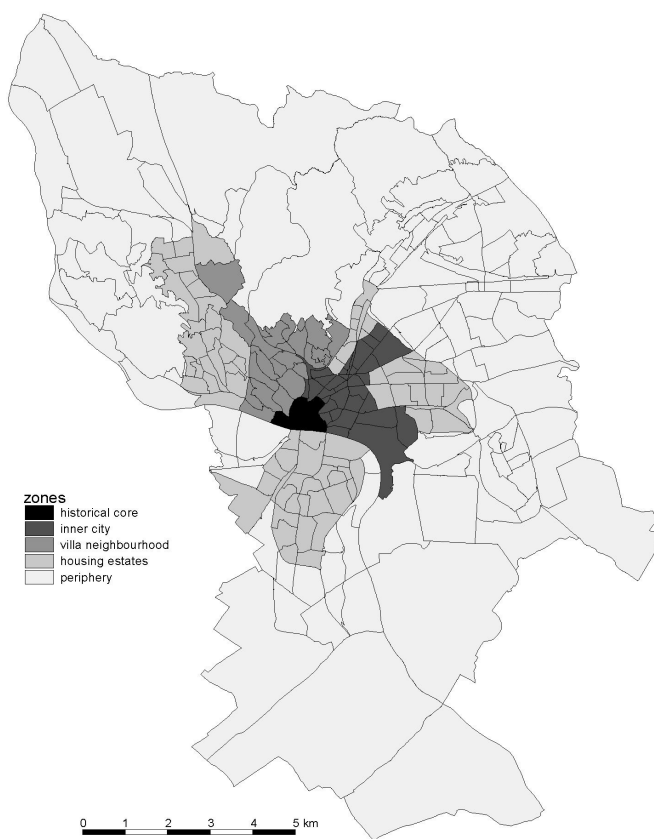


Fig. 1. Intra-urban structure of Bratislava

Tab. 1. Area, population and density of population by city zones

Zones	Area (in hectares)	Area (in %)	Population (in %)	Density of population (inhabitants/hectare)
historical core	170	0.46	2.46	6,405
inner city	1,084	2.95	11.98	4,886
villa neighbourhoods	1,159	3.16	5.10	1,944
housing estates	3,723	10.13	59.03	7,012
periphery	30,614	83.30	21.43	310
total	36,750	100.00	100.00	1,203

Source: own elaboration based on the data from the Statistical Office of the Slovak Republic

**Tab. 2. The main transformational processes, their manifestation in particular intra-urban structures and their appearance in the urban zones**

Partial intra-urban structure	Transformation process	Urban zones
physical (morphological)	revitalisation	C, I, V, H, P
	recession and urban fallow	I, H, P
	suburbanisation	P
functional	commercialisation	C, P, I, H, V
	functional fragmentation	C, I, P
	sacralisation	C, I, V, H, P
	deindustrialisation	I
	suburbanisation	P
social-demographic	downgrading of social-economic status	H
	separation	C, I, P
	segregation	I, H, P
	suburbanisation	P

Urban zones: C – historical core, I – inner city, V – villa neighbourhoods, H – housing estates, P – periphery.

The complex assessment of transformation in Bratislava enabled the identification of a broad spectrum of transformation processes (see Tab. 2). There were processes universally observed and equally important in all five zones. For instance, commercialization was identified as one of the most important processes of urban change in all zones studied. There were processes that occurred in all five zones, but with a differing importance in particular zones. For instance revitalization, which has radically transformed historical core, was significant in the inner city, but had only limited impact on the periphery and housing estates. There were also processes observed only in some or just in one zone. For example, the process of deindustrialization was significant only in the inner city, and sacralization was identified especially in the inner zone and housing estates.

The most important process which has changed character of the *historical core* has been commercialization. The increasing number of restaurants, business offices, specialised shops, domestic and foreign banks, as well as insurance companies contributed to the rapid change of its spatial pattern. The development and redevelopment of real estate brought revitalization of buildings and more efficient utilization of space. The historical core is small and in the early 1990s it was overloaded by commercial functions. The pressure on the historical core was reduced through the project of the Aupark Shopping Centre in neighbouring Petržalka.

Physical revitalization associated with commercialization in the *inner city* has concentrated in the area adjacent to the historical core and along major streets with shops and office buildings. Industrial units, stores and vacant places were replaced by service functions such as banks (e.g. Všeobecná úverová ban-

ka, Slovenská sporiteľňa), company headquarters (e.g. Slovenský plynárenský priemysel, Orange), and other commercial institutions. The development of large commercial projects in the new business centre (Polus City Center) brought a more radical impact on the eastern part of the inner city zone. Since the late 1990s, apartments for sale in condominiums have been constructed on the vacant localities across the inner city.

Selective physical revitalization, intensification of built-up area associated with selective commercialization have appeared across all the *villa neighbourhood* zone. New small residential districts of wealthy population were attached to existing villa neighbourhoods (Slavín, Machnáč, Koliba, Kramáre, Horský park). Apartments for sale in condominiums have been constructed on individual plots in Machnáč.

The zone of *housing estates* represents a large area with standardised residential buildings constructed mostly during the 1960s-1980s. The housing estates are not a subject of radical morphological, functional and social changes. At some localities new apartment houses, offices and retail facilities were constructed (Petržalka, Dolné hony, Trávniky, Pošeň, Záluhy, Kramáre, Dlhé diely) or renovated. Selective commercialization has concentrated along major streets or roads (e.g. Dolnozemska cesta and Jantárová cesta in Petržalka, Tomašíkova in Ružinov). Large areas of empty (or former agricultural) lands in Petržalka, linked to existing housing estate infrastructure were built-up and now serve commercial uses (Danubia center with hypermarket Carrefour, hypermarket Tesco together with supermarket Terno, and shopping centre Aupark). Social changes are not very significant. Due to limited construction of new housing, and limited affordability of new dwellings for most inhabitants, there is no significant outmigration from the housing estates. This preserves the existing broad-spectral social composition of the inhabitants. Sacralization (the construction of buildings with sacral function) also plays an important role in the shaping the character of particular housing estates (Petržalka, Dlhé diely, Pošeň, Záluhy).

Residential and selective commercial suburbanization have an impact on the *periphery*. Commercial projects concentrate along major roads (Rožňavská, Eisnerova, Žitná, Svornosti), either in complexes (e.g. Soravia Shopping Centre and Avion Shopping Centre), or in individual units. New districts of suburban housing are emerging in areas with good environmental conditions (Záhorská Bystrica, Rača, Rusovce, Čunovo). There are also individual developments, which transform the peripheral zone (Vajnory, Podunajské Biskupice, Vrakuňa, Jarovce, Devín, Devínska Nová Ves).

As far as the physical (morphological) intra-urban structure is concerned, the most important processes are as follows: suburbanization, revitalization, recession and urban fallow. The functional intra-urban structure is mostly affected by the processes such as suburbanization, commercialization, sacralization, and deindustrialization. The social-demographic intra-urban structure is modified by the transformational processes such as suburbanization, separation, segregation and social status downgrading.

## BEHAVIOURAL APPROACH AND THE PERCEPTION OF INTRA-URBAN CHANGES

Behavioural approach was introduced to urban geography through the study of movement patterns, especially those associated with intra-urban migrations and journeys. A second major elements within behavioural approach relates to the notion of individual cognition of the urban environment. Urban dwellers possess cognitive, or mental maps of their surrounding environment, and these maps are far from identical to the actual physical structure of the city (Cadwallader 1985). The third element is represented by a more humanistically oriented behavioural approach, which focuses on human feelings and values such as the sense of place (Tuan 1987). The behavioural approach is less concerned with the production of descriptive models of urban form and more with the production of interpretative insight into relationship between people and their environment (Hall 1998).

The second part of this study is based on behavioural approach and concentrates on the perception of urban spatial transformation. The emphasis on people's view of the environment and its dynamics, and the resultant mental image encouraged human geographers to think in terms of environmental perception and mental images.

The man made environment is the spatial manifestation of human decision making, and many of these decisions are related to the way we perceive space, evaluate elements of space, and image the potential use of it. The perception of spatial reality is the result of perceiving enduring objects, or the result of enduring socio-cultural interpretations or constraints (Ira and Kollár 1994). Perception, then, can be regarded as helping to build a world of identifiable things. If we perceive a structure and processes (that form it) to be complex, it is possible that our knowledge, with respect to that structure and processes, may also be complex (Walmsley and Lewis 1993). An individual (in our research university student – living in Bratislava) who daily experiences the complexity of life in the city may become familiar with those activities that appear to be important for development and changes of intra-urban structures.

Knowledge of the environment is something that is created in the mind of an individual as the interacts with the environment. The end product of the act of perception and cognition has a variety of labels like mental map, cognitive representation, schemata, image. Environmental images are regarded as learned and stable mental conception that summarise an individual urban environmental knowledge, evaluations and preferences.

Images contain information extracted from the broad spectrum of elements in the external urban environment. This is the space in which characteristics, meaning and configural relations about elements in the urban environment are held as mental constructs. There is an assumption that individuals (dwellers – students) must have internal knowledge about external environments in order to exist (work, live) in them. The other assumption is that internal representations will be part idiosyncratic and part common in structure.

Attempts to recover images of the spatial environment and its dynamics have many forms ranking from written, verbal and pictorial reports to various analyses. The investigation of perception of urban changes and environmental images

in our research project relied on survey research such as questionnaires. We have penetrated the unique experience barrier and discovered the idiosyncratic general characteristics of the image known by individuals. We have also identified, and interpreted the meanings and significances of things which are retained in the image.

The survey focused on perception of changes was conducted in Bratislava in the last part of the year 2000. Reflections about dynamic intra-urban changes in Bratislava led us to conduct a survey based on subjective estimates. The way in which we have obtained information from individuals was via formal questionnaire survey, a technique frequently applied in human geography (Robinson 1998). The basic set consisted of 511 university students permanently or temporarily dwelling in Bratislava more than two years. The respondents were people older than 18. The questionnaires provided both qualitative and quantitative information. Their principal attraction was their ability to produce data that can be analysed by standard procedures, especially through descriptive statistics. The questionnaires provided a way of discovering the characteristics and beliefs of the students population at large.

The questions were focused on perception of negative and positive developmental aspects, topophilia and topophobia, evaluation of changes in the historical centre, inner-city, new housing estates, villa neighbourhood and peripheral zone during the last ten years. The concluding part of the questionnaire concentrated on the evaluation of the opinion on the economically, socially and environmentally balanced (i.e. sustainable) development of the particular zone and municipal parts.

The aim was to receive images on the contemporary state and development in particular zones of the city as well as in the urban districts. The important objective in this part of the research was the gathering of reflections of reality from the side of the respondents, their attitudes, and evaluations. The main motive was to find out the main tendencies in the development of intra-urban structure, advantages disadvantages of development, and evaluation of the implementation of the sustainable development concept. For some purposes of this study the area studied (Bratislava city) was divided either into 5 zones (Fig. 1), or into 17 urban districts (Fig. 2).

### QUESTIONNAIRES AND RESULTS OF THEIR ANALYSIS

Only one tenth of the respondents estimated their knowledge of the intra-urban changes as sufficient. Less than one half of the respondents (43.8 %) had a feeling of certain, but insufficient acquaintance with the changes of intra-urban structure. Almost one third (31.3 %) of students had practically no information on changes in the urban environment.

According to Tuan (1987), profound links (both emotional and psychological) develop between people and the place they live in and experience. Places are important phenomena in the lived world of everyday experience. They are important to humans in spite of the fact that some characteristics (features) like meaning or importance are of unmeasurable and unobjectifiable character. Although places usually have a fixed location and possess features persisting in an identifiable form, the meaning of a place comes not only from location, the trivial function that place serves, but also from the community that occupies it and



from deeper complex experiences (Relph 1976). In our survey we have tried to measure topophilic sentiments as well as topophobia or topocide (the opposite of topophilia). Topophilia refers to the active bond that develops between people and place. Out of 17 the urban districts, the respondents estimated Staré mesto (57.1 %), Lamač (7.2 %), Ružinov (5.1 %), and Karlova Ves (4.9 %) to the most attractive (favourable). Topophobia (topicide) refers to the destruction of the bond between people and place. The development of these sentiments is strongly connected with Petržalka (64.2 %) and partly with Vrakuňa (7.8 %) and Podunajské Biskupice (5.9 %).

Major positive futures of the city development during last ten years (since the beginning of political, social and economic changes) were identified as follows:

- *reconstruction, renovation, modernization,*
- *more shops, supermarkets, hypermarkets,*
- *development, improvement of the infrastructure,*
- *renewal, reconstruction of historical town (core),*
- *more and better quality of greenery,*
- *more job opportunities,*
- *new constructions,*
- *development of tourism and recreation facilities,*
- *better quality of services,*
- *improvement in aesthetic quality and tidiness.*

Among major negative features of the city development during last ten years (since the beginning of political, social and economic changes) university students identified:

- *environmental pollution,*
- *worsening security,*
- *unfavourable transportation situation, worsening of public transport,*
- *drugs,*
- *crime, vandalism, Mafia,*
- *strong commercialization,*
- *unemployment,*
- *weak infrastructure,*
- *insufficient development,*
- *construction of supermarkets and hypermarkets,*
- *deterioration of environmental quality,*
- *lower aesthetic quality of the urban environment.*

The following questions were devoted to the examination of selected specific changes in five zones within the city: historical core, inner city, villa neighbourhood, housing estates, and the periphery. In the opinion of respondents in the historical core radical improvement or improvement in the availability of shopping (90.4 %), basic services (59.7 %), aesthetic quality of the

environment (76.7 %), and land-use (49.1 %) was recorded. The evaluation of changes in transportation (without changes – 43.8 %, worsening or radical worsening – 31.9 %), environmental quality (without changes – 29.8 %, worsening or radical worsening – 38.6 %) and quality of housing (without changes – 29.9 %, radical improvement or improvement – 29.2 %) is more controversial. The respondents estimated security (62.8 %) and interrelations between people – interpersonal relations (49.7 %) as worsening or radically worsening (Tab. 3).

In the opinion of the respondents from the city studied, the development in the inner city is improving or radically improving in the area of shopping availability (86.9 %), basic services (63.0 %), and aesthetic quality of the environment (52.3 %). On the other hand security (57.3 %), interrelations between people (47.9 %), and environmental quality (45.4 %) were tagged as the worsening or radically worsening (Tab. 3).

Out of the several chosen problems in the housing estates, the respondents of Bratislava estimated changes in the area of shopping availability (improving or radically improving – 71.2 %), basic services (improving or radically improving – 51.9 %), security (the worsening or radically worsening – 66.5 %), interrelations between people (the worsening and radically worsening – 59.1 %) environmental quality (the worsening and radically worsening – 55.2 %) to be most serious (Tab. 3).

**Tab. 3. Perception of major changes (in % of responses)**

Area / Zone	Historical core	Inner city	Villa neighbourhood	Housing estates	Periphery
Availability of shopping	90.4 (+)	86.9 (+)	37.4 (+) 17.0 (o)	71.2 (+)	49.3 (+) 15.9 (o)
Basic services	59.7 (+)	63.0 (+)	32.5 (+) 20.7 (o)	51.9 (+)	36.6 (+) 24.9 (o)
Housing quality	29.2 (+) 29.9 (o)	26.6 (+) 32.3 (o)	63.8 (+)	35.8 (o) 29.0 (–)	24.1 (+) 26.4 (o)
Aesthetic quality	76.7 (+)	52.3 (+)	65.6 (+)	30.9 (o) 38.2 (–)	29.2 (+) 26.8 (o)
Transportation	49.1 (o) 31.9 (–)	37.8 (o) 37.2 (–)	20.9 (+) 32.7 (o)	38.6 (o) 34.6 (–)	28.2 (o) 25.8 (–)
Security	62.8 (–)	57.3 (–)	23.7 (+) 22.3 (o)	66.5 (–)	22.3 (o) 41.3 (–)
Quality of the environment	29.8 (o) 38.6 (–)	26.2 (o) 45.4 (–)	40.3 (+) 17.8 (o)	55.2 (–)	23.3 (o) 31.7 (–)
Human relations	25.4 (o) 49.7 (–)	25.6 (o) 47.9 (–)	21.7 (o) 25.0 (–)	59.1 (–)	23.1 (o) 29.5 (–)
Land-use	49.1 (+) 20.7 (o)	40.9 (+) 23.1 (+)	37.4 (+) 13.1 (o)	27.8 (+) 28.4 (–)	30.9 (+) 20.7 (o)

(+) – improving or radically improving, (–) – worsening or radically worsening, (o) – without changes

In the villa neighbourhood only housing quality (63.8 % improving or radically improving) and aesthetic quality (65.6 % improving or radically improving) were favourably perceived.

The perception of changes in the peripheral zone was very special. There was no radical polarization (Tab. 3). Only in the case of shopping availability the percentage of those who estimated it as improving or radically improving was significant (49.3 %).

The final part of the questionnaire requested opinion concerning trends of the economically, socially and environmentally balanced, that is sustainable development by zones (Tab. 4), and municipal parts respectively. The trend from the perspective of sustainability in the historical core is perceived by 76.1 % of respondents as favourable. The trends in the inner city (46.3 % positive and 28.4 % neither positive nor negative responses) and in the villa neighbourhood (40.5 % positive and 21.1 % neither positive nor negative responses) are perceived as less favourable. The developmental trends in the housing estates are estimated by 46.2 % of students as unsustainable, while 28.2 % estimated them as neither sustainable nor unsustainable. Peripheral zone also has less a favourable image – 21.1 % of students estimated the trends as unsustainable and 26.6 % as neither sustainable nor unsustainable.

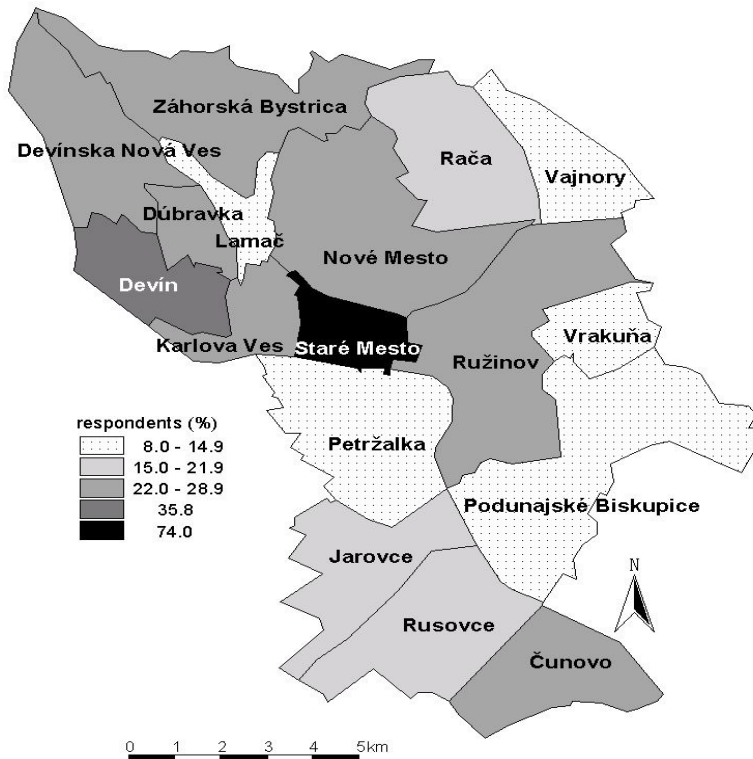


Fig. 2. Perception of positive developmental trends by municipal parts of Bratislava (sustainability perspective)

Tab. 4. Perception of development: the sustainability perspective (in % of responses)

Development / Zone	Historical core	Inner city	Villa neighbourhood	Housing estates	Periphery
favourable	76.1	46.4	40.5	13.5	16.6
neither, nor	15.3	38.2	21.1	28.2	27.6
unfavourable	5.7	8.4	7.2	46.2	21.1

As far as estimation of development trend by urban district is concerned (Fig. 2), the best situation is in the case of Staré mesto (Old Town). Almost three third of student (74 %) estimated trends as sustainable. On the contrary the development in Petržalka is estimated by 46 % of students as unsustainable. More positive than negative estimations recorded for Podunajské Biskupice, Ružinov, Nové mesto, Rača, Vajnory, Devín, Devínska Nová Ves, Dúbravka, Karlova Ves, Lamač, Záhorská Bystrica, Čunovo, Jarovce, Rusovce.

## CONCLUSIONS

Many processes have contributed to the changes of intra-urban patterns. The paper outlined some implications of the intersection of political, economic, social, cultural, demographic, technological and other trends for urban change in Bratislava in the late twentieth century. Many of them were primarily caused or accelerated by political changes in 1989 and the following transition.

The processes, which transformed the urban pattern and townscape in Bratislava in the last decade of the 20. century had specific manifestations in five types of zones within the city (historical core, inner city, villa neighbourhood, housing estates, and the periphery). The most important process, which has influenced the historical core has been commercialization, that is, the growth in importance of commercial functions (banks, restaurants, business offices, specialised services). The development of smaller and larger projects brought an impact of commercialization on revitalization of the inner city. Existing villa residential districts intensified their built up area and new villa districts emerged in the areas with favourable environments (north-east, west and north-west of the city). The zone of housing estates is only partly subject to major social and physical changes. The processes of commercialization, sacralization and humanization are evident in selected areas of housing estates. Residential and commercial suburbanization is the process shaping the character of the periphery zone in Bratislava.

The investigation of perception of the urban environment and its dynamics relied on surveys conducted among university students. Among positive features of the city's development during the last ten years (since the beginning of political, social and economic changes) students identified reconstruction, renovation, modernization, growing number of shops, supermarkets, hypermarkets, development and improvement of the infrastructure, renewal, reconstruction of the historic town (core), more and better quality of greenery, more job opportunities, new constructions, development of tourism and recreation facilities, better quality of services, and improvement in aesthetic quality and more tidiness as the most important. Among major negative features of the city development during last ten years, the respondents identified environmental pollution, deterioration of environmental quality, worsening security, drug crime, crime, vandalism, Mafia, unfavourable transportation situation and worsening of public transport, strong commercialization, construction of new supermarkets and hypermarkets, unemployment, weak infrastructure, insufficient overall development, and lower aesthetic quality of the urban environment as the most important.

The examination of selected changes in the five zones (historical core, inner city, villa neighbourhood, housing estates, and the periphery) showed that in the

opinion of respondents radical improvement or improvement in the availability of shopping, basic services, aesthetic quality of the environment in the historic core was recorded. The respondents estimated security as the worsening or radically worsening. Shopping availability, and basic services and aesthetic quality of the environment in the inner city is improving or radically improving. On the other hand security, interrelations between people were tagged as worsening or radically worsening. In the housing estates, the students estimated changes in the area of shopping availability, basic services (improving or radically improving) and public security, interrelations between people, environmental quality (the worsening and radically worsening) to be most serious. In the villa neighbourhood only the changes in housing quality and aesthetic were favourably perceived. There was no radical polarization in the perception of changes in the peripheral zone.

The opinion concerning trends of economically, socially and environmentally balanced, that is, sustainable development showed that the trends in the historic core are favourably perceived by 76.1 % of respondents. The developmental trend in the housing estates are estimated by 46.2 % of students as unsustainable. As far as estimation of development trend by urban districts, the best situation is in case of the Old Town (74 % estimated the trends as sustainable) and the worst is in case of Petržalka (estimated by 46 % of students as unsustainable).

Through the use of a subjective (perceptual) approach, we were able to identify various features of urban development and better understand “geographical reality”. Although this reality may only be partially perceived by individuals or groups of the population, it is nevertheless created by the actions of individuals as it is the space within which people live and work (Rogerson et al. 1989). For planners and decision makers, understanding of parts of this reality, when placed in context, can help to indicate a fuller picture of both the whole of reality and the role played by parts within it. Studies of elements of the reality through the perception of urban development and the urban environment can be brought together constructively in order to promote better further development and conditions for sustainable living. Subjective images are an important component in identifying reality as perceived by individuals or groups within the population, and in selecting information for decision making to affect that reality.

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## **ZMENY VO VNÚTROMESTSKEJ ŠTRUKTÚRE BRATISLAVY A ICH PERCEPCIA**

Článok prináša analýzu procesov, ktoré sa podieľajú na transformácii vnútornej štruktúry mesta Bratislavy v poslednom desaťročí 20. storočia. Spomínané obdobie charakterizujú procesy podmienené politickými, sociálnymi a ekonomickými zmenami prechodného obdobia. Pre potreby štúdie bolo územie hlavného Bratislavy rozdelené do piatich zón (historické jadro, vnútorné mesto, vilové štvrte, nové sídliská a okrajové časti – periféria), v rámci ktorých boli analyzované jednotlivé procesy. Najdôležitejším procesom, ktorý sa prejavil v historickom jadre, bola komercializácia, to znamená rast komerčných funkcií (banky, reštaurácie, kancelárie, špecializované služby). Realizácia menších a väčších projektov ovplyvnila komercializáciu a revitalizáciu vo vnútornom meste. Existujúce vilové štvrte intenzifikovali zástavbu a nové štvrte sa objavili v území s priaznivou kvalitou životného prostredia (severovýchodná, západná a severozápadná časť mesta). Sídliská sa stali subjektom nevelmi významných fyzických i sociálnych zmien. Procesy komercializácie, sakralizácie a humanizácie sú evidentné v niektorých častiach povojnových sídlisk. Rezidenčná a komerčná suburbanizácia je procesom, ktorý najviac ovplyvnil charakter okrajových častí.

Výskum zameraný na percepciu zmien sa uskutočnil v poslednej časti roka 2000. Úvahy o dynamických intraurbánných zmenách a ich percepcii vyústili v dotazníkovom výskume založenom na subjektívnych hodnoteniach univerzitných študentov. Sledovaný súbor tvorilo 511 vysokoškolských študentov starších ako 18 rokov. Dotazník zabezpečoval kvalitatívnu i kvantitatívnu informáciu. Otázky boli zamerané na percepciu pozitívnych i negatívnych aspektov rozvoja, topofíliu a topofóbiu, hodnotenie zmien v historickom jadre, vnútornom meste, v nových sídliskách, vilových štvrtiach a v okrajovej zóne za posledných desať rokov. Záverečná časť dotazníka bola zameraná na hodnotenie názoru na ekonomicky, sociálne a environmentálne vyvážený, t.j. udržateľný rozvoj jednotlivých zón a mestských častí.

Medzi pozitívne stránky rozvoja za posledných desať rokov študenti zaradili rekonštrukciu, revitalizáciu, modernizáciu, viac obchodov, supermarketov a hypermarketov, rozvoj infraštruktúry, viac a lepšiu kvalitu zelene, nové pracovné príležitosti, nové stavby, rozvoj cestovného ruchu a rekreačných zariadení, lepšiu kvalitu služieb, zlepšenie estetickej kvality a čistoty prostredia. Medzi negatívnymi črtami rozvoja v poslednom období bolo uvedené: znečistenie prostredia a jeho zhoršujúca sa kvalita, zhoršujúca sa bezpečnosť, nepriaznivá dopravná situácia, zhoršenie verejnej dopravy, drogy, kriminalita, vandalizmus, organizovaný zločin, silná komercializácia, nezamestnanosť, slabá infraštruktúra, nedostatočný rozvoj mesta, výstavba supermarketov a hypermarketov a nižšia estetická kvalita prostredia.

V rámci historického jadra boli pozitívne hodnotené: zlepšenie a dostupnosť nákupných možností (90,4 %), základných služieb (59,7 %) a estetickej kvality prostredia (76,7 %). Bezpečnosť a vzťahy medzi ľuďmi boli označené ako zhoršujúce sa z pohľadu 62,8 %, resp. 49,7 % respondentov. Vo vnútornom meste došlo k zlepšeniu nákupných možností (86,9%) a základných služieb (63,0 %), ako aj estetickej kvality prostredia (52,3 %). Naopak, k zhoršeniu došlo v oblasti bezpečnosti (57,3 %).

V prípade nových sídlisk zlepšením bolo viac nákupných možností (71,2 %) a služieb (51,9 %). Bezpečnosť (66,5 %) a medziľudské vzťahy (59,1 %) sú vnímané ako zhoršujúce sa. Vo vilových štvrtiach respondenti pozitívne hodnotili zlepšujúcu sa estetickú kvalitu prostredia (65,6 %) a kvalitu bývania (63,8 %). Pri hodnotení percepcie zmien v okrajových častiach mesta možno konštatovať, že výrazné zhoršenie nevykazuje ani jedna z možných alternatív. Významnejší podiel respondentov vníma



zlepšenie v oblasti nákupných možností (49,3 %). Z hľadiska udržateľnosti rozvoja bolo jednoznačne hodnotená len centrálna časť mesta – historické jadro (76,1 % respondentov). Pri hodnotení mestských častí z hľadiska sociálne, ekonomicky a environmentálne vyváženého, t.j. udržateľného rozvoja najlepšiu pozíciu zaujalo jednoznačne Staré mesto (74 %). Petržalka bola vnímaná pomerne významnou časťou respondentov ako mestská časť s neudržateľným smerovaním svojho rozvoja (46 %).

Prostredníctvom subjektívneho percepčného prístupu bolo možné charakterizovať rôzne aspekty rozvoja mesta a jeho vnútornej štruktúry a tak lepšie pochopiť geografickú realitu. Štúdium jednotlivých prvkov reality prostredníctvom percepcie mestského prostredia a jeho rozvoja prináša poznatky, ktoré je možné použiť pri usmerňovaní ďalšieho rozvoja mesta a pri vytváraní podmienok pre udržateľný spôsob života jeho obyvateľov.