

## **NEW TOWNS IN THE SETTLEMENT SYSTEMS IN CENTRAL-EASTERN EUROPEAN COUNTRIES**

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### **INTRODUCTION**

Now as never before in the society development history do the problems of settlement and urbanization become urgent; their solution being a significant ingredient of many prominent socio-economic problems. Therefore, the range and depth of urban settlement research, looking for ways to increase the reasonable effect on this process are believed to be among primary economic tasks.

Both positive and adverse tendencies evolved in the long run of urbanization process, they strongly affect the dynamics and spatial pattern of social production together with people life conditions. Among these tendencies especially important are the excessive growth of largest towns (towns - millionaires, urban agglomerations) and of huge urbanized zones, the settlement irregularity pronounced at different territorial levels.

Many adverse phenomena accompanying large agglomerations development contributed to the progress of new concepts in geourbanistic science aimed at elaborating deglomeration measures or minimizing these urban giants sprawl; one of them was the idea to develop new towns. It has been most fundamentally substantiated in Great Britain, where not only conceptual approaches originated, but a considerable part of new towns came into being. They present, however, a part of new towns immense entity appearing in the course of actively advancing urbanization process. In other countries the idea of new towns developing has been accepted (Merlin, 1969, 1971, 1976; Labasse, 1989, Steinberg, 1981), whereas it is realized much slower than on the British islands (Purdom, 1949; Rosner, 1962; Osborn, Whittick, 1963; Ramsay, 1985)..

Each country at a given moment has a certain number of new towns with their specific features and problems of further progress.

Geographers in Poland, ex USSR and in other Central-East European countries up till now do not pay enough attention to new towns investigations. Meanwhile, new towns became already a usual component of the geographic and urbanistic space in numerous countries, their construction in the XX century is very attractive for modern people, influencing their mentality and stimulating birth of new urbanistic ideas. Can you find anybody now, who never heard about the cities of Brasilia, Komsomolsk-na Amure, Chandigarh in Punjab, Tappioli, Reston, Umea in Sweden or the Nigeria capital - Abuja ?

Apparently, it is high time to summarize the world experience of new towns formation, to consider its various aspects, to present a conceptual and realistic analysis of new towns development in future in different countries as well as numerous problems faced by new towns.

That's why so important and urgent for the geourbanistic science (geography of towns) is the progress of knowledge on new towns, on their problems, both of general kind and specific each country and each type of new towns.

The purpose of this paper is to reveal general regularities governing the new towns development in national, regional and local settlement systems in various countries alongside with peculiar features at any level, than to propose basic concepts of new towns deriving of all this material.

The methodology and methodics of the work derive from the present-day theoretical and practical concepts on towns and settlement system development and functioning, popular now in economic and social geography, in urban construction, sociology, demography. Diverse publications on geography, agents and details of urbanization process in different countries, on economic-geographical situation of the town and region, on regulation and management of urban development and settlement have been overviewed.

In his research the author assumed as a basis many conceptual and methodical, and practical works of specialists engaged in any kind of urbanistic research – first of all prominent French, English,

Polish, Russian (Soviet) scientists (geographers, town designers, sociologists), then – reviews of geographers in other countries (USA, Hungary, Bulgaria).

As information base for this research primary statistical data have been taken, which were published by national or international institutions, as well as monographs and articles on geourbanistics and close disciplines in the ex USSR, Poland, Hungary, Bulgaria and other countries.

When studying the Central and East European data we addressed mainly to those for the ex USSR, where the greatest number of new towns was constructed (and is now under construction) in a wide range of natural-geographic conditions – including tundra and oases in deserts. We have also considered Hungary as a peculiar example of a country with a low number of towns until the second half of the XX and in the beginning of the XXI century (54 towns in 1945), these towns begin predominantly „rural towns”; Bulgaria with its persisting feudal rural settlement system, where the urban population in 1946 hardly reached 25%; Poland having had already in Medieval time more than 900 towns (in its present –day boundaries; i.e. more than now).

## **THEORETICAL AND METHODOLOGICAL ASPECTS ON NEW TOWN RESEARCH**

The definitions of the “new town” concept has its history and is inadequately interpreted in different countries. The first problem to appear is the relation between the notions “new” and “young”. The answer to this question is of primary importance for the further discussion. If we assume them synonyms, the time limits of this research are threatened to be removed endlessly, descending to those remote years, when the first towns in human history have been erected, their youth, however, had lasted only during a certain time span.

That’s why the author prefers the term “new town” as a notion not related to any time periods (new towns – Chinese, Greek, Roman, Medieval, modern, etc.). The “youth” of “new town” corresponds to initial stage of their evolution.

This statement enables us to approach the definition “new town”, but does not solve the basic question” what is the kind of town that may be defined as a “new” one?

The easiest answer may derive of administrative and formal juridical criteria; according to them new are towns having received their urban status during the last 30-50 years.

This definition is, however, far from being precise. The reason is that the status of a town is given by municipal authorities according to different criteria, which vary in time and area. The most usual criterion is the number of inhabitants, and even this one has shifting limits as in different countries, so within one country (ex USSR being a good example).

Administrative criteria denominating the town, supply it with a number of administrative functions. Administrative solutions are usually voluntary and are based on juridical standards changing in time and specific for each country; therefore, administrative criteria are regarded as auxiliary for defining the “new town” concept.

The history and genesis of a town are thought to be better criteria to identify the new town, they are imprinted in its architecture and spatial structure. One of the approaches in this criterion is based on the statement that “new town” is a settlement unit, which appeared in a certain site practically “at a bare place” in accordance with a specially elaborated new urbanistic and architectural concept, or at least with a new general plan. This approach supposes the so-called revolutionary way of new towns development, which means the formation of town’s structure (or of its major part) during a short time period, and may be opposed to the evolutionary way presuming slow changes and transformations of existing settlements.

This criterion being accepted, doubts may appear about the feasibility of regarding as new the so-called “towns-mushrooms” (growing as “mushrooms after the rain”) according to Pierre George (1959) terminology. The “towns-mushrooms” in their classic form are really produced by a revolutionary and even by an explosive method (“mushrooms after the rain”); they display, however, an extremely chaotic urbanistic scheme and architecture (Gdynia in Poland is an appropriate example). As towns of this type are numerous in Central-East European countries, we have to accept their chaotic appearance as typical urbanistic model of the industrial progress period.

Historic-genetic criteria derive of the analysis of urban settlement evolution within an area and finding the moment, when the town actually appeared. The importance of town construction “on the bare place” is frequently emphasized with simultaneous investigation of reasons and trends of the new town formation. It is difficult to find an example of a town in countries of a dense settlement net, that could have grown on an absolutely non-urbanized territory. Consequently, proportions of bonds become very essential to be revealed between old towns and newly reclaimed areas, that could be sufficient to state the new town is being talked about.

Much more complicated is to define a new town with the help of functional criteria. The concept of a town itself means a multi-functional settlement. This definition in its traditional meaning forces us not to refer to towns those ones that lack independent significance (towns – satellites being the first to exclude) and being adjacent to large cities or their agglomerations perform some special functions for them, for instance, of residential areas (town – “bedrooms”).

In modern world, with its high mobility of people the function itself lost its absolute adequacy. In modern towns, occupying large areas, the main urban functions get to be differentiated, first of all, those of living and production. This spatial differentiation is unfrequently expanding beyond the administrative town’s limits, and comprises suburban regions with their long existing or, sometimes, new towns. On the other hand, the definition itself of the town function requires precision. Traditionally, the function index – economical base of the town existence – is measured by the number of employment facilities. In this sense the town is regarded as a settlement with diverse variants for labour application. Meanwhile, it is reasonable to imagine (not only in futurologic aspect) such a spatial pattern of urban functions, when separate functions are concentrated in their own towns, situated close to each other and forming in their combination urban agglomerations, conurbations, etc. In this case the author disagrees with some scientists and thinks these separate monofunctional elements of such complex (agglomeration) to be defined as urban settlements.

Basing on the above discussed, we consider as a more correct criterion for the urban function the differentiation of people occupations. Thus, not the place of working, but the source of living is responsible for the definition of this or that town function.

A new town should be characterized by the define degree of the closurement of its main functions – functions of living, working, rest, education and culture; the new towns should display also a functional diversity: alongside with employment facilities in various branches of industry, different kinds of services and other activities should be provided.

The functional diversity considered above results in social differentiation, in the increase of professions and occupations numbers. The conditions cited are to be maintained in case the given spatial formation may be defined as a town. According to Jałowiecki 1989; Imbert, 1978, 1982), complexes of factories, works, mines and living blocks are not towns, even if their population reaches several thousands inhabitants. Thus, Jastrzębie in Rybnik coal basin in Poland with its 100 thou. people is not a town, it is only a gigantic living complex of the collirey.

The differentiation may be so considerable, that some of towns already formed but lacking intricate functional structure determined by employment places are regarded in a different way from the viewpoint of earnings.

The present – day settlements become still more frequently places for common dwelling of different professional groups. They differ by this feature of former factory settlements with the only professional group there, moreover, employed at the same factory (for example, settlements near mines and metallurgical works).

The author considers the criterion of town’s function to be among the primary when determining its “novelty”; drastic change of former functions or evolvement into quite different kinds of activities, having taken prevalence over the former ones, testify to the new essence of the town. This criterion may be considered a primary one, because all the other changes – demographic, infrastructural, morphological derive mainly of the functions changed. New towns are known to evolve in accordance with the alteration of urban functions: thus, Medieval towns are towns – castles; industrial towns of the XIX century, as the recent ones – ingredients of agglomerations, but being spatially isolated and functionally autonomous (towns – satellites in Western Europe), maintain the socio-spatial integration within a region or agglomeration.

Supposing that considerable historical alteration of functions and, accordingly, of the town's morphology result in the birth of a "new town", we have to admit sufficiency of drastic changes in activities in an old town with other subsequent radical transformation for defining the town as "new".

Morphological criteria. The first visual impression of a new town consists in the feeling that it was either initiated or is developing according to a certain plan, which never existed in old towns being naturally and gradually transformed during their long life. However, this "plan" criterion is not always so evident, when examining the volume and trends of alterations; therefore, it remains rather vague, whether a town, claiming to be called "new" should be constructed according to a given plan, or it may be radically reconstructed in the whole or only partially – its centre or quarter(s) with the largest number of inhabitants and/or occupying the largest area. This criterion requires, more than the other ones, an creative approach to the situation, because only critical analysis is able to differentiate reasons and essence of changes occurring in a town.

The morphological criteria practically consist in the identification on the scale of urban area changes, its infrastructure, spatial structure, appearance and functions of the buildings. These criteria comprise features, that create in their entity and details the specific structural image of the town. If it has drastically changed, a "new" town is possible to be discussed, or (depending on the scale of alterations) – a transformed one. The criteria mentioned are bound to time, as during a long time of each settlement existence (some centuries in many cases) its image and spatial structure cannot remain unchanged; whereas to give the name "new" to a town from morphological criterion point of view, its characteristics are to be conspicuously changed during a very short time span (several years). The most difficult problem is to find a boundary for changes, permitting to speak about the new town according to the scale of changes alongside with other criteria operating with the notions of radical changes.

The next criterion to define a new town is the structure and social characteristics of population. Rather trivial is the opinion of young people prevalence in the age structure of population (Jelonek, 1989; Knobelsdorf, 1966) and, in the same time, the feeling of community and bonds with the place people live (Jałowicki, 1988). Such populative or social criterion called sometimes "demographic youth" is frequently synonymous to the youth of the town itself. Demographic structure gradually becomes more even with time being valid in the first "childish" and "adolescent" periods of a new town development.

The importance of demographic criteria consists in the fact, that the town is formed by people and by the urban space organized by them. The above mentioned criteria are in general outline applicable to the second element enumerated (youth of the town). the "new character" of the town is thought to be equally determined by changes in its space pattern and by the population itself. The mobility of population is important as well. Autochthonous people and immigrants frequently differ in their demographic, social and also national-ethnic features; in the latter case the inflow of migrants from areas outside the local sphere of the town's influence is meant. Hence, the arrival of large groups of immigrants, strongly different of autochthones may be the reason for a populationally "new" town to appear. This conclusion originates of the fact, that demographically, socially, national-ethnically different societies would function in another way and reclaim the urban space in accordance with their habits, requirements, behaviour, they would also display a specific evolution dynamics. The new town must be characterized by a feelin of community proper to its inhabitants, of their attitude to a certain locality.

The urban infrastructure and organization of life of the population is regarded as auxiliary criterion, especially when related to social relations criteria. The latter mean changes in the standards of people behaviour and of mechanisms governing their actions. These phenomena are to a certain extent dependent on the social and service spheres progress, on the well-being of population, amount and quality of lodging, reliability of functional transport and communications. Due to the mass-media influence more and more usual for each country become the standard types of social behaviour and less actual is the subdivision of population into social groups (rural, of small- medium- and large towns, etc.). A consequent decrease of social relations criteria importance becomes evident.

The review of criteria presented here and used for defining the "new town" concept is, of course, rather schematic (from the point of view of socio-economic geographer) as outlining only

major trends. In reality, there are many other features, alongside with the basic ones – revealed and quantified according to criteria discussed, which are difficult to adequately differentiate and characterize.

A important feature for “new town” defining is the ratio of “new” to “old”. A new town is rarely initiated on an absolutely not reclaimed area, usually it is constructed on the place of already existing villages and small towns (it is noticed in many cases in Poland, Hungary and Bulgaria).

It is worth to notice that the “new town” concept is far from being static, it is dynamic, which means that any town cannot be always “new”, moreover, each town was new once. Thus, the process of the town formation may be defined, with its historical beginning and end, the latter is possible to be identified. The birth of a “new town” corresponds to diverse prominent socio-urbanistic alterations restricted to a certain point of the geographical space. It may be also the moment of the settlement denomination as a town, its rebuilding, reconstruction after damage caused or explosive-like process of people migration.

The essence of novelty of settlements under study consists in the scale and rate of changes, or, in other words, the revolutionary character of alterations. The processes of the new town formation are supposed to come to their end when the revolutionary changes fade and are replaced by gradual evolution or stagnation.

The categories of shape and essence may be applied to describe a town. The shape of the town is revealed in its territory, building pattern and infrastructure. Rather conventionally, we can define as essence the town’s population and town’s functions. We consider both notions valid for the town novelty definition.

The shape of the town is more stable than its essence; in this respect the building pattern with corresponding technical infrastructure in broad outline should be taken into account, the dwelling blocks being of primary importance. They are mainly responsible for the town’s appearance and for the living standard of its inhabitants. Consequently, the novelty limits, according to Jelonek (1989), may be assumed within the time span of 40-50 years, which is usually followed by the period of houses decapitalization, when the apartments functions and pattern do not meet any more the demands of the next period in town’s development. The second element is population of the town. During the initial period of the town development the majority of its population consists of immigrant with their peculiar sex and age (young) structures, resulting in high rate of natural increase. These features, of course, are subjected to changes. During the town construction the ratio between the increase of immigrants and of local people changes, and since the moment of the town’s birth, people are born which become its natives.

There is a decrease in growth rates at a certain moment of town construction and immigrants inflow, and the demographic processes occur against the background of weaker immigration. The population structure and increment get gradually stabilized at the regional (in accordance with the town dimensions). Thus, as temporal limits of a new town in terms of demography, the time span may be assumed that is required for the reproduction of population and it equals 25-30 years (Jelonek, 1989).

The above consideration suppose the existence of a certain time discrepancy between the materialistic and “human” components of a town, when the criteria to denominate the town as “new” get exhausted, this time span ranges within 30 to 50 years.

There is, however, a third argument for accepting this period as basic for the new town definition and it is important nowadays. In the middle of the XX century and after the Second World War especially, the urbanization processes all over the world get accelerated and altered so drastically that almost a new epoch in urban development seemed to appear. It received many emphatic names (related to a gigantic population growth in the second half of the XX century), like “urbanistic revolution”, “great epoch of moving to towns”, “outcome to towns”. Towns of that period are logic to be called “new”.

Thus, summarizing, it seems feasible to apply the definition “new town” to settlements, that partially or completely appeared at the so-called “bare place” during the last 30-50 years. That kind of settlement should be spatially isolated of its surroundings, originated due to an administrative decision, which was materialized in an urbanistic plan and specific architecture, or owing to “leaping”

growth unprovided by any plans or development programs (at least at its initial stage). The inhabitants of such settlement have to earn their living by various non-agricultural occupations, to be demographically young and experience feelings of community with their neighbours and with the place they live. The dimensions of new towns may vary.

## **NEW TOWN IN THE SETTLEMENT SYSTEM IN POLAND, ex USSR, HUNGARY AND BULGARIA**

The post-war period in Poland is peculiar by its high urbanization rates resulting of industrialization and socio-economic changes in the country. Advanced urbanization is manifested both in the progress of existing towns and founding of new ones.

This part looks at the geographic position and functional structure of towns created in Poland after the Second World War. Of course, precise empiric studies of the subject are very difficult to be carried out: which of the towns should be named “new”; this would require a detailed research of each town separately, whereas due statistical data may be lacking. The author is quite aware of the incomplete adequacy of the approach discussed in above mentioned, nevertheless, following the majority of scientists (geographers), she assumes that the main argument to define the town as a “new” one is the time of its origin, or receiving the status of a town after the War. This fact undoubtedly testifies to a certain socio-economic maturity of the settlement enabling to regard it as a town (Szymanska, 1993).

Moreover, there is a rather large group of towns in Poland which became so modern in terms of their demographic composition and dwelling infrastructure (due to industry development), that they may be referred to as “new towns”, or at least quasi-new towns (Łeczna, Bełchatów, Barcin, Puławu, etc.).

What is the scale of new towns appearance in Poland? The process of birth and transformation of towns after the second War was active and diversified, and this may be illustrated by comparing the reference-books. In the first book of 1946 703 towns are enumerated, while in that of 2000 their number reached 874 (Szymanska, 2002, 2004b). In the beginning of 1950 there were 10 mln people in all the Polish towns, in 2000 the ‘towns’ population equaled 23.8 mln. The population increment in towns during 50 years was due to natural increment (44.1%), inflow of population to the town (34.3%) and to the new towns development or changes in administrative boundaries of the existing towns (21.6%). This latter parameter corresponding to almost 2.5 mln people describes the scale of new towns progress in Poland.

As it was mentioned earlier, in 1945-2000 there were 204 settlements that became towns, and 21% have once had this status in the long run of their history. By the present day 158 towns exist, the remainder has been included into other towns (Figure 1). It is fair to point out that more than 30% per cent (of 158 towns) of new towns received the town status at least for second time.

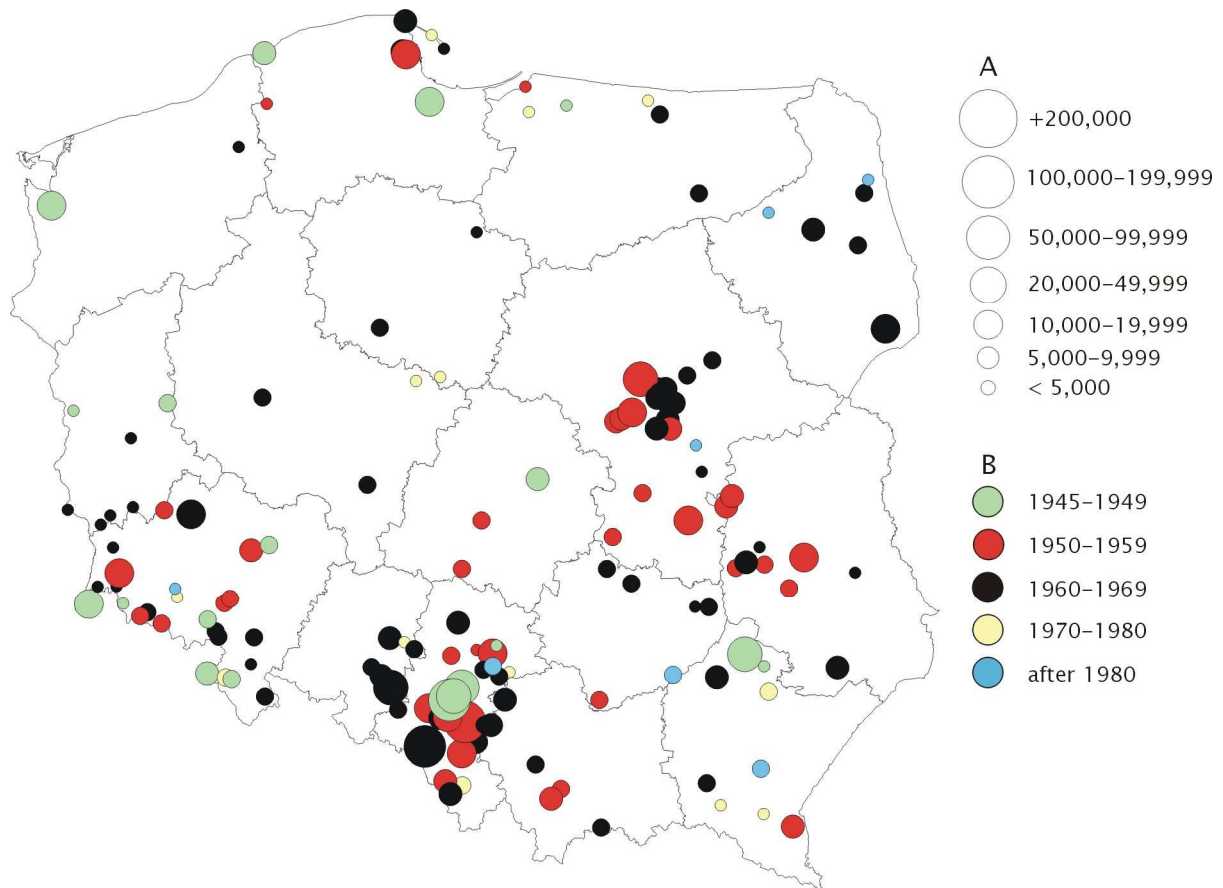


Figure 1. New towns in Poland and periods of the forming (state Jan 01.2000)  
A- number of population; B- periods of towns established

The frequency of the town status assignment varied in time (1945-2000): from 1 to 36 (year 1962) towns a year. The mean annual rate was 4 or 5 towns per year. Periods may be revealed, when the town formation process was more intensive as compared to its mean annual rate, these are years: 1958, 1962 (Figure 1). The considerable increment of towns of 1958 seems to be related to the changes in the administrative subdivision of Poland, when the new “poviat” (administrative regions of the 2<sup>nd</sup> order in Poland) centres were transformed into towns. The majority of settlements, however, received their town status in accordance with a certain economic level they have reached and, consequently, with the increase of the population number.

The majority of towns originated in the sixties (48%) and in the fifties (28%) of XX century, on the eve of active industrialization. Hence, 62 % of post-war towns were industrial in their essence (i.e. towns with more than half of their population employed in industry).

When considering the new towns spatial pattern, their highest density is noted for Upper Silesia (Katowice district and adjacent ones: parts of Czestochowa and Opole districts), for Sudety county (Walbrzych and Jelenia Gora districts) and the capital’s district. The first two cases are explained by the raw material mining and processing in the southern part of Poland promoting the new towns formation. The concept of Warsaw deglomeration proposed in 1950 is responsible for the phenomena under study.

The employment structure of new towns in Upper Silesia and Warsaw districts is drastically different. Industrial settlements predominate in the first one; towns-satellites (for example Tychy, Leszczyny) and industrial satellites (Ruda Śląska) are unfrequent (Litewka, 1979). Some of them are satellites of the second order; Tychy, for example, regarded usually as satellite of the Upper Silesia Industrial region is explained by the concept of this area deglomeration by means of satellites

development, and this was the reason for Nowe Tychy, Pyskowice, Ząbkowice to be founded. It is worth to mention that Nowa Huta is believed to be Kraków's satellite, and that its size enables interpreting Kraków as a peculiar "double town". This viewpoint may be encountered in scientific publications.

New town in Warsaw district are quite different – they are mainly towns for sleeping ("towns –bedrooms"), and some of them are industrial, service or industrial-service centres.

New towns vary in their dimensions. about 70% of their total number is below 10,000 inhabitants, with 30 per cent of urban population living there (urban "new towns population). If towns below 50,000 inhabitants are considered, the differentiation will be even more conspicuous: they make up 95% of new towns.

The analysis of new towns pattern and importance in settlement system permits to specify three categories of towns. The first category comprises "new towns" as elements of clustered settlement forms. Their origin is related to mining industry. These are towns within the coalfield areas in Upper Silesia and in copper-mining regions (Legnica region). The second category new towns are referred, that are adjacent to or included into large agglomerations, or, to be more precise, are in the zone of influence of a large city. Such are towns around Warsaw – Legionowo, Milanówek, Brwinów, Kobylka and many other. The third category comprises autonomous centres in settlement systems, contributing to the development of local populated systems: Mońki, Jabłonowo, Janikowo, Czarna Białostocka and other towns.

Specific problems on new towns. Insufficiency of funding the service systems results (at the beginning of new towns birth, especially industrial towns) in the shortage of employment facilities for women, so that an excess of labour reserves is evident. Recently in many new towns this problem is attempted to be solved by means of enlarging the service system (after the transfer of economy to the market system in 1990 many new private trading centers appeared) or by locating enterprises of light industry. For example, in a young town Janikowo with its 70% of employed people working in chemical industry, new vacancies have been created for women by organizing a branch of "Próchnik" tailoring factory (Szymańska, 1996).

The formation of a new town quite often induces negative phenomena in its surroundings, such as depopulation of nearby villages. The development of a town is related to flats building, to extra employment vacancies formation and investments for infrastructure. All these phenomena are attractive enough for the rural population. Too many people in Poland are engaged in agriculture and quite positive would be their inflow to towns, although, as many young people are quitting the villages and leave their parents there, this fact proves to be more negative than positive if one takes into account the low mechanization level of agriculture (Szymańska, 1996).

One more specific problem in new towns is that of their centres, which are underdeveloped in the majority of new towns. The construction of dwelling with minimal convenience was thought to be a primary importance, therefore, solving problems of the town centre was delayed. We are also concerned with the recent viewpoint on the town centre as unnecessary in modern towns, especially in the large ones.

We are of the opposite opinion on the centres, which is thought to be a valid contribution to the unification of the inhabitants with their native town, which generates the feeling of a community created by joined efforts. For the latter purpose the centre is a symbol, it strengthens the social contacts or even give rise to them. Instead of being the place for everyday shopping it should provide for realization of high level demands, which are deficient until now. In Nowa Huta, for example, the kinds of service of all – urban type are dispersed because of the absence of a pronounced centre (Górka, 1989). The same is the situation in other new towns. The inhabitants of the above mentioned Jastrzębie- Zdrój are sure that their centre must concentrate cultural, trade and service institutions and be a residence place for town authorities (Prawelska – Skrzypek, Makuch, 1989). The inhabitants of Łęczna are the same opinion (Miazga, 1983). In the questionnaires of new towns inhabitants we can frequently encounter proposals on the image of the centre and ways to create it. They prefer to see there a market with a townhall, beautiful large buildings, monuments or some other objects that could be symbols of the town. The centre should have green massive and be a place for people contacts.



Social relations are also complicated in new mining- industrial towns. The immigration genesis could not contribute to the development of social ties between the residents having come from different parts of the country and from different social layers (the formation of the “new society” is slower). The population in old town is usually formed of its nearest surroundings and the integration process is therefore more rapid.

According to Landecker concept (1957) the problem of new society integration may be discussed in a number of aspects: cultural, normative, functional, communicative and emotional.

The integration of society in new towns is discussed using the approaches of M. Miazga, who defines integration as a “process” or a complex of independent changes in the sphere of accepted by the society members’ mentality, as well as their perception of rules and systems governing the town’s functioning, contacts and social relations between separate inhabitants and their groups. Rational and emotional unification with the residence town is also included in this definition (Miazga, 1982).

The absence of social integration in towns (predominantly in the new ones) of the Upper Silesia was disclosed by Rykiel (1987). The area under study was formerly divided between three countries: Austro – Hungary (Western Kraków industrial region), Prussia (Upper Silesia), Russia (Dąbrowa coal basin).

The author analysed the spatial heterogeneity of marriages for the time period 1948 – 19895 and came to the conclusion that most of them (65 – 70%) are homogeneous: people that were born or originated from the same regions formed couples and this continued until now, when the social integration began.

In highly specialized (industrial) new towns, in Central- Eastern European countries, first of all, the problem of environment pollution is very acute (it should be noticed that recently this problem was partly liquidated) .

There exists a widely spread opinion that the sources of the ecological crisis including that of space, and of the pathological phenomena in many Polish towns originate of the communism strategy accepted after the Second World war and consisting in the development of modern industrial society by promoting the heavy industry progress in urban centres. Among the adverse post – effects of this strategy the accelerated urbanization and environment destruction are usually mentioned.

Such urbanization produced recently the pathological situation in the Upper Silesia, which, together with the Kraków agglomeration, abounds in most difficult to solve environmental problems. The by – products of advances in the urbanization sphere is the drastic degradation of the nature.

The pathological situation in the town was created by the administrative, economically non – substantiated decision to start the metallurgical plant in ecological and spatial consequences of this action, without thorough analysis of possible integration of this large neoformation with the Kraków organism. The harmonic development of the city was violated, and its ring – radial pattern, which was the framework of this development, under deformation. The areas between Kraków and Nowa Huta were transformed into a continuous urbanized belt. The spatial and functional integration proved to be extremely hard. Now these two towns with the dispersed patches of residence complexes around them look like chaotically urbanized area almost lacking features proving their purposeful formation (Szymańska, 1993).

In 1950 the socialistic realism in arts and architecture was “officially” proclaimed, since that time it hindered the development of Polish architecture and was an obstacle to its bonds with the global ideas. Although the Nowa Huta project was severely criticized, the fragments of residence block architecture of the socialistic realism period are closer to the present – day constructions, than to those built directly after this period.

The socialistic realism died in 1956, and modernism replaced it again. The development of house – building plants, production of ready to use blocs and panels contribute to decline of architecture. Enormous number of residence blocs is threatening the old city image, it spoils the landscape. The last refuge for architects’ imagination became cathedrals and other church buildings, but this small contribution could not prevent pathologic intrusions into historically unique Kraków architecture.

Summing up, we may remind that in the majority of cases the new towns founding in Poland (with its rather high density of towns – one town per 444 sq. km of its hinterland in 1945 and one town

per 384 sq. km in 1990) was not deliberate. Some of them resulted only of political reasons, so is the case of Nowa Huta, which became harmful for the former historical capital of Poland. It was constructed in accordance with a dogmatic idea to make Kraków “a proletarian” town. Other new towns were placed in agricultural regions, that was wrong as well; it happened with the above mentioned town of Janikowo, that originated due to soda industry in Kujawy agricultural region, whereas such an enterprise could be located somewhere else, for example in the vicinities of towns Pakość (4 km) or Inowrocław (7 km) on less valid lands for agriculture (Szymańska, 1993).

A specific feature of new towns development in Poland is the old network of small town like settlements, which engulfed new towns without any serious changes in their own characteristics. New towns, however had an underdeveloped infrastructure resulting in dangerous social consequences (nowadays this situation has changed positively).

Therefore, it seems reasonable to re – evaluate the new towns concept: what items are really valuable and what should remain only for urbanistic theories.

The former USSR. Soviet and russian theoretical ideas made a very important contribution to the theory of modern urban development. Within a comparatively short period equal to some few new decades many lines of approach have been elaborated in the formerUSSR aimed to find new forms of settlement and to create the definite settlement system at various territorial level.

In this paper we consider new towns as the most common form of settlement in the post-war period, nevertheless, it would be more advisable to discuss the spread of the urban network and to follow its dynamism in soviet times after 1917 (1535 new towns).

The history of town planning in the ex USSR indicates that the way to embody conceptual ideas into practise of urban development proved to be very difficult. Reconstruction of the old settlement system and its further development due to ever increasing demands of the society is a grandiose goal to be solved during several decades. To solve this goal it is necessary to have the striking clarity about the requirements of the society and the settlement patterns. The search of new forms of settlement was accompanied by great difficulties in the ex USSR, because this process started in economically background country, predominated by rural population. That’s why it comes as surprise that the Soviet theory of urban development has acquired intellectual and practical importance.

Some theoretical and practical achievements of Soviet (Russia) urban development as related to those in West Europe are briefly described here.

The 1920s and early 1930s seem to have been a rich period of soviet urban development. Abundant ideas and projects sprang up as if the October Revolution gave birth to a range of creative initiatives that put soviet town planning in the forefront of design (Pertsik, 1980, 1991). The innovation of these ideas should be estimated with dignity and needs to be seriously studied.

To give a clear picture of the atmosphere reigned in Moscow in the 1920-1930s Le Corbusier wrote, using image-bearing expressions: „ ...Moscow represents a factory of plans, the Promised Land for specialist. There is a lot of projects for all construction matters such as plants, factories, dams, housing and even towns designed by using all the achievements of progress. Architecture is flourishing and ripe to bear fruit to everybody who worships it. Moreover, to construct a large motor plant an american specialist in the field of designing workers` settlements has been invited. Residential designed by him looked much like prisons, but it was a model workers` settlement of american type. It was anachronous and not conducive to the spirit of times. This incident illustrates exactly the situation in Moscow of the period under discussion. There were many projects, plans, commissions responsible to study and adopt them. The five-year plan is likely to be as a hearth for steeling all modern technics” (Le Corbusier, 1970)

In the 1920-1930s many planners regarded the regional settlement idea as the best way to create a settlement pattern closely connected with GOELRO plan (B. V. Sakulin`s scheme of settlements, providing a ring of satellite-towns around Moscow combined by railway networks, 1918 as well as a draft of master plan for Moscow and its environs, proposed by S. Shestakov, 1921-1925). There were also proposals for linear settlements from Ladovskiy and Miliutin first of all for large industrial centres such as Stalingrad, Magnitogorsk, etc. The ideas of regional and linear settlements

advanced in 1920s, anticipated the latest achievements in the field of urban development, including the schemes of settlement, proposed by Le Corbusier and Doxpadis. The conception of successive development of existing towns embodied in a number of projects (for example: the 1918 plan of new Moscow, proposed by Shchusev and Zholtovskiy and the 1935 master plan for Moscow) has acquired primary theoretical significance. It is beyond comparison with numerous far-fetched schemes of settlement aimed to eliminate the growth and development of existing towns and cities and to create new ones ( Le Corbusier project concerning the foundation of new capital city north-westwards from Moscow or May`s project to destroy the old town of Moscow in order to construct a new one). The ideas of the 1935 master plan for Moscow were adopted to provide a radial-concetric road system together with the recommendation to reconstruct the city in terms of its conurbation and to create a ring of satellite-towns around Moscow. The 1928 master plan for Novosibirsk should be also noticable; it is an unique plan in the history of urban development projects, predicted the increment of inhabitants up to 1350 thousand people in the next 50 years (in 1978 the number of residents was grown as much as expected) (Rodoman, 1961; Planirovka...,1984).

It should be noted that – as far as new towns constructing is considered – two trends in their development can be outlined: appearance of satellite-towns started in the 1920s and appearance of: Fabrykplant-towns” associated with the development of new regions in the ex USSR, started in the beginning of 1930s (Konstantinov, 1976; Konstantinov, Epikhin, 1980).

The growth of new towns and cities as the very important and regular part of urbanization in the former USSR is a sphere of purely governmental activity to improve the structure of settlement in many regions of the country and to contribute to the emergence of new industrial complexes. According to each five-year plan about 80-90 new towns appeared attributing to regions with high concentration of natural resources, the construction of hydro-and thermoelectric power stations, dams and the other technical services as well as the most developed industrialized centres and spheres of influence.

In the course of rapid economic development a great number of new towns appeared in many regions of the ex USSR, an even settlement network covered the vast territory of the country, including Western and Eastern Siberia. The towns erected at a „bare place” revealed to a considerable extent the changes in the settlement system throughout the country. These towns are distinguished not only by their size but also by the concentration of industrial production, promoting to a high output of State value. The number of new towns has reached 20% in the total amount of large cities. It is the most characteristic feature of urban settlement in the former USSR, reflecting a high dynamics in the development of national economy (Szymańska, 1993).

The processes bearing directly upon the development of new towns and the formation of urban network are as follows: 1) the development of large centres specialized in the main branches of industry and 2) the development of hierarchical network of towns with central functions and spheres of influence.

The ex Soviet Union, and Russia is a country, in which huge amounts of new towns have been and are now built. After 1917 due to industrialization and electrification in Russia it was possible to observe high rates of the urbanization process and its unprecedented.

From these base the huge urbanizational boom started in the former USSR, which was closely connected with industrialization of the country. Forced development of indystry was the cause of the rapid growth of many towns and cities. This is easily seen, exemplated by data for the USSR. In 1930 Magnitogorsk started to be built, the population of which exceeds 426 thousand inhabitants now (2002). In 1932 Komsomolsk na Amure has grown, by 2002 this town contains already 287 thousand residents. Many settlements and villages were transformed in large industrial centres (Szymańska, 2004).

But a great number of new towns appeared after the second World war. For instance, Norilsk in circumpolar region (235 thousand inhabitants), Volzhskiy, accounting for 287 thousand people now, vast urbanized region sprang up within the territory of Siberia near Baikal Lake with a network of new towns such as Bratsk, Angarsk, (278 and 268 thousand inhabitants respectively), etc. In European part of Russian Federation new towns appeared as well: Naberezhnye Chelny (517 thousand residents), Tolyatti (740 thousand residentd), etc. (Szymańska, 2004).

After the October Revolution, in connection with the wide industrialization and electrification of Russia, urbanization had a very stormy character. Made in the twenties years of the 20th century review of towns showed out that some towns had not enough economic potential and therefore they were degraded to village rank, and at the same time 90 settlement units having developed economy received town rights (Lappo, 1997). In the whole Soviet Union until 182 units received towns rights until 1926. This way in the Soviet Union in the moment of census in 1926 from the 737 towns almost 25% were new ones (Konstantinov, 1947). The category “settlements of urban type” (frequently called: “workers’ settlements”, “dacha’ settlements”), has been created and its population was counted to the population of the town. On the basis of census from 1926 it was stated that the number of urban population was 17.7% that time.

During the prewar quinquennium (1926-1939) the number of towns increased from 461 to 576 (inside the that time borders of the Russian Federation). These towns were formed “from zero” on the so called “raw roots” as towns of mineral raw material production or military towns (for example Komsomolsk by the Amur, Severodvinsk, Magnitogorsk).

In the years of the Great Patriotic War (1942-1945) 55 new towns were established (in the whole Soviet Union 87 towns) that received the evacuated population and industrial firms. The most town was formed in the Russian Federation, i.e. by the Ural – 31.6 - in Western Siberia, 5 in Eastern Siberia, 5 in the Volga-Vyatka Region, 4- in the European Northern Russia, 2 – in Povolzhye, 1 in the Central Region and 1 town in the Far East (Lappo, 1997).

The process of urbanization of the whole Soviet Union together with the Russian Federation began from such position. The increased development rate of the town network, especially big ones, was social and economic necessity. One of the characteristic features of urbanization in the ex Soviet Union, and so in the Russian Federation was its interrelation with industrialization. The progressive development of industry (industrial production in the years 1928-1976 rose about 115 times) led to the quick development of towns.

Many new towns appear on the map of Russia with the simultaneous increase of the population of the already existing towns. In the years 1959-1989 160 new towns have been formed, but the formation intensity of new towns (town creation) weakened a little from the end of the 80ties years of the 20th century.

As it was mentioned earlier, the most new towns were established in the 50ties and 60ties years of the 20th century, on the average 8-12 yearly. In the 70ties - 80ties years only 6 new towns were created. We should mention here that in this analysis tens of so called “secret” towns were not taken into account (military towns, towns producing nuclear energy, towns producing rockets and sputniks, etc.) which were not known until recently. It is enough to mention here Arzamas - 16 (from 1991 Sarov), Krasnoyarsk – 45 (from 1993 Zelenogorsk), Krasnoyarsk – 26 (Zheleznogorodsk), Zlatoust – 36 (Triekhgornyy), Sverdlovsk – 44 (Novouralsk), Sverdlovsk – 45 (Lesnoy), Tomsk – 7 (Sieviorsk), Chelyabinsk – 65 (Oziorsk), Chelyabinsk – 70 (Sniezinsk), Penza – 10 (Zariechnyy) and many others (Szymanska, 1993). This is for sure an interesting question, but it is not the subject of this analysis and requires further, deeper researches.

In sum we can state that the formation of new towns in the Russian Federation gathered a stable tendency, however at present — due to the considerable saturation by towns the economically active territory — the intensity of this process decreases.

New towns developed very vehemently, to some of them the proverb can be used “shoot up like mushrooms”.

Among the numerous examples of such development we can mention the town Nabierezhnyie Czelyny (in the Tatarstan Republic; in the years 1982-1989 it was called Brezhnev). This old settlement became a town in 1931. Before 1917 it had 9 thousand inhabitants, in 1939 9.3 thousand and in 1959 – 19.1 thousand. In the 70ties years of the 20th century the production of the known trucks “KAMAZ” begun here, new workplaces were created in the town and in connection with this the dynamics of population increase also grew. In 1970 the town had 38 thousand inhabitants, in 1974 already 163 thousand, in 1979 – 301 thousand and at the beginning of 2002 over 517 thousand inhabitants. So in comparison with 1959 the number of population grew 27 times.

Zelenograd near Moscow (belonging to Moscow administration) has similarly high, 19 times, development rate — in 1959 it had 11 thousand inhabitants, in 1989 already 158 thousand, while in 2002 – 205.9 thousand inhabitants. The Siberian town Surgut (established in 1594) in the Khanty-Mansiyskiy Avtonomnyi Okrug has even higher dynamics of population increase. This important center of exploitation of rich oil and natural gas deposits had only 6 thousand inhabitants in 1959, while in 1989 already 248 thousand and at the beginning of 2002 282.3 thousand, i.e. the number of population rose here over 47 times. Tolyatti, where the greatest Russian plants producing passenger cars are located, also reached considerable size. Tolyatti (ex Stavropol), established in 1738, in 1926 had only 6 thousand inhabitants, in 1959 – 72 thousand, in 1970 – 251 thousand, in 1990 – 652 thousand, and at the beginning of 2002 – 740.4 thousand inhabitants.

We should mention that lately in tens of cases a decrement was observed in the number of population. Such situation appears most clearly in the old basins of mineral raw materials production, for example in Kuznetsk Coal Basin (Kuzbas), where due to the exhaustion of the hard coal deposit the number of population in the towns also decreases.

With the formation of new towns and the development of the old ones a quick increase in the number of population is connected. This process began already in the pre-war years. During 14 years (from 1926 to 1940) the number of population in the towns of Russia increased 2.4 times, and the share of the urban population grew to 34% (in 1926 17.7%).

The urbanization process in Russia after the World War II had an uncommonly dynamic course and was characterized by accelerated urbanization rate, as a result of the industrialization of the country and socio-economic transformations. During fifty years Russia changed from a country where the rural population dominated to a country with a distinct supremacy of urban population. Over the years 1926-2002 the percentage of urban population rose from 17.7 to 73.0 what undoubtedly means a qualitative change (Szymańska, 2004a).

At present, large scales and dynamics of urban development, characteristic of the former USSR, get declined. It should be stressed that the concept of a ring of new towns outside a protected green belt is the dominant theme of town planning in Great Britain, the urban development in the ex USSR is chiefly characterized by wide scope of activity to create new towns of different types.

Hungary. Hungary is a country with a very peculiar settlement pattern. For instance, in the Middle Ages a dense network of well developed towns was widely extended in Poland. According to data presented by Goryński (1972) there existed over 900 towns within modern boundaries of this country. On the contrary, in Hungary there were only 46 towns up to the 20<sup>th</sup> century (until 1918) regarded as "rural towns". In addition, it should be noted that Budapest agglomeration played a dominating role in the course of the urbanization process.

However, the capitalism in Hungary was developed not so intensive as in Western Europe and in Poland particularly, but its impact upon the growth of capital city appeared to be the most important. Thanks to the central position Budapest became the town, mostly industrialized. At the same time the other regions of the country appeared to be excluded from the industrialization and the urban development process.

After the Second World War the growth of industry made it possible to accelerate the framework of organization the urban network and concentration of population in towns: Budapest and new towns have been rapidly grown making up 56,8% in the total amount of towns (71), the share of medium- and large-sized towns was also increased, just as the number of rural population declined especially in settlements of small size (Pesci, Sarfalvi, 1962; Sarfalvi, 1985; ).

From 1945 to 1985 71 towns have been and built accounting for 57% in the total amount of towns in Hungary. Many of them were developed at the place of small villages and settlements, the major part appeared at "a bare place".

After the second world war 4 settlements had risen in urban status: Tatabánya, Ózd, Hatvan and Orosháza. In the course of further industrialization the growth of new towns included already provincial industrial centres and well developed „socialist towns” appeared during 1949-1960 (Dunajvaros, Komló, Várpalota, Oroszlány, Kazincbarcika and Ajka). Besides, 3 settlements which had the main functions within the definite territory were also gained in urban status independent on the

industrialization of this territory: Keszthely, Tata and Törökszentmiklós. Thus, 14 new towns appeared from 1945 to 1960.

In the last 30 years there was a definite planning in the urban development in order to design and build towns in regions to be well developed. As a result the majority of new towns achieved status in the 1960-1990s were responsible for all service matters within their regions.

There were also some new towns erected by planned industrialization of regions as related to accelerating development of mining industry, energetics and produce processing industry as well. These towns appeared in Transdanubia mountain regions (Oroszlany, Ajka, Várpalota), in the northern regions of the country (Ozd, Kazincbarcika) and along Danube river (Dunajvaros, Százhalombatta, Paks) and Tisa river (Tisanvaros). The most part of these towns appeared at the place of one or two villages, the other part as a result of conurbation of large administrative centres and the capital city to provide the demands of ever increasing urban population (Érd, Dunakeszi, Gödöllo).

Urbanization process is steadily increased in Hungary: the number of urban population accounted 59% in 1988 as compared to 26.2% in 1990. This is explained by the growth of the amount of towns (125 by 1990) as well as by the increase of population both in old and in new towns. The distribution of urban growth resulted in reducing the number of population in the capital city as compared to the traditional growth pattern in small provincial towns.

In the last 20 years (1970-1990) average increase of urban population amounted 66000 people. The highest rates of the growth (120-130%) are most characteristic of industrial centres and new towns in comparison with the other ones (114-115%). Hence, as expected, new towns are characterized by higher dynamic increase of population (122% in 1970-1990 as compared to 114% in old towns).

As a rule, in Hungary new towns are inhabited by 10-15 thousand residents (80% of new towns) while in Poland they are mainly small in size (towns with less than 10000 inhabitants account for 70%). Average size of a new town is about 19000 residents as compared to that in Poland (13700 inhabitants).

The specific feature of the modern settlement system in Hungary, even taking into account the growth of new towns is a great share of capital city resulted from the history evolution. Although the growth of Budapest was slightly eliminated for the last few decades it remains predominant among the other towns due to the favourable combination of geographic, economic and political factors.

It should be stressed as concluded that the appearance of new towns during the post-war period of urbanization favored the diminishing of regional differences within the settlement system, but on the whole, the national settlement is not yet harmonious and completed. Historical differences are clearly seen in the urban network of Hungary. Even in agricultural regions of the country the growth of new towns could not render an impact upon the active development of these regions. For instance, processes of industrialization and growth of new towns in areas of Great Hungarian Plain appeared to be insufficient to change in agrarian character of the settlement system throughout the country. These processes caused migration of people, the number of population in some towns was decreased due to re-emigration. It is clearly exemplified by stagnation of the population increase in Alföld towns (Pesci, Sarfalvi, 1962; Sarfalvi, 1985; ).

Thus, national settlement system in Hungary seems to be not completed and even after the growth of new towns the sphere of influence of Budapest agglomeration remains predominated.

New towns within the settlement system of Bulgaria. The history of this country is closely connected with the formation of the settlement network as a result of the most complicated combination of historical, political and socio-economic factors as well as the environment evolution.

At the end of the XIXth century Bulgaria has been weakly urbanized. After the liberation in 1878 migration of people (Turkish nationality) took place in Bulgaria, due to the absence of industry there existed no conditions for the organization of urban life. In 1887 urban population amounted only 18.8% (Valev, 1957). Towns were in small size, a new capital city – Sofia had only 20 000 inhabitants, Plovdiv, Ruse and Varna accounted for 25 000. In towns the traditional wooden houses were predominant. On the turn of XIXth century stone two-storey houses started to be constructed. Experience gained from Central and Western Europe was used as a basis for architectural design after

the first world war. New settlements, administrative and trade centres appeared. However, the urbanization proceeded slowly. Until 1920 the number of urban population didn't exceed 20% in 1934 it reached 21.4% and in 1939 23%. Several years later after the second world war (1946) the share of urban population amounted only 25%. In 1944 there were 104 towns over the whole country.

Five-hundred years long Turkish yoke was the main reason to slow down the economic development of this country. Only after the Second World War Bulgaria has been transformed in industrial-agrarian country. Heavy industry has been especially grown. The old towns such as Sofia, Pernik, Gabrovo, Varna, Ruse were enlarged, new towns and industrial centres appeared: Dimitrovgard, Velingard, Kozlodui, etc.

As in the other countries the industrialization was accompanied by high increase of urban population from 25% in 1946 to 66.2% in 1990. In 1969 the number of urban and rural population was found to be equal and since that time the number of urban residents continued to increase every year due to the expansion of existing towns, appearance of new ones as well as due to the fact that many settlements were gained in urban status in 1960, 1964, 1969 and 1974. In 1969 only 33 settlements achieved this status. As a result, the amount of towns accounted for 106 in 1946, 112 – in 1956, 137 in 1965, 172 in 1970, 214 in 1975 and 237 in 1990. At present, 133 new towns are resided by 78 000 people or 13.4% of the total urban population. Average number of residents in a new town makes up 5 867 while in Poland - 13 700, in Hungary – 19 000. The largest town Dimitrovgard (54 000 residents), the smallest ones – Bolyarovo (1 793), Shipka (1793) and Melnik (330 residents). According to statement of Ignat Penkov (1971, 1971a, 1977) and Velchev (1970) 4 main types of new towns are distinguished due to their economic structure: industrial (for example Madan, Rudozem, Mezdra, Novi Krichim, Kozlodui, Velingrad, Dimitrovgard), industrial-agrarian (Radnevo, Rakitovo, Batak), agrarian-industrial (Kermen, Sungurlarie) and health resorts.

The old and new towns are uneven distributed within the settlement system in Bulgaria. Due to appearance of 133 new towns the hinterland area of a town has been sharply decreased. In 1945 – 1006 sq. km and in 1987 – 468 sq. km.

The situation in the urban network of Bulgaria is quite different from that which is characteristic of the other countries of Central-Eastern Europe (Poland, Hungary, the former USSR) because the old large towns in Bulgaria are found to be younger in terms of aged structure of population. Just these towns are resident by people migrated from villages and the other small-sized towns. Industrialization process has been mainly developed in towns with a population more than 50 thous. inhabitants, the new small towns appeared after the Second World War haven't been paid due attention to be developed. Low salary of residents both in villages and in new towns of small size and the insufficient growth of infrastructure are considered as the main reason for the increased flow of younger people to larger towns in search of better conditions for the life of urban type. It is also noteworthy, that gains in status of town could not promote the socio-economic development of many settlements and the change in infrastructure. In most cases these settlements have been arisen formally in urban status and remain to be as rural ones. The urban development is of great value when it is accompanied by deep socio-economic transformations. It is necessary to follow a policy to activate small-sized towns and to create appropriate funds and resources for these purposes.

It can be concluded that Bulgaria achieved successes in socio-economic development, including the urban development owing to the growth of industrialization. However, the most important problem of the urbanization process in this country is to activate the small-sized towns. To solve this problem it is not enough to rise the urban status of rural settlements without due attention to their socio-economic development.

## **THE CONCEPT OF NEW TOWNS IN GEOURBANISTICS. AN ATTEMPT**

Idea and genesis of a new town. The new towns creation and development may be regarded as important ingredients of the urbanistic history of th mankind, as all the towns on the Earth have once been new and young. The phenomenon of a new town in its most general understanding is a valid component of modern urbanism "philosophy". In a more applied version the development of new town

concept is an actual goal of modern urbanistics (geourbanistics included) theory and practical activities, because the further urbanization growth in the world is inevitably bound to the appearance, sometimes purposeful, of the new towns network.

Two main genetic types may be specified for new towns. In the first one a certain leading function arises, and the town itself seems to be a specific supplement of this function; in the second type the town plays the part of an attracting pole for different kinds of activities. The leading function is usually presented by a definite, localized in a certain place, branch of industry; consequently, the first to appear is the space for working which is followed by the function of a town as a place for labour force reproduction. Such are new towns in Poland and in other countries of Central - Eastern Europe. Industrial plants are not the only town generators, these may be universities (Louvain-la-Neuve in Belgium, Villeneuve d'Ascq in France) or administrative-political functions (Brasilia, Chandigarh in India). In the other probable case an urban space without any dominant function evolves. Due to a certain way of the urban space formation, the field for potential possibilities of development is opening here: residential areas, offices, industrial zones, service centres, recreation areas are constructed in order to attract people and provide them with different occupations. The life and employment conditions should be rather attractive to be sold, although dwelling and enterprises are insufficient as objects for sale, the latter should be the idea of novelty. It is just this idea together with the mechanism of its realization, that accounts for the phenomenon of many new towns progress in western countries.

The "new town" concept is disputable. There are two viewpoints on the subject: one of them defines the new town as a formation arisen at a "bare place" or grown of a drastically changed village; according to the other point of view, "new" are only towns constructed in accordance with a new (as compared to the common) socio-urbanistic concept. The latter opinion is exemplified by towns-satellites around London, Paris and other large cities.

We assume incorrect to oppose these viewpoints, because the second one is complementary to the first. A new town, formed as a revelation of a new socio-urbanistic concept is but a particular case of a new town in general; in the time-spatial perception "new" is a town derived either of the existing or of a really new socio-urbanistic concept.

The "new town" concept is not at all static, it is essentially dynamic. There are no eternally "new" towns, moreover, each town was once new. Thus, the new town formation process has its historical beginning and end, which may be identified.

A new town' starts with the socio-economic changes taking place in a certain point of the geographic space. They may be due to: assignment of the status of the town to a settlement, which already existed here or to a town, that might have been initiated 'on a bare place' or reconstructed after damage caused, explosive-like migrations of people induced by economical, political, military or other changes.

The novelty essence of such a settlement unit is determined by the revolutionary character of the alterations going on. Therefore, the final stage of the new town formation may be recognized by the decline of revolutionary alterations and their replacement by evolutionary ones (or by stagnation in some cases).

Before starting the discussion of the concept an essential warning should be done. As mentioned above, the new town concept may refer to different historical epochs, we shall consider only towns having appeared in the countries under question after the Second World War.

With this limitation (it has been mentioned above) accepted, only such settlements may be defined as new that have originated (at least their major part) not later than 30-50 years ago. The settlement must be isolated in the terrain, its genesis may be related to administrative planned decisions, which are practically realized in a completed urbanistic plan and specific architecture; however, the spontaneous development, without any plan is not excluded. The inhabitants of such settlement earn their living by various non-agricultural activities, they have a feeling of their social community in their residence and working places, young people predominate in the population structure. The new town size may vary.

Two basic gnosiological approaches to new towns research and designing are reasonable to be distinguished for:



- 1) towns on "the bare place" with a unique initial design and functional structure;
- 2) towns, spontaneously growing of an urban embryo and having received their status at a certain moment of their evolution.

These approaches predetermine the procedure of research and designing, they are open for discussion and perfection, they require more experimental studies, which may prove or reject our statements.

#### Reasons of new towns appearance, their types and specific features

The new towns originate by a number of reasons, and the most important among them are the following.

The first reason, rather usual in case of stochastic sprawl of large cities, is the necessity to regulate the large agglomeration centres development ( regulation means here the elimination of enterprises and of functions which may operate outside the town's centre). Regulation is operating by three methods:

- 1) new towns and town - satellites are created only for residence purposes, the so-called "bedroom towns", they cannot provide their own population with employment 'in situ'; in Poland such new towns are presented by Jozefow, Zielonka, Sulejowek and Zabki around Warsaw;

- 2) "partially autonomous town - satellites" are formed providing for "in situ" employment for the part of its labour - capable population (we return to Polish examples, to towns around Warsaw - Milanowek and Piastow; in the ex USSR these are Kolpino, Petrodvorets, Sestroretsk around Leningrad with their constantly decreasing population number).

Some specialists regard these two forms of new towns to be insufficiently effective to relieve the agglomerations centres size, because their working inhabitants (or a major part of them) are transformed into "eternal travellers" moving from their residence place to the town, where they work and then back. We agree with this sceptic opinion. Hence, the idea of territorial disjunction of residence and working sites being essential for the development of "towns - bedrooms" proved to be less attractive and vital as it seemed initially;

- 3) "new town - satellites" are created which "guarantee an almost complete employment within the town for their inhabitants" and are able to provide for cultural-service facilities; they may be exemplified by new towns Grodzisk, Pruszkow, Piaseczno in the Warsaw agglomeration and Zelenograd in the Moscow one. In this case the new town is functionally balanced, i. e. has a full set of urban activities. This is the most advanced type of town -satellites.

The second reason of new towns development, resulting from the necessities of a region, is "indispensability of the socio-economic activity of a certain territory". This reason of forming new towns as the centres of activities encouraging in a region is especially characteristic for dispersed industrial zones; it is very conspicuous for old coal mining regions of Great Britain, where the danger of unemployment was real because of high homogeneity of the territory specialization (these are new towns Cwmbran, Newtown in Wales, Aycliffe, Peterlee, Washington in the northern England with Newcastle as a centre). There is one more subtype of new towns in weakly developed agricultural regions with a low urbanization level. Thus, in Kazakhstan during "virgin lands reclamation" period new towns Derzhavinsk and Oktiabrsk were created. In this way various local centres for meeting the demands of rural population and for non-agricultural activities attraction were formed.

The third reason to found new towns consists in " necessity to make more compact the regional settlement network". This situation is encountered in areas with a poor network of towns (mainly large ones), although the regions themselves may be advanced in agriculture or resort. In case of agricultural over-population it is very important that new towns contribute to normal rural-urban interlinkages. An appropriate example may be presented by new towns in Central Asiatic former USSR countries: Urgut or Katta-Kurgan towns in Uzbekistan.

The fourth reason is "reclamation of economic (industrial) minerals" both in old- and pioneer-reclaimed areas.

In first case many difficulties are faced by new towns development in regions with already existing settlement system (Almetievsk, Nowyi Orlan in the "Second Baku" oil field; Belchatow mineral basin in Poland). New bonds evolve within the old settlement system alongside with new

elements in functions distribution. When the pioneer reclamation of an area with mineral deposits is going on (second case), loci of new reclamation are formed in huge areas (with a consequent new settlement system). Sometimes reclamation is proceeding not from the region to the town but in an opposite direction, and here the region-forming effect of the new town is quite evident. This is the case of economic minerals reclamation and development of various branches of mining industry in new regions. Very conspicuous are these phenomena in the eastern part of the former USSR, in British Columbia in Canada and in some other regions.

The fifth reason - "performance of specific functions required by the interests of the whole state": political, economical, military, scientific, resort. Highly individual type of new towns result of solving such tasks: these are large specialized industrial centres of overall importance (sometimes even beyond the interests of one country: Toyliatti, Naberezhnyie Chelny, Staryi Oskol, Cherepovets in the USSR), scientific or university towns, peculiar by location, building pattern and social climate (Dubna, Pushchino na Oke, Protvino, Zhukovskiy - in Moscow vicinities, Akademgorodok near Novosibirsk, Villeneuve d'Ascq in France), different resort centres (Sochi, Planerneye, Kislovodsk, Borzhomi in the former USSR, Bragov in Great Britain), military and atomic ones (Los Alamos, Stentforth).

Wonderful examples of new towns having originated due to political considerations are the intentionally planned and built new capitals - Brasilia, Canberra, Chandigarh - capital of Punjab, and capitals of Nigeria (Abuja) and Argentina being now under construction. We should like to cite a fragment of the article written by Israel Pionero da Silva in a special issue of a Brazilian architectural magazine on designing and construction of Brasilia city, the entire history of the project, review of architectural solutions and their judgement (Modulo, 1957, No 8): "The city should liberate the government of the pressure, which is exerted upon it in large seaport centres, the people self-consciousness is to be raised, the new capital should be a tool for penetration into the interior and in the tense economic situation of the country it must be something like psychical shock".

Towns adjacent to the nuclear power stations represent a special subtype of this type of new towns.

It is worth to remind in conclusion that the state politics in the sphere of new towns must not follow dogmatic ideological schemes contradictory to the objective regularities of urbanization and the whole society development. Thus, location of a new town close to the historical capital of Poland - Krakow (Nowa Huta) in accordance with the pure dogmatic idea of Krakow "proletarianization" was a violation of the economical common sense, besides, it caused a drastic worsening of the ecological situation in Krakow. Another kind of wrong solutions may be exemplified by the new town of Janikowo with its soda plant, created on very good soils, whereas the plant might have been located in a neighbouring (10km) already existing town. Very valid lands for farming are used now for storing wastes of this soda plant.

One more example of a reason for new town founding incompatible with actual regularities of economy are subjective political considerations, such as birth of political leaders of the country. This was the reason for the towns of Dzhizak in Uzbekistan and Pravetz in Bulgaria to come into being. Quite evident is the stupidity of such actions, unfortunately they took place in real life (Szymańska, 1993).

The above reasons of new towns formation (in Central-East European and other countries) provide for a basis for their typology and, accordingly, for an overall analysis of various new towns problems and trends in their development.

This typology, both functional and genetic in its essence, seems, therefore, logical. An attempt to define specific features and problems of different types (and subtypes, if possible) of new towns is presented below.

#### Type I. New towns in large agglomerations

The following common problems and features of development are proper to the new towns of this group:

The development of towns - satellites hinders to a certain extent the growth of the agglomeration nucleus and contributes to expanding the agglomeration high potential over a broader area; simultaneously it influences the development of the agglomeration itself.

The new towns are in a most natural way incorporated into the agglomeration system, so, instead of being "islands" they become natural ingredients of the system; towns - satellites are the elements of settlement systems, they have mutual productional-economic and cultural-existencial ties with the nearest surrounding and with the other agglomeration elements, they have common municipal and ecological infrastructures, complementary demographic structures, intensive pendulum employment and cultural-existencial migrations.

Forming of a rather pronounced town-forming basis, with its prerequisites appearing at a certain stage of the agglomeration nucleus evolution: removal of ecologically dangerous or covering large areas productions; location of large enterprises departments or plants which are complementary to the production complex of the main city (Zelenograd, Sumgait, Rustavi, Kstovo, etc.); creation of specialized scientific centres (Troitzk, Pushchino, Obninsk, Dubna, Chernogolovka, Akademgorodok near Novosibirsk); formation of towns - satellites on the basis of engineer - transport complexes (airports, sea harbours, etc.).

Choice of a variant of the planned development derived of the analysis of alternatives proper to all the agglomerations: ring development pattern, development along one or several axes, such as rivers, foothill line, railway joints, artificial banks oriented towards a gulf.

Management of new towns development is their common property. It is well known that only if the state politics and town construction management correspond to the objective laws of settlement and urbanization evolution, positive results may be obtained. In the opposite case it is a failure. Thus, hardly effective were the attempts to inhibit the population growth in large cities with their considerable development potential in the former USSR, Poland, Great Britain (f. i. , Moscow, Warsaw, London).

The new towns development in such cases was not successful either. When founding of new towns - satellites was in accordance with a certain stage of the whole agglomeration progress, when the agglomeration was ready for deconcentration, new towns were progressing without disturbances. For example, the program of Zelenograd creation was laying through 20 years on the shelves of urbanistic workshop, but it was not realized until it became urgent for the Moscow industrial complex to have a town - satellite with advanced electronics. Then the town was constructed and it displays now a dynamic development (its population increased from 11 000 in 1959 to 140 000 in 1979 and reached 206 thous. in 2002)- ( Szymańska, 2004a).

Towns - satellites location in countries with underdeveloped automobile transport is determined by railroads system, whereas in western countries, with their communications by cars prevailing, the towns - satellites are usually located near highways (USA).

## Type II. New towns as centres of regions activation

There is one common condition: the reclamation of an area requires a new town; it appears as a response to the demands of a territory concerning creation organizational-transport- distributive, economic, institutional (administrative, financial and other offices) centres; consequently a certain "critical mass" of development of the region is necessary which, in its turn, predetermines the new town appearance.

The main reason of new towns of type II (new towns as centres of regions activation) formation is the performance of service functions for the region: transport, distribution, processing of local products, cultural and other kinds of service facilities for the local population.

Too rapid creation of new towns at the basis of rural settlements without sufficient urban foundation results in a formal increase of the urban population proportion but not in the development of really new towns. The phenomenon of pseudourbanization may be mentioned in this context, which is especially typical for developing countries and producing concentrations of semi-rural marginal population pushed out of the village by the agrarian crisis. These new towns actually have few urban features. Two subtypes may be specified among towns - centres of activation:

- a) "towns - activation centres in industrial zones";
- b) "towns - activation centres in weakly developed rural areas with a low urbanization level".

a) In the first case new facilities for employment appear, that contribute to the region's progress. For example, in stagnant towns near partially exhausted mineral deposits centres of processing industry are created which attract people from the stagnant town. A new function seems to be introduced in the region substituting the old one (mining industry in old coal fields in Great Britain). An appropriate example is Norilsk (235,2 thous. – 2002 year), where since 1970 the population decreases because mining - the main town forming agent, is reduced. New towns appeared in Norilsk surroundings: Oktiabrskiy (mining of nickel) and Nadezhda (metallurgical plant). In some towns within the old coal field areas with exhausted deposits new functions evolve, for example, the coal production in Cheremkhovo does not increase, and a large machine-building complex is planned to be constructed in its vicinities with a new town as its centre.

These towns are usually monofunctional, as they are inserted into the system of already existing towns.

- b) "Towns - activation centres in weakly developed rural areas with a low urbanization level".

The towns under question are usually founded in places with good transport facilities and agricultural production is transported there. Just from these towns it can be fulfilled in most convenient way economic and cultural-existencial functions, which meet demands of rural population in these regions (near the railway stations, highways intersections, etc.). These towns have smaller dimensions than towns - satellites. When designing them the following aspects seem to be important: their predominantly polyfunctional character, reproduction regime and behaviour types of population inhabiting the adjacent rural areas, because the new town population will be formed at the expense of neighbouring rural areas. Contrary to new towns - loci of pioneer reclamation, the urban population here is derived from near migrants and in their planning the peculiarities of the socium are to be considered, i. e. a gradual transit of rural people to the new towns. Many people from the village are working in the town, but continue to live in the village, sometimes members of their families remain there. Such "rural-urban inhabitants" (or "citizens-peasants") are numerous in new towns of rural regions of Poland. This kind of people use buses in their daily labour migrations, hence, a new term appeared in Polish literature for this phenomenon - "bus revolution" (the same happened in many rural regions of the former USSR, with the use of bus communication).

The towns discussed are not usually formed "at a bare place", they get transformed from rather large rural settlements, situated in favourable transport position. So was the origin of many regional centres in the ex USSR.

Formation of new towns in rural area brings about its depopulation. With the low level of labour efficiency in agriculture depopulation is regarded as a negative phenomenon, while with the high one on the farms it is quite normal.

It should be considered that the outflow of people from the villages may cause losses of traditional rural trades. They should be prevented in areas, where they have existed since old times (such trades are well known in Central Russia and in many rural regions in China). Sometimes these trades get transformed and remain (in the form of specialized workshops situated in the centres of such trade regions).

**Type III. New towns in areas of industrial resources concentration (economic minerals, hydroenergetic resources, forest massives)**

The following problems and specific features are proper to new towns of this type:

Contradictions between the decentralized location of economic minerals mining sites and the desire to concentrate settlements as far as possible (mine - settlement, trade - settlement); it seems feasible to evade them by developing local settlement systems.

Rational location of residence areas, that must not be underlain by mineral deposits, otherwise they get spoiled or destructed, whereas lodging is highly deficient in such places.

The differentiation of new towns is reasonable according to their functions and probable time length of existence: main, basic, temporary (including mobile or periodical).

The exhaustion of the deposit is to be foreseen, consequently, a substituting function for the population should be thought of.

When forecasting the population increment in new towns, the development of auxiliary and additional functions parallel to the basic one is to be forecasted (when calculating the population number it should be taken into account in order not to obtain unreal low future population number).

Three subtypes are quite obvious within the limits of this type:

- a) new towns in old regions of industrial resources concentration;
- b) new towns in the areas of pioneer reclamation;
- c) new towns near large hydroelectric power stations (HPS) make here particular subtype.

We have already discussed peculiar features of new towns in old industrial regions.

Founding new towns at "a bare place" (in the areas of pioneer reclamation) has many advantages. There is no necessity to adjust the new town to the existing urban organism, to strive against its hygienic and management shortcomings and its whole structure, which is incompatible with the modern demands of a man. The problem of "adaptation" to the settlement system is not hard to solve either, because in this case the new towns represent a region- and system-forming link. A clear urban concept may be elaborated for such towns comprising update constructive and architectural elements. All the town elements may be easily designed and all its functional structures produced; the modern transport needs may be considered, space for parking places and highways provided. There are many facilities to develop a suitable social service system, to design isolating green belts, saturate the whole town with gardens, boulevards, etc.

The following questions are acute for the new towns by large hydroelectric power stations:

- Radical alteration of the design in the region owing to the reservoir construction, transfer of settlements, new urban network formation, development of large industrial centres due to HPS (using both its energetic potential and the "constructive" one - formation of stores, building sites, etc.)
- Update definition of functions and size of the new town when the HPS will be constructed.
- Formation in all possible cases of one town for both the HPS and the derived industrial complex (Zaporozhye, Zhigulevsk, Volzhskiy, Divnogorsk). Although small autonomous towns may exist, which are related only the HPS and are reasonable in mountains - Nurek in Tadjikistan, f. i. Such towns may be regarded as a second hierarchical subtype.

The new towns under discussion display a considerable functional stability - they are designed for a time span about 100 years and remain monofunctional for a long time. They do not grow so quickly in the demographic aspect as the other new towns, because their town-forming function is not evolving.

#### Type IV. New towns aimed at realization of specific functions of a state significance

There are many subtypes in this group, in particular: capitals, scientific towns, towns - resorts, "secret towns" (military or military-industrial centres), towns for nuclear power stations and others. Some examples of these towns were discussed earlier.

Towns of science are usually small, they are situated near large cities and have experimental enterprises (academic and other scientific centres near Moscow, Leningrad, Novosibirsk, towns with universities and with "factories of ideas", as engineering - scientific centres in the USA, technopolises in Japan).

The larger the town is, the more sophisticated should be its industrial structure, because large towns have the most favourable conditions to develop science-consuming production due to concentration of skilled specialists there. That's why the development of scientific towns in their vicinity is highly efficient. Many specialists noted, that formerly during studying an area in the USA and other countries the main attention was paid to economic minerals, whereas now of primary importance are the following aspects: how is the higher education quality?, what are the lecture courses in the local university?, how many scientists and engineers are there?. According to W. Tompson, American scientist, " the real economic base of a modern town is composed by its universities and research bodies, professional skill of machine-building companies and of financial institutes . . . favouring quick and easy transfer of old dying branches of industry to the new and progressing ones" (Tompson, 1969).

The regional importance of scientific centres and universities is increasing in highly developed countries. They attract new industrial enterprises and companies, especially those, oriented at science - consuming branches. Thousands companies appeared around the university centres in New England, California, Middle West. The highway No128 around Boston and the Silicon Valley in California are world-wide known because of many hundreds of companies being located there, including the venture ones derived from the latest achievements of science and technology.

As for military and industrial - military centres, the new towns in the Ural, Povolzhie, Kazakhstan, Siberia, Central Russia are to be mentioned. They became open to mass-media via publications; these are: Arzamas 16, Krasnoyarsk 45, Tomsk-7, Penza 10, Chelyabinsk-65, 70, Zlatoust. These towns are located both near the large cities and far from them in accordance with the requirements of their undertakings. The distance of the large city may serve a criterion to distinguish second order types. Common for such "secret towns" is a considerable functional and design stability. They are mostly monofunctional, and additional functions are not attracting. The population number is stable or slowly increases, as compared to other towns. Thus, there were 41 000 inhabitants in 1970 in Severomorsk, which was founded in 1951, and 64 000 in 1990; in a settlement of urban type - Sosnoviy Bor there were 42 000 people in 1970, and 56 000 in 1990. The proportion of people with higher education is usually higher, and the integration is more rapid in these towns in comparison with the other ones.

The number of inhabitants of such towns (excluding capitals) ranges within 30 to 80 thousands.

Towns near the nuclear power stations (all of them are new towns in our definition) may be briefly characterized in the following way. Taking into account the ecological factor and not excluding the risk of catastrophes, it seems feasible to locate NPS in special zones far from densely populated areas.

Towns - resorts are characterized by developed transport and service systems far beyond the requirements of the local population. Their location is specific as well being usually governed by natural agents. Towns - resorts may be in broad outline considered as a variety of towns dependent on natural resources.

The new towns typology presented here is far from being complete because of integrades and towns with different combinations of properties.

Summing up, it should be underscored that the typology given above is not comprehensive because in the ekistic reality there are many towns of mixed types. Besides, the typology should be enriched by looking at the town-generating process as an introduction of innovation into the settlement system. The process of introducing innovations is taking place gradually (Figure 2).

It should be remembered that through building or establishing a new town, a completely new element – a new settlement unit - is being introduced into the existing settlement structure (in this case it is irrelevant whether this new settlement unit was created in an evolutionary way from the isomorphism of a village settlement unit or in a revolutionary way, from scratch).

The building of a new town is not always completed; sometimes the plan is relinquished. This often accompanies sudden changes of the political or economic situation in the region. The existence of a given town depends very often on the fact that the region where the town is situated abounds in certain raw materials or other resources which are in demand. Sometimes the existence of a town in a region of strategic importance is determined by the political situation. Hence, the changes in either politics or market demand may lead to abandoning the plans for the creation of new towns. Illustrative examples are provided by 'company towns' in Canada, whose creation and development are subordinated to the principles defined by the establishing companies. There have been cases where the building of the town was terminated due to the changes in the economic situation. Similar cases can be found in the United States and in other countries of the world.

In most cases, however, the building of a new town is accomplished and with its appearance, the new town starts to penetrate the existing settlement system. A new problem arises at this stage, namely, whether the new urban organism will be accepted by the existing settlement system. There are

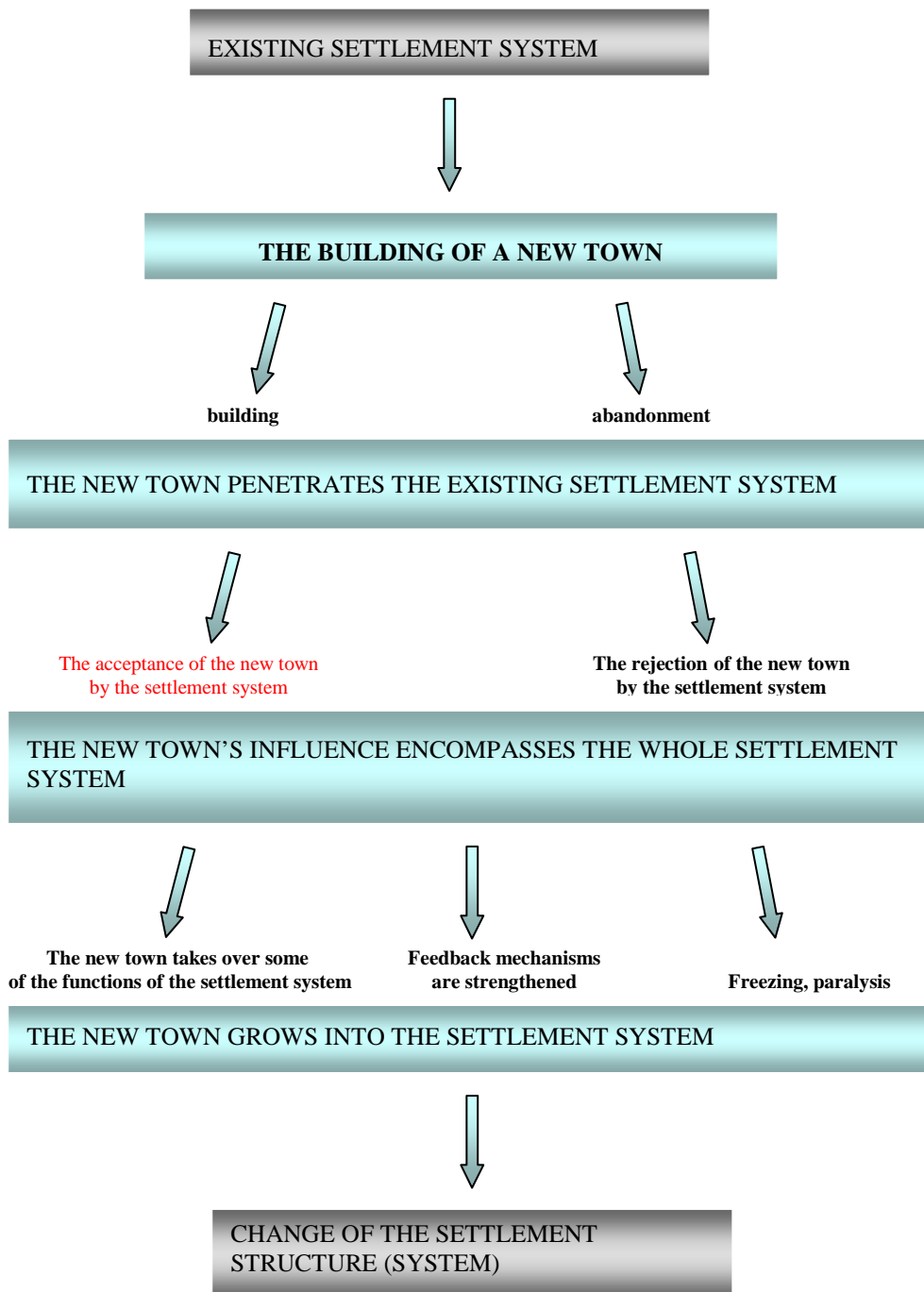


Figure 2. Entrants new town in settlement system

cases, however rare, where the existing settlement system rejects the new settlement unit, does not admit it in its structure and treats it as a foreign body (not *in situ*). The situation can be compared to an abortive surgical transplant operation. This kind of rejection of a new town occurs when the settlement system and a city agglomeration are not yet ready for an introduction of a new settlement unit into their structures.

It seems that perfect diffusion takes place in the case of the cities which are the activation centers of certain regions, in industrial areas, and in poorly developed agricultural regions where the

level of urbanisation is low. The same is true for the towns created in the old regions of industrial concentration, where the creation of towns is connected with mining, extraction, and processing of the local resources.

Especially good diffusion takes place in the regions of pioneering development, where the new town does not have to compete for influence and space allocation. It is so because the town is being created in an empty area, where the creation of a new settlement network is in its incipient phase and the new town itself is a crucial factor in the creation of the new system.

Once the diffusion is complete and the new town has been introduced into the settlement system, its sphere of influence grows to encompass the whole settlement system, feedback mechanisms are strengthened, there occur the processes of amplification and, sometimes, compensation (i.e., the new town takes over some of the functions of the system). From this moment the new settlement unit blends into (grows into) the settlement system and conforms to its systemic mechanisms (e.g., the self-regulating and self-organising processes), leading in effect to changes in the settlement structure of the whole area. It should be noted at this point that sometimes a new town paralyses the settlement system, as if freezing it for some time (insulation). This happens in the cases of incautious creation of a very big new town (city).

As follows from this brief analysis of new town, these units play various roles in the formation of settlement systems at particular hierarchic levels. The towns of the first type (in big agglomerations – “towns-satellites”) fulfil their functions in the local settlement systems most fully. New towns of the second and third types (the activation centers of poorly developed regions and the towns in the regions abundant in natural resources) have a role in the formation of regional settlement systems. The cities of the fourth type (capital cities, centers of scientific development, or military-industrial centers, etc.) manifest their importance primarily in the countrywide settlement systems.

Attention should be given to the factors prompting the creation and development of new towns. In some cases the demand for a town and its development results from the demands of the region; in other cases the process is reversed: the town actively influences the formation of a given region.

Common features and problems of new towns development. The majority of new towns in Poland, former USSR and other Central-East European countries became important centres of employment with the number of employment vacancies exceeded the number of working people. Despite this favourable situation on the labour market, new towns actively exchanged working people with the surrounding areas. The mean proportion of people leaving their towns for job equals 30% in western countries (32.8% in Great Britain in 1987). Almost 34% of labour - capable population made their daily travels to job in new towns, whereas in some Polish towns this index reached 50% (60ties years of the 20<sup>th</sup> century). This fact testifies to the development of regional ties of new towns, on the one hand, and draws attention to the dis-balance between the qualification of the new towns inhabitants and structure of available employment facilities, on the other.

The new towns were industrial in their majority, especially those in Central-Eastern Europe. With the market economy progressing the monoprofile towns in these countries often begin to decline. This sphere of economics - industry - was unfavourable from the viewpoint of employment and highly vulnerable in crisis situations. The industrial orientation of the economic basis alongside with underestimating the spheres of service follows the old philosophy of industrial conurbations deconcentration. Moreover, this orientation raises the unemployment threat in areas with a narrow industrial specialization (f. i. in coal mining areas in Great Britain, in the metallurgical centre Stalowa Wola in Poland).

Concentration of the working class promoted the appearance of social tension and conflicts, growth of criminality and other adverse social phenomena, as prove the investigations carried out in the USA (Klark, 1972, No3) and Poland; there are data showing that it may be true for the USSR.

The monofunctional industrial structure of the town frequently results in a higher proportion of masculine population. However, in new industrial towns in the ex USSR women may predominated, they up till now are still engaged in performing man's job ("industrial woman").

The problem of environment pollution was very acute in monospecialized (industrial) new towns, even more acute than in the old ones, in Central-Eastern Europe particularly. We are



persuaded, that the sources of ecological crisis including that of space and of many pathological phenomena proper to numerous new towns of Poland, the former USSR and other Central-East European countries are concealed in the communistic strategy accepted after the Second World War. It consisted in the development of heavy industry located in towns as a main way to create the modern industrial society. Alongside with other adverse consequences the accelerated urbanization and damage caused to the environment are evident. Such industrial new towns were hardly supplied with update purification devices for the air, waters and soil.

The kind of urbanization under question is responsible for the pathological status of some of new towns in the former USSR.

Although the programs of new towns construction in Western Europe are brought into life, it would be true to mention, that this is done not entirely in accordance with the initial plan as to its completeness and rate. An adequate assessment is to be made for this huge town-constructing experiments, neither their humiliation, nor an ecstatic description are unworthy.

The new towns growth rate in West European countries were lower than it was supposed initially. People were not always willing to change their residence places. Very specific social and demographic problems arised, that's why when constructing a new town regional traditions and people behaviour must be considered more thoroughly.

The new towns - satellites absorbed lower amounts of immigrants from large cities as it had been supposed. For example, in France and Great Britain they engulfed only 1/5 of emigrants from the surrounding conurbations. The situation in Moscow agglomeration seems to be similar.

In the majority of Central-East European new towns (in Poland, ex USSR, Hungary) with their high growth rate, we encountered other problems (dwelling facilities, employment, etc.). Besides, the agricultural hinterland of these towns got depopulated. The peculiarity of problems related to the new towns formation requires comprehensive studies of this phenomenon.

New towns in various countries have a similar age structure of their population with the young people predominating. This should be taken into account when planning the social infrastructure and organizing the socio-economic life in a new town, and when evaluating the image of living.

There is one more particular feature of a new town - its population consists of immigrants. This fact seems to be important, as it determines the diversity in the mode of living, in evaluating life priorities and the formation of social interlinkages practically from the very beginning (the problem of integration should be mentioned when speaking about the new local society setting). We interpret integration as a process or a complex of interrelated changes in the spheres of mental priorities and standards accepted by the society members, perception by inhabitants of goals and arrangements providing for the town functioning, individual and social contacts between inhabitants and their groups. The notion comprises also the attitude of inhabitants to their town, both rational and emotional. At the example of mining centres in Poland the integration is evaluated as a very slow one, moreover, the population of a new town may not be integrated into a local entity at all.

The majority of Western new towns is peculiar by its high percentage of people with higher education and of people engaged in service (mean index 45%).

The education level in Central-East European new towns is lower (except the towns of science) than in the old ones and in new towns of Western Europe.

The pattern of Western new towns territory is dominated by the principle of zoning according to utilization type. To a certain extent this regularity may be followed in those towns of Central-Eastern Europe and former USSR, that were constructed 'at a bare place' in accordance with a plan.

The problem of disproportion in the development of residence facilities, production and socio-economic infrastructure was common to new towns in Central-Eastern Europe; it looked more urgent if we take into account the high population increment there. Shortcomings in the construction and in the infrastructure formation create difficulties in the everyday life of population and could not provide for meeting sufficiently the simple demands of new towns inhabitants (the latter is true for the old towns in Eastern Europe as well).

## CONCLUSION

The difference in conditions and processes of new towns formation at regional and country levels is significant. The following specific features in the new towns development have been revealed by this research in the countries chosen for our analysis:

- in Great Britain - conceptual advances and practical realization of new towns development, that are aimed at the discharge of largest urban agglomerations and designed following the same guidelines; in France - unusual project solutions, tendency to localize science - consuming undertakings in new towns, large scales of new town designed;

- in Poland - existence of old dense network of small urban settlements, where new towns did not essentially change the general pattern; new towns social infrastructure development proved to be insufficient and causing social tension;

- in the ex USSR - huge scales of new towns formation processes and paradoxically small attention to the problem in scientific literature;

- in Hungary - important, but insufficient contribution of new towns to the settlement system development of this country; new towns were treated as the settlement units founded to relieve the Budapest agglomeration;

- in Bulgaria - non-efficiency of the policy of developing the small towns network merely by formal assigning the town status to rural settlements without due development of their economic basis and social infrastructure.

The above assessments and conclusions, including those in the text, we assume important for the development of general concepts and particular recommendations on the future new towns development.

As for the global experience of new towns development applied to Poland, and considering new towns progress within local, regional and national settlement systems it is important to note:

- 1) the world experience is very valid and should be thoroughly analyzed and applied more actively;

- 2) designing of new towns within large agglomerations as closed autonomous formations is proved to be unreasonable, new towns, on the contrary, display close interlinkages with the agglomeration centre and with its surroundings (pendulum trips, functional ties, ecology, etc.);

- 3) new towns in large agglomerations are known to be attractive for locating those branches of industry, that are related to advanced technologies (electronics, robototechniques, informatics), research or design complexes, administrative centres of companies, higher and secondary schools;

- 4) specific age structure of population (young people prevail) should be taken into consideration;

- 5) feasibility to utilize new towns for search and testing the new forms of urban planning and construction, as well as for projecting technique perfection. It includes, in particular, involving future inhabitants in the choice of design variants (regardless all the difficulties, as it was proved by experience gained).

Assuming the extreme diversity and complexity of new towns development problems the scientifically sound strategies of new towns development should be elaborated, which take into account specific national and regional features. This task may be solved at the basis of both extensive and comprehensive particular research, that must be substantiated by the knowledge of general trends and regularities we attempted to find out. The vital problems to be further studied are the following:

- regular and particular features of interlinkages between new towns and their surroundings, inclusion of new towns into local settlement systems considering local conditions;

- character of the socium being formed in new towns, which proved to be an important and complicated process for the town;

- methods and procedures of the new towns development, which proved to be sometimes inadequate to current processes;

- analysis of the problem of functions succession in new towns, especially if towns appeared irrespectively of objective economic-geographical processes and particular problems of the regional development.

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