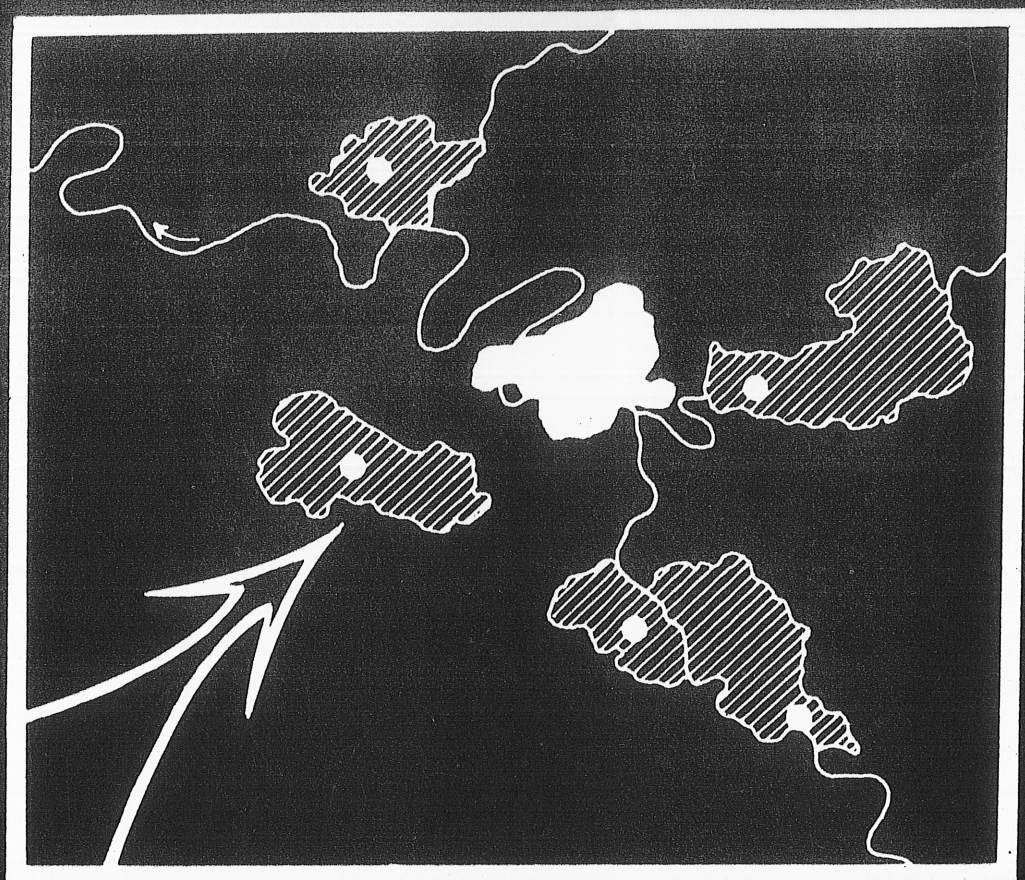


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# NEW TOWNS IN REGIONAL DEVELOPMENT



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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, whereas it is realized much slower than on the British islands.

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

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.

Geographers in Poland, USSR\* and in other 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

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\* The work was done using data collected up to December 1991, when the Commonwealth of Independent States (CIS) was organized. Therefore, we use the name USSR in this book.

cities of Brasilia, Komsomolsk-na Amure, Chandigarh in Punjab, Tappioli, Reston, or the Nigeria capital Abuja being under construction?

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

The purpose of this book 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, then to propose basic concepts of new towns deriving of all this material.

The tasks of this research are as follows:

1. To characterize the basic types of new towns and the main processes accounting for their spatial differentiation in different countries and regions.
2. To identify the place and significance of new towns in formation of new settlement system and in regulation of the old ones.
3. To record and to explain the regularities of different types of new towns appearance and development in national and regional settlement systems.
4. To reveal specific problems of new towns of different types.
5. To formulate basic elements of new towns conception.

The methodology and methodics of the work derive from the present-day concepts on towns and settlement systems 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.

A number of methods were applied by the author to accomplish his task: historic-geographical, comparative-geographical, statistical analysis, typology of the objects studied, logic-cartographic modelling. The structural-system approach has been widely used.

In his research the author assumed as a basis many conceptual and methodical works of specialists engaged in any kind of urbanistic research – first of all prominent Polish and Soviet scientists (geographers, town designers, sociologists), then – reviews of geographers in other countries (Great Britain, France, 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 USSR, Poland and other countries.

The data used in this research concerns not casually Great Britain, France, USA, USSR, Poland, Hungary and Bulgaria. Great Britain is one of the „movers” in new towns creation and is most advanced both in theory and applications. Hence, new towns typical features are thought to be readily

recognized and followed just at the British example. French new towns are our study object as well, the new towns program in this country was strongly influenced by the English experiences. To compare the European and American experience, the information on new towns in the USA has been analyzed.

When studying the East European data we addressed mainly to those for the 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 century (54 towns in 1945), these towns being 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!).

Thus, there were chosen for study comprise those countries, where the new settlement system by means of new towns construction was created purposefully, and countries with the same process being „spontaneous”, not evidently regulated by the state, nevertheless, meeting the objective demands of the country. Countries of both categories studied seem to be rather well representing the existing alternatives of towns development in the present-day world. New towns arise always, and we have limited our research subject matter by the post-war period: from 1945 up to 1988 — 1990 in order to concentrate our efforts on an outline of recent problems of new towns development and their inclusion into settlement systems (for the USSR, as an exception, the time span 1917 — 1990 has been described as being very peculiar and instructive”).

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\* We shall later substantiate this choice.

## I. THEORETICAL AND METHODOLOGICAL ASPECTS OF NEW TOWNS RESEARCH

### I.1. Initial definitions and approaches to research

The definition of the „new town” concept has its history and is inadequately interpreted in different countries. The first problem to appear is the relation between two notions „new” and „young” towns. 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 the 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 (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 is an appropriate example). As towns of this type are numerous in various 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 (towns - „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 Jałowicki (1989), 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 100 000 people is not a town, it is only a gigantic living complex of the colliery.

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 evolvment 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 of 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, 1977) 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 feeling 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 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.

An 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.

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 Eastern Europe. Industrial plants are not the only town generators, these may be universities (Leven-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.

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 level (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 considerations 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.

## I.2. New towns in Polish and Soviet literature

As in Polish, so in Russian (Soviet) literature no agreement was reached about the „new town” concept; practically nobody gave comprehensive definitions, and only few scientists made some comments on it. Two basic approaches to this problem may be revealed. Some authors suppose each town to be new at a certain stage of its development (Straszewicz, 1988; Jelonek, 1985; Michalski, 1989; Kupiec, 1989).

Several scientists, and Jelonek among them, try even to define precisely the time boundaries for each new town. Jelonek thinks possible to consider the town new during 30–50 years from the moment of its birth. Czarnecki (1965) is of an opposite opinion, ascribing the definition of new towns to Polish towns of XVII and XVIII centuries.

The most widely spread in Polish and Soviet literature is the opinion correlating the new towns in their genesis and functions with the English „new towns” developed after Abercrombie plan in order to unload the extra-large cities (Bajorek, 1968; Knobelsdorf, 1966; Litewka, 1966, 1970; Malisz, 1981;

Rozenberg, 1958). Some authors make a next step and relate the new towns genesis to the idea of „town-garden” proposed by E. Howard (Jałowicki, 1989). The others identify new towns with towns-satellite (Bajorek, 1968; Malisz, 1981; Rozenberg, 1958; Wygnanowski, 1963), though many authors disagree with that analogy (Knobelsdorf, 1966; Litewka, 1979). The latter thinks impossible to make such analogization because it does not always correspond to reality. W. Knobelsdorf (1966) assumes the new town not to be indispensably a satellite and vice versa.

According to Jałowicki (1989), a new town erected near an old urban complex performs functions of a town-satellite. There is one more group of scientists applying the term „new town” without any reference to towns-satellites. They adduce examples of new Polish towns, which are genetically close to English dis-agglomerational concepts and are, nevertheless, called satellites (Ciborowski, Jędraszko, 1980; Wróbel, 1971).

It is worth to note that some experienced specialists in geography of settlement, and not only Polish ones, do not even mention new towns, completely ignoring them (George, 1956; Kielczewska-Zaleska, 1972).

The publications cited contain frequently an analysis of various new towns of the world, Europe, Poland, USSR. Among Polish research objects the most usual to refer to are towns, involved in deglomeration processes of the Upper Silesian industrial region periphery: Nowe Tychy, Pyskowice, as well as Nowa Huta and Jastrzębie. G. Prawelska-Skrzypek and M. Makuch (1989) enumerate among the new towns those which appeared or developed at the basis of industry located after the Second World War. Such are Puławy, Płock, Polkowice, Lubin, Głogów, Konin and other towns. The same is the viewpoint of Michalski (1986) defining Belchatów as a new town and of R. Jedut (1988) having done that for Łęczna. A number of scientists use to analyze English towns of the London, Glasgow and Manchester agglomerations (Bajorek, 1968; Ostrowski, 1973; Malisz, 1981) or other towns of the world, having originated in a similar way (Rozenberg, 1958; Jałowicki, 1985). Litewka (1979) compares new towns in Poland with the English „new towns”, Russian „novyie goroda” and German „Neue Stadte”.

There is an opinion (Kupiec, 1989) that new towns may be distinguished by the time of their appearance or by their urbanistic schemes realization, or, at last, by some new approaches to the town's structure. Genesis of new towns is rare to be examined (Konstantinov, 1976; Konstantinov, Yepikhin, 1980). These may be, however, towns of the „bare place” or towns adjacent to old cities (Litewka, 1979; Jałowicki, 1989; Konstantinov, 1976; Konstantinov, Yepikhin, 1980).

The new towns near the old ones seem to perform functions of satellites. Jałowicki (1989) and Czarnecki (1965) presume that in such cases the new town is conjugated with the old one. A. Wróbel (1971) explains the development of

a new town by the progress of industry with an appropriate example of Nowa Huta evolved around a new industrial complex. The genesis is responsible for functions of new towns. D. Szymańska (1989), B. Jałowicki (1985) are sure that the dominant function in East European new towns is the industrial one. The latter author gives also examples of administrative-political functions (Brasilia), as well as examples of new French towns lacking any predominant function.

It should be emphasized that the new towns-satellites bunch of problems was discussed in Polish and Soviet literature of 50-ies and 60-ies (Wejchert, 1960; Grabania, 1966; Gruzicka, 1966; „Goroda-sputniki...” , 1961), when some quite new towns were built in both countries. In later years, when the development of both countries advanced, the interest to the problem decreased, as it may be assumed by literature. Have the guidelines for the new settlements localization changed? We think it did not happen, and the problem remains acute, as it was formerly.

There is another common feature of Polish and Russian literature on the problem under discussion, consisting in frequent references to the examples of new towns in other countries and less attention to new towns in their own ones (Polskaya, 1974, 1984; Kharitonov, 1989). Thus, it does not become evident when studying Polish sources, whether the new towns in Poland appear now and may be defined as new? Is there any original Polish model of a new town? According to literature, being at author's disposal, the answer to this question should be negative. Then, what is the reason for that? Is it the absence of new towns in Poland, or is it the impossibility to insert the existing Polish new towns into classification schemes used all over the world?

The Soviet geographical literature is not paying much attention to the new towns problems. A few geographers, urbanists and architects discuss these problems to a certain extent.

The new town concept is broadly interpreted in the USSR. New are towns derived there of settlements, which appeared after 1917 on non- or weakly reclaimed areas, settlements of different categories that were administratively denominated as towns, as well as already existing small and medium size towns with high development and population increment rates (Planirovka novych gorodov..., 1984, p. 3).

We find similar definitions of new towns in the book „Upravlyene razvityem novych...”(1987). New towns in the USSR are those towns, that originated due to industrial centres or research institutes organization; they appear usually on an „bare place”. Some towns are also referred to this category, if they originated of already existing settlements, their population drastically grew in number, a new economic basis evolved, and the town's appearance changed conspicuously due to new design and architecture. Meanwhile, there is a large group of town-like settlements in the USSR, with initially planned spatial pattern and architecture, having officially received the town's status only after

1917. The town is denominated as „new” if it is spatially isolated. Consequently, new districts in already existing towns should not be referred to as „new towns”.

It is worth mentioning, that in defining the new town concept many scientists are right to emphasize that of primary importance is not the building pattern style, but the population structure, i. e. such a demographic picture of the town, where the majority of population is thought to be new (immigrants – E. W. Knobelsdorf).

The analysis of new towns and their spatial distribution are more thoroughly investigated by Soviet scientists (Nazarevskiy, 1962; Faiziyev, 1965; Smolyar, 1970, 1972, 1981; Konstantinov, 1976; Konstantinov, Yepikhin, 1980; Fedorova, 1977; Kovalev, Kovalskaya, 1980; Trube, Khorev, 1970; Khorev, 1975; Lappo, 1978, 1987; Pertsik, 1973). Some of these authors are engaged in studies of towns genetic typology (Konstantinov, 1976; Konstantinov, Yepikhin, 1980).

The majority of Soviet authors consider as new those towns, that were constructed after 1917. Since that moment (year 1990), 1525 settlements received their status of a town, and more than 4042 town-like (urbanized) settlements were created. In total, it makes up 68% of Soviet towns and 100% of urbanized settlements.

The status of a town was given to settlements differently in various time periods. Thus, the greatest number of towns appeared in 1941–1945, with a mean rate being 85–87 towns per year; in 1950–1960 it equaled 25–27 towns, whereas in 1970–1980 15–16 towns appeared every year and 10–13 towns were recorded to be founded in the 80-ies.

Konstantinov came to the conclusion that only 38 per cent of new Soviet towns were lacking any urban embryo – they came into being on a „bare place”.

New towns are more actively discussed by town builders and architects (publications by I. N. Smolyar : 1970, 1972, 1981). Search of progressive examples of new towns design and ways to solve their economic problems are always attracting attention of Soviet and foreign experts. International workshops sponsored by UN were organized in Moscow in 1964 and 1968 on the problems of new towns design and construction. The choice of the USSR for these workshops was not at all casual, as extensive experience has been accumulated by this country. Moreover, there were several workshops USSR - USA there on new towns design; unfortunately this experience is not yet sufficiently known to geographers and urbanists.

The concept „new town” is not adequately understood by scientists, it causes vivid discussions. Two viewpoints may be specified for the problem: according to the first one the new town is defined as a quite new formation on „a bare place” or as a radically rebuilt former urban „cell”. The second point consists in admitting towns new if they were created in accordance with a new socio-urbanistic ideas. Appropriate examples may be modern towns-satellites around London, Paris and other large cities.

Opposing these viewpoints is illusive, as the second may be part of the first. A town which appeared as a new one and is a materialization of a new ideology is an example of a new town development in general: using a time-spatial approach, the town may be called „new” in accordance with either an existing, or a really new socio-territorial ideology.

An overview of literature made by the author, comprising notions and concepts of new towns, assessments of volumes and proportions of new elements in Polish towns, enables him to record, that new towns in Poland and in the USSR differ of those in countries, where the theory of new towns evolved (Great Britain, France). New components in the Polish urbanistics do not answer neither in their scale, nor in their development programs „classic” English or French ones, still more incompatible are they with the Japanese or American towns.

There are many reasons for such discrepancy, and the first among them is the impact of the Second World War — immense damage caused to urban organisms of Poland, the USSR and other East European countries. The first task after the war was to reconstruct many towns and not to foundate new ones. There was a short period, however, in the post-war Polish history (eve of 50-ies), when new towns were being constructed in accordance with the new political system; they resembled living quarters more than towns.

The further development of such settlements revealed abundant shortcomings in their functioning, mainly in the initial period (for example, Nowa Huta, Nowe Tychy). Then some of them were assimilated by the already existing towns (Nowa Huta), while others were gradually acquiring urban properties.

No demands for absolutely new towns being constructed in Poland, geographers paid less attention to their studies, so publications on new towns are scarce. One should point out that in spite of advanced development of new towns in East European countries and in the USSR, in particular, geographers do not pay enough attention to the problem. In Western Europe, on the contrary, the new towns problem is a usual theme of numerous monographs and scientific publications.

### **I.3. Problems of new towns studies in other foreign investigations: diversity of approaches**

The problems related to new towns are substantiated by abundant and diverse literature published in English, French, Spanish and other languages. Large number of publications compelled us to limit our review mainly by synthetic works. Among them the book of Ramsay „Planning New Towns” (Capital Planning Information Ltd. , 1985) seems highly valid.

The simplest understanding of the term „new town” means „young” and this is shown by the name of the town, where an adjective „new” is added for emphasizing its younger age as compared to similar towns (f. i. New York, Neuschatel, etc.). The adjectives usually remain in the name of towns with many centuries of their history, when towns are certainly, far from being „young”.

The integrated new town definition presumes its formation on a new place, not or partially occupied by formerly constructed buildings, as well as purposeful investments and development program for this town, which are usually realized by special institutions with their own management programs.

Rather frequently special juridical documents are issued to regulate the process. An excellent example of that kind is the English New Towns Act of 1946 together with later changes and corrections, as well as the corresponding acts on the Northern Ireland. All these juridical documents formed a „new town” status, defining it through areas, where it was to be situated and providing for proper administrative bodies (commissions, corporations) for control of the projects development.

Ramsay’s investigations allowed him to suppose, that the program of new towns formation in Great Britain received a new impetus due to new technologies in urbanistic on the eve of the XX century, and the Howard’s idea of a town-garden was the first. There was one more agent having accelerated the integrated „new town” program in Great Britain after the Second World War – the extra-population of London together with its non-controlled spatial expansion. According to Ramsay, both the nomenclature and the mechanism of new towns development over the world depend on their localization and time.

The French program for new towns was initially strongly influenced by the English one, in Ramsay opinion, whereas it was rather different in broad outline.

Ramsay discusses one more interesting phenomenon: the process of cities-capitals advancement. They have been created administratively at a country level, and special institutes were simultaneously organized to monitor the project (Brasilia in Brazil, Abuja in Nigeria).

Attempting to determine or formulate the „new town” concept Ramsay is also elaborating the typology of these towns. Their most realistic classification should derive of purposes they were built with; he illustrates this statement by various examples of phenomena or agents. For example, he reminds a quarrel between the mormons and other Christians in the USA, which resulted in migrations of the former westward and appearance of hundreds of new towns, where mormons could live in accordance with their religious traditions; Salt Lake City being one of them.

The basic, or fundamental goal to develop new towns was the necessity to prevent or hinder the non-controlled expansion of the existing urban agglomerations.

The pilot approach may be exemplified by the Abercrombie plan for the so-called Greater London or later project of Glasgow and Paris „decompaction”.

The next essential reason for new towns formation in various countries was the politics of evolving weakly developed regions or areas with high potential into intensified economic development (Northern Ireland, Scotland, or the system of Bratsk and its satellites in the USSR). New towns appear also due to the development of industry and large industrial investments. Urban structures produced in this case are very individual, as their existence is directly bound to works or factories (Lowell in Massachusetts, Pullman in Illinois, the USA).

Ramsay considers tourism the next factor of new towns formation, as well as the attractiveness of some territories for rest (Mediterranean coast, places for skiing in the Alps). They became more accessible due to planes, and the abundance of tourists calls for different structures in the spheres of service and for local people employment facilities.

Classifying new towns Ramsay uses a new term – „new town in town”.

This seemingly paradoxical term has been proposed to emphasize and in the same time to separate the category of dwelling blocks projects, which are aimed for living of dozens to hundreds thousands people within the limits of existing urban territories.

There is another synthesizing publication – the book of A. G. Champion, K. Clegg, R. V. Davies „Facts about the New Towns” published in 1977 by Retailing and Planning Associates Publishers. The authors presented monographic draughts (monographs) for 28 English towns. The first part of the book contains general problems discussed: demographic and socio-economic characteristics of the 70-ies; the second is dedicated to the history of development (in brief) and comparable statistic data for each town. This book, as the book „Town and Country Planning”, 1974, may be regarded an inventory and provides for sufficient empiric information.

Among the synthesizing publications of French authors those of P. Marlin (1962–1972) seem to us the most interesting, as well as the book entitled „Les villes nouvelles” from the series „La documentation francaise illustree”(1973), the most recent publication by Cl. Chaline „Les villes nouvelles” (1985), the book of J. Steinberg (1981) „Les villes nouvelles d’Ile-de-France”.

New French towns present wonderful examples of the space arrangement by attracting different kinds of activities. The idea of French towns is basing upon three mutually complementary principles: obliteration of town-village opposing, the class solidarity, the environment mythology highlighted by the challenge „back to nature”.

The ideologists of new towns both in Great Britain and on the continent, refer to this or that extent to the Howard’s town-garden concept. „As a result, we have more than two possible places to live in, as it is always repeated: to live in a town and to live in a village; there is, however, a third possibility, when the

numerous advantages of the active urban life combine with the beauty and humility of rural life forming thus a wonderful entity" — wrote E. Howard in 1898. The ideology of new towns is disclosed by official programs, architects-urbanists manifests and by purposeful announcement attracting potential inhabitants and users of the space. Here is a typical announcement from a French newspaper advertising the industrial, storage and office buildings to be hired in the northern metropolity — new town Villeneuve d'Ascq: above the photo of the buildings an engraved inscription is placed: „The village of enterprises". So, not „industrial zones" but just „the village" is proposed. The preliminary description of the metropolity is preceded by business information: location as related to the metro and highways, technical details, f. i. , facilities for casual interior arrangement (distance between carrying supports 11x11m, rooms height 5 to 7 m). Then the announcement returns to mythology, of the urban life in this case, describing this industrial zone as situated in the vicinity of an animated town centre, not far from mayor's office and dwelling blocks.

Very interesting is the announcement advertising apartments of HLM type (with moderate payments and state financial support), we cite it:

„The HLM apartments are not of course palaces, but they are not what they were formerly, especially in the new town.

It should be said — Area: HLM flats can easily compete with any other types of flats.

It should be said: — Conveniences: HLM administration of the urban association Lille and Department du Nord are the first in France to build „completely electrified" flats.

It should be said — Environment: public apartments in the new town have many advantages in service facilities — the dwelling block and centre are not far, and the central garden is under your windows.

It should be said — Architecture: apartment and houses designers are the best in France.

It should be said — Price: in accordance with regulations for moderately cheap flats.

Try! When walking along buildings ask yourself whether they are HLM property. Then look at the registration table on the building — that will be a surprise".

A special announcement advertising the cheapest flats is cited here, because the latter represent in the utmost way the ideology of new towns, where all the best is available at minimal prices.

Merlin in his „Les villes nouvelles" gives an outline of new towns in Great Britain, Scandinavia, the Netherlands, the USA, Poland, Hungary, Brazil, India and France.

Presenting the new towns development in separate countries the author applies the same scheme embracing the urban settlement characteristics, politics

of town development and spatial planning; then examples of new towns constructed follow with the descriptions of their functional structure and urbanistic composition.

In his conclusion to the book the author emphasizes that the question what are the new town properties remains open. The examples given are so differentiated and specific for each country, that it seems hardly possible to make a system for them.

The analysis of English and French publications brings us to a conclusion that the term „new town” is associated in these countries mainly with the juridical act of its formation, with the investments for its construction or enlargement, as well as with the purpose of the future town: town-garden, town-capital, town-polarization centre for a region, etc.

It is worth emphasizing that French geographers attach much attention to new towns problems, as it may be deduced of their new publications. Less attention to the problem is paid by British geographers — new publications are absent. However, we should like to assume that it is but „a temporal break” in the very true discussion of the problem, which was thoroughly and comprehensively studied in Great Britain.

### III. NEW TOWNS IN THE SETTLEMENT SYSTEM IN POLAND

#### III.1. Outline of the problem

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 chapter 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 Chapter I, nevertheless, following the majority of scientists, 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.

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 (Łęczna, Bełchatów, Barcin, Puławy, 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 1984 their number reached 812. In the beginning of 1951 there were 9.2 mln people in all the Polish towns, in 1984 the towns” population equaled 22.2 mln. The population increment in towns during 40 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 mln people describes the scale of new towns progress in Poland.

When analyzing the lodging reserves, serving an indirect urbanistic-architectural criterion, we come to a conclusion for Polish towns, that during the last 35 years (1950 – 1984) the number of apartments grew more than by 1.4 times and the number of rooms – even doubled. This index is substantiated in such a way: after the war the housing construction was realized in the form of separate blocks and microregions with the predominance of multi-apartment

3–5 storey private houses. After the War the amount of lodging built was 1.5 higher as compared with the beginning of the period. So, the scale of building and reconstructing the Polish towns is considerable.

After the Second World War 194 settlements received the status of a town, in 1945–1984 46 of them joined the larger towns (for example: Ząbkowice, Strzemierzyce, Sławków — joined Dąbrowa Górnicza; Imielin, Łędziny — Tychy; Nowa Huta — Kraków).

Some of these towns, such as Poręba, Nowe Skalmierzyce, after their short stay within other towns became autonomous again. There are 148 new towns at present, which are our study object.

It is worth mentioning that the process of assignment (and deprivation) the urban rights has a long history, or practice, in Poland. It was operating very actively until the end of the XVI century, when the urban settlement network over the present-day territory of Poland was quite well developed, and the number of towns was higher than now — 900 towns.

By the end of the Middle Ages Poland in comparison with other European countries was strongly urbanized, towns were numerous, therefore, the process of the town status assignment could be slackened considerably.

In the XVII century towns began to decline due to long wars, natural catastrophes and other socio-economic phenomena. The overall outflow of population from towns was proper to this century, towns lost their economic functions and were subjected to secondary ruralization (Goryński, 1972, p. 4–5).

In the times of Poland division in the XVIII century more than 1400 towns existed, although they were very small — with only 800 inhabitants and some of them were only called towns. Many towns were deprived of their status in the end of the XVIII — beginning of the XIX century, whereas in some cases it was restored by the end of the XIX century. Consequently, many modern Polish new towns originated from old urban „roots”. Thus, approximately 115 settlements received their status of the town in 1900–1945, among them 93 (81%) had it formerly.

As it was mentioned earlier, in 1945–1984 there were 194 settlements that became towns, and 41, or 21%, have once had this status in the long run of their history. By the present day 148 towns exist, the remainder has been included into other towns (Fig. 7).

In the post-war towns about 2 mln inhabitants (2.036 mln) were recorded in 1984, which make up 9.1 of the total urban population in the country (Table 2).

It is fair to point out that more than 28 per cent (of 147 towns) of new towns received the town status at least for the second time (Table 3).

The frequency of the town status assignment varied in time (1945–1984): 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

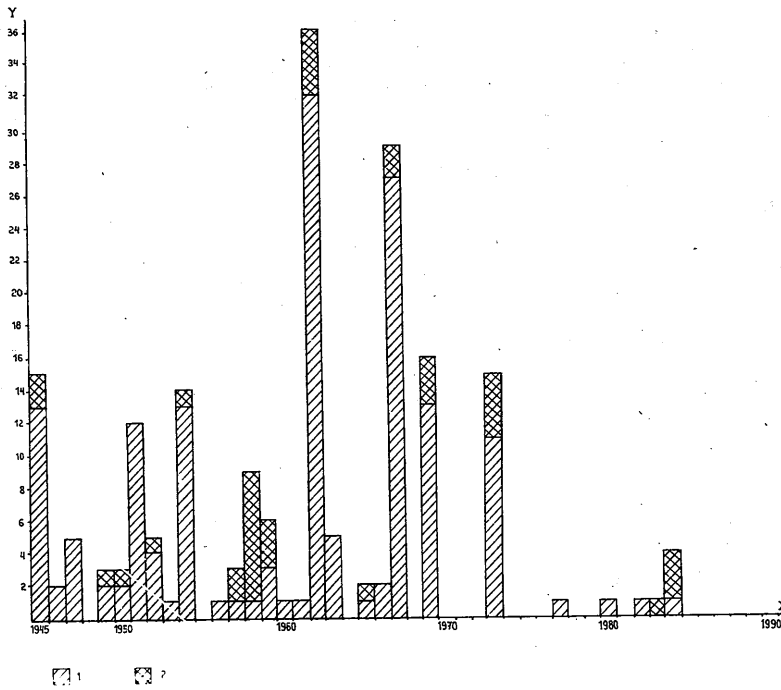


Fig. 7. Number of towns, formed in Poland after Second World War.

X – time of creating, Y – number of cities,

1 – settlements which were being given status of a town for first time,

2 – settlements which achieved status of a town second time.

Table 2. Size of towns formed in Poland from 1945 to 1984.

Size of a town in thou. people	Number of towns		Population	
	quantity	%	population	%
3	12	8.0	26 704	1.3
3 – 5	34	23.0	139 781	7.0
5 – 10	56	38.9	393 873	18.7
10 – 15	14	9.0	176 507	8.3
15 – 20	13	8.6	221 316	10.9
20 – 50	12	8.0	369 923	18.4
50 – 100	4	2.6	260 389	13.0
100 – 150	1	0.6	101 042	5.2
150 – 200	2	1.3	364 427	17.2
<b>Total</b>	<b>148</b>	<b>100.0</b>	<b>2 035 962</b>	<b>100.0</b>

Table 3. Number of towns, originated in Poland from 1945 to 1984.

Year of getting urban status	Number of new towns	Number of towns reached town's status second time	Year of getting urban status	Number of new towns	Number of towns reached town's status second time
1	2	3	1	2	3
1945	13	2	1966	2	—
1946	—	2	1967	27	2
1947	5	—	1968	—	—
1948	—	—	1969	13	3
1949	2	1	1970	—	—
1950	2	1	1971	—	—
1951	12	—	1972	—	—
1952	4	1	1973	11	4
1953	1	—	1974	—	—
1954	13	1	1975	—	—
1955	—	—	1976	—	—
1956	1	—	1977	1	—
1957	1	2	1978	—	—
1958	1	8	1979	—	—
1959	3	3	1980	—	1
1960	1	—	1981	—	—
1961	1	—	1982	1	—
1962	32	4	1983	—	1
1963	5	—	1984	1	3
1964	—	—			
1965	1	1		154	40

Elaborated on the base of: Zmiany administracyjne miast w latach 1946–1984, Statystyka Regionalna, GUS, Warszawa, 1985

(Table 3). The considerable increment of towns of 1958 seems to be related to the changes in the administrative subdivision of Poland, when the new „powiat” (county) centres were transformed into towns (Białobrzegi, Przysucha, Lipsko, Bełżyce, Bychawa, Pajęczno). 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. Some settlements have been denominated as towns „for the future” — providing their further growth (Frombork). The appearance of new towns in the settlement network is responsible for the decrease of average areas per town (in 1945 the hinterland area equaled 444 square km, in 1990 — 384 sq. km). The majority of towns originated in the sixties (92 towns, or 48%) and in the fifties (54 towns, 28%), i.

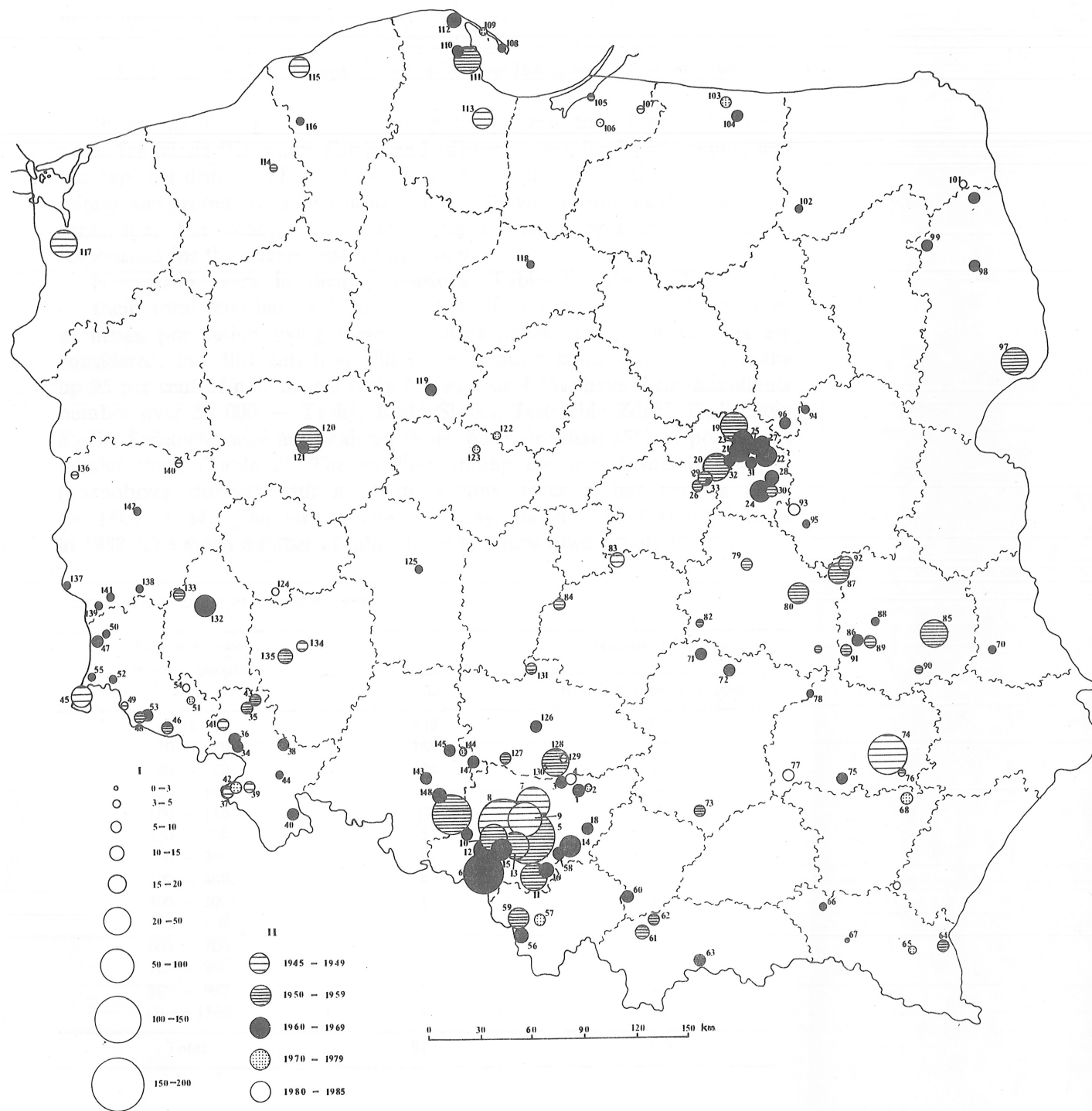


Fig. 8. New towns in Poland and periods of their forming

I — size of a town in thousands people,

II — periods of towns establishing.

Numbers indicate:

- 1 — Łazy, 2 — Ogrodzieniec, 3 — Siewierz, 4 — Poręba, 5 — Tychy, 6 — Jastrzębie,
- 7 — Ruda Śląska, 8 — Piekary, 9 — Świętochłowice, 10 — Knurów, 11 — Czechowice,
- 12 — Leszczyny, 13 — Łaziska, 14 — Libiąż, 15 — Orzesze, 16 — Brzeszcze,
- 17 — Kuźnia Raciborska, 18 — Bukowo, 19 — Legionowo, 20 — Piastów, 21 — Ząbki,
- 22 — Sulejówek, 23 — Marki, 24 — Konstancin—Jeziorna, 25 — Zielonka, 26 — Milanówek,
- 27 — Kobyłka, 28 — Józefów, 29 — Brwinów, 30 — Karczew, 31 — Wesoła, 32 — Ożarów,
- 33 — Podkowa Leśna, 34 — Głuszycza, 35 — Jaworzyna, 36 — Jedlina, 37 — Kudowa—Zdrój,
- 38 — Piława, 39 — Polanica, 40 — Stronie Śląskie, 41 — Szczawno—Zdrój, 42 — Szczytna—Zdrój,
- 43 — Żarów, 44 — Bardo, 45 — Bogatynia, 46 — Karpacz, 47 — Peńsk, 48 — Szklarska Poręba,
- 49 — Świeradów—Zdrój, 50 — Węgliniec, 51 — Wojcieszków, 52 — Leśna, 53 — Piechowice,
- 54 — Świerzawa, 55 — Zawidów, 56 — Wisła, 57 — Szczyrk, 58 — Chelmeek, 59 — Ustroń,
- 60 — Sułkowice, 61 — Rabka, 62 — Mszana, 63 — Szczawnica, 64 — Ustrzyki Dolne, 65 — Zagórz,
- 66 — Jedlicze, 67 — Iwonicz—Zdrój, 68 — Nowa Sarzyna, 69 — Dynów, 70 — Rejowiec,
- 71 — Stępków, 72 — Suchedniów, 73 — Kazimierza, 74 — Stalowa Wola, 75 — Nowa Dęba,
- 76 — Ulanów, 77 — Połaniec, 78 — Ćmielów, 79 — Białobrzegi, 80 — Pionki, 81 — Lipsko,
- 82 — Przysucha, 83 — Koluszki, 84 — Żelów, 85 — Świdnik, 86 — Poniatowa, 87 — Dęblin,
- 88 — Nałęczów, 89 — Bełżyce, 90 — Bychawa, 91 — Opole Lubelskie, 92 — Ryki, 93 — Piława,
- 94 — Łochów, 95 — Łaskarzew, 96 — Tuszcz, 97 — Hajnówka, 98 — Czarna Białostocka,
- 99 — Mońki, 100 — Dąbrowa Białostocka, 101 — Lipsk, 102 — Ruciane—Nida, 103 — Sępólno,
- 104 — Korsze, 105 — Frombork, 106 — Młynary, 107 — Pieniężno, 108 — Hel, 109 — Jastarnia,
- 110 — Reda, 111 — Rumia, 112 — Władysławowo, 113 — Pruszcz Gdański, 114 — Kępice,
- 115 — Ustka, 116 — Bobolice, 117 — Police, 118 — Jabłonowo, 119 — Janikowo, 120 — Luboń,
- 121 — Puszczykowo, 122 — Izbica Kuj., 123 — Sompolno, 124 — Wąsosz,
- 125 — Nowe Skalmierzyce, 126 — Błachownia, 127 — Kalety, 128 — Myszków, 129 — Żarki,
- 130 — Koziegłowy, 131 — Pajęczno, 132 — Polkowice, 133 — Przemków, 134 — Oborniki Śląskie,
- 135 — Brzeg Dolny, 136 — Cybinka, 137 — Łęknica, 138 — Małomice, 139 — Gozdnicza,
- 140 — Zbąszynek, 141 — Iłowa, 142 — Czerwieńsk, 143 — Gogolin, 144 — Kolanowskie,
- 145 — Ozimek, 146 — Kędzierzyn—Koźle, 147 — Zawadzkie, 148 — Zdzeszowice.

e. on the eve of active industrialization. Hence, 62 per cent of post-war towns are industrial in their essence (Fig. 8).

### III.2. Economic-geographical situation and dimensions of new towns

When considering the new towns spatial pattern, their highest density is noted for Silesia (Katowice district and adjacent ones), for Sudety county 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.

New towns vary in their dimensions (Table 4). About 70 per cent of their total number is below 10 000 inhabitants, with 27 per cent of urban population living there. If towns below 50 000 inhabitants are considered, the differentiation will be even more conspicuous: they make up 95 per cent of new towns. Only 7 towns, or 4.5%, have their inhabitants number over 50 000 — Tychy, Ruda Śląska, Jastrzębie Zdrój, Kędzierzyn Koźle, Świętochłowice and Stalowa Wola, but more than 35% of population inhabit them (Table 2). The smallest among the new towns is Ulanów (Tarnobrzeg district) with its 1426 persons. Once it has been a town (in 1604–1934). The largest one is Tychy, having 200 000 inhabitants in 1988. The mean number of inhabitants in a new town equals 13 700.

Table 4. Size of towns of Poland in 1984.

Size of a town in thou. people	Number of towns	
	total	in this number new towns
up to 10	439	102
10 — 20	164	27
20 — 50	124	12
50 — 100	43	4
100 — 150	17	1
150 — 200	5	2
200 — 300	8	—
300 — 400	4	—
400 — 500	1	—
500 — 600	1	—
600 — 700	1	—
700 — 800	1	—
800 — 900	1	—
above 1500	1	—
<b>Total:</b>	<b>810</b>	<b>148</b>

The number of new towns inhabitants is responsible for the natural increment. Thus, only in 35 per cent of new towns the natural increase is lower than the average index for Poland (10‰ in 1984), the remainder 65% display the natural increment ranging within 10–20‰. (Fig. 9).

The highest natural increment is proper to new towns with mining industries – the Upper and Lower Silesia, Lublin district, as well as in new towns of the Białystok district, where all the young people run to towns (depopulation processes, according to Gawryszewski, 1987).

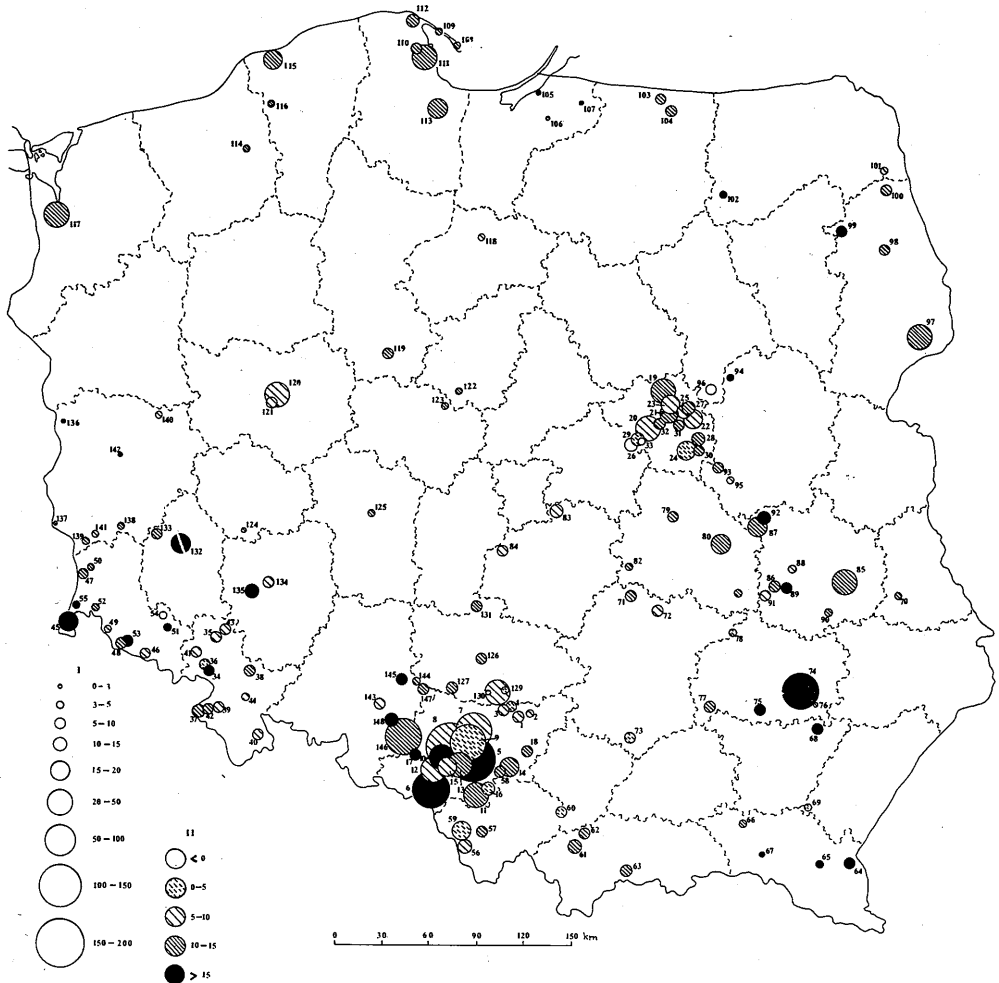


Fig. 9. Natural increase of population in towns erected after Second World War

I – size of the town in thousands of people, II – natural increment of population in promille. The towns numbers see on Fig. 8.

Alongside with towns with high natural increment rates there are new towns (16) with very low ones (below 5‰, and even negative: Koziegłowy — 2.9‰, Podkowa Leśna — 6.2‰, Brwinów, Thuszcz, Konstancin — 0.8‰). These are in their majority towns of the capital's district and settlements having received the town status for a second time. Functionally, these towns are service towns, where the insignificant inflow of young population (having no attracting agents) causes the population ageing (natural increase rate is shown as the mean of three years period <1983—1985> — Fig. 9).

Discussing the new towns scale in terms of demographic science it should be pointed out once more that the majority of new towns have a young population. That is true for new industrial and coal mining towns (f. i. Janikowo, Jastrzębie Zdrój). The difference in the population age structure becomes evident if we compare towns of two districts — that of the capital and of Katowice. The latter have about 30 per cent of very young inhabitants (non-employment age) and only 10.7 per cent of elder people (non-employment age). There are even towns with very young population surpassing 32% against low number of pensioners (population of elder non-employment age). Such are Jastrzębie Zdrój, Kuźnia Raciborska, Tychy, Knurów, Bełżyce, Libiąż.

Towns of the Warsaw district are characterized by lower participation of young non-employment age (below 26%) in the population age structure, whereas the elder ages compose only 13%. The „oldest” from the demographic viewpoint are Podkowa Leśna (20 and 22%, respectively) and Brwinów (22 and 16%).

### III.3. Functional structure of post-war towns

The largest group among the towns analyzed is composed by industrial towns (such towns prevail in Poland, too), i. e. towns with more than half of their population employed in industry (92 new towns — 62%).

In the post-war years the towns development in Poland revealed a strong dependence on the increase of the number of people working in industry, some towns were directly related to the industry development. These phenomena are quite natural for a country involved in accelerated industrialization, they were particularly conspicuous in Poland because of weak development of the service sphere. Localization of industry, which was an impetus for economy progress in weakly reclaimed and hardly urbanized areas and, simultaneously, it was an important agent and prerequisite for a town to be formed. Towns without investments into industry (mainly small towns) underwent but slight economical changes (Wróbel, 1971).

The industrial towns number may be far more elevated if we take for criterion the employment of urban people in town-forming spheres, where the predominance of industry is so evident. In this case the industrial new towns

number will grow by 80% or more. We assume this approach to be correct because the industry in the whole or almost in the whole is a town-forming function. Certainly, the strategy of Poland development elaborated for the post-war period is reflected here. Industrialization was thought to be the main promoter of economic advance, and this is proved by the proportion of investments for industry surpassing 40% of all the investments made and even reaching 50% in the 50-ies.

Industrial towns are concentrated mainly in the Mountainous Silesia and adjacent parts of Częstochowa, Opole districts, as well as in Sudety agglomeration (Wałbrzych and Jelenia Góra districts), whereas in other districts there are but single industrial towns or they are completely absent (Fig. 10).

Seventeen new towns of 18 in Katowice district (Mountainous Silesia) are industrial. Sometimes the dominant industrial function is accompanied by another one, for example, building (Marki, Ożarów, Zielona Góra, Jedlicze) or transport (Kędzierzyn Koźle, Zagórz).

The industrial towns dimensions range from 2240 inhabitants in Lęknica (Zielona Góra district) to 200 000 in Tychy, with the ratio of industrial employment to the gross one being wide (50 – 80% and more; Chelmek, Polkowice, Poręba, Bogatynia, Libiąż, Łaziska, Głuszycza, Knurów, Stępków).

In this way, industrial towns in Poland may be defined as settlements above 20 000 people with industry as a main town-forming function (Jerczyński, 1977), whereas the correlation between the size of a town and its industrial function is not always distinct for the new towns. Trade-service functions are proper to some of small new towns (up to 6 000 inhabitants), which received their town status for a second time.

The employment structure of new towns in Katowice and Warsaw districts is drastically different. Industrial settlements predominate in the first one; towns-satellites (Tychy, Leszczyny) and industrial satellites (Ruda Śląska) are unfrequent (Litewka, 1979, p. 41). Some of them are satellites of the second order; Tychy, for example, regarded usually as satellite of the Upper Silesia Industrial region, forms now its own satellites — Bieruń Stary, Łęziny, Wiry, Kobiór etc. (Litewka, 1976). The abundance of towns-satellites in 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 towns in Warsaw district are quite different — they are mainly towns for sleeping. Wilski (1970) specified four groups of towns within the Warsaw Urban Region (WUR) in terms of their autonomy.

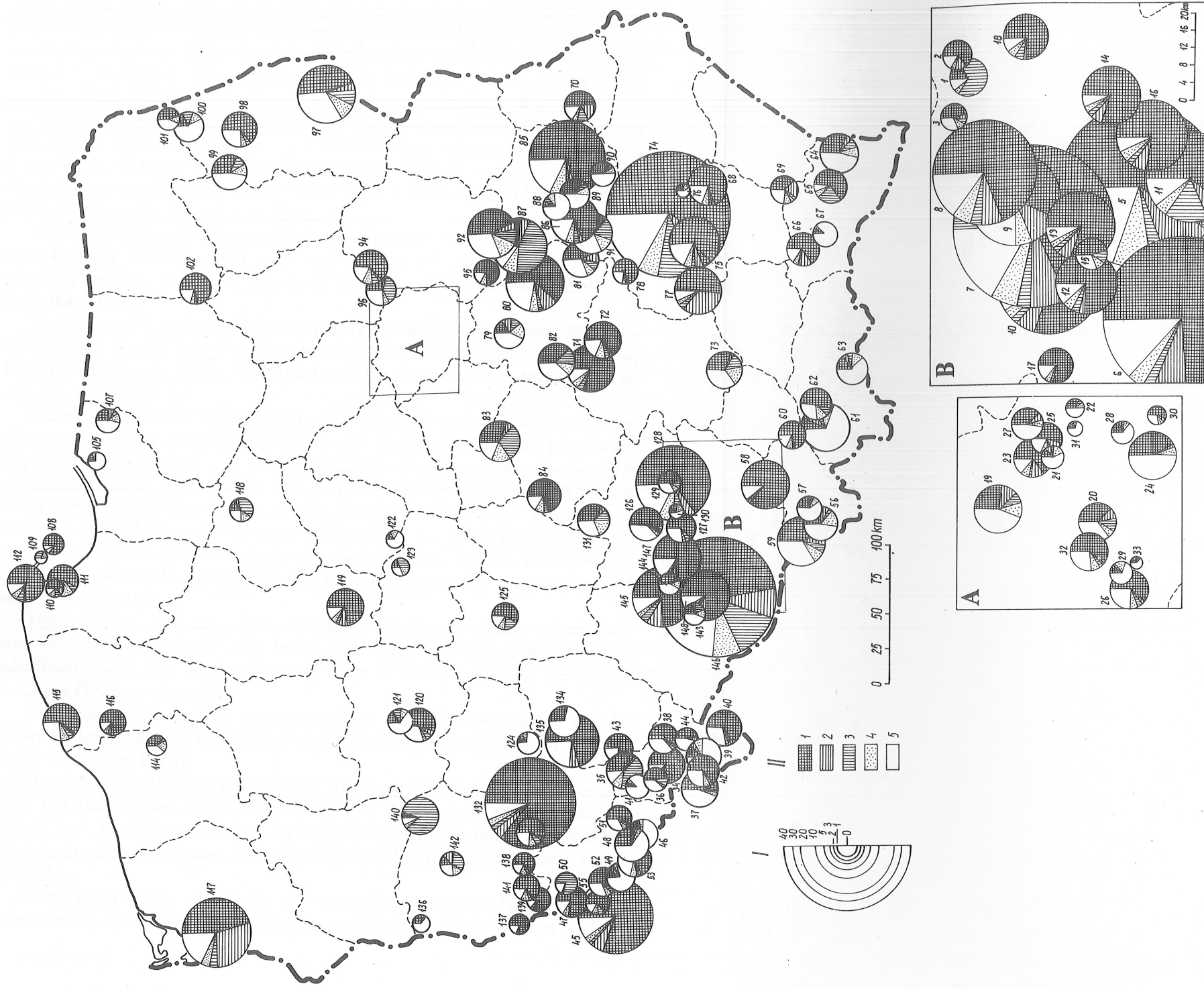


Fig. 10. The structure of employment in new towns of Poland (1986).

I — number of employed in thousands, II — employment structure:

1 — industry, 2 — building, 3 — transport & communication, 4 — trade,

5 — other branches of national economy.

Numbers indicating towns are explained on Fig. 8.

The first group is composed by completely autonomous towns with balanced travelling of people to their job. The employment in industry is the same as the mean for WUR (28%), departures for job equal 25%, employment in service is about 20%. The group comprises towns Ursus, Piaseczno, Grodzisk, Pruszków. They appeared in the inter-war period, except Ursus having obtained its status in 1952, but included into Warsaw in 1977.

The second group comprises partially autonomous towns with more than 60% of employment vacancies; the number of people engaged in industry is lower than the mean index for WUR, about 20% of the total number of employed are working in service. Wilski regarded new towns Milanówek and Piastów to be representatives of the group.

The third group is presented by non-autonomous towns with advanced town-forming functions and only half of the labour-capable population provided by job. Industrial functions predominate (Legionowo, Zielonka, Kobyłka, Marki).

The fourth, last group includes completely dependent towns, where 70–90% of employed people leave for job, and where industry is absent – Brwinów, Józefów, Sulejówek, Ząbki. The third and fourth groups are thought to be „towns-bedrooms”.

Eleven transport settlements form quite a specific category of new towns. These are very new settlements of the 60–70-ies with 30% of their population employed in transport and communication. Their average size is 6000 inhabitants, the largest is Deblin with its 17 000 and the smallest – Węgliniec (3000 inhabitants). The highest in the proportion of people employed in transport and communication in towns Zbąszynek, Łazy and Węgliniec: 83, 70 and 77 per cent, respectively. In other towns Tuszcz, Dęblin, Kolanowskie, Czerwieńsk, Koluszki, Jabłonowo, Jastarnia this parameter ranges within 30 and 50% (Fig. 10).

The trade-service centres compose the third category of new towns, their number is 28. These are usually small settlements with the mean amount of inhabitants 6264; the smallest among them is Ulanów (1426), the largest – Ząbki (Warsaw district).

Such towns are mainly concentrated in the Warsaw district (Ząbki, Podkowa Leśna, Brwinów, Józefów) and in the Lublin one (Bełżyce, Bychawa, Opole Lubelskie, Ryki).

More than a half of the towns considered have been towns once, then they have lost their urban functions and acquired them again after the Second World War. During recent 10–15 years their population did not increase, it even declined in some cases. We doubt whether the formation of such towns is feasible.

There are 9 towns among the new ones with resort functions. They are concentrated in attractive touristic regions of Poland, in the Sudetes and the

Carpathians (districts: Wałbrzych, Jelenia Góra, Krosno). Their mean size equals 6 000 inhabitants. None of new towns situated in coastal area are considered as resort centres because of the structure of their population employment: they are either industrial (Hel, Władysławowo, Rumia, Reda) or trade-transport towns (Jastarnia).

The remainder of new towns (8) are polyfunctional with residence, trade-service and industrial-transport functions. The mean size of these towns is about 15 000 persons.

The types of employment in new towns, in the industrial ones in particular, account for the pendulum migrations (departures and arrivals to job). The investigations carried out revealed correlations between the number of arrivals to job and index of non-agricultural employment, the range correlation index is 0.86. Only 46 towns (31%) of 148 studied have a negative balance of travels to job, which means that the number of persons leaving the town is considerably higher than the number of arriving there.

A positive saldo of arrivals is proper to other 102 towns (Fig. 11) due to their industrial character, where people come mainly to work. More actively people arrive to towns of the Mountainous Industrial area. For example, there are more than 25 000 workers arriving every day to Jastrzębie and Zdrój, about 14 000 – to the towns Tychy and Ruda Śląska and about 10 000 – to Knurów and Czechowice. Among towns of other regions the highest is the index discussed for towns: Stalowa Wola (17 000 arriving, saldo – 15 000), Polkowice (13 000, saldo – 12 000), Bogatynia (7 000, saldo – 6 500).

It should be emphasized for the first group of towns under study, i. e. towns with a negative saldo, that they are mainly „towns-bedrooms”. Such are almost all the towns of the Warsaw district (the exceptions being Konstancin, Karczew, Ożarów), Gdańsk district (Jastarnia, Reda, Rumia), new towns of Poznań district (Puszczykowo and Lubin) as well as Świeradów-Zdrój and Szklarska Poręba in Zielona Góra and Świdnik in Lublin districts. Consequently, these are towns situated within large urban agglomerations – Warsaw, Poznań, Lublin, or towns for resort and sanatoria.

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 coalfields areas in Katowice district and in copper-mining regions (Legnica district).

To 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 – Brwinów, Kobyłka, Legionowo, Milanówek and many other.

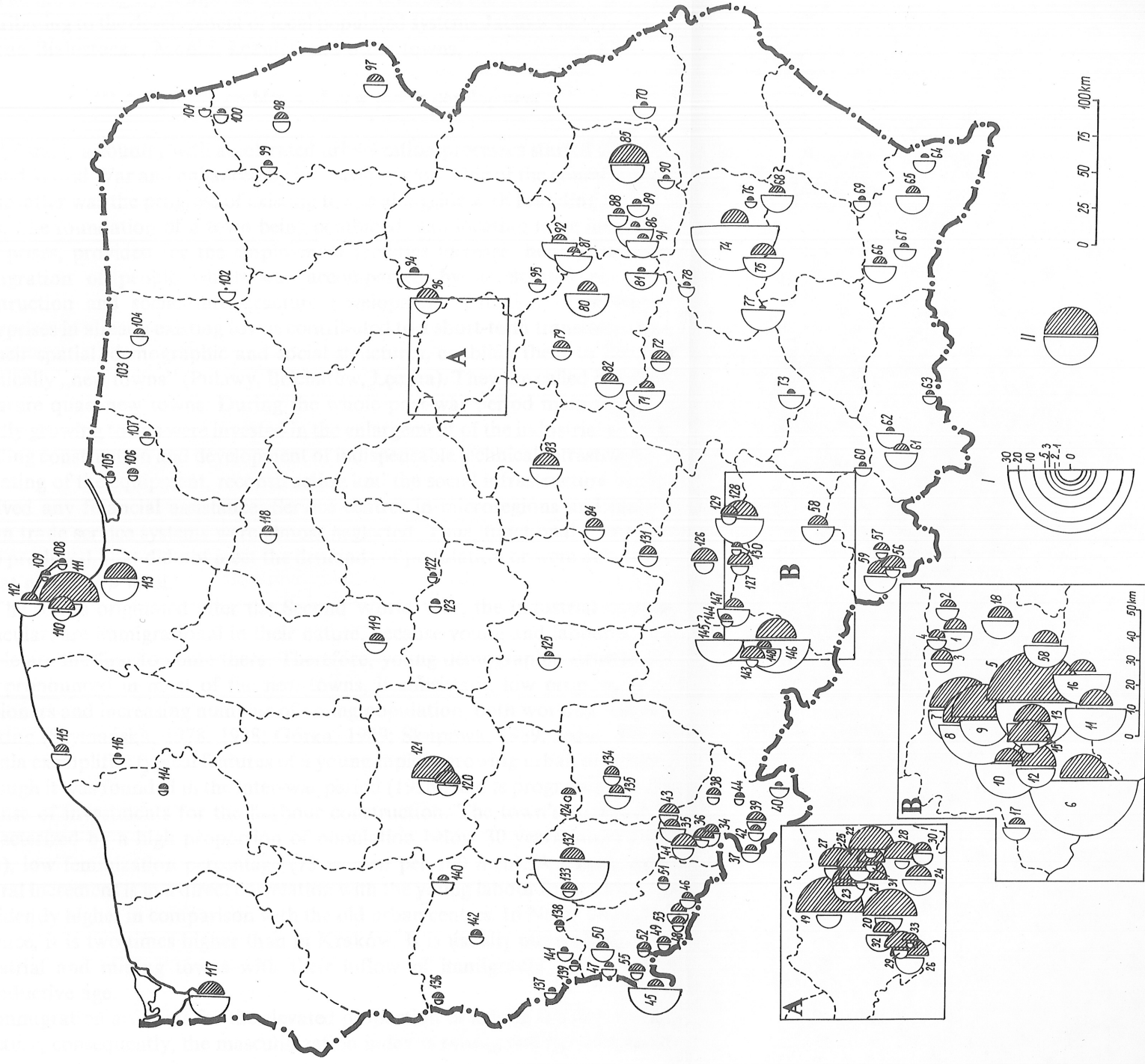


Fig. 11. Travels to work in towns formed after Second World War (in 1986)

I — Quantity of pendulum migrations in thousands people, II — arriving at and leaving for work: on the left there are indicated the arrivals, on the right — the departures. Explanations of numbers like on Fig. 8.

The third category comprises autonomous centres in the settlement systems, contributing to the development of local populated systems: Jabłonowo, Cybinka, Czarna Białostocka, Mońki, Łęknica and other towns.

#### III.4. Specific problems of new towns development

Poland is a country with accelerated urbanization processes started after the Second World War and enhanced by industrialization. One of the consequences of the latter was the progress of existing towns alongside with founding the new ones. The foundation of a town being combined with locating large industrial enterprises, provided for the employment facilities increase, hence, the mass immigration of people which was accompanied by accelerated residence construction and social infrastructure development. Creation of industrial enterprises in already existing towns contributed to a short-term transformation of their spatial, demographic and social structures, enabling them to become practically „new towns” (Puławy, Bełchatów, Łęczna). They are called in Polish literature quasi-new towns. During the whole post-war period main funds in rapidly growing towns were invested in the enlargement of the industrial sphere, dwelling construction and development of indispensable technical infrastructure. Updating of the equipment, reconstruction and the social infrastructure hardly received any financial assistance. Service centres in microregions and central urban trade service systems were almost neglected. Thus, functional structures were produced, that did not meet the demands of population or were able to do this at a very low level.

The towns originated after the Second World War, the industrial ones in particular, are immigrational in their nature, because young and labour-active people are the first to come there. Therefore, young demographic structure is well pronounced in most of the new towns, it consists in low proportion of pensioners and increasing numbers of young population, both working and not working (Szymańska, 1978, 1988; Górka, 1989; Skupowa, 1989; Jedut, 1989). Gdynia exemplifies typical features of a young rapidly growing urban organism, although it was founded in the inter-war period (1926), and is progressing at the expense of investments for the harbour construction. The town's structure is characterized by a high proportion of population below 30 years (more than 65%), low feminization percentage (73 women per 100 men). A conspicuous natural increment is in a direct correlation with the young labour force inflow, it is evidently higher in comparison with the old urban centres. In Nowa Huta, for instance, it is two times higher than in Kraków. It is usually more elevated in industrial and mining towns with their inflow of immigrants being in the reproductive age.

Immigration accounts for the elevated proportion of men in the population structure, consequently, the masculinization index is raising and up till now in

many towns men predominate. This correlation is noted for post-war towns. According to Górka (1989), the prevalence of men (51.5%) is being conserved in Nowa Huta, which had its urban rights since 1949. This parameter decreased, however in the last 30 years (76% in 1951).

Insufficiency of funding the service systems results 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 centres 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, 1989).

The formation of a new town is unfrequent to induce 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 mainly 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, 1978).

The post-war new towns in Poland followed the system of a centralized planned economy. It could be supposed, therefore, that these are towns of new quality answering the new socio-economic system. Problems that they face are the same as in other progressing medium and large towns in Poland. They are more acute and, that's why easier to be revealed. Difficulties in solving problems derive from the absence of any supporting material basis, of the social infrastructure, first of all, and this is evident for the majority of Polish towns.

The social infrastructure development is lagging behind the population growth. Shortcomings in building combined with low quality of the social infrastructure pose a lot of problems in the people everyday life, quite simple demands are met insufficiently. Almost completely absent are the facilities for sports, culture, resort. There are rare exceptions, however, when the enterprises construct their own social objects (Janikowo, Lubin). More advanced in this aspect are new mining towns, but such institutions are frequently available only for miners. With the social infrastructures being almost absent, the development of a closed infrastructure of a particular enterprise begins to play the discriminative role for the inhabitants due to formation of some elite social groups. According to data of Praweńska-Skrzypek and Makuch (1989) for the town of Jastrzębie-Zdrój people not engaged in mining industry have no right to visit polyclinics, sport and other culture objects for miners.

Especially tense in new towns is the absence of polyclinics, weak development of primary and secondary schools, insufficiency of service, mainly of higher order, manifested by the low number of people employed in the third sector (Szymańska, 1989; Górka, 1989). For example, Nowa Huta tends to Kraków in the sphere of high level services (projects to organize a Polytechnic institute only existed), thus the functional dependence of Nowa Huta on the „old” Kraków is evident. Górka (1989) considers Nowa Huta as an individual „new town” only in terms of demography (age and sex structure of population, education and employment). Except for the functional dependence, contacts of Nowa Huta inhabitants with other regions of Kraków are rather rare because of bad communications, distance, lower education level and qualification, as well as of their work in the factory. All this contributes to the idea of Nowa Huta peculiarity in its perception by elder people. Young people visit Kraków not only for shopping, they are more educated and do not imagine their future life bound for ever to Nowa Huta (Górka, 1989).

The absence of a developed service system is usually discussed by scientists engaged in the study of quasi-new towns, i. e. towns that were generated by old ones by means of their rejuvenation due to location of mining enterprises in them (Bełchatów, Łęczna, Puławy). Michalski (1989) stressed that Bełchatów is functionally a new town with residence and building functions prevailing and underdeveloped service and trade. The living standard in terms of service facilities in new towns approaches that of new blocks in large cities.

There are many children and young people in the majority of new towns, and with insufficiency of primary and secondary schools new social problems appear. Children have to visit schools in two or three shifts, teen-agers have to make everyday trips to visit secondary schools or live in internates if schools are too far. Numerous difficulties are faced with by children and teen-agers in Jastrzębie Zdrój, where according to Praweńska-Skrzypek and Makuch, the number of babies born is double in comparison with the forecasted one. Consequently, there are three shifts in primary schools, secondary schools and places for entertainment are drastically lacking (there is only 1 cinema per 100 000 inhabitants). Therefore, people feel uncomfortable, and the youngsters turn to alcohol, narcotics, commit crimes. An appropriate proof may be adduced: there is an announcement on the door of a shop in Jastrzębie-Zdrój: „Selling of thinners and their derivatives is prohibited to people younger than 18” (Praweńska-Skrzypek, Makuch, 1989). The adverse phenomena enumerated seem to demonstrate the short-sighted unreasonable politics in designing the urban area, which serves not only for people existence but affects the mode of living of inhabitants and their biography.

The delayed investments into social infrastructures induce permanent impossibility to meet the most urgent requirements, hence the contradictions

between ever growing demands and facilities to realize them are a constant source of conflicts.

In this way, the first postulate of urban planning may be anticipated. The apartment is, undoubtedly, the most necessary element for living, however, it should not be regarded only as a shelter. Explaining the reasons of delaying the investments into social infrastructures for several years means the misunderstanding of basic vital processes. The demands must be met in the moment they exist, to do this some years later is senseless.

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 of 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 centre 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 gives 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 of 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 massives and be a place for people contacts.

As mentioned earlier, the limited facilities to meet diverse demands of inhabitants in mining-industrial towns are the reasons to perceive the town by its inhabitants as a big bedroom for miners, or as a gigantic hotel suitable only for eating and sleeping. Such „bedroom” character of the town is the most frequent cause of irritation.

Social relations are also complicated in new mining-industrial towns. Their 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 population in old town is usually formed of its nearest surroundings and the integration process is therefore more rapid.

We should like to discuss the social integration problem with the example of two quasi-new or rejuvenated towns — Bełchatów and Łęczna. The location of mining industry enterprises and of the heat electric station caused such a drastic change of their social, demographic, spatial and functional structures (infrastructures) that these town can be now regarded as new towns. Research were carried out in both towns argumentating the above statement (Michalski, 1989; Jedut, 1989).

It was mentioned in sociological publications on the Bełchatów problems that its population before the industrialization period displayed some very local features and did not deviate of traditional behaviour standards (Lutyński, 1964). Alongside with the inflow of new inhabitants from towns, usually more young and educated than the indigenous population, changes in the social behaviour became evident. Processes, operating in the Bełchatów society from the moment the combine was on, are supposed to form a society typical for working class concentrations. Not going into discussion on their specific sociological characteristics Michalski (1989) dwells on an indirect sociological index exemplifying the current changes. This is the spatial homogeneity of marriages in Bełchatów. The distance was measured between the places where the engaged couple lived just before marriage and it was assumed a priori, that the local effect of the town stretches up to 15 km. Marriages between people living within this zone of influence are regarded as homogeneous (Michalski, 1984). There were 110 marriages in Bełchatów in 1970, 49% — between the town inhabitants. The mean distance between the betrothed people former residence places, with one of the couple being from Bełchatów was 14km and this indicates that at least 3/4 of marriages are spatially homogeneous. Ten years later when a lot of people came from different parts of Poland, the proportion of marriages between the Bełchatów inhabitants remained the same (50.2%), whereas the mean distance increased to 36.4 km, for men ranging within 20.1 and 50.7 km. Consequently, this is indicative of the population mobility and decrease in spatial homogeneity of marriages to 2/3. The same is true for Łęczna.

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

The integration of society in Łęczna is discussed using the approaches of M. Miazga, who defines integration as a „process” or a complex of interdependent 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 cultural integration is interpreted as the proportion of features in people's mentality, behaviour, priorities, etc. inherited of their former mode of living, and conspicuous for groups of different geographical provenance. These groups in Łęczna appeared to be quite unexpectedly more similar than different. Similarity in life priorities, or standards accounting for the behaviour of the family member, citizen or worker greatly contribute to the integration processes advancement.

The normative integration means the rate of following social standards. In other words, it is the efficiency of social mechanisms and public opinion control of the behaviour of a family member, citizen and worker which is elaborated by the mutual adjustment or accommodation of various social groups. The latter comprise the rather homogeneous local society and extremely differentiated immigrants.

The results of analysis of both accommodation capacity and factual behaviour manifested rather small changes in the initial period of Łęczna development enabling to avoid drastic disintegration in the normative aspect (Miazga, 1982). As a negative index of normative integration the number of crimes and law violations is to be used. Parallel to changes in the urban society there is an increase in social pathological phenomena frequency: alcoholism, traditional for a trade town with subsequent hooliganism and criminality. These phenomena are promoted by the insufficient development of social infrastructures in Łęczna.

Functional integration is determined as the rate of solving tasks related to the town development by individuals, institutions and social associations (the level of such bodies development and activity of their members, interest to the town's problems, factual social activity and, in particular, the subjective assessment of the town's functioning in terms of its suitability as a residential area). Functional integration is of high importance for a town with accelerated development. Functional integration may be identified through collaboration of various groups of inhabitants, testifying to current changes and enlarging participation of immigrants in the activities of various associations or commissions.

Formation of a new industrial region provoked great expectations of both immigrants and local people. Immigrants, especially those from large towns were very sceptic about the new urban environment, while the Łęczna aborigines were satisfied. The shortcomings in the town functioning inhibit integration and cause destabilization. Of vital importance for the new society formation is the social infrastructure. The shortcomings there hinder the process of accommodation to the urban mode of living by immigrants on the one hand and serve an obstacle for the stabilization of immigrants from large urban centres on the other hand.

The communicative integration is interpreted as contacts between inhabitants and social relations intensity (the degree of prejudice and stereotypes manifestations, aspiration to contacts and collaboration between separate groups and frequency of such contacts) and is a very valuable part of social integration. Mutual prejudice and disapproval of behaviour by some groups strongly hindered the formation of the new society in Łęczna. This is quite evident for the aborigines and immigrants from Upper Silesia. The local people consider the immigrants to be arrogant and avid, they say it is impossible to live together. The same are the reproaches of immigrants to the local people: they are also accused of being backward, egoistic and lazy (Miazga, 1982). The intensity of factual contacts depends on the time span of living in the town, social provenance and professional level of both parents, the urbanization level of the area the child was brought up. Higher is the intensity of contacts between people from small and medium towns, for people from large urban centres and villages it is usually lower. The core of aborigines display the most conspicuous trend to isolation, people coming from Silesia and some other regions also try to minimize their contacts with this core. Immigrants prefer contacts within their own small groups, or with other immigrants, but not with the aborigines. Employment in mining industry favours the development of contacts between all the groups of population. More frequent are different intergroup communications between women and young people.

The emotional integration, or the rate of emotional ties to Łęczna (by distinguishing the town of all the others, being proud to live in this locality, identification with the town and with the urban space) is estimated to be advanced. The emotional ties with the town depend also on the urbanization rate of the place where people spent their childhood and on the time they were living in Łęczna. They are strong for people educated in Łęczna and having bonds with Lublin region, as well as for those who lived in media similar to that of Łęczna, and they become still more pronounced with the duration of people stay in Łęczna.

Different relations and ties are formed between aspects of the social integration. „The positive assessment of the habitat in its broad sense, advanced technical facilities and functioning account for the emotional ties with the town and via all this for the favourable development of social relations, or high level of the communicative integration” (Miazga, 1982). A low level of functional integration may cause the normative disintegration. Therefore, among the integration factors the vital role is played by meeting the demands in lodging together with the due material and technical provision for functioning of the town.

People coming from the Lublin area impact the formation of the new society in Łęczna. They may be regarded as a specific intermediate link between the local people and those arriving from Upper Silesia. This is true when applying

stereotypes in evaluating the other groups, when revealing orientation for the own group and quantifying factual contacts between people (Miazga, 1982). The main sphere of contacts is the common work contributing to the disappearance of any kinds of prejudice. The absence of some public sites, where social contacts may be realized is proper to the town; among such sites the inhabitants enumerate the following ones: public garden, cultural objects, schools, church.

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 analyzed the spatial heterogeneity of marriages for the time period 1948 – 1985 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.

Many new towns display a high mobility due to arrivals to their jobs of most of their inhabitants or due to identifying new towns as something rather temporary. The most mobile are the inhabitants of new towns that came there from large centres, while people from small towns and villages are quite satisfied by their present residence place. The most important reason of staying in the new town is the possibility to have apartment very quickly. Questionnaires were made in some new towns on the subject. Thus, 56% of the people asked in Jastrzębie Zdrój would like to leave this town (Prawelska-Skrzypek, Makuch, 1989). Szymańska (1978) has found out that almost the same part of inhabitants of Janikowo would like to leave it provided they receive an apartment earlier in another town. This is true mainly for young people with good education. According to Bagiński, the same is the situation in Polkowice and Lubin. The most conspicuous dis-accepting the new town as their residence place is proper to people of the age group 25–30 years and is more evident in towns with mining industry. Prawelska-Skrzypek and Makuch are very anxious about the new mining centre Jastrzębie Zdrój, which is a typical town with industrial investments predominating. Its inhabitants are proud of their work, they emphasize its importance, nevertheless, they feel being short of some vital life facilities – possibilities of integrated personal realization under the existing conditions. Such mental discomfort results of the non-harmonic development of the town and of its infrastructures, first of all.

The majority of the problems outlined seem to be relevant to many quickly growing towns in Poland, they are more urgent and, hence, easier to identify in new towns.

In highly specialized (industrial) new towns, in East European countries, first of all, the problem of environment pollution is very acute.

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-product 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 Nowa Huta near Kraków. It was done without any preliminary assessment of 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, underwent deformation. The areas between Kraków and Nowa Huta were transformed into a continuous urbanized belt. The spatial and functional integration of Kraków and Nowa Huta, as well as their complete social integration proved to be extremely hard. Now these two towns with the dispersed patches of residence complexes around them look like a chaotically urbanized area almost lacking features proving their purposeful formation.

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 blocks 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 blocks and panels contribute to the decline of architecture. Enormous number of residence blocks 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.

A new town almost always reached equilibrium between functions that have formed it and the present-day one. Hence, it does not inherit old sins, that are a constant source of concern in many European towns.

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 (4km) or Inowrocław-Mątwy (7 km) on less valid lands for agriculture.

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 under-developed infrastructure resulting in dangerous social consequences.

It would be more reasonable for Poland to think about the development of a social-economic infrastructure in villages, and this could hinder the outflow of people to towns.

Some problems of the town Tychy development are to be discussed now. The new post-war towns in Europe have been criticized for their structure, which was different of that proper to towns of the XIX century. The main points for criticism (insufficiently substantiated in many cases) were: absence of typical urban features, of a developed system of polyfunctional streets, translocation of residence and working places, egalitariness in the mode of living and architectural style.

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

A brief outline of changes in the Tychy new town may be a valuable contribution to solving this problem. The town has been constructed practically at a bare place; the locality that gave birth to its name was a church settlement with 8000 people situated at the periphery of the area designated for the new town. The choice of the place was determined by the idea to provide with dwelling 100 000 people engaged in mining industry outside Silesia with its very unfavourable environmental conditions.

Outside this zone with its highest concentration of industrial objects and lodging sites, denominated as „zone A” four towns-satellites were to be constructed according to the regional plan. One of them was Tychy. The choice of the locality for Tychy was facilitated by favourable climatic conditions within the so-called „zone B”.

The town was to be constructed on a large spare space between forest massives, the southern part of which is presented by Pszczyzna Forest. The concept of the plan, which in 1951 was awarded by the first place and recommended to be brought into life, consisted in a picturesque integration of

the town with the landscape taking into account all the streams crossing the territory. This initial concept determined the architectural design comprising the quadrangle of main streets intersected by two axes: the railway road in the kettle depression and the green axe of the town binding two gardens - the northern one and the southern. The quadrangle and two axes were basic elements forming the framework of the whole plan.

The plan was not changed during 40 years contrary to the pattern of separate blocks, location of service sites, types of constructions and penetration of green zones into the town. These changes were natural, derivative and ecological.

The natural changes resulted of the perfection of the plan, its better adjusting to the landscape and of the existing building pattern.

Derivative changes were due to changes in the program, economic facilities and some limitations produced by administrative institutions governing the building process in the country.

Ecological changes had their sources in the opinion of inhabitants, town authorities, public and professional ratings. The town itself became no more an object of construction, it became a subject exerting its influence upon the plan.

Although the designing of the town was made in almost laboratory conditions of only one office, the realization of the plan was far from being carried out in laboratory conditions, it could be more adequately defined as „a struggle for the town” (Adamczewska-Wejchert, 1990).

In 1951–1964 the planned realization was going on despite the reduced financial support for the district and rejection of the deglomeration ideas, the latter being the cause of new towns development. The time period 1964–1971 passed in search for cheapest ways of construction mainly at the expense of poorer architecture. In 1971–1980 the production of ready construction blocks drastically increased (up to 90%), so that the construction faced the danger of complete unification. This could be hardly inhibited by urbanistic solutions producing a suppressing effect of overall predominance of standard buildings. Beginning with 1980 and up till now the danger still increased because of numerous violations of ecological requirements, such as limiting the areas of open space, green massives, gardens, sites for sports and of the suburban zone, which, according to the plan are responsible for optimal residence conditions.

Two reasons of the danger are evident. One is the desire of the town authorities to fill the open space by dwelling blocks, which, in its turn, originates from restrictions to use some territories for construction as they are valid for agriculture (land resources control regulations by the Ministry of agriculture). The attractiveness of living in the town contributed to more compact building pattern: about 13 000 inhabitants of the second generation dream of an apartment in the town.

Looking for concessions in the process of collaboration of designers, town authorities and People council lasts almost 8 years and produces solutions of varying adequacy. This game in concessions, similar to a controlled sliding, came to its last limit. Passing it over will violate the principle of green wedges intruding into the town and being axes along which schools, kindergardens, hospitals, public gardens are situated. As an additional hazard probable merging of dwelling blocks is anticipated without green massives separating them.

Another big danger may be the construction of new mines near the town. For example, mines of the Mikołów coal field are situated between Katowice, Mikołów and Tychy; and they would conceal the natural-climatic advantages of the new town. We should hope that the energetic balance in Poland will be regulated not via its weakest chain — the health and life of Polish citizens, and in case of contradictions between the interests of mining industry and the demands of the country in their broad meaning the priority of the latter will be assumed. A new town being in the position of disputing interests of agriculture and industry must exist primarily for its inhabitants.

Summarizing the results of these observations it should be pointed out that the aspects of new towns design concerning open space are a failure or do not give any results.

Three conclusions may be drawn of the items discussed:

1) The open space formula in our state (not urban) system was not a success. Financial facilities of the town depending on those of the district could not meet the demands in building and subsistence of these territories.

2) The dimensions of green massives did not considerably exceed those in old towns, f. i. in Poznań, whereas the way to use them without subdivision into town gardens (with fences and guards) and accessible territories contributed to the elimination of control over them.

3) The trend to denationalize public green massives by using them as house gardens is thought to be reasonable. Unfortunately, in reality it results in the decline of their aesthetic status and after a short time span the level of their utilization becomes very low.

It is impossible to bring to a due state green massives in the town, until town authorities, dwelling cooperatives and the whole urban society are not interested in them. Statistics illustrates this distressing experience: 87 of the planted trees were hurt by children in the presence of their parents during a year.

The majority of planted stands resulted not of planned activities (absence of funds), but of a public initiative. The works were sponsored mainly by industrial enterprises providing for equipment and funds and realized by schools, colleges and institutes, when the staff was obliged to participate in planting. The trees were planted at random, there was no preliminary design.

The example discussed seems to introduce the reader into the sphere of application of one of the new towns projects, it illustrates shifts in initial

concepts, and not always to the best. That's why the efficiency of new towns founding should be assessed not only at the basis of initial programs, but taking into account all the aspects of their realization as well.

## **IV. NEW TOWNS AS THE MOST COMMON FORM OF SETTLEMENT IN THE USSR**

### **IV.1. Theory and practice of urban development**

New towns are designed and built in countries with different geographic, economic and political conditions, but the problems to be solved seem to be much the same: urban development and settlement pattern, appropriate distribution of the forces of production, village rebuilding, co-ordination of the most complicated social, engineering and other technical interrelations within national settlement system. Everywhere the efforts to implement town planning programmes can be faced with difficulties, taking into account the present state of urban network and socio-economic development of the country.

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

At present, the very important processes to establish sovereign States, take place in the USSR, however, basic principles of urbanization process and settlement development in particular should be considered within the vast territory of the former USSR due to their unification and integrity. These principles are thought to determine in many ways the future framework of urbanized settlement.

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 (1525 new towns).

The history of town planning in the USSR indicates that the way to embody conceptual ideas into practice 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 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 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, 1991, p. 185). 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 specialists. 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. Residentials 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 settlement, 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 a 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-concentric 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 noticeable; 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).

Between 1926 and 1939 the urban population in the USSR has almost doubled and reached 56 million people. High rates of industrialization and urbanization in the country gave rise to a rapid growth of all existing towns, based upon the new socio-economic conditions and to the development of a new generation of settlement localities of urban type.

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 „plant-towns” associated with the development of new regions in the USSR, started in the beginning of 1930s.

#### IV.2. Rates of urban development

The growth of new towns and cities as the very important and regular part of urbanization in the 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 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 USSR, reflecting a high dynamics in the development of national economy.

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 Soviet Union 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 scale. After having analyzed the matter from this point of view (in the 1920s) it was evident that 142 towns had no sufficient economic potential and they were gained in status of villages, at the same time 182 settlement localities with well developed economic functions had risen in status. Thus, by the time of the first census in 1926 the number of towns accounted for 737, among them newly appeared towns consisted 25% (Konstantinov, 1947). There was also a category of „workers' settlements" of urban type. As a result, according to the 1926 census the urban population numbered 26.3 millions people or 18% (Table 5). From these base the huge urbanizational boom started in the USSR, which was closely connected with industrialization of the country. Forced development of industry was the cause of the rapid growth of many towns and cities. This is easily seen, exemplified by data for the USSR. In 1930 Magnitogorsk started to be built, the population of which exceeds 443 thousand inhabitants now (1990). In 1932 Komsomolsk na Amure has grown, by 1990 this town contains already 318 thousand residents. Many settlements and villages were transformed in large industrial centres.

Table 5. Growth of urban population and number of towns in USSR

	1917	1926	1939	1959	1980	1983	1990
1. Percentage of urban population	18	18	38	47.9	62.2	64.5	66.0
2. Number of urban type settlements	675	1925	2759	4619	5938	6143	6242
— towns	675	709	1191	1679	2074	2128	2200
— settlements of urban type	—	1216	1568	2490	3864	4015	4042
3. Number of large towns <sup>*)</sup>	2	31	82	149	275	282	297
— 0.5—1 mln. people	—	1	9	25	26	29	34
— above 1 mln people	2	2	2	3	20	22	24

<sup>\*)</sup> Among large towns there were numbered those towns with population above 100 thousand;

Sources: Narodnoye khoziaystvo SSSR 1922—1982. M., 1983.

Narodnoye khoziaystvo SSSR v 1983; Strany i narody, vol.

'Sovietskiy Soyuz', M.; Mysl, 1983, vol. 16, p. 99—110;

Demograficheskiy yezhegodnik SSSR. M., Finansy i Statistika.

1990, p. 6, 14—26.

But a great number of new towns appeared after the Second World war. For instance, Norilsk in circumpolar region (173 thousand inhabitants), Volzhskiy, accounting for 275 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, (255 and 266 thousand inhabitants respectively), etc. In European USSR new towns appeared as well: Naberezhnye Chelny (501 thousand residents), Tolyatti (642 thousand residents), etc. Thanks to these processes the urban population increased even more rapidly and by 1990 made up 66% (190.6 millions people). Thus, as compared to rural population the number of residents in towns was increased by 7.2 times (164 millions people). In 1990 new towns and settlements accounted for 70% of the total urban localities in the USSR, in many regions they were fully reconstructed. More than 450 towns and cities have been built at a bare place on previously unused land, at present, they contain almost 16 million of inhabitants or 8.5% of the total urban population in the country. Such rapid process has no analogy in the history of urban development throughout the world. With the establishment of Soviet power after 1917 about 1525 new towns have been designed and built (887 after 1945) as compared to 675 towns existed before (Table 5). Analyzing the intensive development of settlement in the USSR one should take into account the high level of growth of industrial production and infrastructure services. This is a characteristic feature of the USSR urbanization.

There exists a constant tendency towards the urban development in the country, although nowadays the intensity of this process gets decreased due to the great distribution of urban localities within the economically active territories. For example, almost 300 towns appeared for 15 years of 3 five-year plans after 1917. During the war (1941–1945) only 87 new towns have grown as a result of reorganization of the national economy and evacuation of large plants in the East of the country. The growth of towns changes as follows: 1927–1950 – 20 new towns every year, 1950–1960 – 25–27 towns, 1960–1970 – 15–16 towns and 1980–1990 – 10–13 towns (Table 6). As seen from this table the total amount of new towns is found to be much less now as compared to that for the last years due to the fact, that some of them were joint with the other towns and lost their status. For instance: Ivankovo appeared in 1958 had been included in Dubna town in 1960; Novo-Vilnya, received the status in 1950 was joint to Vilnius in 1957; Borovsk (1949) enlarged the area of Solikamsk being joint to this towns 10 years later (1959); the boundaries of Moscow were extended in 1960 including Tushino, which has been built in 1939.

In the first years after the 1926 census of population the attempts were made to regulate the status of towns. By that period several settlement localities achieved formal urban status being most developed economic centres (Rubtsovsk, Kamensk-Shakhtinskiy, Tulun, etc.) or new administrative ones (Dzhalal-Abad, Naryn, Gorno-Altaysk, Karachaevsk). Rapid changes

Table 6. Number of new towns created in USSR in the years 1927–1990.

1927	9	1943	18	1959	14	1975	10
1928	3	1944	24	1960	13	1976	10
1929	3	1945	17	1961	39	1977	11
1930	4	1946	27	1962	22	1978	11
1931	12	1947	15	1963	43	1979	10
1932	20	1948	9	1964	18	1980	8
1933	10	1949	17	1965	38	1981	17
1934	9	1950	28	1966	40	1980	15
1935	10	1951	24	1967	32	1983	15
1936	6	1952	20	1968	18	1984	18
1937	15	1953	18	1969	12	1985	14
1938	139	1954	28	1970	10	1986	12
1939	22	1955	23	1971	21	1987	10
1940	19	1956	56	1972	21	1988	12
1941	15	1957	30	1973	22	1989	10
1942	13	1958	31	1974	12	1990	in 01.1990
						number of all	
						USSR's towns —	
						2200	

Source: Konstantinov O.A., 1976, p. 145  
and elaborations of the author, on the ground of  
every-year statistical material's data.

followed by industrialization of the country caused transformation of many workers' settlements into lading industrial centres of great activities (Kadievka, Gorlovka, Kramatorsk, Konstantinovka in the Donetsk basin; Anzhero-Sudzhensk and Prokopiensk in the Kuznetsk basin; Dzerzhinsk near Nizhniy Novgorod, etc.); quite new towns appeared as a result of intensive settlement development according to the first five-year plan (Magnitogorsk, Berezniki, Krasnouralsk, Novokuznetsk, Komsomolsk na Amure, etc.). Further industrialization was the most important factor of urban development in the USSR. It is noteworthy, that the appearance of new towns gave a jump in 1938 (Fig. 12). By that time the second five-year plan has been completed, there existed already many new industrial centres and in January 1939 the second census of population was expected. In contrast to the first 1926 census, when major settlements were recognized as towns although in fact they didn't have such status, at the 1939 census a great number of settlement localities was gained in status of towns followed by legislation. After 1945 settlement development was mainly affected by higher rates of the post-war restoration of the national economy. At present, large scales and dynamism 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 USSR is chiefly characterized by a wide scope of activity to create new towns of different types. Thanks to the determined national movement to establish new towns and cities the total amount of towns was increased by 3 times in the USSR. This trend can be illustrated by following data: before 1917 there existed only 676 towns, in

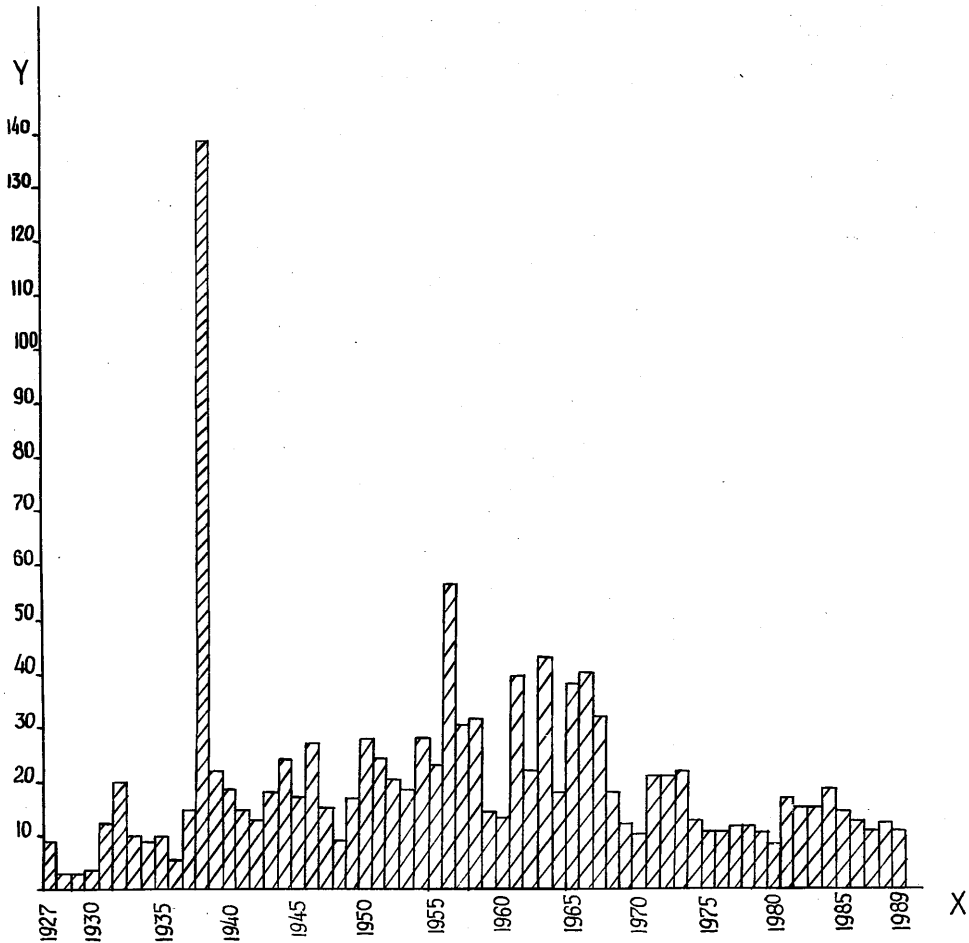


Fig. 12. Number of towns created in USSR from 1927 to 1989.

1927 their amount accounted for 709, in 1937 — 755, in 1941 — 1241, in 1954 — 1515, in 1970 — 1933, in 1980 — 2069 and in 1990 the number of towns made up already 2200, it being known that in the last ten years 131 towns appeared among them 28 in Ukraine, 34 in Uzbekistan and the same amount within the boundaries of the RSFSR.

#### IV.3. Regional peculiarities of development and localization of new towns

It is obvious, that the role, played by new towns is different within the separate regional systems of settlement. In the USSR there are regions, settled for a long time, they have a definite settlement network, in which new towns are absolutely absent or their share is practically small. They are as follows: Tver, Pskov, Smolensk districts in the RSFSR; Rovno, Ternopol, Ivano-Frankovsk, Chernovtsy, Lvov districts in Ukraine, Estland, Latvia and Lithuania as well. There are also regions, represented in the past the remotest depth of the provinces without any town at all. For example, Kalmyk ASSR, Khakass, Gorno-Altai, Gorno-Badakhshan, Karachaevo-Cherkessk autonomous districts; Nenetskiy, Komi-Permyatskiy, Yamalo-Nenetskiy, Khanty-Mansijskiy, Taimyrskiy (Dolgano-Nenetskiy) national autonomous regions; Magadan, Dzhizak, Turgai, Syr-Daria, Kulyab, Naryn districts.

A rapid growth of towns is observed in many previously unsettled regions. In circumpolar areas of the USSR, for example, there existed only 9 small towns in 1917, nowadays this region accounts for many dozens of large towns including industrial centres such as Norilsk, Igarka, Monchegorsk, Kirovsk, Vorkuta. In Soviet times the number of towns has been doubled in the areas eastwards from Ural. In Central Asia and Kazakhstan their amount was increased from 47 to 95, among them Karaganda, Balkhash, Termitau, etc. Major towns became as great industrialized centres, at the same time towns appeared with narrowly specialized functions, e. g. seaports, health resorts, scientific centres. For example, Dubna, Obninsk, Pushchino, Protvino, Akademgorodok near Novosibirsk are well known. Some towns have grown in previously unsettled regions, the others appeared as satellite-towns around large cities: Zelenograd, Zhukovskiy near Moscow, Sumgait near Baku, Rustavi near Tbilisi, etc.

The share of new towns is essentially increased in eastern regions of the RSFSR as well as in many national republics: Kazakhstan, Kirghizia, Tadjikistan, Armenia, Komi, Kabardino-Balkaria, Checheno-Ingushetia ASSR, where the amount of towns reached 75%. Thus, the distribution of the forces of production stimulated urban development and spread of new towns as economic and cultural centres in various regions of the country.

The share of new towns is more greater in the main industrial regions: in the Donetsk Basin (87% in Donetsk district and 92% in Lugansk district), in the

Ural (77% in Sverdlovsk, 74% in Perm, 82% in Chelyabinsk and 71% in Bashkiria) as well as in some regions of Siberia (79% in Kemerovo district) and Far East (78% in Khabarovsk region). In the European USSR such regions are as follows: Samara — 80%, Volgograd — 83%, in Ukraine (Kirovograd — 82%, Kherson — 80%, Zaporozhie — 77%, Kiev — 80% and Nikolaev — 67%). In the Central region of the country the share of new towns accounts for 38% on average, only in Moscow district it has reached 61% owing to settlements near the capital and in Tula district — 67%.

New towns are of primary importance in agglomerations, formed both around the large cities (Moscow, Leningrad, Nizhniy Novgorod, Kharkov, etc.) and in regions characterized by distribution of mining resources (Donetsk and Kuzbas coalfield basins, Krivoy Rog iron-ore basin). The tendency towards declining the growth of new towns was observed long ago and indicated that the settlement network became stable: between year 1926 and 1933 37 new towns appeared every year, within 1939—1959 — 24, 1959—1970 — 23, 1970—1980 — 14—16 towns and in 1980—1990 only 10—13 new towns every year. But only in the last ten years this tendency seemed to be strongly expressed (Fig. 12). Qualitative changes in the composition of these towns are paid much attention. These changes increasingly emphasize the share of new towns in a series of hierarchical levels within the boundaries of republics, regions, districts (36% in 1959, 43% in 1970 and 46% in 1980). Many towns and cities mostly developed in their regions are well marked by the rise in status of regional centres. In this connection the role of town authorities is essentially increased resulting in the change of interrelations with regional administrative power.

Among three existing macrozones in the USSR the highest rates of urban development are most characteristic of Southern macrozone (Central Asia, Kazakhstan, Transcaucasus — 20% in the last decade), more lower rates of the expansion of settlement network are in Eastern (Siberia, Far East — 7.2%) and Western macrozones (the Northern, Central and the Southern European parts of USSR, Uralo-Povolzhye — 3.5% — tab. 7). This is in line with increasing tendency to make the settlement network more even over the whole country, but the main thing is the intensity of the urbanization process.

The role, played by new towns within settlement systems in three above mentioned macrozones is found to be quite different: Western zone is characterized by regulating process in the development of agglomerations, in Eastern zone new towns are built as a result of the development of vast territories with the trend not from region to towns but via verse from town to region, in Southern zone especially in Central Asia the problem is to develop new urban places at the vast territory, which is rurally overpopulated.

New town's geography of urban type settlement enables to testify the tendency towards more even distribution of towns throughout the country (Tab. 8). Highest rate of growth of the urban type settlements number was

Table 7. Increase of new towns number within three macrozones of USSR

Macrozone	Increase of towns' number in 1980 (1970 = 100%)		
	Total	Of „oblast” rank	Of „raion” rank
1. European part of USSR (excluding Transcaucasus)	103.5	109.2	102.7
2. Siberia and Far East	107.2	117.1	109.5
3. Central Asia, Kazakhstan, Transcaucasus	119.9	123.8	116.0
Totally in USSR	106.4	112.9	102.7

Table 8. Increase of new settlements of urban type within three macrozones of USSR

Macrozone	1970	1980	1990
1. European part of USSR (excluding Transcaucasus)	2408	2553	2642
2. Siberia and Far East	580	650	730
3. Central Asia, Kazakhstan, Transcaucasus	608	661	670
USSR	3596	3864	4042

Sources: Nasieleniye SSSR, M., 1980, M., 1990;  
Nasieleniye RSFSR, Itogi vsiesoyuznoy perepisi nasieleniya  
na 15 yanvaria 1959 g., CSU, M., 1960.

observed in Eastern macrozone — 12.1%, however only 8.7% in Western and 6.2% in Southern macrozones. It is noteworthy that Southern macrozone is backward (if take into account „ecistical” parameters) comparing with the Eastern one.

More urbanized type of reclaiming of new territories can be found within Eastern macrozone. The growth rate of settlements of urban type in Southern macrozone could be more lower, if only the right to gain status of mentioned category of settlements followed by legislation would be higher within the Republics of Central Asia.

Bearing in mind the growth of urban settlements and their distribution over the whole country one can observe a common tendency leading to more even development of the vast territory taking into account all the economic possibilities of the country.

Due to a great number of new towns appeared in the USSR the settlement network became more even and stable, to our mind, however, it is sparse in many regions of the country and varies within the areas of some republics. For instance, in the USSR one town occupies the territory of 10 183 sq. km on average, but in different republics these indices are changed as follows: 709 sq. km. in Lithuania, 1103 sq. km in Armenia, 1124 sq. km in Georgia, 1152 sq. km in Latvia, 1332 sq. km in Azerbaijan, 1367 sq. km in Estland, 1385 sq. km in Ukraine, 1604 in Moldavia, 2099 in Byelorussia, 3608 in Uzbekistan, 7531 in Tadjikistan, 9452 in Kirghizia, 16340 in the RSFSR, 30506 in Turkmenia and 32348 sq. km in Kazakhstan.

#### **IV.4. The size of new towns and their dynamic of development**

The share of new towns within settlement system of the USSR, no matter their number (1525) can be estimated only based upon a comprehensive analysis of these towns on the background of all towns in USSR. It is therefore important to pay due to attention to the growing role of new towns and cities. Such an approach is used by us to show the dynamics of growth of new towns within urban network of the other countries, exemplified in this study.

If we group all towns of USSR accordingly to their period of forming and size, then we will notice that all the cities with a population of one million and more and almost all the towns which have 500—1000 thousand inhabitants, have been developed before 1917, on the contrary, two thirds of towns in small size achieved their urban status after 1917. Research carried out by Soviet geographers showed that the network of towns in medium and small size is essentially static in character. Indeed, among the existing towns of small size (population up to 20 thousand inhabitants) 33.6% have been built before 1917 and 66.4% during the years of Soviet power. 71% of towns with population of 20—50 thousand people appeared after 1917. The ratio makes up 30:70 in

favour of those towns that have been designed and built after 1917. Hence, the dynamic settlement pattern is mainly conditioned by this historic-genetic peculiar feature of the urban network in the USSR (Fig. 13). The data cited here are not in coincidence with the statement that „the larger is the town the faster is its growth”. Between 1959 and 1985 it is possible to observe the „accelerated tempo” of growth of new towns with a population of 100–250 thousand inhabitants. In the last decades cities with one million people and more are rapidly grown. It is a general trend in the formation of the urban network.

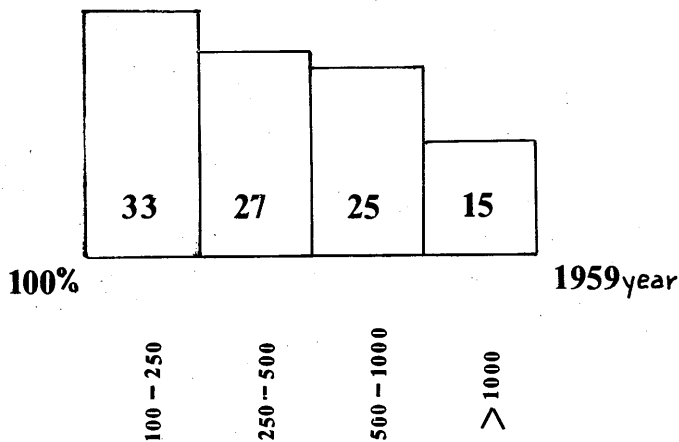


Fig. 13. Growth of towns with population exceeding 100 000 in the years 1959–1985 in USSR (1959=100%).

Let's to analyze the dynamics of the development of cities with a population over 100 thousand residents, based upon statistical data for 1959–1990. In Fig. 14 the results of this analysis are given to indicate high rates of growth of such cities. By uninterrupted concentration of urban population the number of cities increased as follows: 264% of those that had 100–250 thousand people, 217% of towns having population 250–500 thousand, 197% of cities settled by 500 thousand or one million inhabitants and 183% of cities with a population over one million residents.

Among large cities characterized by declined rates of the population increase (up to 60%) due attention is paid to old well developed capital cities and the

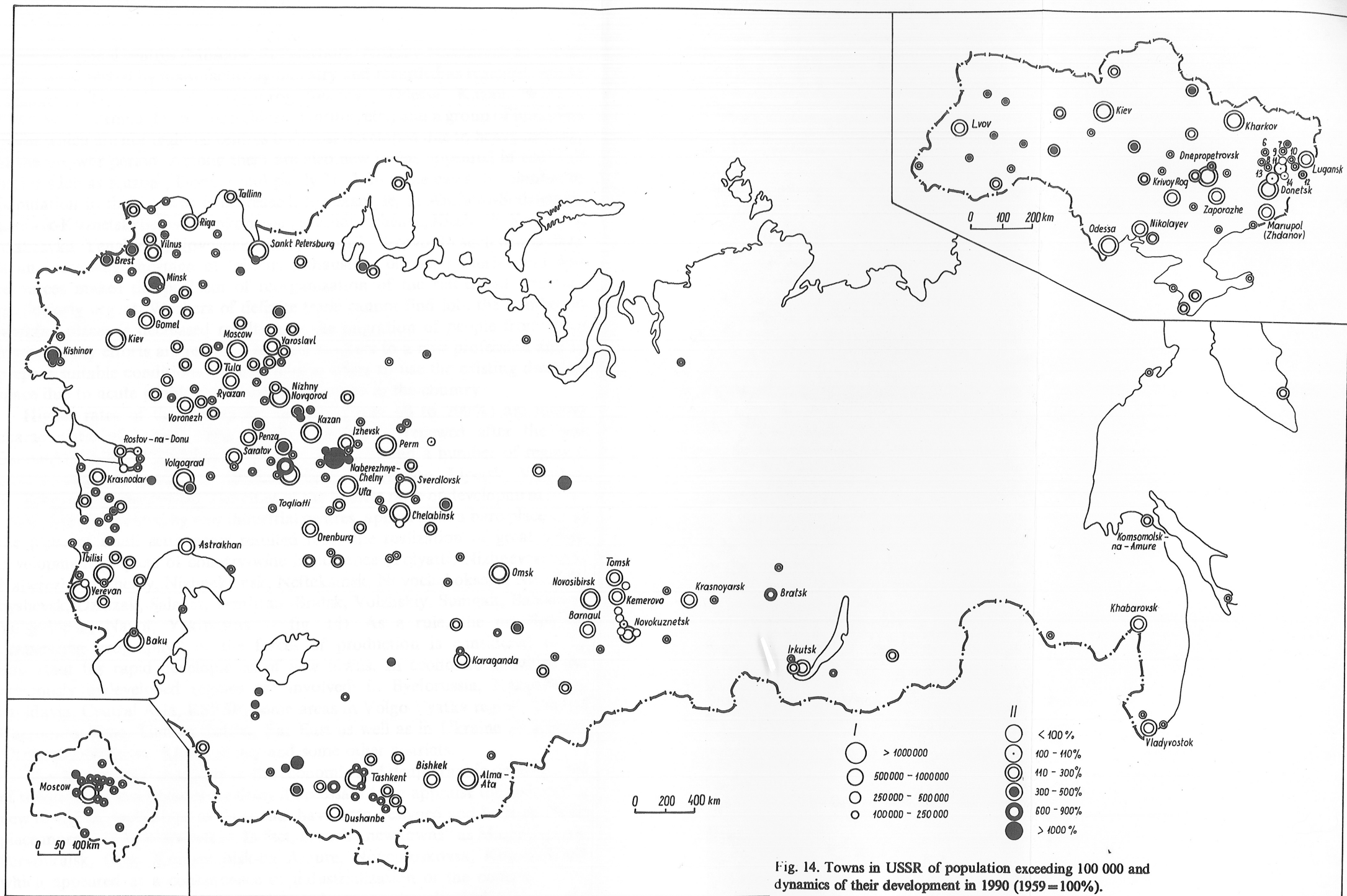


Fig. 14. Towns in USSR of population exceeding 100 000 and dynamics of their development in 1990 (1959=100%).

I — population, II — dynamics of the population development of the towns.  
 By numbers are indicated: 1 — Khimki, 2 — Mytishchin, 3 — Kaliningrad,  
 4 — Shchelkovo, 5 — Balashikha, 6 — Slavyansk, 7 — Lisichansk, 8 — Konstantinovka,  
 9 — Kadiyevka, 10 — Stakhanov, 11 — Gorlovka, 12 — Kommunarsk, 13 — Makeevka,  
 14 — Enakiyevo, 15 — Novoshakhtinsk, 16 — Shakhty, 17 — Novocherkessk, 18 — Batiysk.

greatest regional centres (Moscow, St. Peterburg, Nizhniy Novgorod) as well as large cities erected by manufacturing industry and regarded as regional centres (Yaroslavl, Donetsk, Tula, Taganrog, Ivanovo, Odessa, Kazan, Samara, Tambov, Kostroma, Dneprodzerzhinsk, Norilsk, etc.) and a group of industrial towns which are not regional centres but most developed due to heavy industry in the pre-war period. Among them are also new towns appeared in coalfield basins such as Kuzbas, Donbas and partly Ural. In some cases the number of population in these towns is decreased, for example, in Anzhero-Sudzhansk, Leninsk-Kuznetsk, Belovo, Prokopievsk, Mezhdurechensk, Kiselevsk, Kadievka, Makeevka, Yenakievo, Novoshakhtinsk, Kopeisk, Serovo. In such towns there is an increasing shortage of labour. Exhausting of raw material and fuel resources makes the problem of reorganization of the settlement structure particularly urgent. Workers of definite trade cannot find job, the number of working places is decreased resulting in the migration of people from these towns. Many efforts are required to train workers to a new profession and to prepare suitable conditions for new jobs in order to use the existing dwelling space due to acute problem of housing resources in the country.

Higher rates of the population increase (from 60 to 200%) are mostly characteristic of capital cities, newly founded or renewed after the war (Alma-Ata, Minsk, Dushanbe, Kishinev, Bishkek) and a number of regional centres, erected by industry (Ryazan, Gomel, Kherson, Lipetsk, Vinnitsa, Tselinograd, Yoshkar-Ola). The cities of the highest rates of development (over 500%) are represented by new industrial centres, appeared at a bare place or at the place of small settlements resulted from the realization of great urban development projects of country-wide importance (Tolyatti, Nizhnevartovsk, Naberezhnye Chelny, Nizhnekamsk, Neftekamsk, Novocheboksary, Novokuibyshevsk, Dzhizak, Salavat, Temirtau, Bratsk, Volzhskiy, Sumgait, Balakovo, Volgograd, Navoi, Yekibastus — fig. 14). As a rule, the principle of „expanding geography” of the forces of production is considered to be important for rapid development of new towns. In economic activities the previously undeveloped regions are involved: in Byelorussia, Kazakhstan, Moldavia, Central Asia, RSFSR, some areas in Volgo-Vyatka region, Central Chernozem zone, Tiumen district, Far East as well as in Ukraine — Rovno, Cherkassy, Vinnitsa, Khmelnytskyi and some other districts.

Due to a specific character of the economic and demographic development of towns in the last decades we deem it necessary to re-appraise the concept „a new town” in application to those that have been designed and built at a bare place more than 40 years before. In fact, in such „new towns” as Magnitogorsk, Pervouralsk, Orsk, Komsomolsk-na Amure, Novomoskovsk, Kommunarsk which appeared as a consequence of industrialization of the country in the 1930–1940s the increase of population becomes sharply declined. On the contrary, in old but renewed towns mainly industrialized during the 1950s and

1960s (Cheboksary, Saransk, Cherepovets, Pavlodar, Belgorod, Novgorod, Rovno, etc.) the number of population has been increased by more than 3 times in the last 30 years (1959–1990 – Fig. 14).

Because of multi-faceted character of large capital cities and regional centres the distribution of population seems to be higher than in the other cities and towns. That's why functionalization of large cities is an important factor for the population increase. The other factor determining the dynamic urban development is the industrialization resulted in appearance of new towns erected by industry and regional centres renewed due to the development of national economy.

#### IV.5. Types of new towns

To give a typological characteristics of new towns designed and built in the USSR one should consider functional structure of town. The latter is chiefly determined by the type of towns and their specialization. The extension of urban network is caused by the development of mining and manufacturing industry, agriculture as well as by appearance of towns with narrowly specialized functions, e. g. health resorts, railway stations, scientific centres, etc. Functions of several towns regarded as industrial centres got very complicated and transformed these towns in administrative and cultural centres of the great regions in the USSR. Dushanbe, Bishkek, for example, became capital cities of Soviet republics. Karaganda as one of the miner's towns built after 1917 is now a large regional administrative industrial centre. New towns such as Magnitogorsk, Komsomolsk-na Amure, Novokuznetsk, erected by industrialization in the 1930s are also large varied industrial and cultural centres now. At the same time the majority of towns is considered as specialized centres. Towns with a population not more than 50 thousand inhabitants are usually characterized by non-productive functions (transport, administrative, cultural, scientific-technical, etc.) among them there are towns with a definite industrial specialization.

The main type of new towns is represented by industrial centres with varied specialization of production: mining, oil, coal industry, metallurgy, metal-working, engineering industry, energetics, timber and light industry. For example, the largest new industrial towns have been erected by heavy industry: Magnitogorsk (443 thousand inhabitants), Nizhniy Tagil (440), Gorlovka (338), Karaganda (613), Novokuznetsk (601), Krivoy Rog (717), Zaporozhie (891) and Donetsk (1117 thousand residents). Widely spread are also towns erected to develop various branches of industry in such combinations as chemistry and engineering industry; metallurgy and chemistry; energetics and power production of non-iron metal industry, etc.

As it was noted by Smolyar (1972) there is a trend towards the extension and concentration of production, bearing directly upon the development of industrial base of new towns. In the course of urban development three kinds of new towns stand out clearly depending on conditions available for the growth of industry: 1) the town which is designed and built on the base of the only industrial enterprise 2) the town which is built and enlarged on the base of one production complex of enterprises specialized in any branch of industry (the leading enterprise is accompanied by the other attendant ones) 3) the town which is built and enlarged on the base of several production complexes, composed of different industrial enterprises, not associated with each other.

In the first case due attention is paid to augmentation of one enterprise with the purpose for further development of industrial production and for the growth of this towns. The towns of the other kinds are grown thanks to expansion of the whole complex of different enterprises. As a result of such expansion new towns enable to assume a transition character from one kind to another, that's why they can be considered as stages of the development of the production base provided the growth of the town.

The first kind of new towns is typical for those urban settlements which appear in regions mainly specialized in oil or timber industry as well as around large industrialized centres. In this case definite enterprises are located in newly developed settlements in order to provide the further growth of industry in the centre (nuclei within an agglomeration). For instance, some new towns are centered around Nizhniy Novgorod with a population of 1443 thousand residents (year 1990): Dzerzhinsk (286 thousand residents) is known as a chemists town, Kostrovo with well developed oil-refining industry (64.9 thousand inhabitants), Balakhna — the town of paper mills (31.7 thousand residents), Bor (64.4 thousand people), where glass and tanning industries are developed.

The second kind is characteristic of production complexes, composed of several cooperating enterprises, integrated by technologies, energetics, transport, etc. The towns of this kind are widespread in the intensively developed regions which are rich in energetics, fuel, water and the other resources.

The third kind is inherent in regions under new development. In towns of this kind two or more industrial complexes of enterprises can be simultaneously or consecutively constructed. Such town planning projects have been elaborated to build towns Temirtau (213 thousand residents), Volzhskiy (275 000 people), Balakovo (200 000 inhabitants), Tolyatti (642 000 people — year 1990).

Bearing in mind the conditions available for the development of industrial production and objective tendencies leading to the dynamic growth of different size towns we can assume that in the nearest future it is probably impossible to build a lot of towns with a population of 200 — 300 thousand residents although this size is determined as optimum for new towns.

Wide-scale development of science and the scientific and technical revolution in the USSR gave the birth of new towns or scientific centres. Two groups are distinguished among them: 1) research centres and centres of education (Akademgorodok near Novosibirsk, Pushchino (19 800 residents), Dubna (66 800), Chernogolovka (8 700) situated around Moscow (year 1990); 2) research and experimental centres including research institutes and experimental stations to elaborate and test models of new technics and scientific equipment (for instance, Obninsk in Kaluga district).

The share of such towns is practically small, however they determine in many ways the future urban development in the country.

#### IV.6. New towns within regional settlement systems

In the USSR new towns are of great value for the development of regional settlement system. The settlement pattern is being affected by the appearance and spread of new towns. First of all, the settlement geography is changed due to redistribution of urban population in favour of eastern and northern regions of the country. Density and size of settlements are steadily increased owing to the growth of medium size towns (30—150 thousand residents). At last, the group forms of settlement are activated resulting in qualitative development of regional settlement systems. Agglomerations as the form of a developed group settlement are paid much attention. Numerous groups of towns are mainly spread in regions where mining and different branches of heavy industry are intensively developed. It is worth indicating coal and iron-ore basins, characterized by distribution of group organizational forms of urban life (Donetsk coal basin, Kuzbas, Moscow, Karaganda, Krivoy Rog basins). Within the boundaries of these regions there are towns of different size. In regions with well developed oil-refining industry (Tataria, Bashkiria as well as Samara district) there exist groups of towns, where the main city of regional scale is centered by small towns and settlements, ensuring the effective spatial organization of industrial production. Such towns are known here as Almetievsk (130 thousand inhabitants), Oktyabrskiy (27.2 thou), Leninogorsk (62.7 thou), Otradny (50 thou). The planned spread of towns in regions under industrial development right from the start is based upon the rational location of interrelated groups of towns which enable to coordinate and cooperate the systems of engineering machinery, energetics, transport over the whole region. The other group of new towns embraces satellite-towns which promote the development of large agglomerations. They are especially spread in the course of economic potential development of the largest industrial regions. A great number of such towns (20 with a population of more than 1.5 million inhabitants) appeared around Moscow, Nizhniy Novgorod, Chelyabinsk and in the other industrial regions. Sumgait as an industrial satellite-town has been

planned with the purpose of successful development of Apsheron peninsula and contributed to decentralization of industrial production in Baku. Mashtagi, Dubendy and other towns can be also given as an example.

The third group of new towns considered as self-dependent in the settlement network is the most scanty. These towns play a role of local centres for the development of surrounding territory and make a contribution to the formation of local settlement systems. They are mostly spread in eastern and northern regions of the USSR (Komsomolsk na Amure, Angarsk, Taishet, Surgut, Nizhnievartovsk and many others). Besides, it is noteworthy to emphasize that the urban development in Siberia and the Far East is especially remarkable due to its intensity and wide-scaled scope. In these regions economic-geographical and socio-economic problems as related to the building up of new towns acquire primary importance.

In conclusion it is necessary to notice, that the problem may be arisen in the town planning when there is no definite assessment of successive development of natural resources in regions to be developed. West Siberia is exactly such region, the natural resources of which need to be further studied and discovered. In this connection the problem to find appropriate regional planning structures in urban settlement, to choose prospective communications for building up of towns acquires utmost significance. To design a town it is necessary to estimate reserve areas and infrastructure to provide the planned development of the region as far as the natural resources can be discovered and assessed.

Hence, geographical and planning conceptions and methods are necessitated to pioneer the way for future development of regions taking into consideration all the vague disorienting factors. The experience shows that the errors in the town planning projects aimed at building up of towns and urban settlements under unfavourable natural conditions can be a matter of some difficulties for expansion of these towns. If we consider the uninterrupted growth of towns as well as all other processes which come under the heading of urbanization we face problems as where the process is leading to and how it can be and should be directed if we are not to be confronted with insurmountable difficulties. Meanwhile, there are cases of adopting urban development projects without taking into account the ever increasing demands of population. They produce serious consequences especially in some rapidly developing regions of Siberia, where designed number of population seems to be far behind the factual one. Damages are thought to be considerable and don't need to be discussed in detail. But such errors in town planning projects have been made and are repeated with paradoxical persistence. It is necessary to study the reasons, to change calculation methods and to re-appraise theoretical ideas in order to solve successfully the problems of urban settlement.

Facilities and the sphere of services are found to be one of the main prerequisites for wide-scaled development of the forces of production in eastern

regions of the USSR. At present, service activities have been so far developed insufficiently. Most people live in inferior shared accommodations. The provision of housing residential with hot water, sewage systems has fallen seriously behind schedule (Pertsik, 1980. p. 60).

In most cases hearth settlement pattern and location of industrial enterprises at a great distance from each other, which are so characteristic of eastern regions of the country, make the problem of transport very acute. A number of difficulties is also connected with the organization of engineering services and amenities (insufficient water supply system, unsatisfactory state of roads, being not yet asphalted, absence of protective measures against rain showers, high floods, etc.).

The eastern regions of the USSR, characterized by unfavorable conditions for urban way of life and at the same time by more effective resources for the growth of industry need to be paid due attention in order to improve welfare conditions. From economic point of view it should be more advisable to establish an order of priority in the improvement of facilities to avoid the migration of people, that felt called upon to discover and develop natural resources of the East.

Such problems of urban development in Siberia have been arisen, but now is the time of great changes induced by new conditions of socio-economic development of this region and improvements in the territorial structure of the forces of production. Quite obviously that this question requires special consideration based upon a comprehensive analysis of the total amount of towns and cities in Siberia and the Far East.

It is noteworthy to conclude that in the course of urban development within the settlement system of the USSR two periods stand out clearly: 1) the period of industrialization started in the 1920s and completed immediately after the Second World War; 2) the post-war period resulted in appearance of major cities and towns in their modern sense. It should be emphasized that they are in line with modern interpretation of the concept „new town”. It is more important to show that just now towns and cities play a leading role in the qualitative change in regional settlement systems both in well developed regions within Western macrozone and in the regions under development of Siberia, Far East and partly in regions of Southern macrozone of the USSR.

## VI. NEW TOWNS CONCEPT IN GEOURBANISTICS (AN ESSAY)

### VI.1. Idea of a new town

Our investigation of problems of forming, location and development of new towns of different type in such countries as: Great Britain, France, the USA, Poland, Hungary, Bulgaria and USSR (since December 1991 – Commonwealth of Independent States), substantiated by thorough studies of due literature and statistical data enables to outline the basic elements of a system concept concerning the new towns as a part of a general theory of geourbanistics. This final chapter presents an attempt of a conceptual comprehension of the problem, and we prefer to begin with a summarizing definition of a „new town”, which was empirically analyzed in the section I.1. Later on the reasons of appearance and types of the new towns are to be considered, followed by discussing common problems and properties of these towns; at last we hope to conclude by revealing regularities and development problems proper to each of the main types of new towns.

The new towns creation and development may be regarded as important ingredients of the urbanistic history of the 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.

The „new town” concept is disputable, as we have noted earlier (I.1). 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\*) 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.

## **VI. 2. 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.

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\* It has been substantiated in Chapter I (I. 1).

The first reason, rather usual in case of stochastic sprawl of large cities, is the necessity to regulate the large agglomeration centres development<sup>\*)</sup>. 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 Józefów, Zielonka, Sulejówek and Ząbki 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 – Milanówek and Piastów; in the 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, Pruszków, 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.

<sup>\*)</sup> Regulation means here the elimination of enterprises and of functions which may operate outside the town's centre.

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; Belchatów 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, Planernoje, 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, Chandigarkh — 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 — Kraków (Nowa Huta) in accordance with the pure dogmatic idea of Kraków „proletarization” was a violation of the economical common sense, besides, it caused a drastic worsening of the ecological situation in Kraków. 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 (10 km) 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.

The above reasons of new towns formation 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-existential 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-existential 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 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 160 000 in 1990).

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 the formation new towns of type II 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, 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 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 to the HPS and are reasonable in mountains — e.g. Nurek in Tadzhikistan. 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 plants (NPP) 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. An American specialist W. Douglas (1968) noted, that formerly during studying an area in the USA 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 14, Tomsk 11, Severomorsk, Severodvinsk, Chelyabinsk – 40. 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 plants (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 NPP 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.

As follows of the above analysis, the new towns role in the formation of settlement systems of different taxonomic levels is various. Thus, functions of the towns referred to the type I (towns-satellites) are most conspicuous in local settlement systems; new towns of types II and III (in the centres of weakly developed regions and of industrial resources concentration) are important for the development of regional settlement systems; towns of the type IV (capitals, towns of science, military-industrial towns, etc.) are undoubtedly valid for the state settlement systems. Once more we should like to remind the difference between the impetuses of new towns development. In some cases this development results from the demands of a region, while in others on the contrary — from the demands of a town, i. e. town actively influences the creation of the region.

### **VI.3. Common features and problems of new towns development**

The majority of new towns became important centres of employment with the number of employment vacancies exceeding the number of working people. Despite this favourable situation on the labour market, new towns actively exchange 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 make their daily travels to job in new towns, whereas in some Polish towns this index reaches 50%. 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 are industrial in their majority, especially those in Eastern Europe. With the market economy progressing the monoprofile towns often begin to decline. This sphere of economics — industry — is 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 promotes the appearance of social tension and conflicts, growth of criminality and other adverse social phenomena, as prove the investigations carried out in the USA (Clark, 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 USSR women may predominate, they up till now are still engaged in performing man's job („industrial woman”).

The problem of environment pollution is very acute in monospecialized (industrial) new towns, even more acute than in the old ones, in 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 USSR and other 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 the Upper Silesia, which is together with the Krakow agglomeration, to our opinion, one of the places most difficult to improve in Europe. Similar problems are infrequent in the 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 are lower than it was supposed initially. People are not always willing to change their residence places. Very specific social and demographic problems arise, that's why when constructing a new town regional traditions and people behaviour must be considered more thoroughly.

The new towns-satellites absorb 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 East European new towns (in Poland, USSR, Hungary) with their high growth rate, we encounter other problems (dwelling facilities,

employment, etc.). Besides, the agricultural hinterland of these towns gets depopulated, that is undesirable in Poland and Hungary. 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 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 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 is common to new towns in Eastern Europe; it looks 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 cannot provide for meeting sufficiently the simple demands of new towns inhabitants (the latter is true for the old towns in Eastern Europe as well).

## **VII. SUMMING UP RESULTS OF THE GLOBAL EXPERIENCE OF NEW TOWNS DEVELOPMENT FOR POLAND (instead of a 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 the USA — special attention to the market mechanisms of new towns construction and development, the new town is regarded by designing and sponsoring institutions as a good for sale;

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

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 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.

## REFERENCES

- Adamczewska-Wejchert H., 1990, The New City of Tychy, The environment and the City, Warsaw, 25–30 August 1990, p. 42–47.
- Alaev E.B., 1983, Sotsialno-ekonomicheskaya geografiya, Ponyatiino-terminologicheskii slovar, Moscow, Mysl, pp. 350.
- Aleksyeyev A.I., 1990, Mnogolikaya derevnya (naseleniye i territoriya), Moscow, Mysl, pp.266.
- Alisov H.V., Valev E.B., Volskii V.V., Sluka A.E., 1985, Ekonomicheskaya geografiya zarubiezhnykh stran: retrospektiva i sovremennost – Voprosy ekonomicheskoi i politicheskoi geografii zarubiezhnykh stran, Vyp. 6. Sovetskaya ekonomicheskaya i politicheskaya geografiya zarubiezhnykh stran za 50 let, Moscow, p. 60–98.
- Arkhitektura Zapada i mir iskusstva XX veka, 1990, Moscow, Stroizdat pp. 318.
- Atlas economique de l'Île de France, 1988, Paris.
- Bajorek B., 1968, Nowe miasta angielskie, Miasto cz. I, z. 4, p. 13–21, cz. II, z.5, p. 11–14.
- Cerda I., 1979, La theorie generale de Urbanisation, Paris, Editions de Seuil, p. 248 p.
- Chabot G., Beaujeu-Garnier J., 1971, Zarys geografii miast, Warszawa, PWE, p. 533.
- Chaline C., 1974, Annales de Geographie, Nr 442.
- Cha301-line C., 1985, Les villes nouvelles Dans le Monde, Presses Universitaires de France, Paris, p. 130.
- Champion A.G., Clegg K., Davis R.L., 1977, Facts about the New Towns, Retailing and Planning Associates.
- Ciborowski A., Jędraszko A., 1980, Habitat Konferencja ONZ na temat osiedli ludzkich, PWN, Warszawa, p. 280.
- Czarnecki W., 1965, Planowanie miast i osiedli, T.I, PWN, Warszawa.
- Davidovich V.G., 1959, O razvitii seti gorodov SSSR za 40 let, Vopr. geogr., sb. 45, Moscow.
- Davidovich V.G., 1964, Planirovka gorodov i raionov, M., pp. 230.
- Demograficheskaya i sotsyalno-ekonomicheskaya kharakteristika naseleniya, 1988, Sofia, Centr. Stat. upravleniye (po oblastiam).
- Demograficheskij ezhegodnik SSSR, 1990, pp. 420.
- Devis K., 1965, The urbanization of the human population, Scient. Amer.
- Douglass W., 1968, Cossetting the Ph. Ds! – 'New Scientis' Vol. 37, N.580.

- Dziewoński K., 1968, Present needs and new developments in urban theory, Geogr. Polonica Nr 14, p. 331 – 336.
- Dziewoński K., 1971, Baza ekonomiczna i struktura funkcjonalna miast, Prace Geograficzne IG i PZ PAN, Nr 87, Warszawa, pp. 181.
- Dziewoński K., 1982, Nowe kierunki badawcze polskiej geografii miast, Górnośląskie Studia Socjologiczne, z. 15.
- Edwards K.C., 1964, Georaphy, pp. 320.
- Epikhin A.A., Gladkyi Yu.N., 1984, Novyye goroda v sistemakh gorodskikh aglomeratsii SSSR, Geogr. naseleniya – 84, Tez. dokl. 5 Vsesoyuzn. mezhd. soveshch. po geogr. nasel., Samarkand, sentyabr 1982, L., p. 21 – 23.
- Ezhednevna trudova migratsiya na ikonomicheski aktivnite lica, 1988, t. VIII, Sofia, CSU, pp. 463.
- Faiziyev M.K., 1965, K voprosu o tipologii novykh gorodov Uzbekskoi SSR, [in:] Materialy mezhd. konf. po problemam narodonaseleniya Srednei Azii, Tashkent, p. 106 – 107.
- Fedorova N.N., 1977, Tipologiya gorodskikh naselenii Yakutskoi ASSR, Vestnik MGU, ser. geogr., No 1, p. 104 – 109.
- Gawryszewski A., 1987, Procesy depopulacji w Polsce. Zesz. Zakł. Geogr. Osadn. i Ludn., IG i PZ PAN, Warszawa, z. 2, p. 40 – 52.
- Geografiya naseleniya SSSR v usloviyakh NTR, 1988, (ed. G.M. Lappo Yu. L. Pivovarov), Moscow, Nauka, p. 165.
- George P., 1956, Miasto, PWN, Warszawa, pp. 421.
- Górka S., 1989, Nowa Huta – nowe miasto, Acta Universitatis Lodziensis, Folia Geographica 11, Łódź, p. 103 – 123.
- Goroda mira, 1965, Moscow, Geografiz, pp. 198.
- Goroda sputniki, 1961, Moscow, Geografiz, pp. 193.
- Gorodskiye poseleniya RSFSR (po dannym Vsesoyuznoy perepisi naseleniya 1979 g.), 1980, Moscow, CSU RSFSR, pp. 150.
- Goryński J., 1972, Rola miast i sieci osadniczej w regionie, VI Międzynarodowy Kongres Ekonomiki Regionów, Warszawa, 8 – 14 maja 1972, maszynopis, pp. 32.
- Grabania M., 1966, Nowe Tychy, miasto satelita, Śląski Instytut Naukowy, Katowice.
- Gradostroitelna kultura evropeiskikh sotsialisticheskikh stran, 1985, M.: Stroiizdat, pp. 430.
- Gruza I., 1972, Teoriya goroda, M.: Izd. liter. po stroitelstvu, pp. 246.
- Gruzicka J., 1966, Zespół miejski Nowej Huty i jego rola w rozwoju Krakowa, Miasto Nr 11.
- Gusein-Zade S.M., 1988, Modeli rozmieshcheniya naseleniya i naselennykh punktov, M.: Izd. MGU, pp. 92.
- Harris C.D., 1970, Cities of the Soviet Union, Chicago, pp. 450.

- Howard E., 1898, *Tomorrow: a Peaceful Path to Real Reform* Sennenschein, London.
- Imbert M., 1982, *Ville nouvelle de l'espace planifié à la dynamique sociale du développement urbain*, Centre d'Éthologie Sociale et de Psychosociale, Paris.
- Jałowiecki B., 1988, *Spoleczne wytwarzanie przestrzeni*, Warszawa.
- Jałowiecki B., 1989, *Nowe Miasta, ideologia i rzeczywistość*, Acta Universitatis Lodzianis, Folia Geographica 11, Łódź, p. 25–37.
- Jedut R., 1989, *Charakterystyka przeobrażeń miast quasi-nowych na przykładzie Łęcznej*, Acta Universitatis Lodzianis, Folia Geographica 11, Łódź, p. 123–147.
- Jelonek A., 1989, *Próba określenia podstaw teoretycznych pojęcia nowe miasto*, Acta Universitatis Lodzianis, Folia Geographica 11, Łódź.
- Jerczyński M., 1977, *Funkcje i typy funkcjonalne polskich miast. Statystyczna charakterystyka miast. Funkcje dominujące*, Statystyka Polski nr 85, Warszawa, GUS, p. 20–53.
- Juchniewicz S., 1990, *Kraków, The Environment and the city*, Warsaw 25–30 August 1990, p. 49–52.
- Khanin S.E., 1991, *Problemy samoregulirovaniya gorodskovo rasseleniya – tendencii i perspektivy*, Vestnik MGU, ser. geogr., No 3, p. 8–15.
- Kharitonov V.M., 1989, *Geourbanistika v SShA: tendentsiya razvitiya*, [in:] *Voprosy ekonomicheskoi i politicheskoi geografii zarubezhnykh stran*, vyp. 10, Moscow, pp. 180.
- Khoriev B.S., 1980, *Problemy rasseleniya v SSSR*, Moscow, Statistika, pp. 225.
- Kielczewska-Zaleska M., 1972, 1984, *Geografia osadnictwa*, Warszawa, PWN, pp. 268.
- Klark P., 1972, *Prestupnost v Amerike – 'SShA – ekonomika, politika, ideologiya'*, M., No 3.
- Knobelsdorf W., 1964, *Struktura ludnościowa nowego miasta na przykładzie badań Tych*, Zebranie Śląskie, z. 2.
- Knobelsdorf W., 1966, *Tychy – ludność nowego miasta satelitarnego*, Górnośląskie Studia Socjologiczne, t. IV, Katowice.
- Konstantinov O.A., 1946, *Izmeneniya v geografii gorodov SSSR za sovetskiy period*, Vopr. geogr., sb. 6, p. 11–46.
- Konstantinov O.A., 1976, *Rol novykh gorodov v razvitii sistemy rasseleniya SSSR*, In: *Problemy urbanizatsii i rasseleniya*, M.: Mysl, p. 144–153.
- Konstantinov O.A., Epikhin A.A., 1980, *Nekotoryie sdvigi v razmeshchenii naseleniya SSSR*, Izvestiya WGO, t. 112, vyp. 1, p. 3–10.
- Kovalev S.A., 1962, *Tipy poselenii – raionnykh tsentrov SSSR*, Vopr. geogr. No 56, M., p. 54–72.
- Kovalev S.A., Kovalskaya N.Ya., 1980, *Geografiya naseleniya*. Moscow, pp. 18.
- Kupiec L., 1989, *Nowe miasta – próba kompleksowego spojrzenia*. Acta Universitatis Lodzianis, Folia Geographica 11, Łódź.

- Labasse J., 1989, La ville nouvelle de L'Isle d'Abeau, Acta Universitatis Lodziensis, Folia Geographica 11, Łódź p. 79–86.
- Lappo G.M., 1969, Geografiya gorodov s osnovami gradostroitelstva, Moscow, 1969, pp. 243.
- Lappo G.M., 1978, Razvitiye gorodskikh aglomeratsij v SSSR, Moscow, Nauka, pp. 152.
- Lappo G.M., 1987, Goroda na puti v budushcheye, Moscow, pp. 211.
- Lappo G.M., 1989, Sovremennaya urbanisticheskaya situatsiya v USA, Mirovaya urbanizatsiya, Moscow, AN SSSR i Mosk. filial GO SSSR, p. 106–114.
- Le Corbusier, 1970, Arkhitektura XX veka, Moscow, pp. 320.
- Les CINQ villes nouvelles de la Region Parisienne 11, Janvier 1975, Paris 1975.
- Leyzerovich G.G., 1964, Funktsionalnyie tipy gorodskikh poselenii Kirgizii i ikh razvitiye v perspektivie, Vestnik Moscow. Universiteta, ser. geogr., 6, p. 45–54.
- Lille - Est, ville nouvelle de la metropole du Nord, 1976, EPAL, Villeneuve d'Ascq.
- Listengurt F.S., Smolyar I.M., 1965, O razgranichenii ponyatii "malyie" i "sredniye" goroda, Vestnik Moscow, Universiteta, 5.
- Liszewski S., Gryszkiewicz J., Kaczmarek S., 1989, Nowe miasta jako przedmiot badań naukowych, Acta Universitatis Lodziensis, Folia Geographica 11, Łódź, p. 257–281.
- Litewka C., 1966, Problematyka budownictwa satelitarnego w GOP, Gosp. Plan. nr 12.
- Litewka C., 1976, Ewolucja urbanistyczna Tych, Poglady, nr 2, p. 4–10.
- Litewka C., 1979, Miasta satelity (Zarys pojęć i kierunki budownictwa satelitarnego), Czasopismo Geograficzne, t. 50, z. 1–2.
- Litovka O.P., 1976, Problemy prostranstvennogo razvitiya urbanizatsii, Leningrad, pp. 173.
- Lukhmanov D.N., 1989, Gorod na severie. Nektotoryie sotsialnyie prpbemy urbanizatsii, Geografiya i problemy regionalnogo razvitiya, Moscow, p. 149–159.
- Lutyński J., 1964, Przemiany małego miasta w województwie łódzkim w opinii mieszkańców na przykładzie Bełchatowa, Zesz. Bad. Rej. Uprzem., PAN, z. 9.
- Maiergoyz I.M., 1986, Territorialnaya struktura khozyaistva, Novosibirsk, Nauka, pp. 304.
- Maiergoyz I.M., Pivovarov Yu.L., 1965, Nekotoryie voprosy izmeneniya kharaktera gorodov v evropeyskikh stranakh narodnoy demokratii, Goroda mira, Moscow, pp. 238.
- Malisz B., 1981, Zarys kształtowania teorii układów osadniczych, Warszawa, Arkady, pp. 235.

- Merlin P., 1969, *Les villes nouvelles*, Paris.
- Merlin P., 1971, *New Towns: Regional Planning and Development*, London.
- Merlin P., 1976, *Les villes nouvelles francaises: La Documentation Francaise, Notes et Etudes Documentaire*, nr 112.
- Miazga M., 1983, *Teorie socjologii miasta a problemy społeczne miast polskich. Materiały Konferencji Socjologów Miasta, Lublin 9–10 grudnia 1980, Wrocław*, p. 130–138.
- Michalski W., 1986, *Bełchatów – miasto "nowe". Materiały XVIII Łódzkiej Konferencji Naukowej, Łódź*.
- Michalski W., 1989, *Bełchatów – miasto "nowe". Próba definicji, Acta Universitatis Lodziensis, Folia Geographica 11, Łódź*, pp. 147–165.
- Mironenko N.S., 1982, *K problemie izycheniya granits ekonomiko-geograficheskikh sistem, Granitsy v geografii, Moscow, MGU*, p. 38–46.
- Modulo, 1957, *Brasil*, nr 8.
- Moskvin D.D., 1991, *Naseleniye SSSR, Voprosy migratsii (ekonomiko-statisticheskii obzor tendentsii 1960–1980 godov), Moscow, Nauka*, pp. 158.
- Naseleniye mira*, 1989, *Demograficheskii spravochnik, Moscow, Mysl*, pp. 477.
- Naseleniye RSFSR, 1960, Itogi Vsesoyuznoi perepisi naseleniya na 15 yanvarya, Moscow, Ts.S.U.*, pp. 240.
- Naseleniye SSSR, 1980, Moscow, TsSU*, pp. 520.
- Naseleniye v Bolgarii, 1991, Sofiya, Ts.S.U.*, p. 30–33.
- Nazarevskii O.R., 1962, *Tipologiya i osobennosti formirovaniya novykh poselenii Kazakhstana i Sredneaziatskikh respublik, Vopr. geogr., sb. 5, Moscow*, p. 73–94.
- Observatoire Regional du Foncier en Ile-de-France, 1990, *Dossier de L'ORF nr 2, 1190 (Les villes nouvelles a'la charniere de leur historie), Paris*.
- Ogly B.I., 1980, *Stroitelstvo gorodov Sibiri, Leningrad, Stroizdat*, pp. 345.
- Osborn F., Whittick A., 1963, *The new towns*, London.
- Osnovy raionnoi planirovki promyslennykh raionov, 1964, Moscow, Gosstroizdat*, pp. 260.
- Ostrowski W., 1972, *Urbanistyka współczesna, Warszawa*, pp. 150.
- Ostrowski W., 1975, *Urbanistyka współczesna, Warszawa, Arkady*, pp. 230.
- Pecsi M., Sarfalvi B., 1962, *Die Geographie Ungarns, Budapest, Corvina Verlag*, pp. 399.
- Penkov I., 1971, *Die neuen Stadte in der Volksrepublik Bulgarien, Geographische Berichte, Heft 60, DDR*.
- Penkov I., 1971, *Novite gradovie v NR Blgariya, Sofiya*, pp. 230.
- Penkov I., 1977, *Novite gradovie v NR Blgariya, Sofiya, Izol. Narodna Prosveta*, pp. 399
- Pertsik E.N., 1964, *Formirovaniye sistemy gorodov Kuzbassa, Geografiya naseleniya v SSSR, osnovnyie problemy, Moscow, Nauka*, p. 183–190.

- Pertsik E.N., 1973, Raionnaya planirovka, Moscow, pp. 265.
- Pertsik E.N., 1980, Gorod v Sibiri, Moscow, Mysl, pp. 286.
- Pertsik E.N., 1991, Geografiya gorodov (geourbanistika), Moscow, Vysshaya shkola, pp. 319.
- Pivovarov Yu.L., 1976, Sovremennaya urbanizatsiya, Osnovnyie tendentsii rasseleniya, Moscow, Statistika, pp. 191.
- Pivovarov Yu.L., 1984, Prostraustrennaya evolutsiya urbanizatsii: predmet, zakonomernosti i konseptsiya, Mirovaya urbanizatsiya, Moscow, AN SSSR, GO SSSR, p. 3–14.
- Planirovka novykh gorodov, 1984, Sovmiestnyie sovetsko-amerikanskiye doklady, Moscow, Stroizdat, pp. 144.
- Pokshishevski V.V., 1971, Geografiya naseleniya zarubezhnykh stran, Moscow, Mysl, pp. 239.
- Pokshishevski V.V., Ozerova G., 1981, Geografiya mirovogo protsessa urbanizatsii, Moscow, Prosvshcheniye, pp. 190.
- Polskaya N.M., 1974, Velikobritaniya. Ekonomicheskkiye raiony i goroda, Moscow, Mysl, pp. 230.
- Polskaya N.M., 1984, Nekotoryie osobennosti urbanizatsii promyshlennosti v londonskoi aglomeratsii, Voprosy ekonomicheskoi i politicheskoi geografii zarubezhnykh stran, Vyp. 5, Moscow, p. 169–177.
- Prawelska-Skrzypek G., Makuch M., 1989, Postawy mieszkanców wobec nowego miasta na przykladzie Jastrzębia Zdroju, Acta Universitatis Lodziensis, Folia Geographica 11, Łódź p. 165–181.
- Preteceille F., 1974, Des grands ensembles aux ville nouvelles, Urbanisme monopoliste urbanisme democratique CERM, Paris, pp. 132.
- Purdom C.B., 1949, The building of satellite towns, London. Radoman B.B., 1961, Stroitelstvo novykh gorodov-sputnikov vokrug Moskvy i okhrana prirody, Goroda sputniki, Moscow, p. 169–173.
- Raionnaya planirovka metropolii i novykh gorodov, 1969, Nev York ONZ, pp. 130.
- Ramsay A., 1985, Planning New Towns, Capital Planning Information Ltd., London.
- Razmescheniye naseleniya v SSSR, 1986, Moscow, Mysl, pp. 221.
- Rosner R., 1962, Neue Stadte in England, Monachium, pp. 87.
- Rozenberg J., 1958, Osiedla satelity Moskwy i Wiednia, Miasto nr 5.
- Rykiel Z., 1987, Małżeństwa mieszane a integracja społeczna w regionie katowickim. Zesz. Zakł. Geogr. Osadn. i Ludn. IG i PZ PAN, Warszawa, z. 2, p. 178–199.
- Sarfalvi B., 1985, Geography of the Hungarian Settlement system, Annales Universitatis Scientiarum Budapestinensis, Sectio Geographia.
- Saushkin Yu.G., 1970, Vvedeniye v ekonomicheskuyu geografiyu, Moscow, Mysl, pp. 246.

- Shestakov S.S., 1925, *Bolshaya Moskva*, 1925, pp. 148.
- Skupowa J., 1989, Gdynia – geneza i rozwój nowego miasta. *Acta Universitatis Lodziensis, Folia Geographica* 11, Łódź p. 87–103.
- Sluka A.E., 1975, Osnovnyie napravleniya gosudarstvennogo regulirovaniya urbanizatsii v stranakh Zapadnoi Evropy, [in:] *Gosudarstvennoie regulirovaniye razmieshcheniya proizvoditelnykh sil v kapitalisticheskikh i razvivzyushchikhsya stranakh*, Moscow, Mysl, p. 43–67.
- Sluka A.E., 1987, Parizh, [in:] *Krupnieishiye goroda kapitalisticheskikh i razvivayushchikhsya stran*, Moscow, MGU, p. 37–55.
- Smolyar I.M., 1970, *Razvitiye sotsialisticheskikh gorodov*, Moscow, Znaniye, pp. 189.
- Smolyar I.M., 1972, *Novye goroda (Planirovochnaya struktura gorodov)*, Moscow, Stroiizdat, pp. 178.
- Smolyar I.M., 1981, *Novyi gorod v sistemie rasseleniya: planirovochnaya organizatsiya i razvitiye*, sbor. nauch. trudov, Moscow, pp. 150.
- Statystyka Regionalna nr 7, 1985, Warszawa, GUS.
- Statystyka Regionalna nr 10, 1986, Warszawa, GUS.
- Steinberg J., 1981, *Les villes nouvelles d'Ile-de-France*, Masson, Paris, New York, Barcelone, Milan, Mexico, Rio de Janeiro, pp. 780.
- Straszewicz L., 1985, *Nowe miasta w Polsce i ich rola w urbanizacji Europy*, Mat. VIII Łódzkiej Konfer. Nauk., Łódź.
- Szymańska D., 1978, Janikowo – gmina miejsko-wiejska, *Budownictwo Rolnicze, Architektura i Planowanie Przestrzenne*, Warszawa, z. 3, p. 5–9.
- Szymańska D., 1978, *Przemiany przestrzenno-gospodarcze i demograficzne Janikowa, Ziemia Kujawska*, t. V., Warszawa, PTH–PWN, p. 141–170.
- Szymańska D., 1981, *Analiz razmieshcheniya gorodov Polshi s pomoshchiyu metoda blizhaishevo sasedstva*, Dep. Viniti, No 224, *Vestnik MGU*, ser. geogr., No 6.
- Szymańska D., 1982, *K voprosu o sistemnoi kontseptsii v geografii rasseleniya*, *Vestnik MGU*, ser. geogr., No 5, p. 53–57.
- Szymańska D., 1982, *Poniatie klasifikatsii i tipologii v geografii gorodov*, *Vestnik MGU*, ser. geogr., No 4, p. 75–78.
- Szymańska D., 1982, *Teoreticheskiye voprosy klasifikatsii i tipologii gorodov*, [in:] *Voprosy sotsyalno-ekonomicheskoi geografii Verkhnevolzhhiya*, *Mezhvuzovskiy Tematicheskii Sbornik*, Kalinin, p. 134–148.
- Szymańska D., 1984, *Primeneniye metoda blizhaishevo sasedstva dla analiza seti gorodskovo rasseleniya Polshi*, *Trudy po geografii Tartuskovo Universiteta*, No 681, p. 69–80.
- Szymańska D., 1987, *Nowe miasta w sieci osadniczej Polski*, *Zesz. Nauk. Zakł. Geogr. Osadn. i Ludn. IG i PZ PAN*, Warszawa, z. 2, p. 199–215.
- Szymańska D., 1988, *Nowe miasta w Polsce i ich struktura społeczno-ekonomiczna*, *Czasopismo Geograficzne*, z. 4, p. 403–415.

- Szymańska D., 1989, Problemy klasyfikacji i typologii miast w geografii radzieckiej, *Studia Societatis Scientiarum Torunensis*, Toruń—Polonia, Vol. X, pp. 154.
- Szymańska D., 1989, Przemiany przestrzenno-funkcjonalne i społeczno-ekonomiczne Janikowa, *Acta Universitatis Lodzianensis, Folia Geographica* 11, Łódź, p. 181—201.
- Szymańska D., 1990, Nowe miasta w Stanach Zjednoczonych i Związku Radzieckim, *Czasopismo Geograficzne*, z. 1—2.
- Szymańska D., 1991, Nekotorye problemy razvitiya novykh gorodov v Polshe, [in:] *Prostranstvennoe razvitiye urbanizatsii, Obshchiye zakonomernosti i regionalnyie osobennosti*, Moscow, IG AN SSSR, p. 82—91.
- Szymańska D., 1992, Issledovaniye selsko—gorodskovo kontinuum (na primerie gorodov bydgoskovo, torunskovo i vlotslavskovo vovodstv), *Vestnik MGU, ser. geogr.* No 3, 1992.
- Town and Country Planning, 1974, London, pp. 325.
- Trube L.L., Khorev B.S., 1970, Novye goroda na karte Rodiny, Moscow, Znaniye, pp. 152.
- Upravleniye razvitiem novykh gorodov, 1987, Sovmestnyie issledovaniya, Moscow, Strizdat, pp. 201.
- Urbanizatsiya i razvitie gorodov SSSR, 1985, Leningrad, Nauka, pp. 255.
- Valev E.B., 1957, Bolgariya, Ekonomiko-geograficheskaya kharakteristika, Moscow, Geografiz, pp. 470.
- Valev E.B., 1989, Osnovnye napravleniya razvitiya ekonomicheskoi geografii v Narodnoi Respublikie Bolgarii, In: *Voprosy ekonomicheskoi i politicheskoi geografii zarubezhnykh stran*, vyp. 10, Sovremennyye issledovaniya za rubezhom, Moscow, p. 33—50.
- Varlamov V.S., 1961, Novye goroda-sputniki v Velikobrytanii, In: *Goroda sputniki*, Moscow, Geografiz, pp. 470.
- Velchev Iv., 1970, Novite gradovie v Bylgariya. Drizhenye i struktura na naselencheto obucheniyeto po geografiya, Sofia, pp. 259.
- Wejchert A., Wejchert K., 1987, Przestrzenie publiczne nowego miasta, *Miasto*, Nr 8, p. 9—13.
- Whitehand J., 1986, Problematyka nowych miast w Wielkiej Brytanii, *Materiały XVII Łódzkiej Konferencji Naukowej*, Łódź.
- Wilczyński W., 1988, Tendencje rozwoju miast Stanów Zjednoczonych, *Czasopismo Geograficzne*, z. 2.
- Wilski J., 1970, Analiza wybranych miast strefy zewnętrznej WZM, *Miasto* Nr 8, p. 1—10.
- Wróbel T., 1971, *Zarys historii budowy miast*, PWN, Warszawa.
- Wróbel A., 1987, Rozwój miejskiej sieci osadniczej w Polsce a rozwój gospodarczy kraju. *Zesz. Zakł. Geogr. Osadn. i Ludn. IG i PZ PAN*, Warszawa, z. 2, p. 20—31.

Wygnanowski A., 1963, Plan nowego miasta Nieszawa, Nowa, Stawków, Inst. Urb. i Arch., Warszawa.

Zmiany administracyjne miast w latach 1946–1984, 1985, Statystyka Polski – Statystyka Regionalna, GUS, Warszawa.