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**FUNCTIONS OF TOURIST MAPS OF TOWNS AS A BASIS
FOR DESIGNING THEIR CONTENT: AN EXAMPLE OF
PRAGMATIC APPROACH TO THE MAP LANGUAGE**

The semiotic analysis of a map language may be of essential importance for cartographic practice. However, this is entirely possible first of all if it is not of general character but pertains to certain clear-cut group of cartographic output meant for definite purposes and thus the range of the content complying with those purposes. This article is devoted to one of the most popular and most frequently used cartographic presentation i. e. tourist maps of towns. Their popularity results from the fact that towns make up the most conspicuous concentration of various aspects of human civilization and cartographic presentation of towns is of interest not morely to tourists and visitors that come to towns for other purposes, but—particularly in case of big cities—also to their inhabitants.

In order to determine traits of cartographic language as referred to tourist maps of towns, we can start from the two elementary characteristics of towns. One trait of towns is their great variety manifested by the multitude of types; the other is their great internal differentiation, which is expressed by different functions performed in a town by the particular areas and objects that satisfy manifold social needs. Starting with those two traits, the cartographic language of maps of towns may be approached respectively in its semantic and pragmatic aspect.

While analyzing the semantic aspect of the cartographic language as referred to a tourist map of a town one should, first of all, determine the town's specific character, which may depend on varied and mutually related factors. The most important of them are the town's position and its historical development, being at great length the result of this position. Those two factors influence in turn the town's dimension and rank, its functions, tourist values, as well as its functional structure and transport service system. Determining the type and character of the town conditioned by those factors should make up one of the fundamental bases of both the choice of the content range of the map of the town and the graphic emphasis on certain elements of its content. The analysis of such

relationship between the map content and form, and typical characteristics of towns may be defined as the semantic approach to the cartographic language of those maps.

The analysis of relationships (and their consequences) between the plan's functions and the methods and conditions of their application, and the range of the content, as well as the graphic form, will be called a pragmatic approach to the cartographic language of tourist maps of towns. Variety of functions performed by maps of towns is at great length due to variety of social needs provided for by towns themselves.

In cartographic practice the two above-mentioned approaches, both semantic and pragmatic, should be taken into consideration, all the more they cannot be considered separately (for instance the town's characteristics that will be regarded as significant and worth emphasizing depend on the purpose and the way of application of the map). However, one of the two approaches may be treated as the elementary one while agreeing upon definite editorial problems; the other approach, if necessary, should be taken into account, too. In this article the pragmatic aspect of cartographic language as referred to maps of towns has been accepted as such basis.

As it has been already pointed out, the starting point for a pragmatic analysis of the cartographic language of maps of towns are the functions performed by those maps resulting from the needs that they are supposed to satisfy with relation to the orientation in a town and supplying various kinds of information about it. The necessary elements of the content may be assigned to particular manners of utilization of maps and to the types of information that should be obtained from them.

The range of the content of the majority of maps of towns published in various countries is considerably smaller. In many of them the content

Table 1

Functions of maps	Necessary elements of the content
Size orientation (including finding the position of a given object)	Full network of streets with names and index, selected numbers of houses, other orientation facilities.
Moving about the town — planning	Thoroughfares, oneway streets, streets for pedestrians only, municipal transport network, taxi-ranks, parking areas, filling stations.
Information on tourist objects and objects of culture	Sightseeing objects (tourist attractions), tourist agencies, hotels, camping-sites, restaurants, theaters, cinemas, museums, art galleries.
Business and commerce	Offices, banks, department stores, bazaars, streets of commerce and service.
General characteristics of the town	Functional arrangement, physiognomic differentiation, territorial development.

is restricted to topographic elements with the full network of streets (with names) and possibly to the most important buildings. These are in fact the most significant elements of the plans' content; yet this restriction considerably reduces the utilizable value of plans thus making it more difficult to use them.

Site orientation, particularly localization on the map and then in the town, of the objects being of any interest to the user should be regarded as the most important function performed by maps of towns. From among the above-mentioned necessary elements of the content, selected numbers of houses are of particular importance. Besides, the numbers should be so chosen as to provide for maximum capacity of localizing the objects within the map's graphic possibilities. The numbers perform a particularly significant function in case of long streets or when, for instance a scattered arrangement of buildings disturbs the numeration order. The possibility of estimation from the map of distances between places of interest in the town may also be regarded as a good orientation function. Bearing in mind the difficulties that may be faced by the users of maps while reading the scale, worth recommending is the application for estimating distances of the index grid, whose lines may be given spaced at round values, e.g. every 1 km or every 500 m. If so, the linear scale should clearly show what distance it is.

The next from the above-mentioned functions is related to the first one, and the importance of including information that results from it grows alongside with territorial development of many towns, increasing transportation problems, as well as differentiated traffic capacity of the particular thoroughfares and streets. If marking the main thoroughfares has for many years been a generally accepted practice in working on maps of towns, oneway streets and streets for pedestrians only are shown on considerably few and, in most cases recently published maps, although such information is most often of crucial importance for planning how to get to a certain object in the town.

Presentation of the municipal transport service is a separate, and sometimes very difficult editorial problem. The significance of this information is appreciated chiefly on maps published in the countries of Mid-eastern Europe where the municipal transport service is of particular importance. However, on many maps of towns this information is not given despite its great significance, for instance in great cities in developing countries.

The next two functions mentioned on the list concern information on public service objects of different kinds. This is very characteristic of almost all towns that those objects are concentrated on a considerably small area in the centre, which causes that area place is the place of particular interest to both visitors and inhabitants of the town. The most frequent consequence of such a situation is the presentation on the maps of the town's central area on a much greater scale than the remaining area (mainly from 1:5,000 up to 1:10,000). Worth recommending is the solution

to present a large town area, its central part in particular, in the form of a series of maps in a small atlas, each of them containing information of various kinds, e.g. distribution of cinemas, monuments, municipal transport network, etc. This solution makes it possible to provide many-sided information on localization of various objects in the town.

Apart from the mere distribution of public service objects, the user of map is often interested in information on the scale and importance of a given object. Differentiation according to the rank is to be found on maps with reference to sightseeing object, which are divided into several categories according to their tourist attractiveness. On the other hand, the possibility of differentiating other objects, e.g. hotels, camping-sites according to their rank or class, has not been frequently used.

The last of the specified functions, i.e. providing the general functional, physiognomic or historical characteristics of the town, is perhaps of a lesser importance for practical utilization of the map for orientation purposes; it is of great significance, however, as far as the educational aspect is concerned, as it enriches the user's knowledge about the town which is of interest to him. In case of smaller towns such characteristics may be included immediately in the main map, although in most cases they require a separate map (in the form of an inset map), its scale being much smaller.

The postulated content range of maps of towns resulting from the functions outlined above, in case of big cities is not, on the whole, possible to be shown on a single map; it requires either the supplementing of the main map with a few inset maps (including those on the other side of the sheet), or elaboration of a series of maps in the form of an atlas. It is the latter solution that usually prevails; it is worthwhile, however, to mention that this form is used chiefly for dividing the map into sections. On the other hand, sets of town thematic maps for tourist purposes are very rarely published in the atlas form.

The accepting of the suggested content range is bound to lead to a shift from the popular, purely topographic approach to maps of towns to the thematic approach, which complies with evolution of the entire contemporary cartography. Thus an important editorial problem arises: how far abundance of the thematic content corresponds to the possibility of maintaining the maps' topographic details. The problem became particularly evident in the course of evolution of Polish tourist maps of towns. This evolution is inasmuch specific as it consists both in "thematization" of maps through a considerable enrichment, especially over the recent two decades, of the content (growth of the number of symbols in the legend from approximately ten up to more than thirty!), and in their topographic content being more detailed, particularly as referred to built-up areas. This led to a decrease of clarity of some of the recently published maps. A more detailed analysis of those maps indicates that it is not possible to combine the

maximum detailed presentation of built-up areas (with regard to each building) with abundance of the thematic content. The best solution is a greater generalization of built-up areas with differentiation of their functional and physiognomic types.

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When pragmatic approaching to the cartographic language of tourist maps of towns for determining their content, one should start from defining the elementary functions of those maps and conditions and ways of using. Such an approach suggested briefly in our considerations should lead to more justified decisions pertaining to the content range of those maps (including the generalization degree of built-up areas), that will comply with the needs of would-be users.

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