THEORETICAL ASPECTS
OF LONG-RANGE PLANNING
OF CITY-REGIONS

- examples of Prague and Detroit -

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The increased interest in the long-range physical planning of cities and their regions is characteristic of the contemporary situation in the field of planning, and particularly in those countries which are at a higher stage of development in the urbanization process today. This increased interest has become apparent especially since World War II. At present regional planning assumes one of the dominant positions in both the theory and the practice of physical planning.

The present concern about planning on the regional scale is a delayed reflex of those processes which have been taking place in our settlement network. We can follow the shifting of interest in the course of the century—both in theory and practice—from the big compact cities to the metropolitan agglomerations and then to the whole settlement systems and city-regions.

At the time when physical planning first began to deal with the problems of the large compact city—and that was at the beginning of our century—the big city had already existed for at least half a century and, in fact, had begun to be transformed into metropolitan agglomerations. However, the theme of a metropolitan agglomeration did not appear more systematically in literature and in physical planning practice before the end of the first half of our century; that is, at the time when the reality of the settlement pattern had already progressed towards the metropolitan regions and polycentric settlement systems.

The actual growing interest in the planning of city-regions is reflected in the elaboration and successive refinement of the
approach and methodology of regional studies and plans. Today long-range, and increasingly sophisticated studies of big cities and city-regions are appearing in all parts of the world. These studies challenge every expert in this field by specific aspects of their methodologies and proposed solutions of further development of the largest concentrations of mankind. Among others, the city-region of Detroit is one such center, where studies of this kind are elaborated.

I am very much obliged to the Center for Urban Studies of Wayne State University in Detroit for the kind invitation to participate in its research study and to deal with the postgraduate students regarding my reflections concerning the development of contemporary planning theories in Europe. Furthermore, the stay at the Center for Urban Studies gave me occasion to become acquainted with long-range planning of Detroit. This possibility was extremely challenging to me in connection with the analogous effort of our planning team in Prague. The encouragement and advice of leading representatives of CUS enabled me to try to express some consideration on long-range planning in this paper, whose errors and omissions are totally due to my professional weakness.

I. THE LONG-RANGE PLANNING OF PRAGUE

Before expressing my views on the theoretical aspect of the long-range planning of city-regions, I regard it quite necessary to describe for my American colleagues—at least in general features—the development and contemporary planning of Prague.
A. Prague in the framework of Czechoslovakia

The general process of growing importance of regional scale can be followed in the specific case of physical planning in Czechoslovakia. In the twenties, the first solutions on a regional scale appeared and in the thirties, the first regional studies were elaborated, e.g., on the agglomeration of Prague, Brno, the whole of Moravia and others. A very busy activity then followed after World War II, which is also connected with the transformation of the economics of the country. At this time the solution of regional plans was treated as very urgent, the attention besides being concentrated on Prague was also on the existing industrial regions—the agglomeration of Most in Northern Bohemia, and that of Ostrava in Northern Moravia. In Slovakia, which represents the eastern part of the Republic, the first regional plans were elaborated in connection with the desire to increase Slovakia’s economic development.

The first law concerning the physical planning of 1949 did not introduce the idea of regional planning and was concerned only with local plans. However, at that time the legislation had already been overcome by practice, which represents one of the reasons why the new law of physical planning in 1958 was elaborated and approved. There the conception of regional territorial planning was introduced, and the regional plan and regional planning process described.

At the present time another amendment to the law on physical planning is being elaborated in which the newest
experiences are involved. The territorial plans of regions will of course be retained in the new law, the extent of the solved territory being more loosely formulated. The regional plan can, in certain cases, involve the whole territory of the country or of its historically formed parts—Bohemia, Moravia and Slovakia. The new law will also endeavor to formulate in a new way the relationship between economical and territorial planning. In the law of 1958, the physical planning was above all understood—especially in the bigger territorial complexes—as the agglomeration of economical decisions of the economic plan into the territory. The new law treats economical planning and physical planning as two equivalent (equal) activities, thus creating the mutual dialogue and confrontation which arises from basic decisions on perspective development.

The understanding of the whole situation of the regional planning in Czechoslovakia also stimulates a brief characterization of the present settlement network. It is known that Czechoslovakia occupies a territory of under 50,000 square miles, with its 14.5 million inhabitants representing a density of about 290 inhabitants per square mile. The settlement pattern of Czechoslovakia was formed primarily by a very dense network of small towns and villages, whose foundations were laid in the Middle Ages. Only slightly more than 30% of the inhabitants live in localities with more than 10,000 inhabitants and only six towns have surpassed the number of 100,000 inhabitants. Prague has about
1.1 million inhabitants. Brno, Bratislava and Ostrava each have about 300,000 inhabitants, Plzen and Kosice about 150,000 inhabitants.

These statistical data are, of course, being compiled within their administrative borders, which makes the whole picture of the stage of the settlement pattern somewhat deformed. According to the statistics, only 15% of the whole population of Czechoslovakia should live in towns with more than 10,000 inhabitants. If a calculation was made on the basis of the real stage of the settlement agglomerations, it could be stated that 4,000,000 (i.e., more than 30% of the whole population of the Republic) live in agglomerations of more than 100,000 inhabitants.

This present stage of the settlement pattern suggests the basic principles of the further development of the whole structure of the settlement network: the endeavor to preserve the relatively balanced network of the settlement pattern of the whole country without further excessive concentrations within agglomerations which already exist. With this intention is also connected the development of regional centres in such a way that they could become sufficiently attractive focuses of social and cultural life and of higher education capacities for the adjacent area.

The development is concentrated within the already existing dense networks of settlements which should be complemented with new towns only in very exceptional cases.
The relatively small increase of the population could lead, with undesirable excessive concentration on a few agglomerations, to a depopulation of the other parts of the country. Also, the concentration on New Town programs would only mean the drawing of resources which can be used for the development of smaller "underdeveloped" cities and towns.

The mentioned principles for the further development of the settlement pattern are, of course, nothing exceptional and they can also be met in a number of other European countries. I suppose that the main problem lies not in these principles alone, but above all in the creation of effective instruments for their practical application. In our country, the basic instrument for their application is represented by the regulated dislocation of new work opportunities, thus influencing the dislocation of population.

A concrete example of the application of the mentioned principles is the capital town of Prague. During the period between the two wars, the growth of the city of Prague was relatively intense, and within 20 years the city had increased in population from about one-half million to one million inhabitants. After World War II, the idea was formulated that the number of inhabitants of Prague should not substantially increase (having already reached the point of being over-crowded).

In 1964, this principle was approved by the Government as a part of the perspective development of the city. This means that in Prague great care is taken to see that the
development of industry and also of other job opportunities proceeds by the application of new techniques and automation and not through the increased number of workers.

However, it may be noticed that the application of these principles has essentially been facilitated by the fact that industry in Czechoslovakia was already nationalized twenty years ago. The Government and even the autonomous authorities of towns and regions are, therefore, in a position to influence and regulate the localization of industry. It is, of course, conceivable that even in these conditions the situation is not ideal and without conflicts. Particular industrial branches try to place their new factories within existing agglomerations, offering possibilities of advantageous productive cooperation and qualified man power. The question was often discussed as to whether such a regulation as the location of job opportunities is justified or whether it could lead, in some cases, to economical and other losses.

The city of Kosice can be cited, in contrast to Prague, as an example of the development of a new urban agglomeration. After World War II, Kosice--the center of the Eastern Slovakian region--had somewhat more than 60,000 inhabitants and could be noted as the only fairly large city in this part of the Republic, and as a typical example of having a poorly-developed commercial and cultural center in its agricultural hinterland. Since 1945, a certain amount of important machinery and a number of industrial factories have been located in this area, a university has been founded,
and in connection with the city center, a new district for
100,000 inhabitants is being built. At present the number
of inhabitants has already increased twice and it is ex-
pected that the population will increase to a quarter-
million inhabitants. An outstanding social and cultural
regional centre now exists in Eastern Slovakia, and a whole
network of smaller towns are now coming into being around
Kosice. Some years ago a new step of regional planning
arose. It was the natural need for the mutual coordination
of regional plans on a state-wide scale.

The solving of this task began from various directions.
The Research Institute of Building and Architecture, which
has a well-equipped department for physical planning in
Brno, began to deal with a theoretical study on the per-
spective of settlement network in Czechoslovakia. On the
basis of an analysis of the present stage, a general con-
ception has been elaborated which emanates from the
hierarchical system of the state, county, and district
centers. For the particular centers, more detailed
theoretical studies have been elaborated on respective
levels providing their best desirable size and function.

It is indisputable that this theoretical work had--
and still has--a considerable importance and that it has
generated many new ideas. At the same time, it has been
criticized because of its theoretism, which does not always
correspond to the real situation of the existing settlement
pattern of the country. The application of this theoretical
pattern is quite impossible in the existing industrial agglomerations, where the interrelations of towns are much more complicated.

Parallel with the theoretical study of the Research Institute of Building and Architecture, the Institute for Territorial Planning, "TERPLAN," began to solve the so-called "project R". This project represents a first step toward the solution of the regional plan of the whole Republic. Today, extensive materials are gathered, characterizing the present resources, as well as their development in the future. Such confrontations in the particular branches of our economy are an important basis in the preparatory work of economical plans.

This regional planning situation was the general framework in which the long-range project of the city-region was studied in our country. It is obvious that Prague, as the biggest agglomeration of our republic, is in many ways connected with the development of the settlement network of the state. Unsolved general problems of the distribution of population influenced the work of our team quite considerably. Thus, the long-range planning of Prague again emphasized the necessity of perspective state-wide solutions.

B. The Development of Prague from Town to City-Region

It is not my intention to describe the complicated urban development of Prague, since I have devoted a separate paper to this subject: "Urban Development of Prague". To
present a general overview, I have tried to select only
the major stages of the very long and rich history of our
capital city, and to concentrate basically on events connected
with the development of Prague as an urban fabric. This
development is characterized by the following decisive
phases arranged in a timetable:

<table>
<thead>
<tr>
<th>Century</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Century</td>
<td>Two castles, Hradcany and Vysehrad, and the first settlements;</td>
</tr>
<tr>
<td>10th Century</td>
<td>Seat of the Czech Kings, first wooden bridge over Vltava River; first Romanesque Monasteries;</td>
</tr>
<tr>
<td>973</td>
<td>Foundation of the Diocese of Prague;</td>
</tr>
<tr>
<td>11th Century</td>
<td>Early Medieval Romanesque Town (Old Town of Prague);</td>
</tr>
<tr>
<td>12th Century</td>
<td>First Romanesque Stone Bridge; first Romanesque profane Stone Houses;</td>
</tr>
<tr>
<td>1232</td>
<td>Foundation of the St. Gilles Town, now a part of the Old Town of Prague;</td>
</tr>
<tr>
<td>1234</td>
<td>Town walls enclosing Old Town, Jewish Town and St. Gilles Town into one physical unit;</td>
</tr>
<tr>
<td>1257</td>
<td>Foundation of the Lesser Town of Prague by the Czech King;</td>
</tr>
<tr>
<td>1287</td>
<td>Amendment of town charter by King Vaclav Wenceslas I.;</td>
</tr>
<tr>
<td>1320</td>
<td>Foundation of the Town of Hradcany;</td>
</tr>
<tr>
<td>1348</td>
<td>Foundation of the New Town of Prague by King Karel (Charles) IV; The height of the development of medieval Prague; (Prague as an agglomeration of 2 castles and 4 towns: Old Town, Lesser Town, Hradcany, New Town; surface of or more than 2,000 acres inside the city walls and approx. 40,000 inhabitants);</td>
</tr>
</tbody>
</table>
1817    Foundation of the new suburb Karlin in classicist style; the beginning of the development of new suburbs in connection with industrialization and urbanization;

1880-1901    Annexation of growing suburbs as districts of Prague; the total area of Prague, divided into eight districts, 5,250 acres;

1921    Creation of Greater Prague by incorporation of 37 communities; total area of Prague: about 70 square miles;

1968    A further 21 communities incorporated - total area: 112 square miles.

To describe the entire process of the development of the planning of our capital it would be necessary to go back into medieval times and to describe at least the foundation of the New Town of Prague in the middle of the 14th Century as one of the most magnificent city planning adventures in all of Europe in those days.

City planning, in a more modern sense, obviously developed more recently. Not intending to go deeper into the complicated history of the planning of so-called "city-extensions" during the 19th Century, we may perhaps consider the time until the first years after World War I. In connection with the creation of a free Czechoslovakia, an intense planning activity concentrated on the capital city as an expression of the new independent state and the seat of its government.

From this period of time we could mention many interesting proposals, for example the so-called "parallel Prague" some 30 years earlier than the same famous proposition for
Paris after World War II. The influence of Le Corbusier's "Plan Voisin de Paris" is expressed in the project of three skyscrapers surrounding the historical core of Prague. Just after World War I a new district of Prague was planned according to the principles of the Wagner School in Vienna by one of the best pupils of this school, Antonin Engel. Also, the influence of the Garden Cities Movement is obvious in the concepts of new garden suburbs as well as in the very early translation of Howard's famous book into the Czech language.

The starting point of the systematic physical planning of Prague is the creation of Greater Prague in 1921, which included the continually urbanized territory of the capital and also the reserve areas which were sufficient for the further development of the city up to the present time. Simultaneously with the creation of Great Prague, the State Regulative Commission was constituted. It's competency included not only the territory of the capital, but also the quite extensive suburban zone. The first physical plans of Greater Prague as well as the first studies of the whole agglomeration of Prague were elaborated at this time.

C. The Contemporary Planning of Prague

After the heavy years of fascist occupation during World War II, a new phase of planning began with the first draft of a comprehensive master plan produced in 1948 by
prominent Czech town-planners and architects. Three years later the permanent planning process of Prague was initiated. This led to the approval of the Master Plan of Prague in the year 1964.

The principles of this solution, also approved by the government, are characterized in my paper "Urban Development of Prague" as follows:

1. The city of Prague should not substantially exceed the number of one million inhabitants within its present administrative boundaries, and it is also necessary to limit, in an appropriate way, an excessive concentration of labour opportunities and population in the suburban zone;

2. It is desirable to build up the town as a self-contained organism with a continuous reduction of excessive concentration in the center and a completion of the development of the town outskirts in such a way that a balance of living conditions in the whole urban area can be created;

3. It is essential to achieve a correct functional layout of the town, especially the balanced relation between residence and workplace, housing and community centers and the relations of the town to its suburban zone;

4. The allocation of capital investments must be accomplished in such a way that particular town
sectors form a complex organism containing not only housing, but also civic equipment, workplaces and recreational facilities;

5. It is necessary to protect the historical core of the city always keeping in mind that it will remain the core of the town center and of the city as a whole.

6. The whole town must be penetrated by a system of green spaces which would be combined with the existing green spaces as an important part of the particular sectors and residential areas of the town.

7. It would be desirable to build up the traffic system in such a way that it guarantees not only the development of mass passenger transport, but also the development of individual automobile traffic. Therefore, in the center, the urban streetcar traffic will be laid under the surface and a system of main roads, situated tangentially to the town center, will be built up for motor-car transport.

From the very beginning the major weakness of this Master Plan was seen in its concentration on problems of the city as an administrative entity. This failure is not due to the misunderstanding of the authors of this plan, but to the administrative obstacles connected with the fact that the city and its hinterland are subordinate to two
different elected bodies - councils being on the equal regional level.

This unfavorable situation was gradually ameliorated and during the year 1968 a new study of the long-range developments for the whole agglomeration of Prague was finished. This study is based on previous drafts and the covered territory of the agglomeration is considered as the first priority subregion inside of the whole, more extended, Central Bohemian Region.

On the basis of mutual cooperation of the City Council of Prague and the Regional council of Central Bohemia a multidisciplinary team was created. The team was composed mostly of the staff of our Office of the Chief Architect for Prague and the Institute for Physical Planning - TERPLAN. According to the decision of both professional institutions, the task of leading this team was entrusted to me.

The basic data characterising the extent of the study on the background of the whole country are as follows:
<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Prague</td>
<td>10,000</td>
<td>1,125</td>
<td>1,125</td>
<td>491</td>
<td></td>
</tr>
<tr>
<td>(urban entity)</td>
<td>6,571</td>
<td>1,75</td>
<td>1,75</td>
<td>464</td>
<td></td>
</tr>
<tr>
<td>(administrative unit)</td>
<td>1,307</td>
<td>1,75</td>
<td>1,75</td>
<td>464</td>
<td></td>
</tr>
<tr>
<td>(protection region)</td>
<td>3,107</td>
<td>1,179</td>
<td>1,56</td>
<td>1,56</td>
<td></td>
</tr>
<tr>
<td>(administrative unit)</td>
<td>519</td>
<td>0,30</td>
<td>0,30</td>
<td>11,740</td>
<td></td>
</tr>
<tr>
<td>(protection region)</td>
<td>7,470</td>
<td>4,743</td>
<td>4,743</td>
<td>11,740</td>
<td></td>
</tr>
<tr>
<td>Bohemia</td>
<td>500</td>
<td>6,14</td>
<td>6,14</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>(historical province)</td>
<td>323</td>
<td>9,48</td>
<td>9,48</td>
<td>12,470</td>
<td></td>
</tr>
<tr>
<td>(Czech Republic)</td>
<td>290</td>
<td>9,483</td>
<td>1,49</td>
<td>12,470</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
In the specific case of Prague's agglomeration, we considered the most important task to be the elaboration of an adequate and competent position regarding these basic strategical problems:

1. The role of Prague and its whole agglomeration in the economic, social and cultural development of the nation and in the network of settlement of Czechoslovakia;

2. The development of specific branches of industry and services, especially in the so-called tertiary sector;

3. The demographic development and the growth of the number of inhabitants into region and its specific parts;

4. The socio-professional structure of the inhabitants and the further development of their life-style and environment;

5. The process of urbanization and the general concept of settlement patterns within the agglomeration;

6. The prospective development of Prague as the determinating core of the agglomeration and its functions;

7. The creation of effective instruments ensuring, on a state-wide scale, a coordinated and sensible implementation of the basic aims of spacial strategy and the creation of a harmonic human environment.
Our team was conscious of the fact that the solution of the enumerated problems couldn't be a mere mechanical result of surveys and inquiries and their analyses and evaluation. Therefore, we considered it essential to formulate some basic premises and to define the main goals and concepts of the whole development study.

Those goals influenced not only the whole approach of different experts within our working team, but also helped us to formulate sets of criteria used in the further phases of the study. Personally, I consider such an approach as reasonable, being aware of the fact that such "a priori" formulated conceptual premises could be quite dangerous and could conduct the whole study in a false direction. Both too general and too specified premises are perilous and risky. Excessively detailed and specified premises are "sui generis" predeterminations of the main features of the final solution. Excessively general premises could be interesting and fit to be included in some textbook on town planning, but are of very minor utility for the specific study and the formulation of relevant criteria.

Our basic conceptual premises could be in very digested form expressed as follows:

1. To interpret the whole agglomeration as one indivisible entity on the level of social life, economy and physical pattern - not to interpret it merely as a sum of different territorial units.
2. To ensure for every inhabitant of agglomeration the broadest possibilities of choice in terms of wide access to different job opportunities, social and technical amenities, and primarily access to the central core of agglomeration - Prague.

3. To gradually ensure for every inhabitant of the agglomeration an equal level of basic standards of amenities and - at the same time - to preserve and to encourage diversification of private life style and human environment in different parts of the agglomeration as well as the unique features of specific settlements and landscapes.

4. To endeavor an organic balance between the desirable inter-relations of functional elements and the reasonable specification of residential, industrial, commercial, transportation and recreational areas.

5. To maintain and to enhance the contrast between relatively compact clusters of man-made, built-up areas and open nature areas, whose importance will increase in connection with further urbanization and impact of technology to major agglomerations.

6. To enhance cultural, aesthetic, biological and psychological aspects of human environment which should not be surrendered because of the pressure of economy and technology.
7. To first of all assert the values of the historical core of Prague in context with the needs and conditions of contemporary and future life, and then to preserve and enhance all historical values of the environment.

8. To create a prospective pattern of agglomeration with the capacity to be a relatively firm framework of the development and simultaneously to ensure the necessary flexibility to facilitate new conditions and needs without corruption of the general strategical concept.

To this set were added some general criteria such as, ease of circulation, optimum or minimum cost of implementation, and exploitation of the whole agglomeration, etc. Condensely characterized premises were further elaborated and specified according to needs and aspects of different parts of the study. At the same time they were used as a sort of basic criteria for evaluation of every proposed pattern of the physical arrangement of the agglomeration of Prague during all the successive phases of the study.

Now I can look at this set of premises from a distance both in terms of time and, from Detroit, in terms of thousands of miles. I see that they are rather imperfect, but we did not formulate them as the ten commandments, but as a topic for discussion and further refinement and amendment through the whole phase of the elaboration of our study.
I try to recollect these basic premises only as an example of our way of thinking. I am not sure whether it would be of interest to further describe specific solutions, to enumerate figures and calculations, and to quote names of different districts and settlements.

Only as general information it is possible to say that — on the basis of detailed surveys and inquiries — we proposed the excessive growth of the number of inhabitants of Prague, as the core of the whole agglomeration should not be stimulated. Our projection for the year 2000 is approximately 1.3 million of inhabitants in Prague. It means only an increase of some 150-200,000 inhabitants during the next 30 years. The projection of the agglomeration as a whole is 2.1 million inhabitants. This means an increase of approximately 0.8 million. Thus, the increase of some 0.6-0.7 millions should be located inside the outer territory of the agglomeration. No brand new towns are intended for the accommodation of this increase but rather, the development of existing towns with appropriated conditions for growth from the point of view of both physical and environmental values.

No "pure" types of future patterns (rings of satellites, stars, corridors, etc.) were implemented, but we tried to emphasize the uniqueness of the given natural and settlement patterns leading to specific combinations of radial outside corridors and satellite towns with prevailing importance of
Prague as a core of the polycentric system. As additional information it can be said that the whole fabric is supposed to be operated on a basis of a mass rail transportation system which was already begun by the building of the first subway line inside of Prague. Emphasis given to the mass transportation doesn't mean any neglect of private cars, but their access in the densely built-up and valuable historical core of Prague couldn't be unregulated.

We have just finished this study and are now going through the painful procedure of approval which often takes more time and more effort than producing the study itself.

D. The Comparison of Prague and Detroit

In comparing some basic characteristics of Prague and Detroit, I hope I will not be misunderstood. This comparison is not in any case an effort to artificially impose some similarities of both cities. It is only an attempt to approach Prague by a comparison to American and Detroit's experts. Surprising as it may be, some basic figures are not as different as could be expected in the case of two cities developed under such different conditions.

Let us compare first of all the gradual growth of the number of inhabitants in both cities:
<table>
<thead>
<tr>
<th>Year</th>
<th>Prague</th>
<th>Detroit</th>
</tr>
</thead>
<tbody>
<tr>
<td>900</td>
<td>First early medieval settlements and castles</td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>1300</td>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>1400</td>
<td>40,000</td>
<td></td>
</tr>
<tr>
<td>1600</td>
<td>60,000</td>
<td></td>
</tr>
<tr>
<td>1701</td>
<td>40,000</td>
<td></td>
</tr>
<tr>
<td>1771</td>
<td>70,000</td>
<td></td>
</tr>
<tr>
<td>1815</td>
<td>80,000</td>
<td></td>
</tr>
<tr>
<td>1831</td>
<td>102,000</td>
<td></td>
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<tr>
<td>1840</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>1850</td>
<td>157,000</td>
<td></td>
</tr>
<tr>
<td>1860</td>
<td>210,000</td>
<td></td>
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<tr>
<td>1870</td>
<td>239,000</td>
<td></td>
</tr>
<tr>
<td>1880</td>
<td>314,000</td>
<td></td>
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<tr>
<td>1890</td>
<td>397,000</td>
<td></td>
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<tr>
<td>1900</td>
<td>514,000</td>
<td></td>
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<tr>
<td>1910</td>
<td>616,000</td>
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<tr>
<td>1921</td>
<td>676,000</td>
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<td>1930</td>
<td>848,000</td>
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<td>1938</td>
<td>962,000</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>933,000</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>1,005,000</td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>1,100,000</td>
<td></td>
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</tbody>
</table>
These figures show the gradual but slow growth of Prague during many centuries with the influences of wars, times of stagnation and prosperity. On the other hand, they show the fascinating "explosion" of Detroit in a timespan covering the last few decades. It could be mentioned that in the year Detroit was founded the city of Prague already had the same number of inhabitants which Detroit reached in the middle of the 19th Century. After only fifty years the city of Detroit outran Prague now having more inhabitants than the whole agglomeration of Prague. Every expert in town planning and urbanization is able to see behind these figures the whole history and creative forces of both cities.

The next set of figures is devoted to contemporary characteristics of both cities and their territorial framework in terms of size, population, and density:
<table>
<thead>
<tr>
<th>Unit</th>
<th>Population (in millions)</th>
<th>Area (sq. miles)</th>
<th>Density (inhabitants/sq. mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detroit Subarea</td>
<td>2.5</td>
<td>119</td>
<td>1,969</td>
</tr>
<tr>
<td>Detroit Subarea</td>
<td>2.75</td>
<td>129</td>
<td>1,969</td>
</tr>
<tr>
<td>Detroit Subarea</td>
<td>3.0</td>
<td>139</td>
<td>1,969</td>
</tr>
<tr>
<td>Detroit Subarea</td>
<td>3.3</td>
<td>149</td>
<td>1,969</td>
</tr>
<tr>
<td>Detroit Subarea</td>
<td>3.6</td>
<td>159</td>
<td>1,969</td>
</tr>
<tr>
<td>Detroit Subarea</td>
<td>3.9</td>
<td>169</td>
<td>1,969</td>
</tr>
</tbody>
</table>

Note: The table above lists the population, area, and density for different units, with Detroit Subarea being the most prominent.
Analogous characteristics could be expressed in the comparison of the share of specific territorial units in the respective states:

<table>
<thead>
<tr>
<th></th>
<th>The Share of Prague in Czechoslovakia</th>
<th>The Share of Detroit in Michigan State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>percent of territory</td>
<td>percent of inhabitants</td>
</tr>
<tr>
<td>Region</td>
<td>8.9</td>
<td>16.2</td>
</tr>
<tr>
<td>Agglomeration</td>
<td>2.3</td>
<td>11.0</td>
</tr>
<tr>
<td>City</td>
<td>0.2</td>
<td>7.9</td>
</tr>
</tbody>
</table>

These figures are obviously interesting. They tell us that in the state of Michigan the population is heavily concentrated in the largest city and its region. This is not the case in Czechoslovakia due to the more evenly distributed network of regional centers in other parts of the country.

The analogous density of inhabitants in the territory of both cities could be quite misleading. It seems to me that it is not the result of an analogous type of built-up pattern. In the case of Detroit, practically the whole territory is covered by building lots, while in Prague buildings are more clustered; and quite extensive parts of the territory are preserved as other spaces.
No less interesting is the comparison of both Central Business Districts showing the weight of the central part of Prague with its extreme densities. This situation in the central part of Prague could be interpreted as a stage to be necessarily followed by the same development as that in the Detroit CBD during the last decades. In this connection, I could only express the hope that it would not be the fate of our city center, menacing the values of the historical medieval core.

Every comparison of figures is naturally misleading and simplified. With concern for their physical appearance it is quite impossible to compare Prague and Detroit. It is really difficult to distinguish something common, with the exception of the fact that both cities are composed of houses, buildings, industrial plans, open spaces and other physical units.

In most ways, both cities are in extreme positions: on one hand, Prague as an architectural and cultural complex, polished and refined through centuries; and Detroit, on the other hand, as a pragmatic and unsentimental expression of the effort to produce more material values and to operate the whole city fabric with maximum efficiency.

From the aesthetic point of view, Prague is a genuine treasury of historical architecture, forming the vast historical core which crowns the contemporary city and which requires preservation and development of its values. It
cannot be denied that Detroit also has some specific features which are lacking, however, the substantial enrichment allowing them to correspond to the economic and social importance of this city.

As an architect, I cannot avoid mentioning my opinion concerning the urban composition of Detroit. It seems to me that contemporary Detroit is calling for some extremely strong ensembles which might be able to dominate and master the shattered and illegible image. Perhaps the key lies in possibilities on the waterfront, and in the Woodward Corridor, where until now the scale of new and proposed buildings has been quite doubtful. Also, some structuralization of sprawling suburbs by a system of local civic centers is needed.

Not so striking are the distinctions of both cities in regard to serious troubles with rebuilding, housing shortage, transportation solution, air and water pollution, preservation of open spaces, and the general amelioration of life conditions and environment. Comparison of both cities in such terms would certainly be very instructive, but I am afraid that such a complicated study could cover the same number of volumes as the Encyclopedia Britannica.

Returning to the discussion of the long-range physical planning in both cities, it's possible to follow the continual refinement of planning methodology, different stages of planning policies, and the continual growth of territory
covered by physical plans. It would also be possible to confront this effort with the general level of modern urban planning theories and similar studies in other large cities in the world. It would be possible to describe the urban and planning development of Detroit by citing some facts compiled in the very interesting book by Sidney Glazer, Detroit, A Study in Urban Development, published in 1965. It would be of interest to mention some parallel efforts such as the Prospective Transportation Study of Prague which is trying to cover the same problems as the transportation projections of TALUS. It would be possible to compare the solutions of the Master Plan of Detroit 1950 and the Master Plan of Prague 1964.

All of this cannot be ignored, but my main topic should lie in another sphere—in theoretical aspects of the long-range planning of city-regions. This is the topic of the next part of this paper.
THE MEANING AND ASPECTS OF LONG-RANGE PLANNING

Before beginning, I must confess that I do not intend to formulate basic principles of long-range planning or to elaborate prescriptions of remedies to be ordered in a "physical planning pharmacy". I would rather like to express some reflection and to raise some controversial points. I will try to do this on the basis of my personal experience and, first of all, on the basis of experience with the long-range study of Prague's agglomeration. However, if my consideration seems to touch some aspects of the long-range planning of Detroit's region, it will be merely the result of the considerable universality of such problems, rather than the result of my close familiarity with Detroit and its planning solutions.

A. Necessity of Planning

The first and most basic questions occurring in every discussion regarding planning are whether all of the tiresome procedures of planning are at all useful, and whether or not they represent some positive contribution to the general development of society, its cities, and the whole human environment.

Arguments in favor of the necessity of planning are as old as planning itself, and may even be a little bit older! I am sure that I am not able to add any new or persuading arguments. Thus, I can only express my hope that planning has some meaning in the modern society--and express this opinion in spite of my quite long and extensive practice in
this field, richer in disappointments and failures than successes.

Besides, I am not sure whether this question regarding the necessity of the planning of our cities and regions is adequate. In the sense of an effort to preview further development and to react to or influence this development, planning is inevitable and will exist as long as Mankind exists. The only question is whether or not we are satisfied with planning as the accidental sum of individual decisions, intentions, dreams, and failures, which influence the development of our cities. My opinion is that such "planning" is not adequate and the general shift towards more comprehensive planning or programming is quite understandable.

The question of the feasibility of such comprehensive planning is more substantial. I have not in mind only external connections between planning and our complicated society with its jungle of thousands of interdependent relationships. More basic are those aspects which are connected with our general capability to understand our world. Urban planning is now experiencing a delayed process in the destruction of the over-simplified image of human settlements as physical units able to be described and defined in terms of volumes of substance and mechanical movements. Now we have become aware of the fact that the whole fabric is a much more intricate phenomenon and cannot be described only as a mechanical toy. Such recognition
is in a philosophical sense not far from a sort of agnosticism. And, really, the awareness of not being able to preview the future of unintelligible phenomenon is not far from the truth. Such "planning agnosticism" is not a solution to the complicated troubles of our cities. An honest confession of our limited knowledge leads to modesty, which is so necessary and so useful in our existing planning business.

Both in Prague and in Detroit the planning has considerable tradition. Gathered experience in these cities testifies to both the adequacy of planning in cities and city-regions, and to the necessity of modesty in assessment of its practical results.

3. Planning Process as Expression of Approach

Looking at the singularities of the planning process in the U.S.A. and in our country, it would be quite attractive to compare some general features of both of them. From a first glance, it is obvious that in the U.S.A. there is much more of an endeavor devoted to surveys and inquiries, which seems (to the foreign expert) to be redundant and which takes on a kind of l'art pour l'art in planning. This impression is strengthened by the preponderance of the sociological survey, being really interesting as such, but without consistent implications. On the other hand, European practice is sometimes too busy in the search of conclusions and solutions to have the necessarily developed background.
As to the planning methodology itself, the distinction between the American and Czechoslovak approach cannot be neglected. In our country, with its emphasis and sometimes quite utopian faith in planning, the whole effort is oriented towards planning in the sense of influencing further development in desirable directions. In the USA, on the contrary, planning is generally interpreted as a quantitative projection and extrapolation of existing trends and the effort is heavily concentrated on mastering this "extrapolated" future state of things.

The common problem lies in the decisive phase of implementation, even if the reason for the general weakness is not the same. In our country, we have perhaps more elaborated and effective instruments of implementation and the failure is usually caused by arbitrary "a priori" planning decisions. In the U.S.A., it would be possible to presume better results because they are the "implementation" of extrapolated actual trends. The failure of such implementation is evidence of the projection of irrelevant indicators, and at the same time evidence of the fact that the development of settlements could not be simplified to the image of mechanical quantitative trends.

This very personal and perhaps superficial observation referring to the whole field of physical planning is also applicable to the most complicated field of the long-range planning of big cities, including Prague and Detroit.
Now I will try to concentrate my discussion on this field, being more specific and sometimes also deliberately onesided. I will be very happy if some of my reflections would evoke disapproval and arguments.

1. **Timespan of "Long-Range"**

The positive appreciation of the general usefulness of physical planning leads to the next more embarrassing question as to whether or not long range planning is needed and what "long-range" actually means. Such a question is often combined with wondering whether we planners are so conceited as to give advice to our children and grandchildren on how to arrange and run their future cities. Really, such intentions would be very absurd, and they would be the expression of our mistrust in the scientific, artistic, and generally human progress. It is obviously not our--I mean planners'--intention to give advice to the next generations. The result and, hopefully, the success of our interventions into the patterns of contemporary cities is to help avoid additional troubles and obstacles to the living environment of our successors.

The most important reason for our long-range planning lies not in the future, but in the present times. This "looking backward" from the future is giving us the chance to better judge our contemporary effort in terms of general human values and practical efficiency. And, as a footnote, it is possible to add that this look is sometimes
not encouraging at all—and not only in the field of physical
development of our cities.

It is not necessary to mention that every long-range
plan must be subjected to periodic revisions and reviews
and its real lifespan is measured only in years. According
to our experience, every such plan undergoes a continual
refinement, with a view toward the possible alternatives,
especially in the case of highly urbanized and complicated
territorial units. Such an approach is indespensible, but
at the same time our contemporary decisions—in terms of
land use and location of investments—will influence the
physical structure of cities during many future decades.

Both in Prague and in Detroit, the year 2000 has been
chosen as a general target of long-range planning. It is
this year which is sometimes irritating for people who are
accustomed to reading such dates only in science-fiction
and futurologic literature. But in reality, the year 2000
is only 30 years away from us and today's decisions will
exist as physical realities much longer. From this point
of view the target year 1991 of the TALUS Study seems to be
too near. It is questionable whether substantial changes
and improvements could actually be projected and achieved
during such a short period of time.

"Sub specie alternatives" and also "sub specie" of
real quantitative changes in the patterns of our settlements
a thirty year time span is also rather short-sighted.
The history of our cities and settlements is measured in decades and centuries and this fact is only overshadowed by our everyday troubles. Also, the lifespan of buildings and roads is measured in decades and it is not necessary to be too busy to change it.

Opponents of long-range planning mention first of all, the gap between the theory and practice of planning and the gap between planning and the real development of our cities. This gap is obvious and is extremely distinct in the field of long-range planning. It exists due to the imperfect methods of our studies, but in some ways it has positive significance as does every tension between theory and practice leading to the refinement and perfection of both of them.

The real problem of far-sighted planning is the choice of the appropriate level of exactitude in such planning. Long timespan is reasonable for the general strategy of spatial arrangement, but on the other hand, absurd for prediction of some technical problems or amenities. The relevant distinction of those different levels of necessity in a far-sighted view is one of the main methodological problems of long-range planning.

Every coin has two sides and both of them are important. Planning without a long-range view limps, but the overlooking of contemporary urgent needs limps as well. It is not reasonable to underestimate long-range goals in the name
of urgent everyday pressure, as it is impossible to erase urgent necessities in the name of a future paradise which can be lost as a result of our inability to solve contemporary problems.

The experience of both Prague and Detroit shows that it would be unreasonable to reject long-range planning on the basis of its actual imperfection. The same bad service to long-range planning would be its overestimation as a general pharmacy for the diseases in our cities. Long-range planning is an important weapon in our fight for a better life and more human environment. But, it is not the sole weapon and it loses its potency when not combined with other instruments and measures.

2. Territory Covered

The general tendency towards physical planning of territorial units is obvious and necessary. In Prague our experience shows that basic problems of the historical core of our city cannot be solved only from within this core, but first of all from the outside, acknowledging it as a part of the comprehensive planning of the city as a whole. The same can be stated of cities, which are today no more self-sufficient and autonomous entities, but are parts - sometimes decisive parts - of broader agglomerations, regions and polycentric settlements systems.

This generally accepted approach also has some built-in problems. One of them is the coordination of the size and
shape of the territory covered. Detroit and its region is alone an excellent example. The recreation program has been elaborated on the scale of five counties; TALUS started with six counties and now covers seven counties. The metropolitan area of Detroit covers three counties, and the Doxiadis study defines a whole set of different territorial units with the "Urban Detroit Area" as a core.

Such a situation is understandable and not exceptional at all. Troubles with the collection of basic data are so far insurmountable. The real troubles start only in the phase of implementation.

Our experience shows that it is premature to define in advance the definite limits of territory covered by a regional plan. The only possibility is to start with some hypothetical limits which should be refined during the first phase of study. Besides, in highly urbanized and densely populated regions and counties every limit is more or less an arbitrary one and can be considered as a mere working instrument. Some functional elements of region will surely overpass these limits and the other ones will be concentrated on smaller territory. Every limit is, under such circumstances, a sort of cut-out from a continuous settlement network.

Very often discussed is the necessity of coincidence in territorial limitations covered by regional physical plans and different territorial administrative units, as
cities, counties, or regions. The ideal of perfection is such coincidence, but I am rather sceptical as to whether it is possible in real life. In every country, administrative boundaries are traced on the basis of aspects other than the needs of physical regional planning.

As regards the experience of regional planning in Czechoslovakia, it may be stated that in practice we can meet various approaches corresponding to the real conditions in the particular region. Generally, of course, it can be stated that the demarcation of the limits of the region which is to be studied by the physical plan, hardly ever correspond with the borders of the administrative regions into which Czechoslovakia has been divided. The practice shows that it is very difficult to delimitate the administrative regions so that they might include homogenous units, and in addition, it is necessary in every particular case of the territorial plan of the region to demarcate the limits of the solved territory in accordance with the real aims of the plan. For example, very characteristic cases of regional plans of industrial agglomerations, recreation areas and natural parks, riversides, etc., exist.

In the case of our Study of the Agglomeration of Prague, the limits of the studied territory are not identified with the administrative boundaries of the Central Bohemian Region, nor with the boundaries of some districts (counties). We decided to do so only as an extreme
emergency solution, being aware of troubles in the collection of statistical data and in implementation. The reason for such a decision lies in the inadequacy of whichever administrative boundaries in this territory with real extend of agglomeration. Until now I hesitated to choose or decide whether such a decision was reasonable enough.

In the case of Detroit the identification of regional units with administrative boundaries of counties is much more adequate. Perhaps, the weakness lies only in a quite varied and uncoordinated set of different regional units. In the case of Prague we operate with a more coordinated hierarchy of regions and subregions.

The extension of territory covered by the regional plan is also a coin with two sides. One side has been just described as a natural and reasonable tendency towards bigger areas.

The other side is the danger of becoming lost in territories that are too big and of losing the real and applicable sense of the regional study. Studies starting on the scale of the whole cosmos, or as a minimum, the globe, are quite fashionable everywhere and are not harmful at all. They reflect the existing wide interrelation of vast settlement systems. But, they would be harmful if used as an escape from the microscale of cities, which have been until now the places where the most essential problems of our regions are knotted. Sometimes those
crucial city problems are artificially miniaturized by viewing them from the extremely wide regional macroscale.

Some aspects of development can be properly solved only on the regional scale. At the same time, some problems only seem to be seen clearly and to be solved on such a scale, but then fail in confrontation with the more detailed scale of city and its life.

It is obvious that within complicated territories a hierarchy of coordinated physical planning is needed - from the level of state, through regions, subregions and agglomerations, to the master plans of cities, towns and individual settlement units.

3. **Trends and Projections**

Previewing the future development of our cities and city-regions is connected with two basic questions. The first is the question of the tempo of future trends and the second is the question of the quality of those trends and changes.

In my opinion, the approach to the tempo of development and change is influenced by the desire not to be old-fashioned and not to be outrun by the accelerating development of technology, population explosion or fashionable futuristic and science fiction fantasies.

A "science fiction approach" to planning is influenced by the concentration of our interest on some most striking facts of our human environment which are changing very
rapidly. But these most striking and qualitative facts are very often only outward superficial reflections of more basic quantitative forces which progress more slowly.

This sort of approach is accurately expressed in Marshall McLuhan's statement, that "intense concentration on minute segments and specialists tasks, which is the unique strength of western man. For the specialist is one who never makes small mistakes while moving toward the grand fallacy."

As an example, our transportation planning can be mentioned. It is now quite often considered as a decisive part of the whole field of contemporary physical planning. We are quite successful in projecting and constructing more and more complicated and sophisticated highways, superhighways and super-superhighways. But the question is whether in doing so we do not create insurmountable obstacles for a future, more reasonable mankind with, hopefully, another sense of life. We are projecting developing income levels, travel activities and fantastic mobility not being sure whether our admired mobility is really an expression of freedom and new possibilities of man, or unfortunately the only, and quite inefficient way we can overcome the worsening conditions of social survival.

The influence of the concentration of our attention on jumbo-cities in advanced countries is due to this deformation of our view. Thus, we omit the fact that the
prevailing share of mankind lives, so far, in not so advanced regions and sometimes under quite primitive conditions.

My position is obviously influenced by the city which I am dealing with. In Prague we stroll through streets and parks layed out centuries ago and I hope that our future generations will enjoy the same possibility. I am sure that a certain stability in our physical environment is desirable for our identification with humanity and will be even more important in a future of technological miracles.

I like science fiction very much, and I devoted a part of my recent book to the image of the future city in science fiction and in projects of fantastic architecture. But in connection with the search for the future image of our cities I remember quite often the introductory chapter of G. K. Chesterton's *The Napoleon of Notting Hill*. There you can read: "What can it be? What will London be like a century hence? Is there anything we have not thought of? Houses upside down - more hygenic perhaps? Men walking on hands - makes feet flexible, don't you know? Moon... motor-cars...no heads. And so they swayed and wondered until they died and were buried nicely. Then the people went and did what they liked."

This quotation is sometimes used as an evidence of the conservatism of this ingenious writer. Now, all of Chesterton's impossibilities have been fulfilled. We have
the moon within our reach, we cannot complain of a scarcity of cars, and quite often we behave as without heads.

But basically our cities are not changed and the aim of our efforts should really be not to implement what we like, but to create an environment enabling people to do what they like. We are able, nearly seventy years after the first edition of the story, to agree with the next part of the quotation: "When the curtain goes up on this story eighty years after the present date, London is almost exactly like what it is now."

The second question of future trends is connected with our concentration on indicators of quantitative growth being the basis of future projections. Extrapolation of contemporary trends is our general and universal tool. The major part of our simple planning science is based on extrapolations. Unfortunately, the problem of our predictions and the reason for their failure is not quantitative growth. It is the unforeseen developments influenced by qualitative changes. Easily formulated indicators are connected with mechanical interpretations of city structure and its functional pattern. The functionalist approach was typical for the thirties and is expressed in the Athens Charter, elaborated by the CIAM - European avant garde group of architects and urbanists. Since then, we have learned that the same city functions are performed by
different interchangeable physical elements. The same physical elements are able to serve different functions—in terms of both space and time.

We know that quantity and quality are bound together and major quantitative changes are expressed as new quality. Nevertheless, we need in our planning business a more sober view on outward quantitative developments and more concentration on substantial qualitative phenomena and forces which are moving slowly but also more surprisingly.

I am afraid that our busy effort to implement everything new is the expression of our feeling of inferiority caused by failures of both our predictions and the implementation of projects and plans. A more quiet and more solid approach to the future trends would be the evidence of maturity in our work. This maturity will be expressed in both the realism and the boldness of our proposals.

4. **Flexibility and Stability**

More flexible planning is now extensively recommended as a modern pharmacy for all the ills of our projects and incompetent predictions. The awareness of flexibility is connected with the development of urban planning in the 20th century. No flexibility of city plans was needed during all historical periods in the past. Also, the whole storing process of urbanization in the 19th century was interpreted in physical form as a mechanical "extension" of the existing smaller towns by addition of new districts
or in the latest period of new suburbs. With this approach is connected the traditional search for the optimum size of cities with a static pattern.

Only in the twenties did the architectural avant-garde bring a new term of dynamic plans. Since this time we are able to follow a set of propositions of different flexible and dynamic solutions expressed in different "rocket", "finger", linear or zoned patterns.

The ideal of flexibility also has two sides and the ideal is sometimes exaggerated to shapeless dispersed sheets. The image of the continuous flexible city covering whole continents could be used for elimination of the necessity to specify more exactly the settlement pattern inside of such a city. We have many radical propositions but in the reality of our city building we are not so advanced from the primitive "city - extensions" of the 19th century. The genuine elaboration of useful measures and patterns ensuring a more flexible physical and functional structure of our cities is to be expected only in the future.

No real solution can be seen in the propositions to replace drawn plans by policy statements of social and economical goals expressed in words. Such an approach is too untrustworthy and too near to the other side of our flexibility coin.

It is not by chance that extreme supply plans are not so far from indecision and non-commitment. The demand for
flexible response to "new" conditions and needs could be the best way to no concept at all and the best way to exchange the real concept for small pennies of immediate advantages on the road to minimal opposition.

Looking at the past history of city planning and city building we also have something to learn. We can see in general that only the great planning concepts were able to survive and form a solid framework for centuries of development. This is the fate of baroque Rome, Haussmanniais's Paris, of Washington or Vienna's Ring. On the contrary, petty concepts did not survive merely the period of their adoption and then collapse before their implementation.

I don't intend to discuss our consciences, but flexibility can sometimes be used by the planners themselves as an apology for the failure of plans and for excessive concessions to the complications of our life. Indeed, the field of implementation is a vast and specific problem which cannot be mentioned incidentally. There the notion of flexibility has other basic aspects and is heavily connected with the whole social status of planning and with the effectiveness of its tools. I am fully aware of the close link between the plan and its implementation, but I think that the hardly lucid field of implementation deserves an independent elucidation and cannot be included in this paper.
From a broader view, the desire for flexibility is influenced not only by our effort to respond to the development of technology and urbanization, but has its deepest roots in the general instability of our modern society and in the values on which it is based.

C. Means and Goals in Planning

In a simplified manner, the problems of our modern planning methodology can be expressed by two extreme approaches. One of them is characterized by extensive use of surveys and inquiries, statistics and analysis, mathematical methods and projections. The final solution is mainly considered as a mechanical output of sophisticated surveys and analyses. The whole process of planning is thus like a machine with inputs on one side and persuading output on the other side.

The other extreme approach is based on the presumption that planning is an unambiguous creative process of imagination where all surveys and inquiries have only very minor roles and are considered a formal necessity. The plan is thus considered as a work of art and imagination.

1. Science or Art

The above mentioned approaches are quite often expressed in the question of whether planning is a science or an art. If I would be very skeptical I would say that contemporary city planning and city building is no longer an art and not yet a science.
It is not by chance that in this situation we must face, quite often, an approach which is really neither science nor art. Such an approach can be characterized as handicraft in the skillful but bad sense of this word. It consists in mechanical and routine production of extensive sets of compulsory surveys and inquiries completed by quite banal solutions. This is the reality of our planning and nobody is immune to it.

We are now in a very difficult phase in development of our profession which is characterized by the consciousness that our imagination is not able to master the very complicated problems of our cities and regions. At the same time our science is just going through its childhood diseases complicated by its multidisciplinary approach.

An actual situation is typical because of its emphasis on planning science and neglect of artistic aspects. It is very fashionable to concentrate attention on systems analysis, operations research, and computers, as it was fashionable not so many years ago to identify planning with sociology. In our enthusiasm we quite often forget that all of these tools cannot be more clever than we are. What is worse is that we interchange these means for the real goals of our work.

I am not disfavoring all of these really important and new occasions to enrich our rather imperfect armaments, but frankly speaking I am restrained in stating that these
new means are our general salvation, as it was expected some years ago with the introduction of sociology and now from the rich set of mathematical methods. I know that in the first phases we are only trying, but sometimes we produce very simple, obvious and sometimes doubtful solutions as a result of the grandious scientific display.

My position is deliberately one-sided. The danger of rejecting new scientific methods is not imminent and I try to stipulate them in my own work team. I am not a fan of implementation of some idealistic and "a priori" produced l'art pour l'art patterns. On the contrary it is very urgent to attract more scientists and more branches of science to our planning work. We must learn to collaborate with them and to pose the appropriate questions. We must ask all colleagues and advisors from the scientific sphere not only to be elated over our practical and concrete studies, but also to involve themselves with them and to translate their own theoretical findings into feasible notions and projects for the physical arrangement of human environment. We must force them to be more specific in their too general advice - to be as specific and definite as, too often, politicians and businessmen are. We also must use the unripe results of our planning science because we are not able to stop the development of our cities and regions and wait, or to write "hic sunt leones" on unknown and unsearched spheres or territories.
The real danger lies in overestimation of these new unripe methods which are overly advertised. More composure and modesty would perhaps create a better climate for its development. One-sided emphasis on planning science (and I am tempted to give the last word for the time being in quotation marks) is connected with under estimation of planning art. It is one of the results of the unripeness of our planning science that it is concentrated on easily processed data, which might be, unfortunately, the most indecisive ones.

If we look around us we can see that it is not only a theoretical question. Carelessness in this sense would be understandable, if our human environment would excell by its excessive aesthetical values - unfortunately such a danger is not a menace. We are in the opposite situation and that is why the general neglect of artistic aspects is harmful.

We discuss the trends of technology, we weigh input and output, but we should also remember Camillo Sitte's eighty year old statement that "much has been accomplished in technical matters, while artistically we have achieved almost nothing" and "there still remains the question as to whether it is really necessary to purchase these advantages at the tremendous price of abandoning all artistic beauty in the layout of cities".
Very doubtful is the quite common expression that the appropriate place of aesthetic aspects is on the level of individual buildings or at a maximum on the level of a master plan. In this connection it is necessary to apply to whole regions some other words of Sitte, that "it is only in our mathematical century that the process of enlarging and laying out cities has become an almost purely technical concern". Our regions and settlement networks are, first of all, human environment and as such cannot be measured by economical and technical indicators alone. "Indicators" of beauty, aesthetical quality and psychological effects on man must also be considered.

2. Subject and Objectivity

The seemingly contradictory roll of planning science and planning art is very closely reflected in the relationship of subjective and objective factors in the planning process.

The common opinion links the introduction of scientific methods with guarantees of maximum objectivity. Such a statement is accurate as an indication of the general tendency and the desire for the future, but it is too early and very erroneous to refer this statement to the present situation and to contemporary projects; how sophisticated and full of mathematics they might be.

Planners have just started with the elaboration of basic indicators relating to the physical characteristics
and standards of human environment; we learn how to manipulate them and how to translate them into planning patterns. We do not know how to measure the important spheres of beauty, human motivation and behavior, the aesthetic and psychological qualities of our living environment.

It is not necessary to be so busy with expulsion of subjective factors. The question is not only whether such expulsion is possible but also whether it is desirable. Of course the real danger in the elimination of subjective factors does not exist and every pretention of this kind is far from genuine science, but not far enough from harmful illusion.

Problems of objectivity start with the representation of different professional fields in our multidisciplinary teams, with the involvement, experience, and knowledge of their representatives. We know from our own experience how deeply the orientation of physical plans and studies is influenced by this fact and sometimes even by the hobbies of the leader of the team.

The basic problem of objectivity lays in the assumptions and premises of our projects, in indicators and criteria. Let me quote, as a very positive expression of it, the last words from the second volume of Doxiadis, The Developing Urban Detroit Area, saying that "if basic assumptions and criteria are accepted by those concerned with the future of UDA, then the optimum alternative is
determined with reasonable certainty. If basic assumptions and criteria are altered, then again the frame is set for corresponding solutions."

Those words are a very frank expression of the risks of our profession and the UDA Project is an extremely pronounced example. The whole complicated and daring construction of the successive elimination of 49 million alternatives is built on a basis of a set of criteria on which it also stands and falls.

As an example we can look only at the most decisive and refined criteria used in the last step of the elimination of alternatives. These criteria were derived from the ekistic elements and characterised as follows:

"nature - scenic attractiveness, topography, soil bearing capacity, climate, proximity to water sources;

man - travel time, overall accessibility, air conservation;

society - breakdown of population, rate of population increase, ratio of densities, percent of population living under high densities, average density;

urban structure - compactness, length of shoreline."

It is impossible to analyse all these criteria and to discuss whether or not they cover basic forces and aspects of the future development of UDA. Quite challenging
is the concentration of the "element" of man on travel time, overall accessibility and air conservation as also the expression of urban structure only in terms of compactness and length of shoreline. Some hesitation also is evoked by the overall rating of alternatives, in which the only distinctive rates are derived from transportation pressure on CBD and time spent on metropolitan versus regional networks.

A more detailed analysis of basic criteria and assumptions of Detroit's UDA, of TALUS - the perspective study of Prague's regions and also of other big cities would show how delicate is the balance between the exactness of such premises and criteria and the construction being built over them. Furthermore, they would show the importance of not only the formulation of assumptions but also transposition of that formulation into physical patterns and into the functional and aesthetic arrangement of human environment.

3. **Premises and Assumptions**

The discussion of subjectivity and objectivity leads immediately to the problems of the premises of our planning activities. As in previous chapters of this paper the approach can be expressed in two different manners.

One approach is based on the opinion that the really objective and thus best solution is a mere output of professionally performed surveys and analyses. Analyses designate those variants which must be eliminated
and indicate in an objective way the best possible solution.

The other approach tries to clearly express and specify the intention and goals of the long-range plan as a starting point for surveys and studies.

My opinion is that this second approach is more relevant and legitimate and reflects the fact that the elaboration of every program and plan is based on some intentions and targets.

Besides, the first approach is quite illusory. Some premises to ensure the evaluation and elimination of variants and to provide required analyses, are needed. These premises are, in any case, an expression of intentions and goals.

Basic conceptual principles of long-range plans can be divided into two groups. The first, and usually most extensive one, includes general principles which can be applied in every big city. Such principles express the need of rational land use and functional coordination and the necessity of the improvement of physical and aesthetic standards of human environment. These principles can be found in books on urban planning and they are sometimes considered very objective. Such principles are not, of course, unbiased by the level of our knowledge and by the emphasis of a given period of time toward specific aspects of a city pattern and its functional and spatial arrangement.
The second group of principles in long-range plans is expressed quite anemically and often not mentioned at all. I have in mind such principles which try to react to specific conditions and needs of a given city and/or city-region. The danger of subjectivism in this sort of assumption is much more obvious, but in reality is the same as in the first group. I consider such specific conceptual principles as more important and more closely connected with the uniqueness of a given city. Perhaps my conviction is also related with my experience in Prague, whose uniqueness is notable.

I tried to follow the above mentioned attitudes in the formulation of the basic conceptual principles and objectives of our study of the Agglomeration of Prague. I am aware that these intentions are not adequately expressed in authentic formulations, which are quite general and imperfect.

However, the evidence of extreme difficulty in expressing such basic conceptual principles are not only premises of the long-range plan of Prague, but also the analogous studies of Detroit. If we look on basic objectives of the Master Plan of Detroit, we can see that they are also quite universal and the specific features of the city are expressed only through mentioning the riverfront.

Assumptions and criteria of the Urban Detroit Area Research Project are elaborated and detailed, and they emanate from the ekistic elements of nature, man, society,
and urban structure. Its practical formulation cannot
evoke doubts, whether or not they really cover the most
important aspects of the further development of the Detroit
Area. The emphasis on transportation aspects is especially
challenging.

Another approach was chosen in the Detroit Regional
Transportation and Land Use Study. In this study the
formulation of conceptual premises and objectives was
distributed to the different phases of the study. The
general formulation of goals is the subject of the
Preliminary Statement of Talus Goals and Objectives, issued
April 15, 1969. There the main goal is formulated generally
as "to improve the quality of the environment". This
statement is followed by a quite descriptive expression
of so-called "major issues" in transportation, public
transportation, housing, and recreation. Subjectively,
I would like to see these objectives in more consistent
and exact form.

The problem of adequate elaboration of the basic
premises in every long-range plan cannot be neglected.
In the case of Prague, we discussed these objectives with
the City Council. This was the expression of the fact
that such premises and principles as the social and cultural
goals of planning are formulated. Subsequently, they are
a sort of social request.
The stress given to this primary step cannot be exaggerated. But, of course, an excellent and relevant set of objectives is only one of the conditions and not a guarantee of the quality of the final solution. The objectives and premises should be challenging enough, but not only idealistic dreams uninterrelated to short-range demands and without feasible tools of implementation.
III. CONCLUSIONS

I am rather hesitant to use the title "conclusions" for the last part of my paper. I don't intend to draw conclusions in a form of general and omnipotent commandments. I would like only to express reflections, which I very subjectively consider as important for the general position of long-range planning in our complicated world.

If we look on the history of cities in the world, we are not able to say that only planned cities succeeded and were beautiful and non-planned cities were unsuccessful and ugly. In addition, we have no pure planned and pure non-planned ones. In the majority of them planning and non-planning are intricately intermixed.

Every society begins its life in old cities inherited from the past and adjusts these cities to its specific needs. Such adjustment is not a short procedure and is connected with the spending of vast material and mental resources. It is not astonishing that the society unconsciously tries to solve this task in the most effective way, concentrating only on priorities connected with its survival. With omission of this fact many surprises are connected in implementation of our projects and plans.

Many old cities grew spontaneously as organisms without planning and without any artistic intentions. Now we admire them as works of art and as an ideal environment of man.
Unfortunately, the number of such cities have diminished more and more as time has advanced. Trying to discover the reason for this disconsolate finding, we cannot forget Walt Whitman's words, that "to have great poets, there must be great audiences, too". This assertion is very near to the observation of the famous European architect Adolf Loos, that "every city has those architects (and architecture and planning too - my remark) which it deserves". Indeed, every city is first of all the reflection of society, which tries to create its cities to serve their needs in the best way. Unconsciously, every society forms its cities as an adequate image of itself and as an eloquent message about itself to the world and to the future.

The bond between society and its cities is particularly expressed in the reflection of the basic hierarchy of our cities' social values in a given society. In this field the interrelation is undeniable, and obvious in the whole social geography of cities, in the location of buildings and amenities according to their genuine social importance, in the whole settlement network. Today it is fashionable to ask whether the ugliness and urban chaos are the price of freedom. I am not sure whether we can suspect that the expression of real human freedom is just ugliness and urban chaos. Perhaps the ugliness of cities is merely the expression of the very low but actual position of environmental and aesthetic aspects in the generally valid and accepted - though not pronounced - hierarch of values in a given epoch.
Such findings are not encouraging and could lead to the
decision to "scratch our match". However, the history of the
development of our cities shows that every period of history
and every society is able to create both ugly and beautiful,
failing and prosperous cities. No unambiguous and specific
physical pattern is connected with a specific pattern of
social order.

Every specific pattern of a city is not only a message
of this city to the world, but also a message directed to
its own inhabitants. In this sense, the city is not a passive
copy of a societal pattern, but an active generator of
positive and unfortunately, negative developments in the life-
style of its people and of the society as a whole.

This finding is more encouraging for us. On a highest
level we are again at the question of means and goals. Is
planning in itself our goal, or are our real goals well arranged
and reasonably functioning cities?

Our involvement in planning is the cause of our optical
deception and we sometimes see planning as a goal and not as
a means. Extremely, it could be said that we would be most
happy to see reasonable development in our cities without
any planning at all. We envy our ancestors' certainty of
expression which was the basis of a balanced style of life
and also the basis for balanced communities in a social and
physical sense. The consciousness of our imperfect planning
methods is one of the reasons for such envy. We know very
well that it is possible to plan nonsense even having sufficient tools to implement them.

Our methods of urban and regional planning are in the first stages of their development and refinement. In this connection it is quite natural to attempt to express in the end of this paper the basic fields of science and research which are of first priority for the further development of our professional activity and which are very tightly connected with comparative planning. I do not intend to cover the whole vast field of science and research in urbanization, and urban and regional planning. I would better try to underline the two major tasks:

a. The recognition and analysis of the basic creative forces of development in our cities and settlement network as a whole - not only in terms of general principles but in very concrete consequences for their physical arrangement. It seems to me, in our professional field we move almost as blindmen concentrating predominantly on the most evident demonstrations but not on the most decisive forming and disordering forces of our cities. We are too busy in following fashions and not busy enough in concerning ourselves with roots.

b. The recognition and analysis of basic sources for the uniqueness of our cities and settlements - not only as a basis for preservation of that uniqueness, but first of all for its further development and reinforcement.
It seems to me that we are too busy with unification of our human environment. This unification is one of the expressions of our time and, unfortunately, does not need our support. On the contrary, the uniqueness and diversification are suppressed and do need help as the basic human values of our environment.

In this effort more science is desirable - but science without illusions of perfection; science which would not contradict art as an inseparable part of our professional effort; science as launching pads for imagination.

In such a way both planning science and planning art are inseparable parts of our professional activity, focused on the creation of a better human environment in our cities and city-regions.