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PROBLEMS OF DEVELOPMENT OF METROPOLITAN REGIONS

by

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A. General remarks

1. Problems relating to spatial planning cannot be considered without :
   - analytical knowledge of environment,
   - synthetic comprehension of the factors which, in a historic cross-section, have led to the actual state of the given urban agglomeration.

2. Every urban agglomoration (just as every smaller town and settlement) represents an individual spatial, social and demographic phenomenon. This is why those phenomena cannot be generalized, and all the more so - no solutions incompatible with the development direction optimal for the given agglomeration can be imposed.

3. In this conjunction one can notice an analogy to medicine which deals with live human organisms each of which requires individual diagnoses. But the diagnoses, though as varied in their substance as people themselves are varied, have to correspond, nevertheless, to the general principles of treatment, that is to say, to the general regularities of normal development of man. By traversty of this analogy one can find that there are regularities, too, as regards development of towns and settlements. Their knowledge will

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x) The above remarks are by way of recapitulation of results of research on this question which the author has been carrying for quite some time.

make it possible to plan further urbanisation in such a way as to ensure its conformity with those regularities thereby preventing discrepancy with the basical requirements of man.

4. It has to be stressed that the increased urbanisation of the 20th century is an inevitable regularity. After all, birth rate of the developed countries will tend to focus not in th countryside but in urban centres. That is why growth of tow should not be held as a deplorable development nor should it be restrained, on the contrary, it ought to be managed in th optimal direction adopted.

5. Management of town development has to be exercised within th framework of national and regional plans exceeding considerably the narrow bounds of the local urbanistic plans. This should be linked with efforts to ensure proper balance between urban areas, on the one hand, and the food producing agricultural areas, forests and waters, on the other.

6. Towns manifest a tendency to expand into agglomerations. Whi elongating along clusters of communication (transport) tract the agglomerations, in turn, change into linear units which embrace entire regions and even countries. Those urbanised tracts will form a large, spatial network which should encom pass stretches of farmland and forest areas unsploit by urba nisation. Such a pattern does not bear a character of an im posed scheme - already today one observes the appearance, bo in Europe and in North America, of linear urbanised belts cr crossing entire countries.

7. The tendency to create linear urbanisation patterns favours direct contact between the settled areas and open stretches. One notes a trend towards transformation of concentric urban patterns into radial - linear ones. This tendency is conduc

scattering them all over localities which do not, as yet, exceed the scale acceptable from the point of view of internal pedestrian traffic.

8. Excessive industrialisation should not be forced, nor, what follows, excessive urbanisation should not be postulated within the bounds of agricultural and forest areas situated beyond the basical urbanisation tracts. It is there where smaller locaties will be situated, linked to the agricultural as well as resort areas to be frequented by inhabitants of the nearby urban agglomerations.

9. As a synthetic resume of extensive studies those remarks seek to underline once again the significance of complex, country-wide spatial planning on the basis of analysis of phenomena and facts. Development directions typical for each town have to be examined against the background of interests of whole country and of the theoretical development regularities which manifest themselves in the course of formation of large metropolitan aggomerations.

B. Spatial structure of town and its region

10. In order to determine the optimal spatial structure of a developing town against the background of its region it is necessary to define particular elements of the urbanised area and its surrounding.

I propose to make the following division of town appraoched jointly - with its region :

- full urban investments territory,
- areas adjacent to town,
- direct gravitation zone,
- indirect gravitation zone,
- farther hinterland of town.

17. The above analysis is valid for monocentric agglomerations, that is to say, such ones which have a distinctly defined urban centre as the fundamental nucleus of urbanisation. Analogical studies can be made with regard to polycentric agglomerations.

C. Optimal spatial patterns of agglomeration

18. On the basis of the definitions formulated above it will be much easier to arrive at the right conclusions. If the gradual transformation of towns into urban agglomerations is to be regarded as a regularity - then a question arises whether optimal forms of this development can be established at all.

An arbitrary limitation of growth of agglomerations would conflict with the theory claiming that urbanisation is nowadays both economic and social regularity. However, treating agglomeration as a whole one can assume that it will not grow over and beyond a sensible size of its mother town (compare item 11, a+b). Therefore, an optimal size of town itself can be fixed, i.e. such a number of inhabitants which will not ultimately result in disturbing town's biological and social balance.

This size will depend on local conditions, density of buildin upon character of the town itself. The point is not to exploit the maximum of absorbtion capability of the given area but to secure essential optimal living conditions for its inhabitants. In such cases very frequently the factor of social worthwhileness should prevail over immediate economic worthwhileness.

19. The establishment of an optimal size of mother town does not preclude further expansion of its agglomeration which as a whole ought to perform the tasks allocated to it under national economic plan.

20. To preserve biological balance of entire agglomeration it is indispensable that :

(a) in its development the mother town does not exceed optimal size;
(b) the zone of direct gravitation around it does not change its character and continues to preserve a reservoir of green stretches, free from utilitarian development;
(c) further expansion of the agglomeration is effected through development of the localities situated within the bounds of the zone of indirect gravitation.

21. In this way one arrives at a thesis that in monocentric agglomeration (which include most of metropolitan regions) their development should lead to the mother town attaining its fixed optimal size, the further development afterwards passing by the zone of direct gravitation and switching instead to localities situated within the outer agglomeration belt.

Thus, alleviation and deglomeration of the mother town will be attained without having to limit further development of its agglomeration while retaining green stretches within its bounds for good.

D. Determination of optimal development directions of large towns

22. An analysis of historical growth of large towns reveals some regularities of development. For, in fact, one can observe permanent tendencies of towns to develop in definite directions conditioned by topographic factors or by micro-climate (for example, river valleys or the prevailing wind directions).

Examination of those phenomena leads to establishment of such town development directions which can be called natural directions. If the planned direction of development of urban agglomeration coincides with the natural direction then one can expect that the plan will yield optimal results.

23. In a prevailing number of large metropolitan agglomerations their development proceeds radially along the existing commu nication (transport) tracts (i.e. railways and highways). Those tracts, particularly railways, had been constructed without due regard to the prospects of town development. Tha is why, too, one frequently observes development of metropo- lies along of incidental expansion directions, often running in a straight line, occasionally contradicting strickingly the natural development directions.

24. Concentrically growing towns expanded due to mere addition of new quarters to the old ones. This development method may be called extrapolation to the outside of the existing development as it boils down to a purely mechanical prolonga tion of the actually existing pattern and tracts. It was no always running in the optimal direction and was often subjec to circumstantial pressures.

25. The following three contingencies:

I. natural development directions,

II. incidental development directions,

III. extrapolatory development directions:

are especially distinct in the large, concentrically deve ing metropolitan agglomerations. It is highly probable t putting their expansion on to a course coinciding with th direction of their natural development will result in arr ging them into a linear pattern.

26. It has to be pointed out that concentric patterns (which are still being consolidated by the pattern of satellite towns) lead to ever larger condensation of their central areas. Hen in conditions of substantial increase of the volume of vehic traffic elongated urbanistic patterns become to emerge which make it possible to :

- reduce concentration in the urban centre;
- establish a longer line of direct contact between built-up areas and open stretches of greenery;
- bring down to man's scale the particular settlement elements of the given agglomeration.

27. In that way the once incidental development directions may in a more distant future become an axis of elongated urbanised patterns, characteristics for metropolitan agglomerations of the second half of the 20th century. If those dir tions coincide also with the natural development directions then it is possible to regard their general resultant as op timal in the given conditions. If, on the other hand, furt development of metropolitan agglomeration tends to emphasiz a concentric character of the pattern, then nothing will do short of application of the recommendations referred to und item 20.

E. Spatial scale of urban agglomeration

28. Recongnition of development of large urban agglomeration as a regularity of present-day urbanisation is linked with a need for creation of optimal living conditions for their inhabitants. This implies not only ensuring adequate housing conditions but also ensuring man's biological balance in an urban environment. This can be achieved by means of moderation in designing which will guarantee securing solutions th notwithstanding their enormity, will be adjusted to man's sc

29. This will manifest itself through :

(a) determination of such an optimal size of subsidiary localiti forming part of metropolitan agglomeration which will keep their range well within the scale of walking distance of the centre - a postulate which may mean a settlement of maximum 70 to 80,000 population,

(b) ensuring a direct contact of those settlements with open str ches of greenery while, at the same time, working against their merger into one compact organism,

(c) provision of best possible facilities for the local pedest- rain traffic by separating it from the vehicle traffic lanes, es pecially inside service centres.

A further postulate is harmonious alternation of technics, architecture and greenery within large agglomerations in a manne not to overwhelm man with a pompous immensity of design.

30. It has to be observed that the trend towards scattering (deg meration) of towns which is noted presently is not merely a consequence of either economic or technical requirements. Ove populated and excessively concentrated towns are not more ec nomical as regards either costs of construction or maintenanc costs. Overconcentration involves concentration of traffic which, in turn, involves the need of securing immense reserv of land to allow for road construction and parking areas both of which bear heavily on the over-concentrated town.

Man's self defense against excessive concentration manifes itself in his keeness to flee town noise and over-crowding. Th sociological factor is one of the reasons accounting for the gr of scattered urban agglomerations.

Therefore, while speaking about the need to retain man's sc in detailed solutions - it is also necessary to remember about scale when determining the pattern of spatial structure of larg metropolitan agglomerations.

F. Problems pertaining to town centres

31. This will be combined with determination of future fate of town centres which constitute the main area of people's con tacts. There are distinuished several cases:

(a) town centre not change its location

- in such a case every generation strives to contribute to its successive modernisation thus wrecking the forms shaped by the previous generations,

(b) town centre gradually shifts in an optimal direction

- that being the case, when there is a chance of preserving heritage of the previous generations and enriching them with new values contemporary in each case. The old town centre may continue to discharge its functions to a limited extent, adjoining the new town centre,

(c) new town centre moves away from the given pattern forming a parallel one. This involves transformation of the monocentric agglomeration into a polycentric one,

(d) new town centre transfers from the settled areas to develop outside, where urban build-up will not hamper its accessibility. This amounts to returning to the historical concept of a "cross roads inn" and it may well constitute a new stage not only of development but also internal transformation of the agglomeration.

32. It is much cheaper to build new than over and over again transform old. This, therefore, accounts for the fact that such solutions prevail which do not necessitate demolishing of what the previous generations had accomplished. I deem it only proper to emphasize the importance of the theory of moving away of town centres as one which allows of technical advantages that are more easily adaptable to man's scale and scope of his requirements.

33. However, in order to erect a new town centre alongside of the old one without, at the same time, having to demolish the old,

it is necessary to reserve well in advance appropriate area Hence the postulate that every spatial plan should firmly step in to reserve such free land which could serve whatever building purposes future generations might deem proper This land could be provisionally used as green areas.

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34. To sum up the above reasoning one can say that:

I. development of large metropolitan agglomeration constitu a regularity resulting from economic, sociological and t nical premises,

II. this process needs not to be slowed down or stopped but should rather be directed in a manner ensuring biological balance between the urbanised and green, undeveloped are

III. this balance can be attained through a purposeful planni of the structure of agglomeration as regards both its internal content and spatial form,

IV. development of agglomeration should stem from accuring o new values which are contributed to it by the successive generations,

V. the results attained should not be measured only accordi to whether they are economically worthwhile but also according to the extent to which they are worthwhile socia and concerned for man's welfare,

VI. development of large metropolitan agglomerations must be coordinated with national plan. This can only be ensure if spatial planning and economic planning are one, repre ting the basic of development of the given nation and country.