

Committee III
Human Beings and the Urban Environment:
The Future Metropolis

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THE EUROPEAN METROPOLIS

by

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1. Introductory remarks

This paper on European metropolis is based on the assumption, that in the future

- roughly 80% of human settlements will be of urban character,
- therefore urban population will dominate in human society and
- especially in underdeveloped areas of the world extremely fast growing giant metropolitan areas threaten to overthrow balanced development in the respective countries.

The future of urbanisation in such areas is of importance to all, as a somewhat balanced economic, social and cultural development in underdeveloped areas is essential for the whole world.

Compared with giant metropolitan areas in Asia and South-America, metropolis in "good old Europe" on first sight seems of little relevance to find solutions for development orders in the third world. Also a conference paper, covering just a bit more than thirty pages, is forced to simplify, to concentrate and overstress, thus increasing room for misunderstandings. Nevertheless, such risks should be taken, as otherwise world-wide communication between the sciences in direct personal discussions - as an international conference offers - would not be possible.

We will deal with metropolis in Western-Europe, as socialist countries will be dealt with more competently in another paper. We will also have to concentrate on some major Western-European countries, such as the United Kingdom of Great Britain (Britain), the Republic of France (France), the Republic of Italy (Italy) and the Federal Republic of Germany (West-Germany), adding a number of side-glances to others. These countries offer a reasonable basis of comparison, as they show significant similarities as well as differences, possibly allow some conclusions on goals and policies in other regions to cope with metropolis. Nevertheless we

should keep in mind, that every region has its own specific characteristics of location, population, economy etc., which do not allow simply to copy the goals, approaches, methods or devices of others.

2. Basic developments in European metropolises

2.1 Basic data

Regarding the development of European population, its distribution and urbanisation, we must have in mind, that during the last three centuries Europeans have left their respective countries of origin in several big waves of emigration to North- and South-America, Australia and the southern parts of Africa. Thus, relatively seen, the population of Europe has been balanced to a considerable extent by intercontinental population movements, avoiding overpopulation and numerous giant metropolitan regions, both of which would have developed otherwise without any doubt.

Referring to the four countries mainly to be considered, Britain as well as Italy and West-Germany come quite close to each other regarding their population (roughly between 56 and 61 million) and their area (roughly between 244 000 and 301 000 square kilometers). France has a similar population (roughly 55 million), yet double of the area of the others (roughly 547 000 square kilometers). All of the four countries are considered to be industrialised, the rate of industrialisation in Britain and West-Germany being higher than in the other two.

2.2 Population and urbanisation

Urbanisation in European countries is generally considered to be rather far developed - in some highly industrialised countries (for instance Britain and West-Germany) around 80% of the total population. Nevertheless there are significant differences, which we will deal with in later chapters.

European countries in the last two decades have experienced an

overall drop in the birth-rate, which varies between the countries only in extent. Although movements are not totally simultaneous, it is nonetheless significant, not only that the drop began almost everywhere in 1964, but also that fertility variations in the four countries mainly considered, are broadly parallel. This development is part of a general European movement, with only differences in timing. The population of Western Europe (including Yugoslavia) comes up to very roughly 380 million.

Whereas demographic development has direct effects on the growth-rate, it does not appear to have entailed in short or medium terms an automatic drop in urbanisation. Migration from agrarian to urbanised areas occurs, while population in general is stable or even decreasing. In recent years migrations in industrialised countries of Western-Europe have tended towards smaller and medium sized towns. Villages and very small towns on one side as well as very large towns and metropolitan areas on the other are in some cases beginning to decrease in population.

2.3 Territory and urbanisation

The Netherlands with 334 inhabitants per square-kilometer, Belgium with 320, West-Germany and Britain with respectively 249 and 229 inhabitants per square-kilometer are countries with rather high density. Italy is still above average (185 inh./km²), Denmark (117 inh. per km²) and France (100 inh./km²) range in the average. With less than 20 inhabitants per square-kilometer Sweden, Norway and Finland for example have a very low density.

The countries of Western-Europe have each inherited an urban structure, which is the product of centuries in history.

- The organisation of French territory since the monarchy has been affected by the influence of Paris. Subsequent centralisation of decision making bodies, national economy, network of transport and communications have continuously strengthened the supremacy of Paris over the rest of the country. Recent policies to lessen such domination have so far shown only slight effects.

- The history of Britain also is characterised by the preponderance of London as capital of the Empire. London though has not prevented the development of other large cities. Until recently London derived its wealth and growth not so much from its centralising control over the whole of the British isles, than from its function as capital of the Empire. In Britain also the vigour of industrialisation enabled the existence of other large cities. Nevertheless, compared for instance with urban distribution in West-Germany, London still forms a relatively strong one-sided concentration.
- Italy is presently characterised strongly by the contrast between north and south. Its urban structure is rather particular - numerous cities were former capitals of principalities, whose relationship to and share in the overall economy remains highly differentiated. The influence of smaller and medium-sized towns is growing steadily.
- West-Germany has preserved a relatively very strong balance and diversity of urban structure. With eleven large cities with more than 500 000 inhabitants, of which only two (Hamburg and Munich) have a population of more than a million, it is a country not only notable for the balanced regional distribution of these eleven cities, but also of the complementary balanced distribution of smaller towns in a hierarchy ranging from 10 000 to 500 000 in population.
- The Benelux-countries also show only marks of imbalance in regional distribution. "Randstad Holland" in the Netherlands, the growth of Antwerp together with recent foreign investments in the north of Belgium and the proximity of the agglomerations of the Ruhr- as well as the Rhine-valley in West-Germany have made industrial influence felt almost throughout the territory of these countries.
- Austria, Norway, Portugal and Sweden for instance show a fairly weak urban structure. Their highest population density lies solely with the regions of their capitals, which roughly contain 30%

of the respective total population or even more.

European towns with a population between 100 000 and 500 000 are quite evenly distributed. In Britain, France and West-Germany roughly the same number of inhabitants lives in almost the same number of such towns (45 towns with roughly 9 million inhabitants in France and West-Germany and 50 towns in Britain with roughly 8.5 million inhabitants). We must keep in mind though, that the French urban population is 8 to 10 million less than that of the other two.

2.4 Metropolitan urbanisation

If we focus on metropolitan regions of more than a million in population, the scenario in the selected countries begins to differ strongly. In such metropolitan regions roughly are concentrated in:

- Britain 26.5 million in 6 regions (47% of total population)
- West-Germany 16 million in 7 regions (26% of total population)
- Italy 13.2 million in 4 regions (23% of total population)
- France 13.2 million in 2 regions (25% of total population).

Britain and France differ from the other two especially by their all-overriding national metropolis (London and Paris). Such observations show, that population in Britain is by far more one-sidedly concentrated than in any of the other three, which also means in any other European country. Next to Britain, France shows the strongest one-sided concentration, followed by Italy.

In terms of a metropolis we are used to think of growth in population and physical expansion. Yet a number of European metropolitan regions has come to stagnation or even decrease of population, the reasons of which we will discuss later.

Many European metropolitan regions have experienced a loss of central functions, the most outstanding example being Vienna, in late medieval times as capital of the "Holy Roman Empire" one of the strongest political, cultural and trade centres of Europe. When this empire dissolved, Vienna lost the capital function automatically. As a result of World-War I Vienna also lost the function as capital of the Austro-Hungarian Double Monarchy, leaving it as an overdimensioned

capital of Austria, holding one third of the national population. Similarly, but with less effects, London, Paris, Madrid, Lisbon and others lost metropolitan functions for more or less vast colonial empires. Berlin lost its capital function for a united nation, Hamburg its port function for a vast hinterland of East-Germany, Poland, Tchekoslovakia and even parts of the U.S.S.R. Nevertheless, except of Vienna, most metropolitan regions of Western-Europe still expanded considerably even into the second half of this century, not so much by birth-rates, but by migration.

In general three great migrations are common to all advanced countries of the West. The first, a movement from rural settlements to the towns, started in the 18th and 19th centuries and has now almost come to an end, although not completely (see Italy). The second migration, from the inner districts of towns to their suburbs increased considerably in the beginning of the 1950's with the growth of personal prosperity (especially allowing car-ownership) and due to changes in the demographic structure (being backed up by very high subsidies in housing). The third, presently dominating migration is from the old industrial regions to the growth-centres of modern industries, especially commerce, communication and government in connection with favourable locations of transportation. The results of such migrations we have seen already.

One basic reason explains in context with others of less importance the difference of developments. Britain and France for instance traditionally were ruled by strict central government systems for centuries. Germany and Italy in their today's appearance are rather young, having been shaped out of a large number of small states or principalities with capitals and metropolitan regions of their own. West-Germany has decided to keep up the federal system according to long tradition. The powers of the federal states and communes are therefore based on very strong legislative functions and financial resources, both cutting down central governments influence considerably. As West-German communes receive funds from both, the central government and the respective federal state, the influence of both

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is diminished by balance of power. Distribution of power and resources we will find in similar dimension in Europe only in Switzerland. The proportion of own tax-income within the total budget-income of West-German towns averages around 60 to 65%, a percentage towns in other countries usually could only dream of. Such local powers and resources undoubtedly incite strong local initiatives and activities. They also create strong and competent local administrations.

In order also to level out extreme fiscal disparities, in West-Germany there exists tax-base-sharing on both levels, "poorer" states receiving a tax share from "richer" states, "poorer" communes from "richer".

Federal government has also decentralised its own administrative tasks in a number of cases, by delegating such tasks to the administration of the federal states, who in turn have decentralised their administration on regional levels.

Two further factors of post-war development in West-Germany have supported decentralisation.

In the first case West-Germany had to deal with more than 10 million East-German refugees, pouring in as result of World-War II within a period of a few years only, searching for housing shelter and future working-places in a highly devastated country. Small and medium-sized towns as well as rural villages were the first address for people, because such areas were the only still being at least somewhat intact. Also millions of citizens during the war eventually moved out of the bombed towns into small towns and villages, a considerable part of whom never returned. Thus the growth of almost all towns ranging in size between 10 000 and 50 000 inhabitants since 1945 has been much greater (very often doubling in population and more) than that of towns with a population of more than 100 000. As a result, during the 50's and 60's also industries - especially small growing industries - searched the locations of the labour power in towns with a population between 20 000 and 100 000.

In the second case during the 50's, federal legislation started a

specific programme of limited property redistribution. Every federal citizen had to pay into a public fund ten percent of the value of his property. This fund was installed to support all persons of German origin, who had become refugees and/or lost their property due to World-War II. Millions of persons made use of this fund as starting capital for a new small business and/or a new home, usually within the small town they had found shelter, leading to remarkable initiatives even in rural areas.

Due to this development West-Germany's population distribution is relatively well stabilised, no overriding national metropolis has come to existence and thus no such urgent national policy as the new-towns act in Britain became necessary.

The situation in Britain, France and Italy was not so. Post-war migrations in these countries concentrated by far overproportionally respectively on London, Paris and Northern-Italy. The metropolitan regions of Paris and London each come up to roughly 11 million population, which is more than double of the largest German and more than three-times of the largest Italian agglomeration. These migrations in Britain, France and Italy have led towards a serious imbalance not only of population distribution, but also economic strength.

The conurbations of the Mid-Lands and South-East-England, of Paris, the Benelux countries, the Western-Ruhr-Valley, the Rhine-Valley, Switzerland and Northern-Italy constitute together a potential megalopolis in which a population of more than a hundred million is concentrated. Unless this basin of high intensity and attractivity for population and economy is fairly balanced against the other regions in Europe, this megalopolis might come to resemble that of the North-Eastern seaboard of the United States or that in East-Japan. This zone also is called the "Italy-Britain-Axis" ("It-Brit-Axis"), in which the Rhine-basin occupies a central function and position. Offshoots are the Paris region, the Eastern-Ruhr-Valley and in lesser extent the regions of Hamburg, Munich, Lyon-St.Etienne and Marseille-Fos. (see appendix I)

Three major factors have determined the development of metropolis

and of national distribution disparities in Europe:

- Mineral deposits, a physical factor which gradually has lost its former predominance.
- The "Italy-Britain-Axis", a second physical factor of location preference, which has increased steadily in gravity.
- The Government-System, a non-physical factor of great influence, determined by human will.

To deal with the problems, that have arisen and which were to be expected furtheron, Britain since 1945 has virtually launched an extraordinary national policy with priority objectives and respective legislative as well as administrative mechanisms pursuing the following goals:

- Green-belts in large scale to prevent physical expansion of the large conurbations, especially London.
- New- and planned Expanding-Towns beyond the green-belts and in undeveloped areas to steer the pressures of growth.
- Control of new factory- and office-building to counteract existing imbalance.

and

- Renewal of the inner districts of congested areas to create better environmental conditions for both, housing and industries.

Since 1945 almost 30 New- and Expanding-Towns have appeared, all implementing the above mentioned strategies, the green-belt so far having been held free from unwanted developments generally. It is important to see this policy in the national as well as regional context, the New- and Expanding-Towns having been located and sized either for reasons, concerned with national policies or in implementation of regional plans, such as the Greater-London- or the Clyde-Valley-Plan. Nevertheless we should also note, that a higher proportion of the migration out of London has turned towards existing towns.

This great effort could not though hold up the decay of the inner cores of congested conurbations; the historical burden was too hea-

vy. Slumming in such areas grew rapidly. Permanent incitements for revitalisation, especially new dynamic industries and services were lacking, also due to implicit national distribution policies. Young and/or active population did not move in, but out into the New- or Expanding-Towns, leaving old and/or inactive population in the congested areas. Also socially weak alien population from all over the Commonwealth poured into these regions, ahead of all into the inner core of London.

During this process therefore in further steps complementary measures of significance were taken by British Government respectively Parliament.

- British local bodies received a greater proportion on own financial resources.
- Development corporations, similar to those for New-Towns, were installed for totally decayed areas, for instance for the London Docks and Liverpool Dock.
- Means for modernisation and rehabilitation of housing were increased.
- and
- Very recently British Government has begun to favour the growth of existing towns to the building of New-Towns.

At this point we will leave it to the remark, that the increase of local financial resources seems to have been too half-hearted and the installment of development corporations for spectacular sites too pinpointed, leaving the rest of vast slummed areas unsolved.

France since approximately twenty years has acted similarly, by installing formidable new-towns, which will be dealt with in a later chapter. In addition, by legislative steps recently, the French regional state administration (departements) was turned into a body of local selfdependant administration with restricted rights and financial resources. Comments on the effects of this latter policy would be too early at the present moment. We should note though, that the self-dependance of French local authorities even now by far not reaches that of Swiss and West-German local authorities.

Italy also took steps in direction of decentralisation. In post-war development new provinces were planned by constitution. Yet, up to date only a few of these provinces seem to have been called into real existence.

2.5 Tertiarisation and metropolitan urbanisation

We have been witnessing a reversal of tendencies in Europe in the field of employment structure - tertiary industries and services growing much faster, than those of the secondary sector since the end of World-War II, absorbing all surplus-manpower up to the end of the 70's. This inbetween development has come to a certain stop, as rationalisation and automation of the white-collar working-places have begun to show effects.

Certain services, which used to be provided in regional capitals and very large towns, in post-war development have begun to appear in smaller and medium-sized towns. The growth of such towns in Europe since the 50's is due more to the relative growth of services (private and public), than to that of producing industries.

The situation is different with regard to services provided for industry. Their location has so far been conditioned by the presence of large scale industrial activities. Industrial redistribution tends to separate in space the producing activities from service activities for industry (banks, insurance companies, service companies, advisory agencies etc.). Therefore subordinate tertiary functions are those that are decentralised, whereas their superior administrative functions tend towards the capitals.

In this respect in Britain and France we have a three-tier system - the London respectively Paris regions, in which the real power (political, financial, multinational etc.) is concentrated, a few regional capitals in which tertiary functions of regional management are localised and the rest of these countries. West-Germany on the other side has a scattered distribution of industrial-, tertiary-, management- and other decision-making-centres almost throughout her territory. A multi-headed financial and other tertiary-management structure correspondes with a decentralised concentration of industry,

both again corresponding with decentralised political decision-making in 8 regions having capital functions of state or federal government.

2.6 New-Towns and metropolitan urbanisation

Due to rapidly expanding needs per capita of population in housing, which will be dealt with in a later chapter, added up in some cases by streams of refugees and in other cases of alien people on one side and considerable losses of housing due to war effects or decay on the other, in many European countries new housing in context with new working-places has played a dominant role in metropolitan development. Only recently new housing has lost its dominant role as expansion of metropolitan areas in Europe has slowed down considerably or even come to a stop.

In the post-war period the approach to new housing differed strongly in the various countries. In Switzerland and West-Germany, both having a rather balanced distribution of their population, new housing was left almost totally to the regional and local bodies in context with private initiatives, which also means, that new housing took place usually in existing towns.

As we have already observed, other countries had to cope with very one-sided migrations. Therefore for instance also Sweden, similar to Britain and France, planned and built new satellite towns for Stockholm. These satellite towns were not conceived in a self-dependant dimension as were the British New-Towns. Nevertheless they also differed from normal housing settlements, having their own civic centre, a certain amount of working-places and being of a size similar to that of the first British New-Towns.

Self-dependant New-Towns constituted an original form of urbanisation, systematically introduced on a broad level by the "New-Towns-Act" from 1946 in Britain and adopted since then by other European countries, especially France.

The first British New-Towns were expected to take a population of 30 to 50 000 and were conceived in a sufficient distance from the

built up areas of London, in order to secure self-dependance from the capital. The 14 New-Towns created after World-War II today are well integrated into the urban structure of their region. Yet, these New-Towns did not stop the growth of London really. These towns were planned and built to take up small and medium-sized industries and local services. Large and expanding producing industries as well as the managemnt level of the tertiary sector could not be located in these New-Towns.

The second "generation" of 11 Expanding-Towns denotes a rather radical change in conception and scale. These towns were planned for a size of eventually even up to 400 000 in population, are developed out of existing towns and are intended to also take up larger producing industries and even the managerial level of the tertiary sector.

The 9 New-Towns in France were conceived as distinct urban areas, playing a structuring role in economically highly developed regions. The aim of these New-Towns was not to correct the imbalance of the French regional structure, which means a different approach than that of Britain. The goals of size originally already were set for a population between 100 000 and 300 000. In siting the 5 New-Towns of the Paris region, account was nevertheless taken of the experience gained from the first New-Towns of Greater London. The 4 New-Towns in the French "provinces" must be seen in the context of restructuring the area of a local capital. This policy includes only such local capitals, which help to integrate developed regions more firmly into the exchange and production networks of advanced industrial society.

While one of the purposes of the New-Towns is to absorb surplus population, they are on the other side also conditioned by economic developments of national and international scale (see the fast change of development of tertiary industries and services). For this reason it seems that the switch in British New-Town policy is not solely due to decrease in population growth. Over all we can observe in recent years a tendency in Europe leading away from the concept of New-Towns towards expanding and restructuring existing towns.

2.7 Some side-glances

Discussing European metropolis we should also mention some new developments, which were rather unknown to Europeans up to World-War II.

For instance many metropolitan regions especially in Britain, France and West-Germany since the early 60's have experienced a strong immigration of alien population. This population moved into urban and not into rural areas, due to the economic motives of such immigration. This development has led to a number of serious problems. Difference in religion, economic goals, subsequent social behavior etc. have created aggressive relations between the original population and alien new-comers. In general the alien population remains underprivileged for years, most probably even for one or two generations, mainly to be seen as a major problem of adequate education.

The respective metropolitan region would have lost considerably in population if this immigration would not have occurred. Many working places at that time would not have been supplied with man power. Two figures from West-Germany may signify the dimension. Roughly 25% of the population of Frankfurt am Main are aliens and the Turks in Berlin (roughly 200 000) form the largest community of Turks outside of their homeland.

Similar dimensions and proportions can be observed in France (alien population mainly coming from the former French colonies in North-Africa and Indo-China) and Britain (alien population to a substantial part coming from Commonwealth countries, London being a centre of people from the West-Indies).

Politicians in Western-Europe since the beginning of the 70's have begun to develop policies of integration of such minorities. In the beginning it was thought necessary to spread aliens totally amongst local population and to forbid any kind of concentration. Presently policies pursue a decentralised concentration of alien population within urbanised regions.

Beginning with the sixties of this century a completely new kind of agglomeration has appeared in Europe as a result of prosperity. Along the European coast-line of the Mediterranean-Sea vacation-industry and -housing has virtually exploded, creating a kind of vacation-metropolis with very high densities, a sky-scraper landscape and traffic-congestions, which can compete with any kind of other metropolitan areas. An outstanding example can be seen at the Spanish "Costa del Sol" with a zone of extreme intensity of this kind reaching from Fuengirola in the West via Torremolinos, Malaga, Rincon and to Torre del Mar in the East.

Even less important "non-physical" measures than government- and taxation-systems can influence the quality of metropolitan regions strongly. For instance in all cases of toll-raising on auto-routes (free- or high-ways) a very high proportion especially of the heavy truck traffic avoids these auto-routes because of the toll. This means, that especially the trucks still virtually "bang" through villages, towns and cities even throughout the night! Thus toll-policy has become a severe threat to considerable parts of urban population. In Europe this is mainly the case with the mediterranean countries.

In context with continuously permitted increase of axle-loads of trucks in Europe, such policies show a further effect. Especially the historic roads in European cities in the long run cannot hold such axle-loads, they are destroyed in relatively short time and the municipalities have to maintain them with extreme costs. This means, that national governments introducing tolls to finance auto-routes, do this to the debit of the municipalities and of the health of urban population.

3. Sectorial problems of and goals for metropolitan areas

In spite of the limited space, some major sectorial topics should be discussed. To explain an overall material concept for a region, in context with the sectorial topics, including regional plans and the respective various procedures would cover a complete seminar lasting

for two semesters. We will start with housing and its environment, because also in future housing will maintain an important role in metropolitan development, especially in the third world.

3.1 Housing in metropolis

The British saying "my home is my castle" expresses best in short terms how important an adequate home is to human dignity. Whatever we plan and do, the human being will be in the centre of our thinking. Therefore for good reasons a high proportion of housing in Europe is subsidised. Due to the present situation in public finances throughout Europe, the total sum of housing subsidies in the respective countries has risen to a major budget policy problem, which in general means, that subsidies had to be or will have to be cut down considerably.

It would cover too much of space to describe the different systems of subsidies for housing. We shall leave it to the remark, that the systems range from tax-reduction schemes solely (Switzerland) to public housing mainly being planned, constructed, run and maintained by public authorities (council housing in Britain). Additional systems are: subsidies on the capital investment or on the interest rate of private houseowners (individuals, corporations as well as cooperatives) and direct, personal subsidies to tenants.

Two major factors have made housing so expensive, that troubles of considerable dimension lie ahead of us:

- Very high interest rate on investment, partly depending on international financial affairs, topping
- Very high housing costs (land, public utilities, building construction, maintenance, energy costs etc.).

This situation has led to rents in West-Germany, that are considered to be too high in average, leading to increasing personal subsidies also because of high standards in housing quality and maintenance. In Britain, where rents are kept very low, being fixed strictly by authorities, a vast decay of housing has spread, because the low rents often are not sufficient even for a reasonable maintenance.

The situation regarding "old housing" differs strongly in both countries.

In Britain fixed rents, difficult conditions on modernisation subsidies, high interest rates and taxation have so to say "overburdened" the broad mass of old housing. The state of maintenance and modernisation in vast areas of metropolitan conurbations is rather poor.

In West-Germany a tremendous war-loss has gradually turned into a remarkable gain. All large cities and conurbations lost a considerable amount of their housing (ranging from 20 to 30%) due to war events, mainly through bombing. The losses concentrated on the inner core of the cities, concerning buildings, which were the most liable for slumming. Thus maintenance and modernisation in West-Germany could be applied to buildings in average of much better condition than those in Britain and most of the other European countries.

It seems, that in most countries in both cases, new as well as old housing, the requirements for standards have been too high. Therefore in most countries presently a careful approach to new standards and a revision of existing standards is being discussed seriously.

In addition to the discussion about standards further influence factors should be considered, as there are:

- Never in European history comparable quantities and qualities of housing have been built than in the post-war period. From 1964 to 1973 (peak years of production) dwelling units were built in:
 - Britain - 3.8 million = 380 000 per annum in average
 - France - 4.4 million = 440 000 per annum in average
 - Italy - 3.1 million = 310 000 per annum in average
 - W-Germany 5.8 million = 580 000 per annum in average

These figures make clear, that we will have to expect a corresponding peak of general maintenance for housing beginning in the 90-s. This we must have in mind for future housing policies!

- Never in European history population has dwelled under better conditions, which does not mean, that conditions are satisfying.

In most of the more industrialised countries of Western-Europe, for instance, the average number of persons living in one dwelling unit before the war amounted to roughly 3.6 persons and today 2.2 persons. The average in each of the countries differs, but the tendency is identical. This means, that we had to provide for a metropolitan population of 1 million

- before the war roughly "only" 280 000 dwelling units, and
- in 1980 roughly 455 000 dwelling units!!!

This again means, that

- we had to provide for additional 175 000 dwelling units for the same already existing population of 1 million,
- we had to increase the built on area for housing in any metropolitan region by 65%, taking into use virgin land without population growth and without any change of building density, and
- we lost considerably more population in the inner core of the metropolitan and other urban areas by this structural effect, than by any other!

Anybody thinking, that this might go without a high bill being presented, is an illusionist! In this context we should also have in mind, that high subsidies naturally increase the demand on housing. This means, that we still have to find the right scale and balance of housing subsidies.

This is a structural development factor of prosperity, we should especially point at for planners in Asia and South-America. Most probably for decades giant metropolitan areas in these continents will expand in area considerably long after population growth has come to a stop or decrease. This is not a point for the near future, but certainly one, if we think in longer terms!

In the housing sector therefore the following goals should be pursued, priorities having to be set according to the situation of the

respective metropolitan area.

- New housing, modernisation of housing and continuous maintenance of housing are complementary and not alternative to each other.
- Maintenance of housing eventually should regain its normal character as permanent private activity - public policies should take into account this goal.
- Modernisation of housing should receive limited public assistance as stimulus and to slow down temporarily the subsequent rise of rents.
- Standards in housing are necessary, yet there is no need to set extraordinarily high standards; adequate differentiation of standards for new and for old housing is essential.
- Burdens of rents on one side and of subsidies on the other should underly a differentiated balance. It will be a prime duty of politicians to make clear to the citizens of their respective countries, that the home is one of the most precious goods of human mankind - not being of consuming character - for which everybody must be ready to pay a substantial portion of ones own income. If rents are held extremely low, public finances not being able to take the necessary burden instead, the lack of maintenance will at the far end be by far more costly for the citizen himself, than a limited and reasonable increase of rent will be.
- Housing districts should be organised in such a sense, that any kind of negative "stigma" for the whole district is avoided.
- Citizens should be offered a sufficiently differentiated supply and choice in housing in terms of age, standard, location, size and rent, so as to enable them to find a home in accordance with individual preferences and financial means. This should be a principle of metropolitan housing policy.
- Neighbourhoods should not be uniform in structure and appearance; the citizen should have reason to identify himself with his own environment due to its individuality. Prefabrication, strict technical norms and other regulations hinder the implementation of such goals.
- Improvement of the environment should play a dominant role on the

public side of action, which simultaneously should strive for re-establishing the historical characteristic of a district, thus supporting diversity within a metropolitan region.

3.2 Transportation within metropolis

Telecommunications experts seriously predict the chance of decentralising tertiary working-places to an extent, that a considerable proportion of the population can even work at home. This could save us a lot of traffic problems and of course of financial means in the future. We must doubt though, whether people will accept such a development at the end. On the contrary we must assume, that people might oppose against the almost certain isolation from colleagues and friends in their working-places. Possibly people also will not be willing to stress family-relations by being forced to live and work together full-days in their homes. Sociologists and psychologists may have to give an answer to this soon.

Again and again new technological devices for mass-transport have been offered (for instance individual tubes etc.). Yet, up to date no device has been able to replace or complement seriously the individual car on one side and the existing means of public transportation on the other, in metropolis especially the public rapid transit train. Additionally we must have in mind, that enormous investments have been made in public rapid transit, which by all means we cannot abandon. For instance in West-Germany since 1960 at least 12 cities with a population each between roughly 500 000 and one million have invested tremendous sums to install a rapid transit system (including underground), 60% of the investment being funded by federal and 20% by the respective state government.

Nevertheless, one of the most serious disturbances in urban life has to be seen in todays traffic effects. Opposition has grown steadily in Europe, not so much against the private car, but against the road.

In context with an overall city-development-concept, metropolitan transport policies in Western-Europe have operated in general on the following principles:

- Mobility is characteristic to and indispensable for modern society. Transportation policy must take this principle into account.
- Wants for individual transportation means of commuters, however, cannot be met, especially for environmental reasons.
- The needs of services should be the major criterion for the sizing of the road system and of respectively adequate short-term parking facilities in city centres and comparable areas.
- The through-traffic in housing districts must be cut down, installing environmental zones.
- Relieving residential areas from through traffic, results though in further concentration of traffic on main roads. Yet we must consider, that along such usually radial main roads there lives an unneglectable proportion of citizens. Especially these citizens in average must be classified as socially weak - the stronger having for some time already evaded traffic nuisances by buying or renting a new (quieter and more expensive) home.
- This effect calls for respective relief of main roads from trespassing traffic. For this reason by-passing auto-routes are of importance - any toll on them being of deadly effect.
- In addition nevertheless insulation measures should be taken in such roads with priority, reasonably in connection with energy-saving programmes.
- The density of city-centres and comparable areas generating traffic, must subsequently be limited. To avoid subsequent pressure of tertiary industries on housing districts, zones for such uses must be offered, for instance through a central places concept.
- All of this leads to absolute priority of public transport. A rapid transit network, a functioning suburb-trains system by national railways, a bus lines net connected with both, having interchanging locations at all train-stations and a park-and-ride system, all coordinated in a metropolitan-tarif-authority is an essential demand for metropolitan areas of Europe.

There is one more factor, that influences the structural development of public transport considerably, a factor we have already discussed

in its context with housing - the drop of inhabitants per dwelling unit. Before World-War II in a metropolitan district with 100 000 dwelling-units there lived roughly 360 000 inhabitants, today only 220 000. Roughly not quite half of the population of an industrialised country is working. Working people build the back-bone of public transport. This means, that through this effect public transport throughout the European countries has suffered a loss of potential users from roughly 180 000 to 110 000 within a district with 100 000 dwelling-units, that is 39%! Unless we go through a catastrophe destroying numerous homes, this loss will never be regained. For a short period European planners thought, that this loss could be compensated by high density of buildings. Yet development and experience have also led to a limit of density, which lies presently at a floor-area-ratio between 0.8 and 1.0 for housing in the northern parts of Western-Europe and roughly between 1.0 and 2.0 in some mediterranean countries. With such densities a compensation against the historical situation is not possible. On top of this comes the loss by users of private cars. This again is a point to be stressed for the planners in the third world - once more not for the near, but for the far future.

3.3 Industries, services and metropolis

Undoubtedly the change in economic structure has had a great influence on the physical structure of metropolis. We have already discussed tertiarisation and its effects on distribution of population in Europe on the national level. Within metropolis tertiarisation had even stronger effects. Tertiary industries have an automatic tendency towards central location - especially towards the city-centre. This tendency has produced a lot of problems, as tertiary working-places are able to operate on very narrow urban space. In the beginning of tertiarisation, offices so to say sneaked in more or less unobserved, but gradually developing a tremendous pressure on the city-centre and adjoining highly qualified mixed- or housing areas. In addition traffic congestion of unknown dimension was the result. In many European countries measures were taken to lessen this pressure and its negative effects.

Producing industries took a development in the other direction. Mechanisation and automation demanded one-level-production procedures and subsequently much space. Industries therefore searched location in the outskirts. Old production sites of the inner-core were abandoned, being very costly in their transformation for other uses, thus creating a new kind of "urban erosion" in industrial and in mixed areas. Such eroded areas are growing presently, as during the last crisis industries on top of moving out also died out overproportionally, no new users being in sight. This development forms a new threat especially to all metropolitan areas with a high proportion of typical classical industries, such as steel- and textile-production, coal-mining, ship-building etc. Due to its very early industrialisation, this urban erosion has hit British metropolitan regions more than any other.

3.4 Environment and metropolis

In recent years environment and the care for it have rapidly grown in importance. This is best documented by the installment of departments, authorities and ministries of environment on all levels in many countries.

It should be stressed though, that in several countries and metropolitan regions of Europe, careful planning of the environment has a substantial tradition, even if it seems to us nowadays, that it has not been sufficient.

Due to location according to transportation means most of the European metropolitan regions are situated at water-facilities (sea, river, canal, lake). This is the case with Lisbon, Barcelona, Randstad Holland, Marseille, Hamburg, Copenhagen, Oslo, Stockholm. Even London and Paris have strong ties to the water. Some of these regions have made systematical use of their water-front situation in combination with free- and green-space zones which have definitely added quality to the situation. This is especially the case with such cities as Amsterdam, Lisbon, Hamburg or Stockholm for instance. The artificially created Alster-project of Hamburg has for instance inspired the city of Boston to create the Charles-River-Project.

4. Types of metropolitan agglomeration

It is important to note, that the dominant economic structure of a metropolis strongly influences its physical appearance.

4.1 The multi-centered metropolitan agglomeration

Usually this type of agglomeration is characterized by a number of large and roughly equally strong cities, complemented by another series of smaller and medium-sized industrial towns, which in the process of industrialisation gradually have grown together to one very large agglomeration. In such cases the origin of development must be seen in the location of mineral deposits, such as for instance coal and ores. The outstanding examples of this type in Europe are the British Mid-Lands and the West-German Ruhr-Valley-District. Within such European regions three major problems presently are predominant:

- Heavy industries still are intermixed with other urban zones, especially housing, on a much too broad, disturbing scale, which leads to a serious burden for the living quality of these regions.
- Traditional industries of these regions die out gradually, leaving back enormously large areas of unused grounds, creating a new kind of "industrial erosion zones", as no new users of the left grounds are in sight. This new kind of erosion provokes a kind of negative preparedness of adjacent quarters for slumming.
- Organising, running and maintaining public transportation means in these agglomerations has become extremely difficult, due to the more or less scattered inner structure of such regions missing a hierarchial concentration on one centre.

Whilst the Ruhr-Valley and the Mid-Lands represent zones dominated by the secondary sector, another new kind of multi-centered metropolis has emerged, namely Rand-Stad Holland, of highly mixed structure, secondary industry by far not playing the role as in the other two. The multicentered metropolitan agglomeration in Europe therefore has two main physical configurations, which can be seen in a schematic drawing in appendix II.

- The multi-centered raster structure (Ruhr-Valley) and
- The multi-centered line structure (Rand-Stad Holland).

4.2 The mono-centered metropolitan agglomeration

This type is characterised by dominating tertiary industries and represents the prototype of "METROPOLIS" in the very sense of the word. Tertiary industries searched their mutual neighbourhood in the city-centre of such regions, thus creating a mono-structural configuration. Most national capitals in Europe can be classified as belonging to this type. Usually these metropolitan regions, although tertiary services being dominant, also have a considerable amount of secondary industries, mostly of modern and dynamic character. These regions suffer from the following problems:

- High concentration of working-places in the city-centres, generating extreme traffic-congestion with severe disturbances for many citizens and high pressure for uses of office grounds.
- Extraordinary expansion, tertiary industries having grown faster than secondary industries in the last decades, the tempo not seldom overriding reasonable time for planning procedures.
- Pressure on and destruction of housing in areas adjoining the city-centre, according to the needs for office grounds.

The situation probably is on the verge of changing again, as automation has begun to intrude into tertiary industries. This could mean, that in future the number of working places in such regions is liable to shrink as drastically just as it has in the classical industrial areas. The mono-centered metropolis in Europe has mainly two physical configurations, which can be seen in appendix III:

- The ring-structure (London and Paris) and
- The radial-axis structure (Hamburg).

Tertiary expansion threatened to destroy (and frequently also did so) the social and cultural function as well as the historical appearance of the city-centres and the inner cores, including most valuable housing areas. Results of this threat can be seen in many cities, that have not reacted in time. Yet, this must not necessarily have been the result, as we can observe in other cities.

5. Administration and metropolis

5.1 Strategic development action

The problems discussed in the previous chapters show, that local and metropolitan administration had to and will further have to change continuously its role, approach to solutions, management and methods as well as techniques of administration. The efficiency of planning and of transferring planning results into reality therefore stand and fall with the ability of public administration to act and react - altogether to function. We can witness a growing confrontation between the dominating classical exercise of sovereign administrative jurisdiction on one side and the more recent phenomenon of strategic development action on the other.

At the time, when the first European agglomerations started to grow rapidly, contemporary philosophy was based on the principle, that private enterprise could bring about a sufficient system of physical order. State- and local-authorities therefore would devote their attention mainly to the direct elimination of overt threats to the land and its population.

In context with growing agglomerations, increasing complexity of social development forced public authority to widen the scope of its activities again and again. The first step in this direction, concerning physical planning, had been to plot the entire territory of a city according to land-use patterns. However, until world-war II such planning merely defined land-use to the areas against the day, when such areas would be used for development, it did not plan in a comprehensive manner the timing of and initiative steps for development.

Such a particular approach, broadening the scope of planning including development action programmes etc., appeared after world-war II first in Britain, as we have seen in previous chapters, and in Sweden, later also in other countries. It did so by analytic observation of the structure and function of a metropolis, its social and economic potential and inevitably, the related areas of land-use and investment goals. Following this analysis, concepts

and programmes were developed in more and more comprehensive ways. Since then such devices, as medium-term financial- and investment-planning have been applied with increasing reference to spatial planning. Thus in post-war development planning administration gradually became part of a multi-dimensional system of decision-making, which increasingly began to differ from traditional administration forms. New methods had to be evolved, a task, which was made more difficult by simultaneous increase of public relevance of its activities.

5.2 Subsidies- and investment-programmes

Plans are only of value, if they are turned into reality. Therefore local authorities especially must take up action to ensure and coordinate public infrastructure measures as well as to incite private activities. We therefore shall take some side-glances as to what has happened in this respect.

The various districts of a metropolitan area for instance differ strongly in their quality, due to age, location, structure and several other factors. The deficits of the districts especially in the inner-core vary considerably. There are districts, that have a deficit in educational infrastructure, others have a deficit in social infrastructure and again others lack sufficient technical infrastructure. Local authorities in Western-Europe during the last decade therefore have begun to try to balance the qualities of such districts by improving also those, that are on the verge of slumming and not concentrating solely on such, that must be considered as slums already.

State financial provisions explicitly connected with urban renewal and modernisation of housing have been increasingly installed in almost all Western-European countries in order to support this part of local policies.

Many cities have introduced priority areas, especially in their inner-core, as frame for public and private investment programmes. Such "improvement-areas" usually are not understood to keep their

priority status eternally. As soon as public intervention has led these areas to a reasonable standard of facilities, buildings and environment, they are expected to be released out of this status. Due to lack of maintenance during the two world-wars, their immediate post-war periods and the intermediate world economic crises, not only housing has and had to be improved by basic maintenance measures and by modern technologies, but also the environment of buildings, blocks and districts in many a Western-European metropolis. Usually bad conditions of housing and bad conditions of the environment coincide with each other in their local distribution. Financial resources of the local bodies began to shrink in the 70's. Environmental investment is nevertheless one part of public activity. Therefore "improvement-areas" were developed, in order to be able to combine a series of rather small investments in a reasonable way, in Hamburg called "programme of small steps in district development". The objects of such programmes in general are: cutting down through-traffic, installing pedestrian-zones, public playgrounds for children, regaining public squares for pedestrians by taking out car-parking, planting trees in roads, colouring facades etc., etc..

Finally in some cases major infrastructure measures were planned and built in such a way, that they serve the development of the mentioned "improvement-areas" in addition to their own direct function for the metropolis. In Hamburg for instance a new public rapid transit line touches and serves with its stations six of such "improvement-areas". A new Technical University in Hamburg was not situated on virgin-land, but in one of these areas as nucleus for new impulses partly on left industrial grounds and a new centre of 5 professional schools (roughly 5 000 students) was located at another of such areas for the same reason.

5.3 Identity of regional planning- and administrative-boarder

In all cases of metropolitan development not only one municipality is involved. For instance previously to the installment of the

Greater London Council, replacing the London County Council (LCC) in 1965, roughly 90 burroughs were considered as being part of the Greater London region, 30 of which were only underlying administration of the LCC. The LCC on the other side had been installed as early as 1889, the urbanised metropolitan region though soon outgrowing its administrative borders.

In West-Germany the first regional body was founded in 1920, constituting the "Ruhr-Valley-Council" as a corporation of the Ruhr-Valley municipalities. Other regional bodies mainly were constituted after world-war II in the 60's (Frankfurt, Hannover etc.).

Such regional bodies have achieved remarkable results regarding regional matters, such as public-transport, water-supply, sewerage, green-zones and -belts, irrigation etc.. Such tasks would not have been solved by the numerous municipalities involved. In cases of a missing regional body, the state would have to administer such tasks.

In very recent years in several countries we can observe the tendency of state governments to turn back the development, weakening or dissolving regional bodies, state authorities again taking up the task, which also means, that state authorities are strengthening their own powers. Time has been too short to distinguish positive or negative results out of this development. Nevertheless we have observed, that decentralisation has played a dominant role in avoiding giant metropolis to develop in Western-Europe. Under such premises metropolitan bodies (legislative as well as administrative) should be installed and strengthened and not vice versa.

6. Closing remarks including some value principles

This paper could merely offer some essential spotlights on European metropolis, which may allow us with the necessary reservation to come to some major value-principles, also to be considered outside of Europe.

In recent years for instance a common phenomenon spread in many countries, not only in Europe, which came about spontaneously, in-

dependently and about at the same time: the negative reaction of parts of the public to recent urban development. Behind this phenomenon lies a great anxiety and uncertainty of the population regarding rapid changes on one side and the feeling of some heritage to be held on the other. A kind of civic rebellion against growing restrictions of one's own individual freedom of decision and action adds up to the above mentioned anxiety, mainly due to increased ties of standards, regulations, rules etc.. On the other side industrialisation calls for standards and regulations, which - in the interest of public - must also restrict individual scope. If we do not find ways of more freedom from regulations for the citizens, reaction may end in rising rebellion with incalculable consequences.

A first value-principle therefore should be to ensure more freedom for the individual by cutting down (keeping low) the number of regulations in order to gain some free space at least for absolutely necessary new regulations (environmental-protection, energy-saving).

In Europe the increasing complexity of planning procedures has become extremely difficult for the citizens to understand, to argue in their own interest and therefore also to cooperate. Quite often it happens, that too strict rules and normative demands by the state hinder plausible results of negotiations within citizen-participation on the local level. Such a barrier often frustrates both sides, the citizen as well as the local authority, which in a number of cases would be willing to negotiate a compromise, yet is hindered by the above mentioned barriers. Also plans can only be turned into reality, especially taking citizens participation into account, if the decision on the material matter of a plan and its financial consequences are held in one hand, which logically can only be a local decision making body!

Therefore decision-making in steps as well as decisions on physical planning, respective finances and exemption of rules being held in one hand within such steps should become a second value-principle. This primarily means delegating decision-making powers

to local councils, local groups (for instance cooperatives) and even to individuals themselves.

The basic aim of all spatial planning is to improve the physical living conditions of the human being. The quality of living conditions is basically defined by the social, cultural and economical needs and wants of the citizens, which reflect a great variety. In Europe massive housing districts with high density and high-rise buildings have in general led to negative reaction. This has provoked the British slogan of "low-rise with high-density", a slogan obviously demanding human scale in the design of human settlements.

A third value-principle therefore should be to offer a choice of living qualities by diversity in the supply of environmental situations, meaning also a variety of the town-districts!

Referring to the environment of the human being, "human scale" should be proclaimed as a fourth value-principle.

In this context we should have in mind the astonishing capability of adaptation existing town-quarters as well as towns as a whole in Europe have already shown in the past.

Therefore a fifth value-principle should be followed, by carefully holding and maintaining (not mummifying!) existing structures and buildings also as an important reverence to our history.

Under such premises existing towns and their parts - being different because of having been built in a sequence of past decades and even centuries - offer an excellent basis for diversity on one side and simultaneously for making use of existing infrastructure on the other.

The demand for equality is an unshakeable political demand. Often equality is driven to the extent of uniformity, which is the case especially in physical appearance of new settlements. The politician though, will rightly react with distrust, when he has to suspect behind the aim for variety also poorer living conditions as an objective.

Therefore not total equality in the sense of uniformity, but equal quality, allowing utmost diversity of metropolitan areas and their districts should be set as a sixth value-principle.

A sufficient shelter is one of the greatest values for human beings. Therefore the provision for a decent home should be a seventh value-principle for metropolitan development including the housing for the family as nucleus of society and stronghold of social backing. It is not the technical quality or the standard of equipment of housing which is important, but

- adequate room for at least a limited privacy and family development, including the old,
- acceptable environment, including places for social communication, especially for the children and the old,
- location with reasonable accessibility to social and cultural services, especially regarding health and education and
- location with reasonable accessibility to stations of public transport, especially as means to reach the variety of working places.

Housing policy should be conceived on a basis, that allows the individual - in case of need also with the help of society - to finance its own home in terms of a medium range perspective.

Post-war development policies in European cities and metropolitan regions frequently have been criticized, mainly supposing, that the phases of urban development policies have been completed along too one-sided lines. Three main phases can be outlined:

- Urban reconstruction (mainly in the 40's and 50's),
- urban expansion (mainly in the 50's and 60's) and
- urban regeneration (mainly since the middle of the 70's).

This in general was a plausible sequence, taking into account the situation many European countries were at the end of the war.

This situation called for priorities of efforts, accompanied by calculated temporary neglect of other fields. A "balanced" policy, assuming normal conditions, as many critical retrospects of today obviously do, would by no means have been possible to pursue.

Within the mentioned sequence mistakes have been made. Without doubt it is a debatable point, whether the shifts in policies and regarding priorities should have been initiated at other points of time. Mistakes were also made in the weighing of demands for change against conservation. Nevertheless it is remarkable to observe, that national legislative bodies and governments as well as local councils and administrations again and again have weighed the alternatives and changed the priorities within the process of development.

Reconstruction and extraordinary expansion having been coped with in Europe, the beginning of the seventies saw the start of a somewhat normalised situation. The above mentioned third phase therefore is better balanced than those before. The regeneration of older districts on a broad scale is thus complementary to urban expansion, not just a new one-sided dominating alternative. Urbanisation policies in metropolis therefore are a continuous, multi-dimensional process - meaning continuous and balanced maintenance, reproduction and new production of urban substance as a very normal daily event.

URBAN DISTRIBUTION IN EUROPE

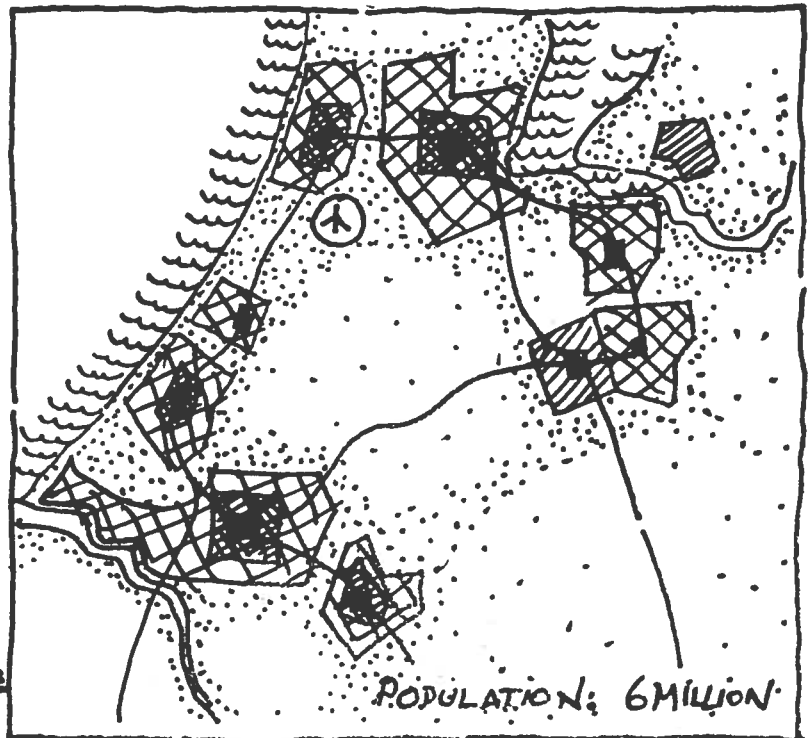


APPENDIX II

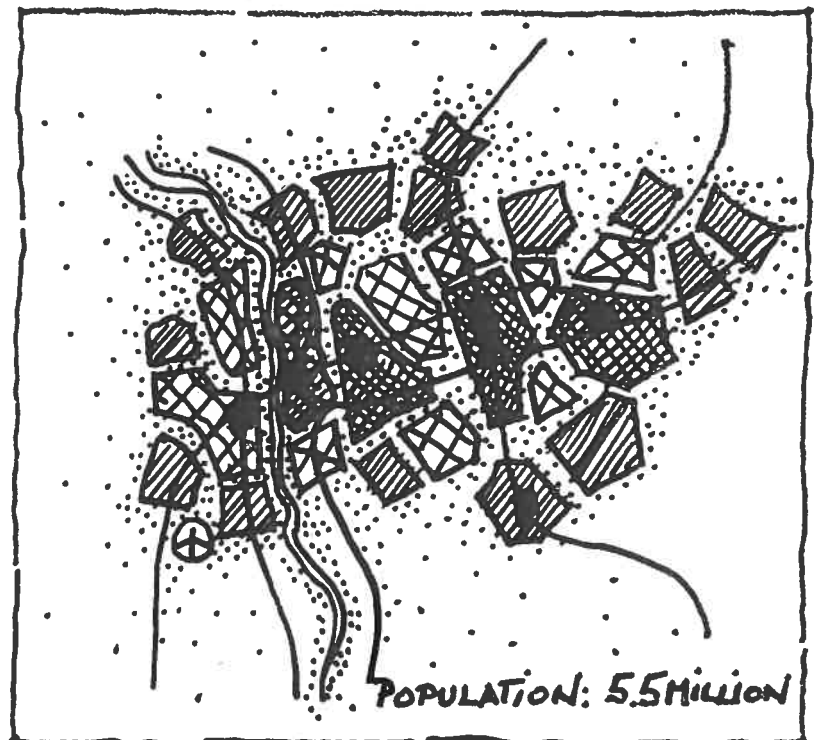
EUROPEAN METROPOLIS

SCALE ROUGHLY 1:1000000

MULTI-CENTERED
CIRCULAR-LINE-STRUCTURE
RANDSTAD-HOLLAND



MULTI-CENTERED
RASTER-STRUCTURE
RUHR-VALLEY-DISTRICT

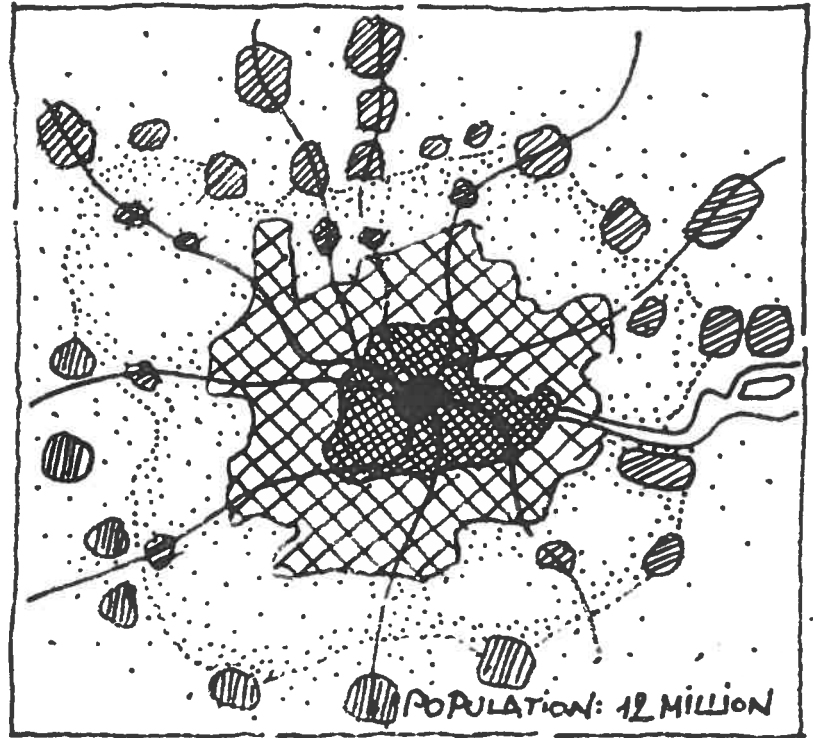


APPENDIX III

EUROPEAN METROPOLIS

SCALE ROUGHLY 1:1,000,000

MONO-CENTERED
RING-STRUCTURE
LONDON



MONO-CENTERED
RADIAL-AXIS-STRUCTURE
HAMBURG

