

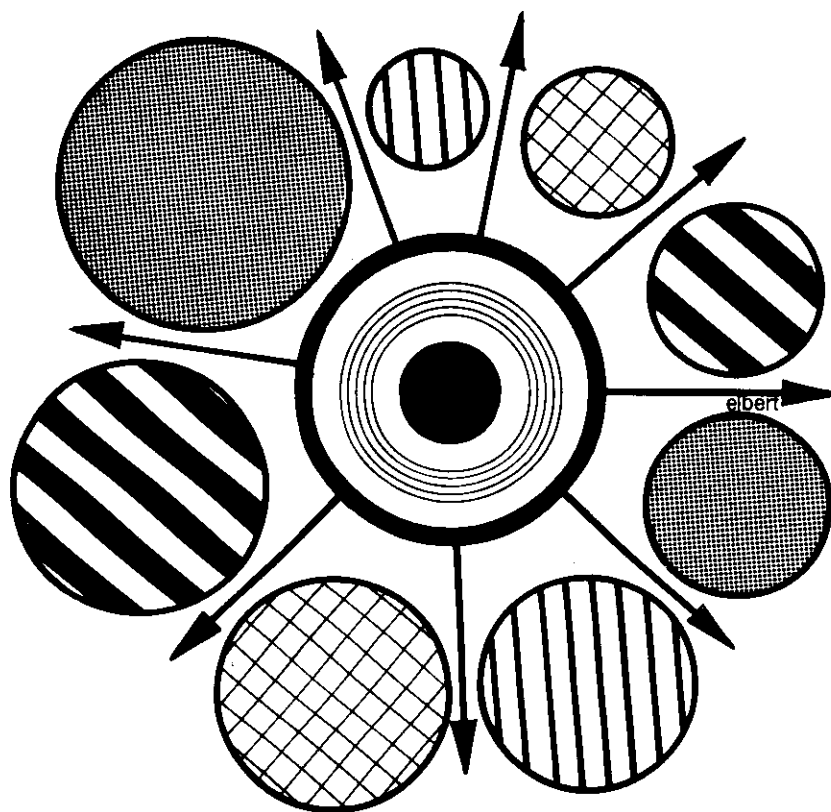
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TRANSPORT POLICIES
AND NEW REGIONAL PLANNING REQUIREMENTS

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TRANSPORT POLICIES AND
NEW REGIONAL PLANNING REQUIREMENTS

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PRELIMINARY NOTE

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I. EUROPEAN REGIONAL PLANNING POLICY - WHAT GOALS?

The Parliamentary Assembly has observed that new priorities have been forced upon European society in recent years bringing about a change in certain principles of transport policy. Reference was made to changed attitudes and circumstances concerning environmental protection, restricted energy supplies and growing citizen participation in decision-making.

Before going on to assess how far such developments may modify the goals proposed by regional planners to transport authorities, it will be worthwhile defining the situation with which we are concerned.

At European level we come up against the same question marks and ambiguities as in the case of individual nations.

Firstly, regional planning has a double significance. Any policy on public works or economic development comes within regional planning, which thus tends to include every scheme within a general context. At the same time, regional planning means deliberate action to attenuate inequalities between regions.

The second ambiguity, not unconnected with the previous one, is that it is impossible to identify regional planning goals clearly according to level - local, regional or national. We can do no more than refer to concordance or discordance of the aims announced at the three levels.

These two difficulties face in the same way anyone involved in regional planning at European level. However, this is not to say that we cannot find some topics that take on a new aspect or even arise specifically at European level. Here are four of them:

1. European identity - the development of international transport is not simply a need to be met, like the need for water or energy. Transport is the tangible expression of greater solidarity between our peoples and of our need to meet and to get to know one another. Obviously, transport facilities take on a cultural dimension and have a symbolic function.
2. Western society has for a long time been founded on a market economy and its predominant cultural values have been much affected by economic objectives. It is therefore not surprising that the quest for European identity should go hand in hand with the aim to enlarge the European economic market. Thus the harmonisation of transport regulations is looked upon as a factor in stepping up the exchange of goods. Here we might also include the constant preoccupation with transfrontier communications, even though distances are relatively short.
3. Another goal is the technical, economic and political co-ordination of large-scale international projects. As distinct from the two objectives mentioned above, this third one takes us into the sphere of means. Why should we try to promote a trans-continental waterway? Naturally, in order to confirm our European identity and put goods more easily onto a wider market. But two other notions lie behind any project of the kind:

International co-ordination leads to greater efficiency. Clearly, when combined, any two infrastructures will be better used and correspondingly more profitable. The point is not as trite as it may seem. For when concern for efficiency predominates, the actual transport need becomes an external consideration and no attempt is made to modify it. ,

Linear infrastructure plans necessarily contain measures for space organisation far less the case with non-linear infrastructures, eg airports, and reference is made in such cases to the concept of the development axis, a powerful image which appears to supply objectives, albeit ill-defined ones.

4. We move on quite naturally from this concern with highly structured space planning, commonly encountered at national level, to the fourth objective to be identified in European regional planning policy: balance between the powerful, well-endowed, central regions and the peripheral regions, suffering from poor communications and a generally slower economic development rate. On the European plane we meet the same complaints as in individual countries with problems of regional disparity:
 - . difficulties resulting from urban concentration,
 - . the danger of the less highly developed regions falling even further behind,
 - . failure to exploit the assets of peripheral regions.

We are left somewhat perplexed by the recurrence of the same arguments in certain individual countries and in the European organisations. For just as it is obvious, for example, that Italy will endeavour to check depopulation of the Mezzogiorno, it is equally obvious that we can hardly expect migration from the densely populated regions of Germany and Holland towards the peripheral regions of Europe. That is to say that action to balance the highly populated and the under-populated regions is urged for socio-political reasons rather than economic ones - no existing or growing social organism can sustain excessive internal differences of income without risk to its unity and to its very existence.

Importance of the spatial dimensions of planning

We observed above that the development axis image plays an important role in regional planning despite its lack of precision. Our approach to problems varies, as do the words we use to describe and analyse them, depending on whether we are looking at an atlas or a plan on a scale of 1:200,000. The Ruhr is a development axis, but so is the Mediterranean - the same words will not do for both.

In the one the geometrical pattern plays a definite role and can affect transport organisation, town-country relations and the distribution of urban functions. In the other, the concept of a development axis is far more functional - it takes on a meaning only retrospectively within a vast time-span. That is to say, the Mediterranean has been an axis for migration and for economic and cultural diffusion.

Energy saving and protection of the environment - objectives or constraints?

The reader may be surprised to find that energy saving and protection of the environment are not included among the fundamental goals of European planning policy.

Most planners in individual countries at first took these new considerations as constraints. The majority are now convinced that, in the realm of transport, these criteria are not incompatible with steps to meet growing or even stimulated demand and that it is simply a question of finding practical ways of providing better protection of the environment and of saving energy.

Energy saving, generally speaking, means simply how to provide more transport despite the rising cost of energy and the threat of possible restriction of oil supplies.

Environmental protection is a somewhat different problem. Preservation of a given area of land, a commodity becoming rarer and rarer, could be a subject of international concern. But it should be pointed out that average population density in Europe has not reached the point where we can speak of a land shortage. Quality alone is at stake. The real bone of contention here is the individual landscape or the isolated ecological unit (valley, forest, animal population zone, etc), generally far too small to be a subject of international debate.

At the same time it should be noted that attitudes are changing. What appeared simply as a constraint may well become the subject of real interest. A preliminary indication of this is the juxtaposition in the Parliamentary Assembly's recommendation of the need to take ecological factors into account and of recognition of the increasing importance of direct public participation in decision-making.

II. WHAT TRANSPORT NEEDS?

In the sixties planners in most countries were attempting to meet a growing transport demand, the product of well-known phenomena:

- . demographic growth,
- . economic development,
- . lowering of frontiers and development of trade,
- . specialisation of production units,
- . emergence of new needs (tourism).

Research was carried out to assess this growth, situate it geographically and make forecasts on the basis of some of its causes.

Subsequently planners and transport specialists realised the interaction between transport systems, the distribution of work and of people, and transport demand. In particular, attempts were made to show the effect of transport availability on demand, research on this point being carried out especially in urban environments where mobility (and therefore demand, given fixed demo-economic structure) is modified by the quality of existing transport networks.

At regional and national level specialists sought above all to establish a connection between transport supply and demographic and economic development.

Thus when we ask the question "What transport needs have to be met?" two other questions naturally arise: "What freedom of transport do we want to give to the public?" and "What economic development do we want to serve?"

Thus we see just how relative is the concept of "transport needs". The picture can also be modified by the development of telecommunications. While goods transport may not appear to be much affected by the gathering role of telecommunications, it can be said that the introduction of telecommunications and data processing will entail a degree of rationalisation particularly for return freight.

Mail and, generally speaking, transport of all forms of recorded information will probably be greatly modified. But transport of that kind is a slight fraction of the whole.

Passenger travel, particularly business journeys, would be transformed, however, given any substantial development in the cost and potential application of telecommunications (eg tele-conferences).

Only wide distribution of these new techniques could modify behaviour and offer a real alternative to travel. While that stage has not yet been reached, certain industrial groups are already equipped with such facilities and are endeavouring to promote their use in order to avoid costly travel. From the information at present available it can be assumed that middle-grade managerial staff may well utilise these new techniques even more than top-level managers.

Passenger transport forecasting has not yet taken account of this phenomenon.

Thus OECD research (operation COST 33) produced a model of traffic demand in which business journeys depended on economic factors (GIP, demography, tertiary employment, etc) and transport supply, omitting the role of telecommunications. The report concludes that total business travel demand is little affected by the structure of supply. If we take the tele-conference to be a new form of transport we might argue that growth of business transport (180% to 200% between 1970 and 2000) has been somewhat over-estimated.

We must have more detailed information on the duration of business journeys if we are to assess this problem accurately. The question also arises of whether peripheral regions, which will be placing a greatly increased demand for business journeys, will be able to set up this new equipment at the same speed as central regions and thus share in post-industrial economy at least in this sector. It can be said that this will be an important item of consideration.

By what criteria should transport policy be judged?

Following these general comments on the identification of transport needs, but without at this stage going into the effects of transport infrastructures on economic development, it will be useful to consider how a goal may be defined in terms of transport quality.

a. For regional planning purposes, the only truly decisive factor is quality of service.

Transport authorities are called upon to take lasting and carefully adjusted action regarding the transport system, by investment policy or by management devices. But such changes become relevant on the time and space scale of regional planning only when certain thresholds of quality are passed. We shall attempt to describe certain of these thresholds, remembering the possible objection that they are arbitrary in character:

- . Existence of an infrastructure or route. No route is ever impossible, but here we must consider new links, eg the boring of a tunnel or a new road over a mountain pass that saves a long detour.
- . Permanent availability of the infrastructure. Here particular reference is made to the road network, but the criterion may be applied to other means of transport (water, air). Potential users expect transport to be regular and not at the mercy of weather, etc. Naturally, exceptional circumstances may alter this view.
- . Speed as perceived by individuals. Speed, total time taken and comfort combine to influence individual users' appreciation of any means of transport.

A car driver is particularly sensitive to the total time taken for a journey but is also very aware of freedom to adapt style of driving. The comfort experienced on roads with dual carriageways is probably due to the fact that the driver is scarcely incommoded by the presence of other vehicles, particularly slow ones. We believe that with the separation of carriageways an important quality threshold is passed. On the other hand, such improvement is less apparent where crossroads are clover-leafed.

In rail transport the one-day return journey appears to be the basic service requirement. Passengers are also very conscious of whether a journey exceeds certain other units of time, eg one night, one half-day.

In air travel, flight speed on internal European journeys plays only a secondary role and is certainly of less importance than time schedules and journeys to and from the terminal. Regular daily flights and one-day return journeys are probably the only firmly established requirements for the improvement of air transport.

b. Equal accessibility for all regions. It is fanciful to think of transposing to less populated peripheral regions the facilities that exist in urban zones.

However, one of the most important factors in regional balance is ease of access within a given time to numerous places of importance to economic life.

According to the OECD report (COST 33) it is possible from the Randstat (Holland) to reach a "market" of 25 million people in 110 minutes in a radius of 143 kilometres, whereas from Greece a market of that size can be reached only in twice or three times the time and over distances five times as great. There are two sorts of conclusion:

- . Restoring balance between regions is in the first instance a demographic problem and, therefore, a very fundamental one.
- . Over long distances the aeroplane is the only way of significantly improving accessibility. This is not to say that the importance and value of land infrastructures are any way diminished; the aim is simply to recall the limits of such infrastructures over long distances.

Given the aim to extend the horizon of each point in Europe, we must reconsider the sense of any policy centred on development axes. Such preferential axes may constitute specific goals of policy for reasons of efficiency, but it must not be forgotten that that sort of policy stands partially in contradiction with the aim to achieve isotropy, implying complete freedom of choice, a goal to be achieved rather by promoting direct liaison between peripheral regions. This observation is made mainly in order to stimulate reflection, for everyone will agree that improvement of inter-peripheral communications cannot take priority over the removal of certain bottle-necks in the most important axes.

c. Satisfactory service - but not at any price.

Transport costs act as a brake or moderating factor in transport demand. Just as regional planning authorities must aim to improve the accessibility of regions with the worst communications, so they must also make sure that transport costs are not disproportionate and that they do not simply widen the gaps already created by physical geography and demographic patterns.

Now we come to the question of the equalisation of tariffs. Motorway tolls are one particular expression of this problem. While various international bodies have recommended that each means of transport should balance income and expenditure and that users should pay only marginal social costs even if this means balancing the budget by including the use of infrastructures, the same bodies have never said at what geographical level such a balance should be struck. In the case of most transport means (railways, motorways, airlines), the question is highly topical.

It may be impossible to give one standard answer and set up equalisation as a dogma. But we must make sure that tariff structures do not form insurmountable obstacles between peripheral regions and the international markets.

III. TRANSPORT AND ECONOMIC DEVELOPMENT

The 1973 European Conference of Ministers responsible for Regional Planning (la Grande Motte) dealt very fully with this subject, as did the Strasbourg seminar in which the ECMT and ECMRP took part. The conclusions tend to show that improved transport supply effectively modifies economic geography and produces a measure of development for the regions served. Results of that kind can be evaluated and even measured by means of certain indicators. But they are frequently disappointing. Short-term effects are not considerable, quantitatively speaking, and when it comes to long-term effects it is very difficult to pick out which of them are due to infrastructure. After several years the infrastructure becomes merged into the geography, like valleys and mountains.

It should be noted that studies of this kind have most frequently dealt with linear infrastructures, such as bridges, railways or toll-paying motorways, which affect a certain number of pre-determined points along their axis.

Other means of transport such as waterways, air routes, ports or even roads have not, so far as we know, been studied in this way.

Now, the choice of means of transport obviously is not neutral as regards the long-term effects that may be expected of an improvement in the transport available. Numerous variables modify the extent and direction of the effects of any transport system - initial economic situation of the regions concerned, possible complementary roles of such regions, extent of changes in transport supply. We shall endeavour to define the particular nature of the various means of transport despite their diversity and the specific contribution which each makes to regional planning objectives in Europe.

- The main motorways (toll paying) in Italy appear to have played a positive part in the industrial development of the MEZZOGIORNO. Some information was supplied on this point at the second session of the ECMRP. But the report presented also brought out the fact that the effects were concentrated within a strip no more than a few kilometres wide along the motorway. Thus, whereas a motorway does have a structurising effect, this may be attributed just as much to the acquisition of prestige by the places through which the motorway passes as to any objective improvement in transport facilities. Of course it is a good thing to gain two or three hours on a journey of 500 kilometres. But it is more important to have a motorway access road within a few kilometres of one's factory. The main motorways built to "open up" peripheral regions thus have an important effect on a region's image from within and from without.

- In urban regions that are highly populated and developed motorways have served as a means of reducing the cost of congestion. But this form of transport supply has produced fresh demand chiefly taking the form of longer daily journeys. Some research has even attempted to show that the time-budget for urban travel was invariable.

While this argument has not always been borne out, it has frequently been observed that transport investment in highly populated urban regions produces increased mobility and longer journeys, soon resulting in saturation of the new infrastructures. It has not been shown that this speeds up the growth rate of the conurbation, while the urban structure and the way in which it functions are modified: transport costs (the use of energy in particular) may therefore be increased by an investment policy that stimulates mobility.

- Air transport is steadily developing in Europe, much faster than other means of transport. Unlike improvements in land transport systems, air transport achieves a radical transformation, in its disdain for obstacles (geographical features, frontiers) and its minimisation of the effects of distance. It provides a flexible and developing response to demand and can be adapted to provide communications between secondary poles even though traffic potential may be provisionally limited. Thus peripheral or transverse communications can be provided without necessarily passing through the main urban centres.

- Maritime transport at European level can contribute to the stepping up of trade and communications between coastal regions. However, Europe's broken coastline with its large peninsulas (Brittany, Spain, Italy, Greece) constitutes a handicap as distances between ports are far greater than overland. Furthermore, even though sea transport would be particularly suitable for traffic between the extremities of the peninsulas international exchange between those points is slight, while numerous large ports are situated inside the gulfs (Marseilles, Bordeaux, Genoa). Despite the value of this type of transport in restoring the balance of regional planning at a time of energy shortage, the function of the large size docks will probably be confirmed. Maritime transport will thus contribute to the economic and financial reinforcement of a limited number of major ports.

- For our fourth example let us take the motorway networks linking the densely populated regions of the North-East with the Mediterranean coast.

These motorways are used for the main tourist migrations while they also serve densely populated regions. To meet the demand for tourist travel it would have been possible to adopt just three systems of transport supply:

- . air transport with a radical reduction in travel time, but to a restricted number of destinations;
- . traditional roads, with limited time-saving, even after reconstruction, but with benefit for all the regions through which they pass;
- . rail, with mass transport potential.

The motorway is a compromise between these various systems. Even with their intermediate exits, motorways turn space into a tube whose two ends gain enormous benefit.

These few examples simple aim to point out how each individual transport system has a different way of balancing the demographic and economic system.

IV. TWO EMERGING CONSTRAINTS - ENERGY SAVING AND PROTECTION OF THE ENVIRONMENT

In the first three sections we threw light on three forms of interaction between transport and regional planning.

- How can transport planning at European level serve the fundamental goals of regional planning?
- What indicators could help us to tell whether modification of a transport system will have a favourable, neutral or unfavourable effect in the light of regional planning objectives?
- How does each means of transport specifically fashion space?

The need to save energy and the need to provide better protection of the environment should be taken into account as follows:

- Each means of transport should be used where it is most effective in itself (profitability) and in relation to planning objectives. This means that several modes of transport should not be superimposed

along the same axis except in specifically restricted cases. In other words, if freedom of movement is an important factor in economic development and cultural life, efforts should be directed towards extending the accessible area rather than providing a greater choice of transport.

- Attempts to increase speed, with a consequent increase in energy expenditure in every case, should be made only in accordance with major regional planning objectives.
- Maximum use should be made of existing infrastructures so as to avoid land wastage. Exceptions may occur where existing infrastructures cause major forms of inconvenience - generally for man (eg noise, accidents) - and when a new infrastructure may be expected to make a significant improvement in the environment.

These guidelines are suggested for the purpose of influencing the current tendency and not to make any radical change in the transport system which, even if feasible, would be extremely harmful.

The OECD report (Action 33) states that the primary road network (motorways and main national highways) will, between 1970 and 2000, rise from 145,000 kilometres to 168,000 kilometres, while by the year 2000 few airports are likely to be saturated. Of the 43,000 kilometres of rail of international importance only 2,600 are likely to be saturated or close to saturation by the end of the century.

Overall growth of infrastructures is therefore not excessive, and although in the case of each project more care should be taken with actual siting within the given landscape, the actual surface area of infrastructures still to be created might not be more than 500 square kilometres (1/10,000th of the area of Europe).

The question arises, if present trends in the demand for energy continue, and in the event of raw materials becoming even scarcer, whether we shall be faced with totally insoluble problems. But this question is not directly relevant to regional planning. There is indeed a high degree of correlation between travel and national production in the different states; passenger travel is increasing more rapidly than freight transport; long-distance and, in particular, international transport is increasing faster than short-distance transport, which is sometimes even declining. But generally speaking, there is a very firm link between transport and economic growth. Thus, in the first instance, any changes in distribution resulting from state action would have only a secondary effect on energy consumption, which is largely determined by overall increases in production.

Similarly, any corrective action by states in the field of regional planning has no marked effect on energy consumption. Certain forms of action cancel each other out - thus motorway construction may reduce energy consumption for certain users while it increases overall consumption by creating greater mobility; policy to restore demographic balance may hold back rising energy costs in urban areas but increase the average distance of inter-urban travel.

The energy question can only be put in terms of the overall regulation of transport demand. Are positive economic growth, even at a moderate rate, and satisfaction of the basic aspirations of the European peoples compatible with such control of transport demand? Present trends in the cost of energy and increased competitiveness in energy should mean that the necessary adjustments can be made, unless oil supplies are subjected to major physical limitations.

Respect for the environment coupled with an energy saving policy would not totally upset relations between transport policy and regional planning. As regards quantity, the various fields of interest are relatively independent.

But the same is not true of their quality relationship. Planners and transport authorities are aware of the fact that any increase in traffic is not an aim in itself but that it can be useful only in relation to the higher goals mentioned above. While the introduction of new transport infrastructures together with a certain increase in total demand remains generally compatible with the new constraints, future projects and systems must be selected more rigorously.

V. SOME CONSEQUENCES FOR REGIONAL PLANNING AND TRANSPORT AUTHORITIES

a. The need to balance investment

We have suggested that an increase in transport demand was not generally an aim itself as far as planners are concerned. The persons responsible for harmonious development of regions throughout Europe attribute to the phrase "increase in demand" a meaning which varies according to the place or axis in which the demand occurs. We do not mean to say that there is one type of demand which must be satisfied and another which must not. Infrastructures must have the capacity to deal with traffic flows in accordance with evolving demand. But the question remains as to the quality of the service that should be provided.

Hitherto economic theories have assumed that any "public utility" was the sum of all "individual utilities" but that the way in which these "individual utilities" were distributed was of no importance. However, this view is a simplification of reality. It overlooks the very factors which largely make for a dynamic society, ie the permanent tension between the two contradictory forces, equalisation and differentiation. Just as in social relationships neither tendency can be permanently upheld without danger, so in the regional planning field there appears to be a growing consensus that at present it is necessary for the public authorities to support some degree of equalisation of living conditions between the European regions.

This is the spirit in which to approach new investment and decisions on transport management.

Improvements in the transport system may benefit the user in various ways - reduction in the duration of transport, reduction in cost, improved reliability (safety, comfort).

Let us now consider time-saving, the improvement most frequently referred to. In calculating the public profitability of a project time-saving should be measured differently depending whether the investment increases or reduces disparities in speed of communication between axes that should play similar roles. In this respect all one can do is to compare plans expected to produce identical structures.

Certain projects aim to introduce very high-speed transport on the basis of existing facilities (railway etc) along very highly developed axes. For present users the time-saving (travel from end to end) could be some 30% or even more. In addition, such new means of transport will increase mobility within the larger urban regions and between them.

Along such axes increased mobility does not stand out as a priority objective and so, when calculating profitability, we should consider as a public advantage only the saving of time actually achieved within the mercantile system (ie business journeys, goods transport).

On the other hand along axes where public authorities are endeavouring to anticipate and even stimulate demand, savings in time for all users should be taken into account, as any increase in trade would be both the means and the sign of an improvement in the integration of such regions in the general European cultural and economic network.

b. The right communications for the right routes

Previously we referred to the need to avoid incautious proliferation of new infrastructures, particularly with a view to preserving the environment.

As the various means of transport are financed very differently and as, in addition, the effects of a new infrastructure are spread over a long period one cannot be sure that the free market will produce the best present and future solution for the public. Certain examples prove the contrary.

In endeavouring to save energy the public authorities are increasingly required to find the best means of transport for each situation. But the aim is not to do away with normal, healthy competition between the public and private companies responsible for transport systems.

The tremendous advantage of the motor vehicle is the freedom which it confers. It can provide point-to-point service even for the most remote places. It can adapt to a very wide range of traffic flows. But from many points of view (eg safety, energy) it forms a transport system unsuitable for high speed. If it is to play a part in long-distance travel its role must be limited to instances of low demand.

In the case of the railway average cost does not increase in proportion to speed. But the same is not true of increases in energy expenditure in proportion to speed. The ideal speed should be decided in relation to the average length of journey.

The aeroplane's particular quality is that it can adapt to a fairly wide range of traffic flows over long distances. The tremendous increase in European air traffic in recent years has caused a revolution in human geography and in the planners' working methods and will go on doing so. With an average passenger load the largest aeroplanes scarcely consume more energy per passenger/kilometre than the motor-car (with 1.3 passengers per car).

Lastly, it is clear that geography predetermines the use of waterways and maritime transport. But it may well be that new ways of using them will be developed in the future.

Once the specific qualities of each means of transport have been clearly defined, including energy consumption and the main advantages it can offer to the community, the authorities should give full attention to the possible joint use of means of transport.

In the case of passenger transport, terminal journeys will in future be the subject of new arrangements. The idea of complete door-to-door service to the customer has already put in its appearance and can only go on spreading. Car hire at either end of the journey, terminal bus and joint taxi services will become essential features of optimal transport management.

In the case of long-distance freight transport the main effort could be focussed on concentrating traffic in the high-performance infrastructures (as regards speed or energy), ie the main rail axes, the ports and certain waterways.

Roads should be planned from the essential point of view of the needs for which they are best suited - short and medium distances, variable flows, limited speed, cover of the entire territory. We cannot assume that the functions of major European axes are necessarily homogeneous, once construction is complete; all we can say is that certain service criteria have been met according to the meaning which we set out above. A suitable aim might for example be to keep a trans-Alpine link open throughout a "normal" winter.

CONCLUSION

A stronger intention to preserve the environment and the need to restrict energy consumption (at least so far as we know the facts at present) do not mean a complete upheaval in the pursuit of regional balance in Europe. On the contrary, these new considerations should encourage regional planning authorities to define their fundamental objectives and to reformulate them in a context of more moderate demographic and economic growth. There is no contradiction between regional planning objectives and these new constraints, which become rather a gauge of the extent to which regional planning is, ultimately, conceived for man and placed at his service.

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