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## REGIONS, BORDERS AND NETWORKS <sup>1</sup>

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### ABSTRACT

The title of the conference “Borders and Regions” was considered by the majority of the lecturers as problems of a region at the border of a larger region (country, European Union). This lecture deals rather with the relation of a region to its *own* border: sets out the main functions of the frontiers of a region and concludes how certain networks can help to fulfil the same tasks.

Nowadays both in strict sense and figuratively there is a shift from using sharp administrative borders towards creating indistinct frontiers. Sharp spatial borders become concentration of tension rather than solving problems (iron curtain, US-Mexican border etc.) As an analogy we can also refer to the general shift from regulation with sharp administrative limits towards market-type regulation with softer frontiers. (in economy, environmental protection etc.)

Over the roles supplied by a frontier zone (buffer, filter and barrier) it is a *characteristic spatial structure* within the region that has a chance to select the external effects arriving to the region. The physical networks that are spatial imprints of the existing relation systems have four possible roles as internal *provision*, external *accessibility*, to assure *through-cut* and of *avoiding* a region.

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<sup>1</sup> Lecture on the international conference “Borders and Regions” organised on November 29-30, 1999 by the Department of Economical Geography of the University József Attila, (JATE), Szeged

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The condition of the good operation of a region is the good *local provision*, that is the existence of appropriate internal networks. Out of its existence the *pattern* of the structure is also determining: creating appropriate internal transport network in a region it is an important target to built out multilateral net structures so, that a similar provisional position be able to decrease (and not increase) the differences originated from the position of these different localities.

The measure of good *accessibility* is the multilaterality and multidirectionality of relations. There are two important levels of accessibility links to be distinguished: the direct main, large-scale axes and the transborder extension of the subordinated internal provision networks. In case of similarly developed linked regions, we can expect that the advantages due to the improvement of the relation will also be symmetrical between the regions. Improving accessibility between developed and less developed regions, it is not so clear, that the result is similar: we also have to take into account whether the internal structure in the underdeveloped side able to develop at a measure needed by externally controlled changes.

In order to defend and develop the internal structure, the *through traffic* crossing the region has to be led with minimised harmfulness and with minimised troubling of internal relations. We have to learn, that it is impossible to eliminate through traffic, but on the other side it is not at all an aim to attract more of it into the region.

With the metaphors *Island*, *Basin* and *Crossroad* we try to describe the relation between a region and its environs. The *Island* represents the isolated region without external relations. A *Basin* disposes with clearly interpretable frontiers, while there are *gates* along this frontier that are able to both let and filter the inflow. In the same time the internal structure is also able to select: there are incoming element easily melting into the structure, while other elements are not. The *Crossroad* is a part of the space where the internal structures have no role or importance; everything serves those arriving, everything is determined by external structures.

By forming the transport network we can influence the endowments of a region. In connection with that task now in Hungary (and in Eastern Central Europe) we just have to strengthen the *Basin*-characteristics and as we are able we have to decrease the danger to be involved into a *Crossroad* role. Understanding such role of the networks gives us a possibility that the networks, in frame of a conscious development policy be ready to take over a part from the role of the frontiers and by that development a functional harmony could be created between the tasks of the frontiers and the internal structures.

## INTRODUCTION

It seems that the interconnection of the two expressions borders and regions that appeared in the title of the conference was understood differently by the participants.

Perhaps a majority of lecturers deals with the *relation of a region relative to the border of a bigger area* (country, EU): here we can mention the problems of the border-side life, the question of the cross-country relations, generally the international considerations. The other possible approach focus on the relation of a region with its own border-line. This lecture is one from this latter category.

## Regions

In a process of identification of regions generally the attention, frequently even the professional preparatory work focus on two items: on the determination of the borderline and that of the centre of the region. Admitting the importance of the administrative clearness in all matters when the *single covering* of the territory and the *reciprocally unambiguous correspondence* is necessary, (statistical arrangement, administration, responsibility for basic services etc.), still we want to underline, that long debates on borders and centres in many cases just draw away the attention on the essence: that is on the uniqueness, on the special profile, on the internal interconnections of the region. As for the *centres*, the detailed opinions about that topic we can postpone to a possible future "*Regions and region centres*" conference; our present topic put rather the role of the *borders* on the agenda.

## BORDERS

What are the main functions of the border? On the one hand this is distinguishing a given region from its environs, on the other hand marking the range of effects and validity of internal rules, structures, and separation of all these from different rules and structures.

**On many fields of activities we can observe a shift from sharp administrative borders towards slurred border-zones influenced by the processes themselves.**

It is an easily formulated task and an intellectual challenge to deal with limitation of territories by sharp borderlines. In the same time it is worthy to ask, whether really always reasonable to move a scientific apparatus in order to the "good" limitation; whether it is a real target to create sharp borders between neighbouring, but different rule systems.

Our practical experience is that the sharp artificial limitation means always a significant intervention into the territorial processes, that frequently cause harmful accumulation, congestion and tension. The big pression to transgress the borders helps to break loose corruption (smuggling, illegal migration etc.), and the frequent effort to brake these activities in the short term is the enforcement of the border. This kind of reaction typically not solve but intensify the existing problem.

A few examples to the prevention of the flow of *goods, ideas or people* with a sharp border: – between neighbouring rich and poor countries (United States-Mexico); between significant political differences (iron-curtain, West-Berlin, Schengen?); or administrative rules to prevent the migration into the city (Határ-út /Wekerle-telep/ at the earlier border-line of Budapest).

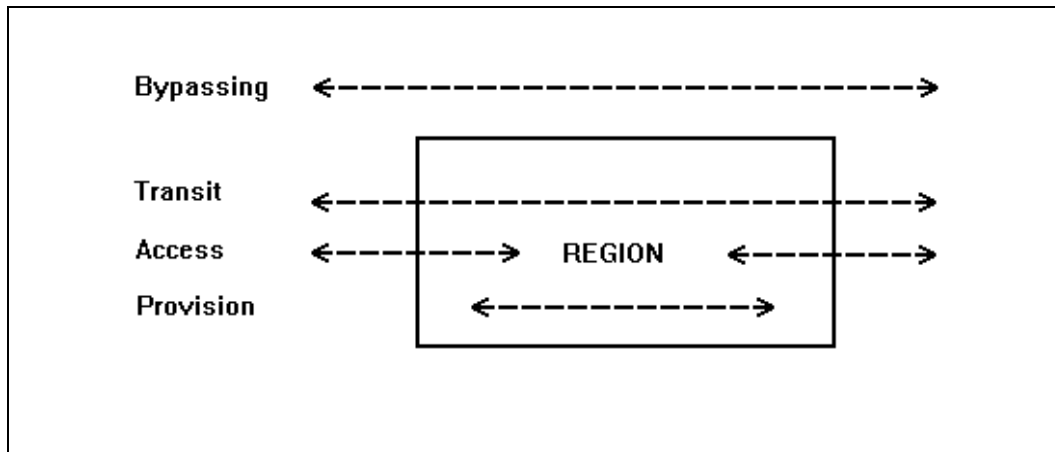
Drawing a sharp, determined borderline suppose, that it is possible for very different economic branches, activities to establish a common spatial border. The general experiences do not verify this kind of thinking based on *one single dominant organising principle*, as different activities (different production relations, trade, free-time activities, home-work relations, waste disposal, water sources etc.) dispose with just different activity zones, and even within that zones there are different rational "ranges of gunshot" valid for the users of different modes of transport (cycle, car, public transport).

Both in concrete and in figurative sense the formulation of *blurred* (not sharp) *borderlines* can be considered as a sign of our times. So earlier sharp borders of *disciplines* and *professions* are getting blurred, that can be considered as a sign of reordering. – The result is, anyhow, that instead of a *borderline*, there appears a wider band, *a zone of boundary*. The freedom of the choice, of the deliberation is increasing, as the frontier functions are not accumulating at a single line, but form a gradual transition, making possible the formulation of a gradual resistance, a gradual filtering, a gradual balancing of the existing differences.

It is also worthy to observe the parallelism with the development of the regulation of other disciplines. Both in environment protection and in the economy a similar shift has been carried out from a strong administrative regulation using sharp limits towards a market-conform regulation using softer transition that, at least on the level of the expectations should be less rigid and arbitrary than pure administrative rules, offering a certain possibility of consideration for those whom the rules relates. (Beside an administrative / bureaucratic logic there is a room here for a technocratic / economic approach too.)

What might be a "market-conform" regulation in the case of the borders of a region? An ideal form of the regulation is, if everybody can freely enter into the area, but all those not fitting to the structure will not feel there well and leave. For that reason it is a *characteristic internal structure* that is necessary within the region; as mainly it is this structure that can make the selection, by absorbing or just expelling the newcomers. A main characteristic internal structure is a local culture and civilisation, based on gradual internal harmonisation and on internal relations. Physical structures as element of that relations create also important internal structures

## WHAT NETWORKS CAN DO?

**Provision, accessibility, passageability, avoidability**

Source: After Plogmann (1980), with own additions.

**Figure 1. Different network relations, relative to a region**

Figure 1. present those relations, network connections, e.g. transport connections can occupy relative to a region. We called *provision connections* the interconnection of the elements (e.g. villages) *within* a region. *Accessibility* of a region is achieved by all those connections crossing the frontier of the region, that direct into the region from outside, or that direct outside from the region. We named *transit connections* the movements that *cross through* the region without having an internal target. At last we called *by-passing* the possible flow, that *do not get into contact* with the region at all. Below we definitely distinguish the specific functions and roles belonging to each mentioned types of flows; while in the same time looking for common, harmonised principles in the case of all functions.

**PROVISION (EXPLORATION?)**

**It is the condition of a co-ordinated operation of a region, that a proper internal network should exist**

Ultimately, in the internal life, in the good operation of an area, it is not the good operation of the transport networks that is important, but, that (expressing from the transport's point of view) the world of *the starting points and the destination points* of the transport should be living in prosperity. Still, it is our statement, that a fundamental condition of that kind of operation is the existence of the proper physical networks. Naturally this does not mean, that it is the construction of the physical networks, that *creates* the internal activity, the connections, but means, that the luck of

the networks can hinder the development of the internal relations, what is more a missing physical connection is able to present as unreasonable even existing relations. Here there is a kind of mutuality: the two activities, namely the formulation of small-distance, neighbourhood (economic, cultural etc.) connections and the construction of the similar level physical connections are able to amplify the started processes in the case of the harmony between these activities (positive feedback). If, in turn, this harmony is slacken, if the organic construction of the local structures end, even the existing connections develop back, effecting also the structure, that become inorganic, collapse, doesn't protect any more the internal values of the area. (this is also a positive feedback, but this time into the direction of the collapsing).

The physical networks of a region protect as a *memory* the courses of earlier relations and make it easy that the same relations may be formed again. Just because of their such features, the networks are able to function as the *structural elements* of the culture of connections promoting the cohesion, the co-operation of the given area, the creation of characteristic activity profiles, the accumulation of events following each other. And among all networks, with the "world of destinations" that is with the activities aiming the real sense of the transport, it is the capillaries serving the destination points, that is the *internal provision networks* of an area that get into interaction.

It is only such regions disposing with an internal structure that has the chance, that in a coherent way could select the inflow arriving from the outer world, and by that at least to a certain extent could influence the events, consequences effecting the region.

### **It is the pattern of the internal structure that is determining whether the given region becomes viable**

The pattern of the internal physical structure within a region present a kind of similarity with the patterns of the activities, as those are mirrored by the physical structures. That is, due to a single-centred, hierarchical activity- and relation network, the "memory" that is the constructed physical structures will also be single-centred and hierarchical, what is more, they will promote the further maintenance of similarly structured activities.

A characteristic feature of strictly hierarchical structures is that their nodes are not substitutable, are unavoidable, and because of that these nodes are getting into key position. that is all other nodes at a next level get to a defenceless position relative to the previous one. This same feature, that is the arrangement without any freedom makes on the other hand the operation of the hierarchic structures rigid, clumsy and resistant against any change, and in the same time vulnerable and inflexible from the point of view of survival.

The literature dealing with networks offer clear guidelines, that in order to discontinue the damaging characteristics it is necessary that multidirectional networks instead of the single-way forced connections be formulated between the elementary nodes. Still, there are obstacles to be eliminated before a spontaneous formulation of multidirectional connections and these are the *existing network structure* itself, mirroring the earlier operational mode; the *key-positions* having been formulated at the higher level nodes and also the resistance against any change in the defence of the existing relative advantages.

*The spontaneous processes are suited first of all for the defence of the existing structure.* The filling up, even the enforcement of a given structure can be relied on spontaneous processes, but when it is necessary *to change the given structure* it is not enough to let work the spontaneous processes, the intervention is unavoidable in order to help the expected changes. Naturally it is necessary dispose with a clear picture about the *aim* of the intervention, the *tools* of it and that of the expected *impacts*. If all these prove to be acceptable for the people concerned, then there is a chance for the positive and effective arrangement of the intervention.

When shaping the internal transport network of a region, it is absolutely necessary to lift into the main objectives the formation of *multilateral connections* that decrease the defencelessness of single settlements, and make possible the materialisation of alternative local development scenarios. Naturally the multilateral cooperation forms must be evolving in economic, cultural, educational, free-time etc. dimensions and not more than one level of that the maintenance, improvement or development of the existing or earlier existed physical connections together with the stressing of the structural continuity of the grid network characteristics. *It is the substance of the grid structure that the various points of the region are approaching similar provision position at least as far as it is possible, that is the differences caused by their position between the points are decreasing (and not increasing).*

### **Viable regions look for centres, and not vice-versa**

Because of the existence of earlier forced relations generally there is a similar need for such a counterbalancing between the centres of the regions and the rest of the settlements too. This is not more, than the recognition that it is the *totality of the region* that need optimal conditions for a development, and this is not necessarily identical to the conservation of internal relations inherited from the past. As it was referred above the centre got into key position due to earlier forced relations, frequently feel counterinterested in the decreasing of that relative advantage, and inclined to hinder a development thinking in the whole of the region, maintaining its key-position even at the price of braking down the development possibility.

That consideration is frequently coupled with a suggestion *as if it would be the irradiation of the centre that formed the region around itself*, and consequently for all those living in the region first of all the improvement of the connections leading to the centre would ensure the future development. It is important to underline, that with the good internal provision of the whole region here we try to move the positions just to the opposite direction, that is to the *increase* of the local choice possibilities by that basing the progress of the viability of the region on the improving chances of the whole of the area. We think that *the centre of the region can become more important just if it can represent an area of growing importance*, that is it should recognise its interest just in the development of the region as a whole.

#### ACCESSIBILITY

#### **The multidirectionality of the accessibility is of basic importance for the development of a region**

We wanted to stress above the importance of the internal relations, but *not against* the external accessibility of the area. On the contrary, we just keep it important to fasten for the region, that the external relations be of good service for it. Just in order to that it is necessary, that the internal structure be able to absorb the arriving goods and effects, that there be an existing spatial structure that can be further constructed by the new influences, that there be a fundament in the region, that the new results can be built on.

Based on all these above, it is definitely to be stressed that the regions also interested in the fact that they dispose with a good accessibility. As a measure of the good accessibility, for the whole of the region we underline the same point, that was also a measure of the good provision within the region: namely the *multidirectionality and the multilaterality of the relations*. A region is able to exploit well its positive endowments from the external relations, if these connections are not forced ones, that is the region itself dispose with a possibility of choices and considerations between types and directions of relations. It is evident, that the multidirectionality of the relations also brings a physical security advantages (it can't happened, that the blockage of a single route practically isolate the whole region) but in the practice even more important is the economic, social and psychical dependence that follows from a forced relation.

In Hungary, the spatial structure is still form a structure where both in the connection of the regions to each other, and in their international accessibility the share of *the forced connection leading across the Budapest conurbation* is far higher than it is reasonable.



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**Among the external relation a difference has to be taken between large scale backbone relations and neighbour (co-operation) relations**

Above we spoke generally about the external relations of an area. It is useful, still, to distinguish two levels of these relations. – One level is represented by the relations offering the main flows between regions, generally by *higher level backbone connections* on the main networks. This level both in its system and in its physical characteristics differentiate from the internal provision networks that serve the local connections.

The other level is represented by the prolongement of the internal provision networks, that is by the interconnection of this internal networks through the frontiers of the regions. Such kind of interconnections make possible for unites (e.g. for villages) at the border area of regions to dispose with the possibility of the multilateral connections, also ensuring that this neighbouring co-operative traffic shouldn't be forced to take roundabout ways and shouldn't load the routes constructed for long-distance traffic. On the other hand the continuous character of the secondary network makes capable this level that we can count upon it as an extended and interdependent system (e.g. for using by cyclists).

**The symmetry or the asymmetry of the impacts depend on the difference in the development of the interconnected regions**

After underlying the importance of the connections of accessibility, we also have to draw the attention to a danger. During the whole history, the construction of the main roads of interconnecting regions represented a kind of imperial domination factor. For Rome it was the amalgamation of the empire that needed the construction of the roads where the legions could quickly advance. During the flourishing period of Rome these roads served the conquest and the maintenance of the dominance, but it is to be seen that these same roads were also used by those barbers invading the empire in the period of the collapse. That is, *the road always strengthened the position of those more powerful*.

In the case of roads connecting regions of similar development it is groundedly expectable that the advantages that follow from the improvement of the connections will also be divided symmetrically between the regions affected. This situation characterised the earliest element of the trans-European network interconnecting the most developed countries of the European Union.

The situation is not so clear-cut when we look at the routes interconnecting to each other *developed and less developed regions*, or improving the accessibility in such situation. In such cases – now already in economic terms – it can happen, that the distribution of the advantages is not just asymmetric, but it can prove to be defi-

nitely disadvantageous for the less developed region, as the course of the development can become deformed there, by creating an enclave area separated from the rest of the local economy, and by not decreasing but increasing the external dependence and defencelessness of the region.

Above we have already dealt with an important element of the self-defence of an area, the importance of the internal structure. Here we can add, that the existence and operation of an internal structure can also be considered as an indicator of the level of development of the given area. In the period of sudden changes of the external structure, it is the obligation first of all of those living in the region to estimate the measure and pace from these changes, that is tolerable for the internal structure; and the kind of developments and restrictions that are able to promote, that the development of the internal structure be able to keep abreast of the demands of external changes.

#### PERMEABILITY OF A REGION (POSSIBILITY FOR EASY CROSSING) TRANSITABILITY

##### **The through traffic has to be transmitted across a region with the minimal possible disturbance of the internal circumstances**


The stressed mentioning of the role of the internal structure does not mean that the through traffic or transit traffic across a region could be excluded or disregarded, or we shouldn't deal with that. Even we have to underline, that the *central position of a country* is a *positive endowment*; similar to those kind of advantages as for example the *richness in raw materials* of a region. But this analogy must be continued: it is a general experience, that in the long run economic competition those countries that tried to base their future exclusively on the direct sale of their raw materials all lagged behind. The advantages due to the use of the raw materials are realised in those areas, where the materials are processed and the products get into a multi-relation and multi-colour activity field. Quite similarly, the advantages of the transit role also can not be realised by the direct sale of the "raw material" – of the transit corridor – but rather if the *region touched itself able to catch the possibilities that the transit corridor means*, if there exist a local economy that able to built in, to absorb the necessary activities. For all this it is necessary, that the region dispose with an internal structure, with a local system of relations, with a network of "capillary vessels".

The defence, maintenance and development of the internal structure is aimed at by keeping the principal, that the real transit – that is the flow, that do not get into contact with this structure – must let through the region *with the possible minimal harm, with a minimal disturbance of the internal circumstances*. Three considerations follow from this principal relating the transit traffic: namely (1) a quantity, (2) a modal split and (3) a network forming considerations.

- (1) Above all, we must *make an end of the myth of the quantity*, of the misbelieve that it would be the interest of a region, to increase the flow of the transit crossing the area, the attraction of the biggest possible traffic. As an example we can present here a few figures describing the situation of the Hungarian tourism sector. Referring to international statistics, in the number of tourists, it is 2-3 per cent of the *international tourism of the world* that cross Hungary; while from *the income of the international tourism* of the world an order of magnitude less share, a few per mille [‰] get to the country. It is clear, that the income can not be increased by trying to further growing the *number* of those arriving into the country: even now it is not the quantity of the throughput but rather the absorbing capacity of the tourism sector, that we have the problem. This later should be upgraded approaching by that a better balance between the internal structures and the external demands. Similar diagnose could be given generally about the relation of the traffic and the local economy: there are no real country interest in serving a flow of goods that exceed the internal absorbing capacity of the region or the country. *The transit traffic can not be eliminated, but no effort should be taken to attract as much of them as only possible.*
- (2) In the sense of a *modal split consideration* in order to decrease the troubling effects of the through traffic, it is desirable to assure that *the possible biggest share of the trunk and through transport should get to modes that are proper for that service like the rail*. The reconstruction of the poorly maintained railway main axes should have a priority over the construction of parallel motorway corridors in Hungary: just inversely as it is happening now-a-days.
- (3) The defence of local structures from the impacts of the through transport is served by a *network formulating consideration*, namely, that *the through and the local interest traffic should be separated in its system*. In the case of roads that means the distinction of the road infrastructures themselves, that seems at a first sight to be a wasteful solution, but in the reality it is not just useful, but also fits to historical practice. The basis of the secondary road network was the horse-carriage road network that connected villages to villages. The tracing of the main roads constructed in the recent 150 years have gradually been separated from that old road network sticking strictly to topology, land ownership and soil possibilities, and a new structure has been created, the main road network connecting urban centres to each other. A similar process is expected now when motorways are organised in a new network, that does not aims to connecting any more urban centres to urban centres, but regions to regions.

Those sections of motorways that were constructed until now in Hungary has been created on the base of a quite difference logic. they were built parallel to the most loaded suburban main road sections leading to Budapest, where the capacity of

the main roads were exhausted. These motorways do not mean a *new structure* at all, just the contrary, they maintain and enforce the rayon-like, Budapest-centred structure of the main road network. If the future Hungarian motorway system would mean the connection and prolongation of these existing sections to the frontiers of the country (as it is suggested by the existing official plans) then, by that we would press the inter-regional traffic across the area of the Budapest conurbation. This fact would be harmful from both the point of view of the circumstances of the traffic and the area.

Against this, *the inter-regional through transport corridors should be built across the country so, that it could by-pass Budapest and generally the densely inhabited locations, the area of the Balaton lake and generally the resort areas, the protected areas.* Besides both environmental and economic considerations make the country interested in the possibility to construct these transit-corridors in the smallest possible length. It is justifiable mathematically, that a form resembling to a closed envelope  is able to connect the planned main frontier-points (that is the environs of Mosonmagyaróvár, Nyíregyháza, Szeged and Nagykanizsa): creating important intersections both in the western side of the country at Székesfehérvár, and in the east at Szolnok. here joining to the east-west axe of Hungary connecting the mentioned areas. Such a line by-passing Budapest and its environs not only lighten the capital from the unnecessary through traffic burden, but by concentrating the logistic functions in two different points, in the same time contribute to the development of the internal structure of other parts of the country. This helps the development of the whole bigger region and through that, in a paradox way not hinder but just helps the enforcement of the regional position of Budapest. If the centre is surrounded by an existing and developing bigger region, it is definitely helps the enforcement of its central role, even we can say, that it is the condition of a real regional position.

#### **AVOIDABILITY (POSSIBILITY FOR NOT CROSSING IF NOT NECESSARY)**

#### **RELATIONS BETWEEN A REGION AND ITS ENVIRON**

##### **(Island), Basin and Crossroad**

With the metaphors Island, Basin and Crossroad we try to distinguish characteristic relations between a region and its environs, that is the possible relations between areas within, and those out of the region.

In that context *Island* symbolise an area closed, isolated, without any external connection; that is the extreme situation, when the internal structures has no contact at all with the outer world. In the Hungarian context (fortunately) we don't have to make calculations with this case, but in the 1950s this approach was relevant to different countries of eastern Europe.

The *Basin* is also a part of the space with clearly definitive border-line, where it is well distinguishable that a certain point is within or out of that area. But in the case of the *basin* the border does not mean a total closure, there are *gates* that make possible that both inward and outward different traffic flows. Those elements inside dispose of a certain order, an internal structure. Those arriving into the basin, partly adjust itself to the internal situation, partly can also modify on these situation, – or can also leave. What is important, that after that mutual adaptation process take place, the internal structure still be valid, it should not be eliminated. A kind of mutuality and balancedness in the adaptation process is assured by the fact, that on the one hand the gates are able to filter, to portion both inward and outward flows, on the other hand the internal structure itself can also "select": there are elements that can be easily absorbed by this structure and others that not or only after a gradual transformation. At last all those elements got into the basin are able to *build in, to get acclimatised, to be domesticated*, to become part of the internal structure through these processes.

In this very general phrasing used above, almost no matter whether we speak about the diffusion of natural processes like the spread of plant cultures, or of just social habits, human civilisation. The *basin* feature is an important characteristic of our narrow environs, namely of the Carpatian basin; and both in ecological and in historical (linguistic etc.) context it can be traced back that special duality of protection and of outward openness.

The *Crossroad* (passage-way) symbolise a part of space, where the internal structure has *no* role, it is not important, what is more, everything serves those arriving, passing through. The rules are subordinated to the interest of this latter, everything is determined by external structures. No matter that in eastern European history and in the Hungarian history there are also many cases when this area became military springboard, served but as a tool for achieving other target points. So it can't be deny that this region also possess such kind of endowments, potentiality, but it is also important to underline that not those episodes of the past were the most glorious periods of the local history.

Now-a days, among the preparatory priorities of the European integration process, significant, – sometimes it seems to be exclusive – stress is taken on the importance of the external relations and on the confirmation of the *transitability* (penetrability) of these countries. The Hungarian transport policy (1996) seem to look the

pledge of the future in the crossroads role of the country and its ambition aims at a definitive increase of such kind of tasks. By my opinion in both cases bigger attention should be given to the maintenance and tending of the *internal structures*, on reserving and improving the internal relations, and preventing that by fully destroying internal structures the changes would totally subordinated to external interests.

For example in the case of the national road network it is the 30 000 km of total length that embody the internal structure. This network essentially got its proper pavement suitable to the necessity of the car traffic during the 1960s - 70s. In this days the Hungarian road network is "European" because this system works. If we let this system destroying, if we neglect its maintenance, the network will not be European – independently from the fact if we might construct 1000 kms of motorways to *traverse* the country.

By forming the transport network we can influence the endowments of a region. In connection with that task now in Hungary (and in Eastern Central Europe) we just have to strengthen the *Basin*-characteristics and as we are able we have to decrease the danger to be involved into a *Crossroad* role.

*Budapest, November 28, 1999.*

## REGIONS, BORDERS AND NETWORKS<sup>3</sup>

Tamás Fleischer<sup>4</sup>

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The measure of good *accessibility* is the multilaterality and multidirectionality of relations. There are two important levels of accessibility links to be distinguished: the direct main, large-scale axes and the transborder extension of the subordinated internal provision networks. In case of similarly developed linked regions, we can expect that the advantages due to the improvement of the relation will also be symmetrical between the regions. Improving accessibility between developed and less developed regions, it is not so clear, that the result is similar: we also have to take into account whether the internal structure in the underdeveloped side able to develop at a measure needed by externally controlled changes.

In order to defend and develop the internal structure, the *through traffic* crossing the region has to be led with minimised harmfulness and with minimised troubling of internal relations. We have to learn, that it is impossible to eliminate through traffic, but on the other side it is not at all an aim to attract more of it into the region.

With the metaphors *Island*, *Basin* and *Crossroad* we try to describe the relation between a region and its environs. The *Island* represents the isolated region without external relations. A *Basin* disposes with clearly interpretable frontiers, while there are *gates* along this frontier that are able to both let and filter the inflow. In the same time the internal structure is also able to select: there are incoming element easily melting into the structure, while other elements are not. The *Crossroad* is a part of the space where the internal structures have no role or importance; everything serves those arriving, everything is determined by external structures.

By forming the transport network we can influence the endowments of a region. In connection with that task now in Hungary (and in Eastern Central Europe) we just have to strengthen the *Basin*-characteristics and as we are able we have to decrease the danger to be involved into a *Crossroad* role. Understanding such role of the networks gives us a possibility that the networks, in frame of a conscious development

policy be ready to take over a part from the role of the frontiers and by that development a functional harmony could be created between the tasks of the frontiers and the internal structures.

*Budapest, November 28, 1999.*

#### **REFERENCES**

Plogmann, F. (1980): Die Bedeutung der Verkehrsinfrastruktur für das regionale Entwicklungspotential. Beiträge zur Siedlungs- und Wohnungswesen und zur Raumplanung 664, 1980 Münster



## REGIONS, BORDERS AND NETWORKS<sup>5</sup>

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### ABSTRACT

### INTRODUCTION

Regions

### BORDERS

On many fields of activities we can observe a shift from sharp administrative borders towards slurred border-zones influenced by the processes themselves.

### WHAT NETWORKS CAN DO?

Provision, accessibility, passagebility, avoidability

### PROVISION (EXPLORATION?)

It is the condition of a co-ordinated operation of a region, that a proper internal network should exist

It is the pattern of the internal structure that is determining whether the given region becomes viable

Viable regions look for centres, and not vice-versa

### ACCESSIBILITY

The multidirectionality of the accessibility is of basic importance for the development of a region

Among the external relation a difference has to be taken between large scale backbone relations and neighbour (co-operation) relations

The symmetry or the asymmetry of the impacts depend on the difference in the development of the interconnected regions

### PERMEABILITY OF A REGION (POSSIBILITY FOR EASY CROSSING) TRANSITABILITY

The through traffic has to be transmitted across a region with the minimal possible disturbance of the internal circumstances

### AVOIDABILITY (POSSIBILITY FOR NOT CROSSING IF NOT NECESSARY)

### RELATIONS BETWEEN A REGION AND ITS ENVIRON

(Island), Basin and Crossroad

### REFERENCES

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