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# SPATIAL EQUITY - SOME ANTI-THESES TO CURRENT REGIONAL DEVELOPMENT DOCTRINE x)

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# SPATIAL EQUITY—SOME ANTI-THESES TO CURRENT REGIONAL DEVELOPMENT DOCTRINE x)

**by Walter Stöhr and Franz Tödtling***

## 1. SPATIAL EQUITY AND REGIONAL POLICY

Spatial equity or the reduction of spatial disparities of living levels is a key objective of most national urban and regional development policies.[1] In some countries this is formulated in general terms such as "balanced development between regions" or "reduction of disparities between West and East (France, [46]) or "the prevention of regional imbalance" (Great Britain, Cameron in [53; p. 15]). More explicit formulations are used in Sweden [56] and in the German Federal Republic [47], [9] where a stepwise definition of the "attainment of more equal living conditions" was undertaken by specifying components of basic living conditions (employment facilities, access to social, commercial and cultural services, to "good" environment, etc.), of their minimum standards, and of maximum accessibility ranges. The results of these policies on the whole have been poor, sometimes contraproductive, with regard to objective material indicators of living levels (as will be shown later) while they are rather undefined with regard to the more subjective perception of—frequently immaterial—living conditions by specific regional communities.

The poor results of regional policy in objective material living levels terms are expressed by the fact that spatial disparities in material living levels in most countries have not decreased, or if they have at one level (e.g. at the interregional one) they have usually increased at other spatial levels (e.g. regional or urban). The subjective perception of conditions of living by concrete regional communities seems to show growing discontent on the part of subnational social groups (including local and regional ones) about the increasing impact upon them of exogenous economic and political determinants (large scale functional changes) and their diminishing ability to resist them and to shape their own destiny within large and still expanding economic and political systems. The increasing dissatisfaction of ethnic minorities in many European and other countries is a symptom of the

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[1]Other goals explicitly formulated are: efficiency of resource use (Australia, Brazil, Bolivia, GFR, Sweden, etc.), protection of the environment (Australia, Austria, France, GFR, Netherlands, etc.), national security or other national goals (Austria, GFR, Israel, etc.). The present paper, both in its theoretical and empirical parts, is focussed primarily on conditions in market and mixed economies.

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latter as well as local resistance against urban freeways, major airports, nuclear power plants etc.

Both these facts have to be seen against the background of an increasing functional specialization and integration (between sectors as well as between regions and nations) and of the increasing mutual interdependence resulting from it. Large scale functional changes in demand, in technology, raw material and energy prices, etc. which are transmitted vertically within or between sectors and trans-regional or trans-national organisations, are the cause of major changes in territorial space, see Pred [42]. Along with the increasing scale of private and public functional decision making units, such vertically initiated changes cause local and regional disturbances and fall-outs of increasing complexity in the form of environmental pollution, unemployment, congestion, idle regional resources, etc. which are to a great extent left to territorially organized communities "to be mopped up," see Friedmann [16].

Regional policies in our present highly interrelated and complex social systems are therefore increasingly concerned with mitigating the fall-out of functional (vertical) changes upon territorial communities. Spatial development policies can therefore be considered a countervailing power to sectoral or other functionally oriented trends and policies. With the increasing scale of functional (sectoral, organisational etc.) interrelations and dependencies, the emphasis of spatial development policies has shifted from the (formerly dominant) local and regional level to inter-regional, national and even multi-national ones (such as the European Community's regional policy). The greater the territorial scale, however, the more the territorial interests will approach the aggregate functional ones (at the world scale they become identical) and the more they tend to lose sight of the perceived requirements of small and intermediate sized territorially organised social groups. Because of this, regional policy will be less able to fulfill its function as a countervailing power.

This paper is concerned with the relations between small group well-being and regional planning at multi-regional, national, and multi-national levels. Spatial equity will be considered in somewhat broader terms than is usually the case in planning analysis and practice: not only as spatial equality of living levels but also as equality in options of group development and human self-realisation over all populated parts of the country. Besides the criteria usually considered, such as regional product, regional income, access to employment opportunities, to basic services, or to minimum environmental quality, there will also be included the right of individuals and small groups to determine their immediate natural and human environment and to exert adequate control on the influence of external economic, technological, cultural and other factors which effect their well-being. Equity is therefore considered not only in terms of equal socio-economic levels but also in terms of equal chances of individuals and groups for diversity and for being different, see Matzner [33]. Given a diversity of individual (and

group) aspirations and dispositions this is the only way of facilitating opportunities for a maximum degree of human self-realisation.

These opportunities have in the past decades in many developed and developing countries been reduced considerably by increasing functional and spatial integration of interacting systems of growing size, complexity and lack of controllability. All these factors have led to "backwash effects" not only in economic (Myrdal, Hirschman) but also in social, cultural and political terms. The determinants of change have become vested in a few functional and geographical centres, on the impulses of which the rest of the system has increasingly become dependent. It is maintained that satisfactory solutions of existing problems at intermediate and small social scales will only be possible if, along with the presently dominating strategies for system-wide spatial integration (and regional openness), explicit instruments for selective spatial closure at various levels are applied. Essentially this would imply devolving some of the decision making powers which have become vested in functionally organized (vertical) units back to territorially organized (horizontal) units at different spatial scales.

Taking into account the impact which changes in large scale functional relations exert upon territorial structures, there are theoretically three possible strategies for solving emerging conflicts:

1) by complex systems management: this requires full knowledge of the systemic interrelations between functional and territorial changes and vice versa. In view of the complexity of these interrelations this should remain a long-term research item but it is doubtful whether applicable research results may be available in the near future, except for selected problem areas. Also, they may render technocratic, but not necessarily socially feasible solutions.

2) Priority for functional changes: This strategy has been implicitly applied during the past half century or more. Large systems oriented criteria (technological change, efficiency, etc.) prevailed and the resulting territorial changes were either neglected or left to the individual household, firm or local and regional community to cope with;[2] at best, extreme disruptions of territorial relations were looked after by large-scale functional (public or private) organisations.

3) Priority for territorial integrity: this would mean that functional changes are allowed to take place only to the extent that no major disruption of territorial living conditions is caused, or that substantial aides are given to territorial communities to adapt their structures to the functional changes they consider desirable.

The choice between these three theoretical alternatives depends on which

[2]Large scale individual motorization, freeways, large scale urban renewal, environmentally dangerous industrial or energy plants are cases in point.

importance for human and social well-being is attributed to large-scale functional (mainly market and institution based) relations as against small-scale, environmental and social relations. It also depends on whether functional processes such as the introduction of new technologies and scale economies are considered major objectives to rule over small scale human and physical environments or whether the latter contain the objectives and are to rule over the first as instruments. A major rethinking of what are objectives and what instruments in our society in fact is involved.

## 2. CONCEPTUAL BASES OF CURRENT REGIONAL DEVELOPMENT PRACTICE

Many of the shortcomings of current regional development practice seem to stem from its conceptual bases which again are influenced considerably by the limitations of current regional development theory. Major factors in this respect are: the heavy reliance on neo-classical economics, the strong concentration on large scale vertically organized (private and public) institutions, the heavy reliance on market and institution based processes neglecting non market and informal processes, and the strong emphasis on economic and the neglect of social and political processes.

*Heavy reliance on neo-classical economics*

A major strategy of most policies for regional development is transport and communications integration. As in neo-classical economics the underlying idea is that a reduction of distance friction will make factors and commodities sufficiently mobile to move to the locations of their highest return; factor and commodity prices would equalize over space and lead to a convergence of regional per capita income, see Richardson [48; p. 24]. By promoting the areal specialisation of activities this would at the same time increase national economic efficiency.

While the latter often occurred, a convergence of regional disparities in living levels in most cases did not materialize (see section 3). In order to facilitate this, additional policy instruments were used as crutches to still make the neo-classical model work: a manipulation of factor prices (e.g. regional capital and employment incentives), a redistribution of external economies (through public infrastructure investment) etc. But the persistence of certain immobilities (of power, of population, of natural resources, etc.) continued to produce biased spread and back-wash effects and it has recently been increasingly realised that many of these immobilities are not only unavoidable but even sought for as an important social and political objective. Such objectives are related to what Allardt has called conditions of "loving" and of "being" which we shall discuss later.

*Sector theory* is another important ingredient both of current regional development theory and practice, see Richardson [48; p. 24]. In accord with this theory, regional development policies try to attract to less developed areas sectors

with high productivity increases and with high demand elasticity. These were usually industrial sectors able to use a high degree of scale economies. They were called "leading" sectors. There is no indication however, that these "leading" sectors actually are the ones which yield greatest individual or group satisfaction in the less developed areas or countries concerned (the frequent decline in the provision of basic regional requirements such as food and key service shows this), nor were these sectors the most appropriate ones for the optimal utilisation of the region's resources (heavy reliance on capital and technology in fact often set regional natural resources and labour free).

*Export-base theory* is a further important component of current regional development theory. It is based on the assumption that regional income is essentially a function of regional export performance. Apart from the theoretical limitations of export base theory, see Hilhorst [26], Richardson [48], it has contributed to the surrender of regional development to factors and decisions outside the region and to large scale functional interrelations.

*Growth centre theory* is a further important element of current regional development theory and practice. It is essentially a combination of export-base and sector theory applied to a point economy. Since overall mobility of factors and commodities has turned out to be unfeasible (and in many respects undesirable) the implicit attempt now was to collapse reality back into a point economy (one of the initial assumptions of neo-classical economics) and to thereby make regional equity and national growth compatible. Growth centre theory has led to a high emphasis on urban industrial growth, based essentially on extra-regional determinants. But it resulted in the lack of broader regional development observed in most countries as shown below in section 3. In spite of the empirically found deficiency of the growth centre concept, a major critical evaluation of this strategy has so far only been made for Asia [39].[3]

This parallel movement of regional development theory and practice may have been mutually influenced: regional development practice challenged the formulation of theories of regional growth which confirmed its initial policy approaches; on the other hand the body of theory emerging in this process reassured regional development practice of the correctness of their initial steps. In this way they reinforced each other by circular causation. The theoretical approaches mentioned above were essentially developed to explain past spatial patterns which had emerged under conditions of increasing functional and spatial integration, specialisation, industrialisation, the use of agglomeration and scale economies, and of accelerated innovation. Since it were these factors which essentially brought

[3]Kamal Salih in his concluding remarks said, he was not sure whether he had come "to a burial of the growth pole idea or to a celebration of the new agropolitan approach" . . . and . . . "whether this symposium will mark the demise of central planning of growth-oriented approaches and of accelerated industrialisation as the prime mover of development, or the birth of a self-reliant planning, of the goal of distribution and of accelerated rural development." [39; p. 416].

about spatial inequalities, the theories could hardly be expected to contribute much to the eradication of this problem.

*Strong concentration on large-scale vertically organised (private or public) institutions*

Regional development practice has relied heavily on large scale vertically organised institutions for implementing its policies. Horizontally organised territorial structures have thereby often been disintegrated or not been able to emerge. This applies to directly productive, to infrastructure sectors as well as to human and to man-environment relations. In the directly productive sectors refuge was usually taken to large scale multi-plant (and often multi-national) enterprises (private or nationalized) not only because they often operated "leading" industries but because they could readily be identified by regional development agencies and be dealt with easier than a great number of small firms, see Hansen [22; p. 55 ff.] for France; Stew Holland [27] for Great Britain and France. The role of these large firms was often further promoted by strong informal ties between leading personalities of large scale industry and government, see Sundquist [55] for France. In developing countries multi-national companies were relied upon heavily both for national as well as for regional development in programs such as for the North East of Brazil. In infrastructure sectors reliance also was put mainly on large scale centralized agencies to provide investment and organisational skills for the implementation of projects in less developed areas.[4] Similarly, the relocation of offices of large-scale government institutions to less developed areas was considered an easily manageable instrument of regional policy (see, for example, Sweden, Great Britain, France).

Lasuén [30] has stressed the space bridging capability of multi-plant and multi-product firms in transferring development impulses to remote areas, particularly by facilitating transfers of capital and technological innovation through their intra-organisational channels and not having to rely on public transfer channels which are usually scarce in such areas. Large scale organisations, however, tend to uniformly apply their central decision making criteria also to less developed areas. They will normally apply their own (high) technology also in these areas. Therefore employment effects are often disappointing and the region's resources will be utilized with a bias to the interests of decision makers external to the region. Similarly, the employment effects of relocating public offices to less developed areas have usually been disappointing since along with the offices usually a substantial part of the employees were transferred also from highly developed areas. The second problem with the space bridging capability of large scale organisations is that it can work both ways: whereas developmental impulses can be transmitted relatively easily to less developed areas, they can also (particularly in the private sector) be withdrawn with equal facility. With multi-national firms

[4]This made these areas even more dependent on formal structures and on outside inputs.

this has an additional dimension: shifts are possible not only between developed and underdeveloped areas of industrialised countries but also to Third World countries with their much lower wage levels, see Holland [27; p. 43] for Great Britain, France and Italy.

In summary one can say that, since most problems to which national policies for spatial development address themselves were caused by large scale influences transmitted through vertical functional channels. Consequently, the use of large scale, vertically integrated institutions turned out to be a rather evasive instrument for controlling these problems. In the long run they must be expected to operate in the interest of these large scale organisations rather than in that of the respective regions for which the policies were meant to operate.

*Heavy reliance on market based and formal institutional processes*

Both regional development theory and policy have primarily been concerned with market oriented processes and formal institutional aspects of development. Indicators used to measure the economic level of development or to formulate targets of development such as regional product, regional income or regional employment were in practice exclusively geared towards those components of these variables which passed through the market (e.g. market production, market derived income, and employment in market activities); production and employment related to (informal) non-market activities was rarely measured and hardly ever incorporated into planning targets. Yet these activities are of great economic and societal importance. In the United States, a country with a relatively small share of non-market oriented economic activities, the value of the latter has been estimated at 65 per cent of national income, traditionally measured by market transactions only. Scitovsky [54; p. 102] shows that with the emphasis of economic development policy on increased specialisation, mobility and large scale functional activities relying on the market mechanism, a steady reduction of the production of non-market goods and services has taken place (e.g. those rendered within social groups like the family, neighbourhood or clan, including mutual help and stimulation, advice and work as self-realization). These non-market goods and services however, according to Scitovsky, provide "comforts" essential for human satisfaction such as the comfort of "belonging" of "being useful" and of cultural continuity or "sticking to our habits" [54; p. 114 ff.]. These "comforts" are similar to Allardt's conditions of "loving" and "being" which we shall deal with later.

Indicators of social development which are widely used such as access to hospitals, schools, administrative offices, etc. also measure only the access to formal institutionalized social services which, particularly in less developed areas, are complemented to a considerable extent by informal activities fulfilling similar functions. In the present process of growing specialisation, institutionalisation, industrialisation and urbanisation these informal functions are increasingly being substituted by formal ones. Yet there is a wide spread feeling that this replace-

ment process should not continue to an unlimited degree and in part should even be reversed; see, for example, Illich [29] Matzner [33]. The argument is that for reasons both of efficiency and of group involvement many of these institutionalised public services should be devolved to informal self-organising groups. Greater emphasis of small-scale social relations is considered an essential condition for human happiness. These small scale human interactions "do not go through the market . . . are (usually) rendered free, their reciprocity and equitable distribution being assured by custom, tradition, social pressure, family discipline or law" (Scitovsky [54; p. 86]). They are culture specific "a determinant of culture and at the same time an expression of it . . . they contain the substructure which may help to thus protect human culture in all its splendid diversity in the face of inevitable change [20; p. 80–81]. Relations in small scale territorial space according to Greenbie "make human life ultimately satisfying" as they are "specific to culture, personality, time, place, and circumstance" [20; p. 93]. Greenbie uses Hall's [21] concept of "proxemic" or small scale space[5] and contrasts it with "distemic" or large scale space. Communication with "proxemic" space, according to Greenbie, provides the individual with security, a sense of identification (by differentiating it from other individuals and groups), "behaviour in proxemic contexts . . . require(s) a lifetime of experience to develop" . . . with "a clear understanding as to the conventions of its use" [20; p. 84] and consequently entails a relatively high degree of immobility.

Behaviour in "distemic" space on the other hand "can be learned abstractly, consciously and much more rapidly than proxemic behaviour" and therefore facilitates much greater mobility. Conceptual relations in distemic space can be kept up with a much larger number of people than sensual relations in proxemic space. Rather than culturally defined, distemic space therefore can be trans-cultural or "super-cultural" [20; p. 83].

In the terms used above, proxemic space can be understood to be predominantly territorially or horizontally organised, entailing a high degree of cultural specificity and immobility. Distemic space on the other hand is predominantly functionally or vertically organised, trans-cultural and entails a relatively high degree of mobility. Furthermore, distemic large scale systems require a comparatively high degree of organisation of activities, their legal and administrative systems must be guided by superior authorities (which may or may not correspond to small scale requirements) while proxemic small scale systems usually operate sufficiently well by informal self-organisation and self-policing [20; p. 92]. Greenbie maintains that a balance of human interaction in both these spheres (proxemic small scale and distemic large scale) is essential not only for individual and group well-being but also for the self-protection of small-scale territorially organized groups against large-scale (functional) influences.

[5]Hall calls "proxemic" space that part of a person's or group's environment within which sensual (non-rational, non-verbal) communication dominates; it extends over continuous space and is usually limited by the radius of regular direct personal contacts.

These arguments all seem to stress the importance of retaining and explicitly providing for the development of small scale, non-market, non institutionalised informal activities, the importance of territorially organised (horizontal) besides functionally organised (vertical) relations, as well as the retention of cultural specificity and the intentional maintainance of a certain degree of geographical immobility. Most of these factors were either absent from or at best at the non-operational margin of current regional development theory and practice.

*Strong emphasis on economic and material human needs*

Both current regional development theory and practice have so far concentrated on economic and material needs or what Eric Allardt [1] calls conditions of "having," while greatly neglecting (apart from occasional verbal statements of intent) immaterial human needs which he calls conditions of "loving" and of "being." This is essentially a replica of what has happened in national development theory and practice for the past three decades. Mainly as a reaction to that narrow economic orientation the social indicator movement tried to introduce the broader concept of "quality of life" at the national level since the mid 1960s. While it must be admitted that important theoretical and operational problems still need to be solved for national policies, the concept has hardly even started to touch yet on the theory and practice of spatial development planning.

Allardt [1] distinguishes between three groups of human needs: The above mentioned dimension of *having* (income, density of dwellings, employment conditions, health, education) to which most of the currently used indicators of regional development relate; the dimension of *loving* (relationship between individuals measured by components such as local solidarity, family solidarity and friendship) and the dimension of *being* (referring to the degree of self-realisation versus alienation of the individual in society expressed by components such as the degree of irreplaceability, the amount of political resources or access to decision-making available to the individual). Galtung [17] adds two further components of interest to regional development planning: the diversity of possible life styles for individuals to choose from, and the degree of autonomy (versus external control) of groups or individuals to set their own cultural goals.

Objectives of the latter groups are very rarely to be found in operational terms in either regional development theory or in regional policies: conservation of specific cultural and historical values is defined as an objective of regional policy in the German Federal Republic [8; para. 2], the provision of conditions for a wide range of life styles and for effective citizen participation and decentralisation of decision making in Australia (see Logan [32; p. 137] referring to the last labour government's policy). But indications for an operationalisation of these objectives are very scarce.

Reasons for the virtual absence of such objectives and their operationalisation may be: first, that some of these objectives (particularly the conditions of "being") would require shifts in the distribution of power and while it may be comparatively easy to redistribute material resources, a shift in power usually is

much more difficult to achieve, particularly if it requires existing centres to devolve their own powers. Second, little knowledge exists about the functional interdependencies of these variables amongst each other and with the conditions of "having," as well as on the instruments for influencing them. Third, these variables are more difficult to measure than the economic or material ones normally used in regional development programs and are therefore less accessible as political achievement indicators. Fourth, there may exist a feeling that these "conditions" or "comforts" depend on small scale community relations which cannot and should not be planned from higher levels. However, if these small scale (usually territorially defined) conditions and comforts are heavily influenced and often disrupted by large scale functional processes (see above), then national and interregional policies should provide for defense mechanisms by which small scale groups are enabled to fend off consequences of large scale functional processes they consider undesirable for their own living conditions. Such defense mechanisms would increase the resilience of territorial systems to external shocks or provide the possibility to regionally control their consequences in order to maintain the functioning of integrated territorial systems. Examples for such mechanisms will be given in the last section in connection with the concept of "selective spatial closure."

There exists an additional danger in operationalising only objectives pertaining to Allardt's conditions of "having." If such indicators are mainly used for measuring the existing level of development and the progress of regional development programs, one will tend to underrate existing levels and advances of development particularly in less developed areas where non-market and non-institutional spheres still play a relatively large role. Furthermore, if objectives of spatial development are operationalised mainly in terms of conditions of "having," the displacement of informal by formal functions will be accelerated and if the evaluation of regional development programs takes place mainly in terms of indicators of "having," the priority (often unconsciously) assigned to them in one period will tend to perpetuate itself also for following periods and lead to a long-range priority of material values.

Whichever policy is adopted in this respect, the measurement of development levels and of effects of regional development programs should in any case attempt to include besides the currently used variables also estimates of changes of external material effects (pollution etc.) and of non-material effects such as increased distance of individuals to decision making, increased frustration, decrease in self-fulfillment, etc.

## 3. SOME EMPIRICAL EVIDENCE OF RECENT SPATIAL DEVELOPMENT TRENDS: THE MATERIAL EFFECTS OF REGIONAL DEVELOPMENT POLICIES

The following section attempts to synthesize the evaluation by various authors of spatial development trends and policy effects. The countries used were

limited by the availability of relevant case studies. A further limitation with regard to the topic of the present paper was that most authors found it difficult to distinguish clearly between autonomous and policy induced trends of spatial development. Most case studies therefore evaluate the cumulative result of both. The policy effects only in few cases were calculated in quantitative terms (e.g. by spatial or temporal correlation) and in most instances estimated by rather subjective criteria. A third limitation is that most of the indicators used in these case studies refer to material indicators of living levels or what Allardt would call conditions of "having" (changes in income trends, in employment trends and migration, spatial linkages of the input-output type; in few cases broader socio-economic variables aggregated by factor analysis). Evaluations of indicators of non-material conditions (of "loving" and of "being" in Allardt's terms) are hardly available in spatially disaggregated form and by no means on a similarly broad comparative international basis.

We have distinguished between overall trends of inter- and intra-regional disparities and specific intra-regional development trends in relation to "growth centre policies" for specific regions.

*Overall trends of inter-regional and intra-regional disparities*

For Brazil detailed investigations of trends in inter-regional and intra-regional income disparities have been undertaken by A. Gilbert and D. Goodman [19] with special reference to the North-East. Testing Williamson's hypothesis of a convergence of inter-regional income disparities in the course of national development for the period 1939–1968 the authors found that the statistical evidence was inconclusive and suggested that "(inter) regional income differentials have remained fairly stable" (p. 129). Conclusive results became evident, however, in the case of income inequalities within the North-East of Brazil where the authors found sharply increasing inter-personal income inequality during the 1960's, especially within the urban areas.

In Spain there also seem to exist increasing intra-regional income disparities. Lasuén [31], evaluating Spain's regional policy, points out that the consequences of the policies which have been pursued during the past two decades have been a reduction in interurban income differentials and an increase in urban-rural income differentials,[6] the net effect of which has been a reduction of income differentials among regions. Similar conclusions for Spain have been arrived at by Richardson [49].

For Italy, the persistence of sizeable spatial disparities in indicators such as per capita income within the Mezzogiorno (for which a major development pro-

[6]Lasuén states further that "until the early sixties, both rural-urban and interregional income differentials were widening. It seems that only from the early 1960's onwards have the interurban and interregional income differentials been ameliorated, in spite of the continuous worsening of rural-urban differentials due to the growing weight of urban income in the underdeveloped areas."

gramme has been in operation for about two decades) is pointed out by Allen/McLennan [2; p. 119]. Sundquist even indicates that these intra-regional disparities have been increasing rather than decreasing and states that the "developing" disparities have led to a modification of the regional development strategy away from the growth center policy in 1971 [55; p. 171 ff]. Similar findings to those of Sundquist, were found in an OECD study [44] which showed that, although there has been some improvement with regard to the South's share in gross industrial investment, heavy migration from the South continued in the late 1960's (with higher absolute numbers 1968–1970 than in previous years), and the South's share of national employment fell from 33% in 1951 to 30.6% in 1970. With regard to per capita-income, the South could keep pace with the national growth rate but the gap towards the rest of Italy was not noticeably diminished ([44; p. 30 ff], see also [51] and [11]).

In France regional economic policy at first sight seems to have been quite successful (see, for example, Rémy Prud'homme, in [43]). The regional distribution of population and economic activities particularly industrial employment was modified in the desired direction, the century old flow of people from the provinces to Paris was halted and possibly reversed [43; p. 56 ff.]. A closer look however, shows that industrial employment increased in the Western regions mainly around Paris but not at a distance which would include most backward areas of France. Similar findings relate to the distribution of industrial employment [55; p. 119 ff.],[7] and both Rémy Prud'homme [43; p. 59 ff] and the OECD [44; p. 26] indicate that the disparities between regions have not been significantly reduced.

Lack of success of regional policy measures is also indicated for Belgium: see Ruehmann [52], Davin [14].

There also seem to exist some examples of at least partial goal fulfillment of regional policies: For the United States, Cumberland [13] and Thoman [57] evaluate the Appalachian program in at least some respects as successful in that the large gap between Appalachia and the rest of the nation in terms of employment rates, migration balance and per capita income has narrowed slightly in the period [57; p. 20 ff.], [13; p. 101 ff.].[8] Cameron [12; p. 24] states for the United Kingdom that regional policy has contributed to an improvement in the relative unemployment level and the per capita income growth.[9]

In the Federal Republic of Germany about 550,000 jobs have been subsidized by regional policy measures from 1969–1974; see Hötger [28; p. 187 ff.].

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[7]Sundquist, however, states also a slight improvement of the more distant provinces with regard to industrial employment in the late 1960's (p. 120).

[8]There is no clear answer to the questions of how much of this trend is due to regional policy and how intra-regional disparities developed, however.

[9]Moore and Rhodes [34] state in this connection however that although disparities would have been worse without regional policy they have remained at unacceptably high levels (p. 49).

Other investigations indicate however, that the causal relationship between subsidies and job creation is rather weak and that the diversity and qualification of jobs created is small; see Wolf [61; p. 431 ff.]. Böventer [7] indicates that regional trends in Western Germany are very much due to market forces rather than to regional policy measures.

In Austria, inter- and intra-regional material disparities seem to have been decreasing during the 1950's and 1960's. Berentsen [5] found that regional inequalities of per capita product during the period 1961–1971/2 have considerably declined both at the Bundesländer (province) level and at the Bezirk (county) level. Similarly a broader analysis of nine indicators of regional levels of living by factor analysis (1957–1971) shows that a considerable decline in the factor score inequalities was observed [5; p. 97 ff.]. Berentsen hypothesizes that Austrian regional policy has (although little coordinated) certainly positively influenced the partial goal fulfilment of reducing inter-regional and intra-regional disparities. But it is difficult to say to which extent the little coordinated regional development policy or other specific Austrian conditions have contributed to this phenomenon.[10]

Koichi Mera [39] also shows evidence of decreasing income disparities for the 46 prefectures of Japan during the period 1961–1972. He further analyses how much regional policy, and particularly the growth pole strategy in existence since 1962, might have contributed to the reduction of income disparities. He concludes from the analysis that the government's industrial decentralization policy at selected growth poles did neither materially contribute to a reduction in income disparities among prefectures nor to a reduction in the trend of population concentration [39; p. 260 f].

The findings of the above mentioned case studies can be summarized as follows:

1) In most of the countries analysed there is no clear indication of a major convergence of regional disparities of income or other indicators of material living levels. This seems the case particularly in countries with sizeable regional

[10]Such specific conditions might be (some of these points were indicated by Berentsen, others by the authors):

1) the small geographical size of Austria,

2) the expansion of commuting radii from the main employment centres to cover the majority of populated areas (Berentsen, p. 11),

3) the long standing traditions of tourist activities in many rural areas,

4) the stagnation and peripheral Eastern location of the richest province (Vienna), and the fact that the second richest province lies in the other extreme periphery (Vorarlberg),

5) certain factor scarcities (land, labour) within the major cities, particularly in Vienna, reinforced still by rigid land use regulations and a fragmented land market,

6) the entrenched federalist character of the country,

7) a very rigid and all-embracing legal and administrative system acting as a forceful break for the rapid adoption of innovations.

problems (Italy, France, Brazil). For most countries it is difficult to say to which extent the trend is due to the "autonomous" working of the market mechanism or to explicit policies of spatial development.

2) From more detailed analyses available for some countries it seems that spatial development policies in general were not able to change spatial inequalities in material living levels significantly. In cases where it was possible to reduce disparities at one scale (e.g. the inter-regional one), this was usually accompanied by an increase in disparities at other scales (e.g. the intra-regional or interpersonal ones). Such shifts in disparities from one geographical scale to another could be observed particularly where policies of "concentrated regional development" were applied, usually combined with sectorially unbalanced development (mainly industry) and a strong emphasis on overall efficiency (Spain and Brazil, to a lesser extent France).

3) In most countries where a reduction of spatial disparities at least in some respects seems to have taken place (Austria, Japan, FGR, USA) either initial regional inequalities have been relatively small (Austria, FGR), spatial development policies were fuzzy and little articulated (Austria, USA) or were considered to have had little effect upon the reduction of spatial disparities (Japan). The reduction in spatial disparities were then either attributed to market forces (Böventer for GFR) or to specific national geographical or historical conditions (Austria).

4) There are no broader comparative analyses available on the impact of spatial development policies on non-material indicators of living conditions such as Allardt's conditions of "loving" and of "being."

*Growth Centre-hinterland effects*

A number of case studies have been undertaken on the impact of growth centres upon their hinterland. Some of these relate to what Alonso and Medrich [3] call "induced" growth centres (see, for example, Richardson [49] and Buttler [10] on Spain; Penouil [41], Moseley [38] and Sundquist [55] on France; Hansen [23] on the USA; Allen and McLennan [2] and Sundquist [55] on Italy; Appalraju and Safier [4] on Third World countries), while others deal with "spontaneous" growth centres (see, for example, Moseley [36], [37] on Rennes/France and East Anglia/United Kingdom; Gilbert [18] on Medellin/Columbia and Waller [59] on Peru). The major findings of these studies and investigations can be summarized as follows:

1) Spread effects from growth centres were usually smaller than expected, or less than backwash-effects and therefore had a negative net result on the hinterland. They were narrowly limited in geographical extent, usually restricted to the commuting area, often as a function of the size of the centre; see Morrill [35].

2) Increases in income of lower order centres or rural areas create strong income multipliers in higher order centres but not the other way round; see,

Nichols [40], Moseley [36], [37] and [38]. They seem to move upward rather than downward within the urban hierarchy.

3) In the context of policies for broad spatial development it is difficult to justify growth-centre policies for lagging areas due to their lack of spread effects in the urban hierarchy downward or from the growth centre to a broader hinterland; see Hansen [24], Nichols [40], Moseley [36], [37] and [38].

## 4. SELECTIVE SPATIAL CLOSURE AS A STRATEGY FOR INCREASING THE RESILIENCE OF SPATIAL SYSTEMS

In view of the above conceptual considerations and empirical evidence (although both are by no means complete) we should like to discuss an alternative strategy of regional development by selective regional closure. The following ideas by no means suggest a policy of regional autarchy. Both from an efficiency and an equity standpoint this would be unthinkable today. Suggested however, are policies which permit the channeling of today's widely uncontrolled economic, social and political "backwash" effects to facilitate greater spatial equity of living conditions in the sense defined above. This requires a number of preconditions:

1) the broadening of explicit spatial development policy beyond economic to a more explicit consideration of social and political processes;

2) the reformulation of distance friction from a negative concept (to be diminished as an obstacle to large-scale integration and spatial equilibrium) to a positive one for the structuring of a spatially disaggregate interaction and decision system (Isard);

3) greater attention to be paid to non-market and non-institution based activities and to the requirements of small-scale human and man-environment relations;

4) a shift of decision-making powers from today's mainly functional or vertical (sectoral) increasingly to horizontal (territorial) units at various levels. The scale of the territorial decision-making level should ideally be the one within which a maximum of the repercussions or external effects of the respective decision can be internalized. This means to short-circuit decision-making scales with spatial impact scales to the maximum degree possible. In case of doubt the lower level should be given preference.

We shall not propose specific instruments for such policies here, particularly because they have to be carefully adapted to the specific historical, institutional and political conditions in each country or region. We shall only give examples of policy instruments already in use which operate (often intuitively) in such direction. Strategies of selective spatial closure can, in current economic terminology, be applied from the supply side (regional resources), the demand side (guidance of regional preference patterns), and through policy instruments modifying distance friction and redistributing the effects of external and scale economies, of differential accessibility and of decision-making power—all conditions which create spatial disequilibria.

*Selective regional closure from the supply side*

External vertical influences (changes in external demand, technology, intra-organizational relations, etc.) frequently lead to under-employment or over-employment of (relatively immobile) regional resources, particularly of labour and natural resources. In order to avoid abrupt changes in factor employment, a higher degree of co-determination on the transfer of such changes by the affected regional communities may be necessary. Such regional co-determination could take place:

1) on the application of new technology which would lead to the under-employment of regional natural or human resources. Essentially this means that technology would be reverted to the role of an instrument rather than a determinant of (territorially organized) society. An extreme case in this respect is China where differentiated levels of technology are normatively determined *ex ante* by assigning specific shares of a sector's production to local, regional, and national industries; see Weiss [60]. More flexible policies might include the negotiated step-wise introduction of new technology or the compensation for negative external effects which it causes;

2) on natural resource use. Regional co-determination could range all the way from regional ownership of natural resources to communal control of the degree and kind of their exploitation, of processing, of waste disposal and other forms of pollution caused by their use; it might extend to over-exploitation as well as to induced under-exploitation of natural resources. Examples at the international level are today to be found in most developing countries; at the sub-national level an increasing number of regional communities are demanding more decision-making power on their own natural resources (Wales on its water resources, Scotland on its off shore oil, the North of Chile on its copper, etc.);

3) on the employment of human resources. Regional co-determination will vary widely according to the respective socio-political system: from communal decision-making on migration (e.g. in China) on one extreme, to more liberal policies of regionally differentiated labour exchange systems and regionally differentiated school and training facilities geared to specific regional development potentials and needs rather than to a uniform national education system.

*Selective regional closure from the demand side*

Regionally differentiated preference patterns are a major element of regional closure. In the past decades innovation diffusion (i.e. the adoption of new uniform production or demand patterns) has in a rather simplistic way been equated with development. The spatial extension of communications and transport media has promoted the trend towards increasing uniformity of preference patterns. This trend towards uniformity has benefitted those regions or organizations which were able to take advantage of scale and external economies and has relegated the others to cumulative disadvantage. Diversity in regional preference patterns (par-

ticularly if they are oriented to the use of regional resources) not only increases the competitive position of peripheral, less developed, or small regions but also contributes to such non-material human needs as local and regional identity and others of Allardt's conditions of "loving" and "being." The economic advantages of differentiation can be explained by the fact of decreasing marginal returns to innovation once it has spread to a certain extent. Beyond this point non-innovation (retention of traditional customs and production methods, historical built form, untouched natural environment etc.) may again become an economic advantage. This can bring advantages to the regional economy both from the demand and from the supply side.

This differentiation of preference patterns can also be expressed by a different weighting of non material as against material objectives (e.g. Allardt's conditions of "loving" and "being" against those of "having"). Non material objectives seem to be promoted by a higher degree of regional closure where status is attained in often non material terms by the position one holds in the proxemic space of a specific culturally defined social system in "relative ranking hierarchies"; see Greenbie [20; p. 94]. Material objectives on the other hand seem to be promoted by regional openness where in competitive "absolute ranking hierarchies" status is measured in quantitative terms, for instance by income or consumption. Specific value systems therefore seem to be related to different degrees of regional openness or closure. The latter seem to influence the value systems and vice versa.

The maintainance of regionally differentiated preference patterns depends greatly on the regional disaggregation of the administrative and decision-making system. Federal systems seem to promote it more than unitary ones. The more decisions are devolved to regional and local communities the more they can articulate differentiated preference patterns. A further prerequisite for regionally differentiated preference patterns is a relatively high degree of intra-regional (as against inter-regional) interaction and communications and transport integration. Instruments for this purpose are regionalized (cable) TV networks, regional newspapers and other media, as well as a regionally disaggregated transport network. Another frequently used instrument to disaggregate regional demand are regional contract premiums whereby regional suppliers are granted higher price margins for public tenders on the grounds that this helps to "lock in" local and regional demand created by public expenditure.

*Other measures for selective spatial closure*

1) Biased increase of accessibility for less developed areas. While a mutual increase of accessibility between areas of different development levels normally leads to increasing instead of decreasing disparities (see above), a unilateral improvement of the access of less developed areas to core region markets (without vice-versa improving the access of core regions to less developed areas) can help to overcome these disequilibrating effects. In Sweden, for example, transport sub-

sidies for long-distance shipments are being given unilaterally to manufacturing firms in the less developed North and further subsidies are granted for telephone costs in this region; see Bourne [6]. While the above was related to inter-regional accessibility, such a biased policy can also be applied to the internal accessibility of (or between) less developed areas. In such a regionally disaggregated transport and communications policy priority would be given to connections within and between less developed areas (rather than between these and highly developed core regions). Such a policy would unilaterally increase the possibilities of less developed areas to make use of scale economies and thereby improve its competitive position. In Sweden extensive proposals for an inter-peripheral transport network have been made; see, Törnquist [58]. In Britain proposals have been made for intra-regional commuting subsidies for less developed sparsely populated areas in order to increase access to labor at individual locations; see, Moseley [38; p. 146]. In France explicit priority has been given to strengthening the transport connections between regional equilibrium metropolises; see [45; p. 46 ff.] and Friedly [15; p. 158 ff.].

2) Compensation for spatially differentiated external and potential scale economies. Within specific sectors scale economies are to a great extent a function of market accessibility. Accessibility again is apart from geographic location considerably determined by public transport investment, an economy external to the firm. In peripheral areas in which sufficient transport improvement is either not feasible or not possible (not all locations can nor should be touched by freeways, etc.), compensation for this lack of scale economies may be necessary in order to maintain basic needs services. In areas with too low population and/or income density to facilitate the required scale economies of private (or public) basic services, compensation by subsidies, negative income tax etc. would be justified in order to make them viable. It will depend on the specific economic and political system whether this compensation has to be derived from general taxation or whether it can be drawn from enterprises gaining high external economies, e.g. due to location at a freeway exit, thereby able to reap great scale economies. It is the typical question of how to compensate for differential locational advantages between a (freeway oriented) supermarket and a neighbourhood grocer if the latter is needed for the supply of less mobile population strata (children, aged, poor etc.) in a local or regional context.

These examples of policy instruments were often intuitively developed to control spatial "backwash" effects. If strategies of selective spatial closure were adopted as explicit components of regional development policy, coherent sets of such policy instruments adapted to the specific conditions of the respective country or region would have to be elaborated and subjected to empirical testing. Only empirical tests will show whether such a strategy is better able than current regional development practice to contribute to established objectives of spatial equity.

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