A SYNTHETIC APPROACH TO REGIONAL DEVELOPMENT THEORIES
Part I *

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ALTERNATIVES FOR THE FORMULATION OF REGIONAL DEVELOPMENT THEORIES

Today a great number of theories and individual propositions about regional growth or development coexist and maintain their existance. Even if it were possible to classify these theories or proposals into categories, their boundaries would still not be clearly defined. It is possible that, by adding new propositions, one can shift theories from one group into another as well as expand the contents of a theory by establishing smooth relations with various theories of social change and development. Today we have a very flexible regional growth theory that consists of structural blocks made up of propositions whose interrelations can easily be established.

It would be inadequate to explain the particular state this theoretical field is in, by an absence of unified theory. The structure of this theoretical area can be explained more easily by looking at what it endeavours to provide answers for. The elements of the development strategy of a theory consists of
a) the basic question that it poses itself,
b) the basic variables that are used in explaining or controlling this problem and
c) the structure of the propositions that it employs.[1]
If a theory gives answers to different questions or present solutions using several variables, then its structure needs to be rather flexible in order to satisfy such demands.

Regional development theories are in general, pragmatically oriented theories which attempt to provide answers to practical questions. For this reason both the questions they pose and the variables they use are greatly determined by political choices. According to Gunnar Myrdal, in a scientific field, the points questioned, as well as those left uninquired are opportunistically directed.[2] One of the best known examples of this can be seen in the independent development of location theory from international trade theory. The international trade theory assumes a production space divided into sub-spaces and seeks the most suitable type of production for each of these sub-spaces. In location theory, on the other hand, the

1. İ. TEKELİ, "Mekan Organizasyonlarına Makro Yaklaşım için Türkiye Üzerinde bir Deneme", Yayınlanmamış Tez, ODTÜ, Ankara, 1972, s.1.

2. G. MYRDAL, Objectivity in Social Research, New York: Pantheon Books, 1969.

type of production is an exogenous decision and the question
is to find its optimum location within the given production
sub-space. The greatest contribution of location theory is in
its inverse way of formulating the question, rather than in the
solution it brings. It is not mere coincidence that international
trade theory was developed in England, the only industrialized
country of its time, and thet location theory was first developed
in Germany at a time when decisions for industrialisation were
being taken.

Having seen that theories develop in relation to the types of
questions they pose, we can now try to look for different
problems in regional development that go to determine the
flexible character of regional development theories.

Q1. How can a region's growth be encouraged independently
from other regions?

Q2: What would the process and intensity of influence
on its environs be of any localized economic development?

Q3: What is the process of regional differentiation of
national growth? If a national growth decision is given,
how can this be distributed among regions?

Q4: What type of national spatial organization would
maximize the rate of economic growth in a country?

Q5: If a certain type of national spatial organization is
given as a goal, how can the transition from the
existing spatial structure to the objective one be
achieved with minimum costs?

It is possible to pose variants of the fifth question according
to the types of goals proposed for spatial organization,
regional equality, national integration etc.

3. J. FRIEDMANN and W. ALONSO, *Regional
Development and Planning*, Cambridge,
Mass.: M.I.T. Press, 1964, pp.17-20.

These questions comprise the concepts of development -space- and
planning as emphasized by Friedmann and Alonso.[3] Each one of
these questions is based upon a particular concept of development,
space and planning. For example, the first question is valid for
a planner who is responsible for regional planning in a country
where there is no national planning functions exists,
whereas with centralized national planning, the third question
is important for the national economic planner. Similarly the
fourth and fifth questions are valid for the national physical
planner. In the formulation of the first question a discontinuous
regionalized concept of space is in use, while the formulation

4. B. HARRIS, Problems in Regional
Science, *Regional Science Association
Papers and Proceedings*, v.21, 1968,
pp.7-16.

of the second question is based upon the concept of a continuous
space around a node.[4] The fourth question assumes that spatial
organization is an independent variable or a tool in economic
growth as opposed to the fifth question where the assumption is
is a dependent variable.

Regional growth theories strive to find answers to questions that
are posed according to these different assumptions about planning
types and concepts of space. Since this is the case, the valid
question is not whether one group of theories in this field is
superior to another group, but whether they are suitable for the
purposes they were intended to serve. The relevance of a
theoretical field as a whole can be judged by whether its
structure is flexible enough to provide answers for questions
that are formulated in different ways.

Despite the apparent tendency in existing regional growth
theories to go beyond mere economic analysis, they still keep

5. H.B. CHENERY, The Application of Investment Criteria, Quarterly Journal of Economics, v.67, 1953, pp.76-96.

6. UNITED NATIONS, Evaluation of Projects in Centrally Planned Economies, Industrialization and Productivity, Bulletin 8, 1964.

7. N.S. BUCHANAN, International Investment and Domestic Welfare, New York, 1945, p.24.

8. W. GALENSON and H. LEIBENSTEIN, Investment Criteria, Productivity and Economic Development, Quarterly Journal of Economics, v. 69, 1955.

their basic characteristic of being extentions of economic growth theories. The latter have developed into regional or spatial development theories when the effects of spatial dimensions were incorporated by means of agglomeration effects, distance inputs and division of space into regions.

National economic growth theories have not only devised general principles so as to guide development policies, but have also formulated operational decision criteria for behavioral units, such as "social marginal productivity",[5] "economic effectiveness",[6] "rate of turnover",[7] and "reinvestment".[8] in one to one correspondance with these "principles". It is necessary to establish this relationship if a theory is expected to guide implementation.

There exists no such relation however, between regional growth theories and the decision criteria of behaving units belong to the field of location theory.

Traditional location theory was developed independently from regional growth theories which did not exist by then. Since regional development theories are an extention of economic development theories, it is not suprising to find identically attributed decision criteria of behaving units. The latter, on the other hand, contains little scope for spatial organization. The clearest example of this, can be seen in the relationship among international trade theory, economic base theory, and the criteria of comparative costs.

Viewed from this point, another framework emerges within which location theory can be reformulated. It is possible to talk about a location theory that consists of decision criteria of behavioral units which facilitates the implementation of policies, the outcome of higher level rational spatial organization, or regional development theories. In other words, a location theory can be reformulated which fully corresponds to development theories.

Now let us examine the traditional location theory with respect to this new framework. In location theory the following assumption is made: in a social structure, where the principle of completely decentralized decision making is dominant, the behaving units act to maximize their own motivations. Thus the objectives related to regions and the nation -which are systems of higher order- automatically materialize. This assumption is a direct outcome of the fact that traditional location theories employ the axiomatic system of micro-economies. This axiomatic system is based on normative assumptions about the behavior of the units rather than empirical generalizations related to these units. Such are the profit-maximization of the entrepreneur and the utility- maximization of the consumer. According to this axiomatic system it is possible to say that, under perfect market conditions, decisions taken according to traditional location theory would also provide the optimum solution for national spatial organization.

Empirical observations indicate that the assumptions of this traditional equilibrium model are unrealistic for more than one reason. For one thing, due to external economies and new innovations that take place, the law of diminishing returns is not functioning in central locations. Secondly, the center does not provide adequate opportunity for perceiving investment opportunities in the periphery. Thirdly, the elasticity of demand for services and the industrial production of the

9. J. FRIEDMANN, *Regional Development Policy*, Cambridge, Mass.: M.I.T. Press, 1966.

specialized centers exceed "one", and the fact remains that the terms of trade change to the disadvantage of the periphery. Furthermore, the center coincides with the national market and there exists no perfect divisibility due to threshold sizes and since the periphery cannot adapt in conformance with the rapid change that takes place in the center, we can conclude that it is not possible to reach an optimum at the level of national spatial organization with the existing criteria of the location theory.[9]

In this case two kinds of approaches can be proposed. The first is to substitute planning for the market mechanism as an institution and the second is to make use of planning as an institution for the adjustment of the market mechanism. The former is the coice of the socialist and the latter that of the capitalist countries.[10] The theories to be developed at the system level above the behavioral unit will show structural differences according to these choices. In the first case, spatial distribution related to the unit will be directly decided so as to optimize the system goals; whereas in the second case, a distribution in accordance with the system goals would be achieved only by affecting behaving units through interventions within the market mechanism. In the latter situation, regional and national development at levels above the behaving units will generally be impact type theories that are based on the relations between goals and the controllable variables. These impact type theories would be based on the behavioral relations discovered for the system.

10. G. MYRDAL, *Beyond the Welfare State*, London: Gerald Duckworth and Co., 1960.

11. L. RODWIN, *Nations and Cities*, Boston: Houghton Mifflin Company, 1970.

Recent development, in this field, for the western countries, has been along the lines described above. Nations are observed to accept policies of urbanization and interregional balance as goals, and to comply with impact type polarized development theories in realizing these goals.[11] In these countries, planning models directed to make locational decisions for the whole units of the system are usually in conflict with their political systems. In such cases decisions on national spatial organization appear not as locational decisions for the units, but as general policies aimed sufficiently to decrease the level of freedom in locational choices of the units. Yet, reaching a sufficient degree of limitation by the sustainance of political tensions -that would be generated through planning decisions- is rather a vague criterion. We should review the current policies in several countries in order to clarify this criterion. These in general are the urbanization and interregional balance policies. It is possible to argue that, when they comprise the sole bundle of policies and given the set of different assumptions about migration, every industrial location decisior satisfies the interregional balance goal of these policies. However, if only these two represent the existing policies the degree of freedom in investment distributions would not sufficiently be decreased.

12. D. HARVEY, The Problem of Theory Construction in Geography, *Journal of Regional Science*, v.7/6 Supplement, 1967, pp. 211-216.

The two policies are inadequate in decreasing the individuals' degree of freedom in location decisions so long as they don't cover the issues of spatial organization as a whole. These policies usually limit themselves in defining certain patterns of spatial structure as policy goals. Spatial organizations however, can only be comprehended when both the spatial structure and the spatial processes[12] are simultaneously defined. The currently accepted national spatial organization policies of various countries neglect the processes. It can be argued that since structures are the end products of the

processes, defining goals only for structures would be sufficient. But in this case the degree of freedom of decisions related to behavioral units are not sufficiently reduced.

Five groups of spatial organization policies are proposed below, for the attainment of a necessary reduction in the degree of freedom of decisions of behavioral units:

a- *Policy of urbanization :* This policy has an extensive range of choices for both the developed and underdeveloped regions of any nation. It consists basically of a choice between, or of a balance among, levels of spatial concentration or dispersion of the activities in a social system.

b- *Policy of interregional distribution or balance:* This policy covers choices for the distribution of activities of the social system among various regions of the national space and it concentrates on choices among regional balance and inbalance, welfare and growth.

c- *Policy of urban hierarchy:* Policies of urbanization and interregional distribution do not clarify options about the internal structures of regions. The policy of urban hierarchy would determine choices concerning the distribution of social system functions among different levels of urban systems. The choices about the primate cities of the nation will be considered in this group.

d- *Policies on flow relations:* It can be argued that flow relations would occur depending on the decisions taken by the previously mentioned three policies and therefore, cannot be considered as a policy in itself. The reason for its treatment as a seperate policy is the fact that it provides an opportunity for testing the consistency between other goals of the social system and the policies of spatial organization. The flow relations in these policies consist of the flow of goods, knowledge, decisions etc. If there exist such goals as the maintenance of national unity and the acceleration of social change of isolated regions, it is necessary that interregional flow relations be maximized. An increase in flow relations can be achieved by the specialization of the functions of social system that would enhance interregional complementarity.[13] This obviously is purely a choice of spatial organization.

On the other hand, since flow relations also determine the type of control within the system, they also effect the realization of goals related to spatial organization. It is not possible to achieve a desired spatial organization unless the institutional structure of the control that exists in the social organization is accordingly monitored.

e- *The policy of "Spatial Adjustment" in spatial organization:* If we were faced with the problem of deciding on policy decisions for the organization of previously unorganized space, the above mentioned four policies would have been adequate. However, when one talks about a policy for spatial organization, in general a desire for change in an existing structure, is implied the activities and the population in a spatial structure, are meant to be shifted. The two important decisions here are the level and characteristics of migration and the degree of internalization and externalization of social costs involved in the shifting of productive activity through the manipulations of decision makers. The limitations imposed in these two areas would effect the speed of transformation of the system and the strategy choices related to spatial organization.

13. K. W. DEUTSCH, The Growth of Nations, Some Recurrent Patterns of Political and Social Integration, *World Politics*, v.5, 1953, pp. 168-195.

If it can be accepted that this group of five policies can sufficiently decrease the degree of freedom in the decisions of behaving units -without creating critical political tensions within the system-, it follows that the national spatial organization or regional development theories be comprehesive so as to cover the whole area of those policies.

EVALUATION OF SOME CONCEPTS AND PROBLEMS RELATED TO REGIONAL DEVELOPMENT POLICIES AND THEORIES

In the context of regional planning theories and policies, no matter how the question is posed the aim is to induce a change in an existing structure. If this is the case then the way in which these theories pose their problems and the concepts ·they employ should be tested as to whether they accelerate or slow down the process of change. In this section some of the concepts commonly discussed in the choice of national or regional spatial organization strategies, will be tested according to the criteria for hastening or slowing down the transformation.

THE CONCEPT OF EFFICIENCY

It has been discussed in the previous section that an optimum will be reached in a system, based on a completely decentralized decision-making, when individual units try to maximize their motivations through their actions. Let us suppose that a major transformation is proposed in such a system. Then let us also consider that the locational decisions of behaving units are to realize this transformation in time. It will be apparent that location choices of behaving units aimed to achieve the desired transformation will not lead to the maximization of their motivations. Therefore, this obviously is not an efficiency solution according to the given decentralized decision making model. On the other hand, this transformation is necessary for the realization of goals at the system level. In order to realize this transformation, it is necessary to make concessions from efficiency. In such a case the planner or the politican will have to persuade the decision mechanism to give up efficiency in favor of the implementation of system goals.

In this context, let us analyze the basic spatial organization problem of a country which has experienced colonialism and now is involved in the pocess of industrialization. During their historical evolution such contries have exported their agricultural products either unprocessed or only next to elementary processing. As a result of this type of foreign trade relations the transportation networks of such countries have become foreign market oriented tree-systems and urban nodes have grown at trashipment points, the most important being the port cities. If short-term efficiency analyses are made for the location decisions of such a system, the existing structure will be maintained rather than changed. Such a spatial development pattern is not necessarily the best possible one for a country to exploit its own resources for an internal market. On the contrary, it is a spatial pattern which maximizes the dependency of the national economy on foreign markets. Thus in such a case, although the transformation of spatial pattern is desired, the use of

14. J. PAZESTKA, Certain Factors
Influencing Regional Development.
Seminar for International Studies,
Lund University, Sweden, 1967.

traditional location theory will not be conducive to this
transformation.

The concept of efficiency should be well defined to discuss
whether or not there will be any sacrifice of efficiency in
setting such information goals. Efficiency is relative concept.
Efficiency solutions change with goals and the scale of the unit
in question. Solutions maximizing the efficiency of a single
firm, of an industrial complex or of the economy of a region or
the country will give different results.[14] As the scale is
increased the number of assumed constant parameters will
decrease and the number of manipulated variables to arrive
at the most efficient solution will increase. In this context
an increase in scale is a means of transforming some
environmental determinants to the status of internal variables
which fall under the control of the decision maker.

In the same context, while the present structures are accepted
as constraining parameters in a short-term analysis, in a long
term analysis some of these parameters will become controllable
variables and therefore the efficiency solutions reached in
each case will be different.

15. P.J.D. WILES, *The Political
Economy of Communism*, Cambridge, Mass.:
Harvard University Press, 1956.

It has been stated above that in location decisions, efficiency
solutions change relative to the assumptions about institutional
structure which are regarded constant.[15]

In all these examples, efficiency appear to be a function of
parameters that are assumed constant. Since basic structural
transformations are to be expected in underdeveloped countries,
the number of parameters in the chosen planning models must be
minimized. On the other hand, in traditional location theories
which analyze the location choice of a firm in the context of
short term equilibrium analysis, the whole existing spatial
structure is accepted as a parameter and thereby the number of
parameters are increased. Even in this type of a spatial
transformation problem, the use of efficiency analysis at the
firm level is the unavoidable consequence of accepting a
political rule as a parameter. It will be relevant to introduce
regional or national planning to a society, if we can extend
the efficiency concept over and above the scale of the firm.
On the other hand, if theories at this level remain dependent
on the concepts of efficiency at the level of the firm due to
the political regime choice then the introduction of regional
and national planning will have limited influence on the
performance of the system.

If important transformations are to be planned in a spatial
system, the number of parameters accepted as variables will
increase and this will increase indeterminacies in the
decision making processes. Under such conditions importance
will be attached to making policy preferences consistent with
system goals rather than giving detailed location decisions
through the use of precise optimization techniques. When
transformation in the system is realized, implementation of
precise optimization techniques in the context of recently
formed parameters will not then be in conflict with the system
goal of transformation.

In the USSR where such a transformation has been realized in
spatial organization, three distinct stages can be observed
in the approaches used in location decisions. The first is
that of "directives". In this stage "directives" are
formulated related to the use of raw materials and resources.

16. Z. ZBIGNIEW, Models of
Industrialization and the Location
Policy of Industry, Problems of
Regional Economic Development, Warsawa:
Polish Scientific Publishers, 1968,
p. 48.

The second period is that of "principles". In this period
"equality" and similar general principles are applied to
location decisions. After the realization of transformation
in the system, the third stage is reached. In this stage,
"optimization" techniques are used which assume the
transformed spatial structure as a parameter.[16]

EXISTING POPULATION DISTRIBUTION AND
OPTIMUM LOCATION DECISIONS :

There is a two-way relationship between the distribution of
production activities in space and population distribution.
The pattern of distribution of population in space influences
the areal distribution pattern of production activity; on the
other hand, the areal distribution pattern of production
activity influences the distribution pattern of population.
This reciprocal relation between the distribution of population
and the production activity increases the opportunities of
putting forward propositions concerning the changing of existing
patterns of distribution. Consideration of only one direction
in this two-way relationship reduces the means of making
proposals for change.

Within the context of short-term efficiency analyses, the
traditional location theory considers the spatial distribution
of population as constant and given this distribution seeks the
best location. Although it is not the only decisive factor, the
location of demand is one of the most important variables.
Therefore the analysis neglecting the influence of production
location decisions on the spatial distribution of population,
will have an amplifying effect on decisions contributing to the
maintenance of the present population distribution pattern.The
use of such an assumption in short-term analysis is permissible.
But in a long-term analysis due to the effect of accumulation
such an assumption will limit the opportunity of change
proposals to a great extent. Inclusion of the interrelation
between location decisions and population distribution will
provide flexibilty in long-term analyses to the planner without
falling into conflict with the efficiency concept.

17. E.J. MISHAN, The Costs of Economic
Growth, Harmondsworth, Middx.: Penguin
Books, 1969.

A problem of this type is posed by the welfare economists in
their criticism of the methods used in deciding the optimum
production compositions.[17] In a market economy, production of
a commodity increases until the marginal cost of production
exceeds the value of commodity in the society. In such a case
the optimum is reached in the market mechanism. This optimum is
relative to the value attributed by the society of that
commodity which is based on the demand for it. The character
of demand is dependent on the income distribution pattern of
society. This optimum production defined by the market economy
is an optimum reached when there is no change in the given
income distribution. Within a given stock of national resources,
it is possible to define several optimum production compositons
each corresponding to a different pattern of income
distribution. It is not possible to define an optimum
production composition, independent from the distribution of
income.

Similarly we can assert that the optimum distribution of
production activity calculated in the context of location
theory is valid only for a given pattern of population
distribution.

In the long-term national spatial organization analyses, -i.e. when the problem is considered not at the firm level but at the national level- the main question sould be, "which pattern of population distribution will maximize national income?" instead of, "what is the optimum distribution of production activity?" This may help to avoid in spatial organization analysis, the constraining affect of the existing population distribution. Furthermore, posing the question in this manner implies a biased view in the direction of the propositions for change.

The optimum population distribution of a country must be one of the basic questions of macro location theory. Yet, apart from some propositions in this field, a macro location theory *does not exist*. Empirical studies made for several countries, have revealed a high degree of correlation between the national income and the volume under the population potential surface.[18] If such a relation is valid, then the population distribution that maximizes national income, will also maximize the volume remaining under the population potential surface.[19] It is possible to calculate the contribution of a person settled at any point on the national space to the volume contained under the total potential surface. We can then find the point where this contribution is highest. These two statements lead to the conclusion that the most rational solution is the concentration of the whole population at one point which obviously is an inadequate solution. A constraint obtained from the actual population distribution should be included in the findings of the empirical studies conducted in several countries stated above.[20]

If we drive an optimum pupulation distribution pattern from the point of view of system rationale, then the criteria for realizing this pattern will gain importance in the location decisions of production activity.

FROM FIRM LEVEL NORMATIVE LOCATION THEORY TOWARDS A BEHAVIORAL LOCATION THEORY:

Traditional location theory is a normative theory. It tries to determine the location which maximize the utility function of the producer and its analyses result in single point solutions, which denote the most favorable location for the producer. This kind of approach however, compels the planner in his locational choices to comply with the economic efficiency criteria only and causes him to underplay or even ignore other criteria. If it were possible to obtain several identical or equally acceptable points through the analyses then a far more useful location theory could have been formulated for the national physical planners.

The traditional location theory gives a single solution, since it uses the normative axiomatic system of micro economics said to disclose metaphysical overtones rather than being based on empirical generalizations. If location theory was developed as an empirically based behavioral theory, rather than a normative theory it could have had a flexible structure providing more than a solution. There are attempts to develop a behaviorial location theory.[21] Alonso points out that the number of location decisions given spontaneously as a function of the decision maker's location, exceeds in number, decisions based on conscientious choice.[22] Wolpert shows that the locational behavior of individuals is not maximizing but satisficing.[23]

18. If I denotes national income, V denotes population potential, A denotes area, α and K denote constants, the relation is :

$$I/(\int v\, dA)^{\alpha}=K$$

J.Q. STEWARD referred in W. WARNZ, Global Science and the Tyranny of Space. *The Regional Science Association Papers and Proceedings*, v.19, 1967, pp.7-19.

19. If statistical units are of equal sizes then

$$D_i = \sum_{j=1}^{i=n} 1/d_{ij}$$

will be an index of the contribution of an individual settled in (i)th unit to the volume under population potential surface. I. TEKELI, "Mekan Organizasyonlarına Makro Yaklaşım için Türkiye Üzerinde bir Deneme", Yayınlanmamış Tez, ODTÜ, Ankara, 1972.

20. It has been empirically shown that if P_T is the total national population, the relation

$$P_T^2 / \int V^2\, dA = .12$$

remains constant in time for both the United States and Turkey. For United States see: W. WARNTZ, *Macrogeography and Income Fronts*, Regional Science Research Institute, Philadelphia, 1965. For Turkey see: I. TEKELI, "Mekan Organizasyonlarına Makro Yaklaşım için Türkiye Üzerinde bir Deneme", Yayınlanmamış Tez, ODTÜ, Ankara, 1972.

21. A. PRED, *Behavior and Location*, Lund Studies in Geography, v.1,2, 1969.

22. W. ALONSO, *Industrial Location and Regional Policy in Economic Development*, Institute of Urban and Regional Development, University of California, Berkeley, 1968.

23. J.WOLPERT, The Decision Process in a Spatial Context, *Annals Association for American Geographers*, v.54, n.4, 1964, pp.537-558.

It is a conventional way of classifying industries by the level of flexibility in their locational behaviour, i.e. by their being 'foot-loose'.

There seems to exist two alternative means of ascending from single choice locational theory to theories that can accomodate multiple choices in space. The first approach is to develop an axiomatic system, based on a generalized proposition borrowed from psychology as Wolpert does, rather than using general normative hypotheses in the study of locational behavior of the decision makers. In the second approach, location theory classifies industry according to the flexibility it has in locational decisions, or according to specified ranges. In both cases, the limitation of a single locational choice is eliminated and there exists a wider range of locations from which the choice may be made according to criteria other than efficiency at the firm level.

ASSUMPTION OF IMMOBILITIES:

Factors of production in existing national and regional development models are assumed to be either perfectly mobile or completely immobile. Both of these alternatives are contradictory to the strutural characteristics of regional phenomena.

The use of perfect mobility assumption in monitoring the workings of market mechanism, with reference to a set of welfare criteria, leeds to a paradoxical situation since most of what are identified as undesirable consequences of such market mechanisms arise due to immobilities in the first place.

Leven has an interesting approach to the problem.[24] Accordingly, it is possible to collect and classify data, only in fields where there exist specific levels of immobilities. Since all regional taxonomy inherently assume immobilities we can not make perfect mobility assumptions. On the other hand, the assumptions of perfect interregional factor mobility and interregional commodity flow are inconsistent. There is a substitution possibility between factor immobilities and the interregional flow of goods; factor immobility is substitute by the flow of goods.

The analysis made above has indicated the drawbacks of the assumption of complete mobility. Obviously it is not possible to make the assumption of perfect immobility within a national system. Therefore, to most suitable approach, regarding regional structure, is to make the assumption of a graded immobility as both Siebert[25] and Klaassen[26] do. Klaassen, in his attraction model makes a similar assumption by approaching regional growth processes both from the demand and supply sides currently. Siebert, advancing futher, emphasizes the reciprocal effects the factors of production may levy on each other due to differences in their levels of immobility. The intensity of use of external economics as a concept, is extended by Siebert by means of its reformulation as a function of immobility. Efficiency solutions obtained with the consideration of both the short-term efficiency rationale and the perfect factor mobility assumptions are biased in favor of the relatively developed regions. As the planner moves away from assumptions of perfect factor mobility, his chances of identifying efficiency solutions in favor of underdeveloped regions increase.

24. C.L. LEVEN, J.B. LEGLER and P. SHAPIRO, *An Analytical Framework for Regional Development Policy*, Cambridge, Mass.: M.I.T. Press, 1970.

25. H. SIEBERT, *Regional Economic Growth Theory and Policy*, Scranton, Pennsylvania: International Textbook Company, 1969.

26. L.H. KLAASSEN, *Methods of Selecting Industries for Depressed Areas*, O.E.C.D., Paris, 1967.

RELATIONS BETWEEN NATIONAL SPATIAL ORGANIZATION POLICIES
AND OTHER NATIONAL DEVELOPMENT POLICIES:

One of the most important questions of implementing national
spatial organization policies is their consistency with other
policies. It can be asserted that the structure of existing
theories do not enable conducting tests of consistency. As an
example we can take the case of establishing correspondences
with an industrialization policy. There is a close relationship
between an industrialization policy and a spatial organization
policy. In countries where the industrialization policy gives
priority to consumption industry, production is conducted in
small manufacturing units in existing urban concentrations and
thereby gain further importance. Whereas in countries where the
industrial policy is based in large units which produce capital
and intermediate goods, the opportunity for applying
decentralization policy is greater. As presented in the
previous sections, if in behavioral location theory a
classification of industries is made according locational
flexibility of industries, it would be possible to answer the
question of what would be the most suitable development priority
scale for sectors in achieving the desired transformation of
spatial organization. Likewise, we can conclude that some
spatial organization policies can only be implemeted if certain
preconditions such as a definite development rate, vertical
and horizontal mobility are realized.[27]

It is obvious that "impact" type theories are suitable to the
application of consistency analyses of development policies.
However it is necessary that the autonomous variables to be
used in these theories be disaggregated so as to show the
quality differences.

27. J. FRIEDMANN, *Regional Development Policy*, Cambridge, Mass.: M.I.T. Press, 1966.

INTRODUCTION OF SUFFICIENT COMPREHESIVENESS AND DIMENSIONS
OF POLITICAL ANALYSIS TO REGIONAL DEVELOPMENT THEORIES

In national or regional development theories, other dimensions
besides space are usually introduced to the analyses in order
to upgrade rationality or to subscribe to a more comprehensive
approach from the system point of view. The most important
failure that can be made in developing such theories is to
increase the number of variables to an extent so as to make
the theory unoperational. The level of comprehensiveness in
existing theories should be tested according to the criteria
of operationality.

In this section we shall emphasize power relations and the
political dimensions as two dimensions which should be
introduced in order to incearse the opportunity of making
realistic proposals for change. In regional development theories
Friedmann uses conflict theory in a polarized development model
and thus includes power and control relations in spatial
organization theories.[28] This approach is necessary to achieve
sufficient comprehensiveness.

28. J. FRIEDMANN, "A General Theory of Polarized Development", Mimeograph Report, 1967.

Regional development theories are developed only in the context
of economic analysis, especially short-term efficiency analyses
here contribute to the maintenance of the existing structure
and delay changes. This makes it imperative that be considered
in a political context since economic efficiency criteria alone
cannot be relied upon in decisions arise about the power which
imposes decisions so as to give up existing economic rationale.
Question as to the nature of this power and causes for its

appearance have to be answered in the context of this theory.
This answer can be integrated into the analysis in the
form of a spatial conflict model. Integration of such a conflict
model to regional development theories will contribute to the
applicability of the policy proposals obtained through such
theories.

BALANCED VERSUS UNBALANCED DEVELOPMENT STRATEGY

29. R. NURSKE, *Problems of Capital
Formation in Underdeveloped Countries*,
London: Oxford University Press, 1953.

30. A.O. HIRSHMAN, *The Strategy of
Economic Development*, New Haven: Yale
University Press, 1958.

The approaches of balanced development strategies have been
introduced to regional development theories as an extension of
discussions about national development strategies by Nurske[29]
and Hirschman[30]. Hirschman argues that a condition of controlled
unbalance in the economic system will increase the possibility
for investors to perceive investment opportunities. This
condition will encourage investors and therefore will increase
the economic system's rate of growth. Inter-industry relations
are used by Hirschman to prove the operation of this
acceleration effect in the system. Moreover, the existance of
inter-industrial or functional relations in a system is used
in defence of balanced development strategies.

31. R. ROSENSTEIN, Problems of
Industrialization of Eastern and South
Eastern Europe, *Economic Journal*, v.53,
1943, pp.202-211.

32. F. PERROUX, Note on the Concept
of Growth Poles (Note sur la Notion
de Pôle de Croissance) *Economie
Appliquée*, 1955; Also: D.L.McKEE,
R.D. DEAN and W.H. LEAHY (Ed.s)
Regional Economics, The Free Press,
1970, pp.93-103.

Let us examine the question of investment concentration in a
settlement as an example of development strategies. This
investment concentration can be defended by the "big-push"
theory of Rosenstein -Rodan[31] as well as by the concept of
"polarized development" of Perroux.[32] In this example, the same
investment strategy is purported in a context of balanced
development in the former, whereas in the second case it is
formulated in a context of unbalanced development. So the same
inter-industrial or functional relationship is used in defence
of both a balanced and an unbalanced growth strategy. The
derivation of two different conclusions from the same functional
relationship can be explained only by differences in the
assumed implementing units. In the proposals of unbalanced
development, the implementing unit is the private sector whereas
in balanced development propositions the implied implementing
unit is the public sector. As a more general reason, we can
state the differences in this understanding of system and system
change concepts in these approaches. In the argument for
unbalanced development the assumption is that a change induced
in an element of the system is likely to create tensions in the
system; and as the system spends extra adaptational efforts to
eliminate such tensions, the rate of change will be increased.
Thus in this strategy, the concept of change used is that of a
wholes and parts system understanding.[33] It is assumed that all
social systems of this type possess a certain degree of
flexibility and it is through this flexibility that an internal
or external effect can give rise to tensions in the system,
without necessarily destroying but inducing the system to change
concept for the wholes and part type of a system that is used
in the controlled unbalanced development strategy is more
suitable for small scale changes.

33. J. FEIBLEMAN and J.W. FRIEND, The
Structure and Function of Organization,
Philosophical Review, v.54, 1945,
pp.19-44.

If the change concept of cybernetic systems is examined, the
difference between small and great scale changes will be
clarified. Small deviations in a cybernetic system are
controlled by the feed-back mechanisms enabling the system to
turn back into the equilibrium state, and maintaining the
system boundaries. This type of a system concept is not
sufficient to explain social systems which are in a continuous

34. W. BUCKLEY, *Sociology and Modern Systems Theory*, Englewood Cliffs, N.J.: Prentice Hall Inc., 1967.

35. W. ISARD, *General Theory Social, Political, Economic and Regional*, Cambridge, Mass.: M.I.T. Press, 1969.

36. R.C. ANGELL, The Sociology of Human Conflict, *The Nature of Human Conflict*, ed. E.B. Mc Neal, Englewood Cliffs, N.J.: Prentice Hall Inc., 1965.

37. R. DAHRENDORF, Elemente Einer Theorie Des Sozialen Konflikte, *Gesellschaft und Freiheit*, ed. R. Dahrendorf, 1962.

38. L.J. MAMALAKIS, The Theory of Sectoral Clashes, *Latin American Research Review*, v.4, n.3, 1969,pp.9-71.

39. J. FRIEDMANN, "A General Theory of Polarized Development", Mimeograph Report, 1967.

40. B. BERRY, "City Size and Economic Development Conceptial Synthesis and Policy Problems, with Special Reference to South and South East Asia," Manuscript, 1970.

process of evolutionary change. To be able to explain evolutionary processes within the cybernetic system approach, one has to introduce a higher level concept of feedback, which controls the change of primary level feedbacks. Thus, morphogenetic system formulations are used rather than homeostatic ones.[34] In such a system, system boundaries maintained have to be shifted to create changes in the system. Changes in such a system can be observed in the boundaries. In order to induce a change in such a system it is necessary to introduce a sufficient level of new inputs to the system. In these systems changes occur in discrete steps. The system will shift from one stage to another. There is a similar understanding of change in the "big-push" strategy of Roseinstein Rodan. Thus we can conclude that the propositions of balanced or unbalanced development are based on different concepts of systems change.

If different concepts of change in systems underly different strategy implications of other types of system theories like conflict or dialectic theory in which the concept of change is fundamental. Altough in the "big-push" type of change a jump is involved, the stage then reached is again a static state. There exists no built-in mechanism in the system that enable continuous change. We can utilize conflict theory for the specification of such a continuous change mechanism. Here the emphasis will not be on how an interregional conflict can be resolved for the mutual benefit of regions,[35] but on the manner the spatial conflicts arise and on the consequences of resolution. Conflict is not considered here as a means for disintegrating the system; rather it is used as a development process for the system in the context given by Marx-Simmel-Coser.[36] Dahrendorf's classification of extended conflict theory develops from the single class conflict of Marx to the multi-conflict type.[37] It is possible to define many types of conflict according to different categorization and scales in society. This type of a system change concept is also observed in economic and regional development theories. The sectorial conflict theory of Mamalakis[38] as a national economic development theory and the center-periphery conflict model of Friedmann[39] can be cited as examples in this context.

In discussing the balance terminology of economic development, one remains within the context of an intersectorial equilibrium. When on the other hand, the center-periphery model is discussed within the context of conflict theory the concept used is that of a distributional imbalance in space. Balance in a spatial organization is a vague concept. The concept of primacy is generally used as an index of unbalanced in relation to the center-periphery model. If the primacy concept is cnosidered within the context of different social systems diverse judgements can be derived. Berry has approached this distribution problem recently through information theory and has shown that the primacy distribution minimizes entropy.[40] Even if this may be accepted as an expression of imbalance, this may also be evaluated as an imbalance which expresses a kind of order.

For a clarification of the concept of change, it will be appropriate to discuss the concepts of balance and imbalance in regional development theories, within the framework of systems theory.

THE RELEVANCE OF EXTERNAL ASSIGNMENT AND INTERNAL DETERMINATION OF REGIONAL DEVELOPMENT

The verification of this point is important not only to show the significance of independent development efforts in a region, but also because it may lead to either a pessimistic or optimistic evaluation of development efforts in the peripheral regions.

If the approach to the problem of the interregional differentiation in national development is made by means of a short-term economic efficiency model so as to maximize the total national income, then the assignment of development by external decisions may prove to be valid and the internal regional development efforts be insignificant. In the previous sections the efficiency concept was criticized interms of long-term analyses and institutional constraints. It was pointed out also that it was necessary to include a political conflict model, in order to increase the relative weight of the efficiency concept in the solutions. These assertions provide an opportunity to get away from the inevitability of externally assigned regional development. When such flexibilities are built into the model it is expected that regional development theories include, even if partially, the intra-regional development efforts. The most critical aspect in the use of such models would be the incorporation of the type of relations or the pattern of coalitions between local power groups and central power groups. Friedmann emphasizes this variable in his proposals of regional social development poles.[41]

Yet the introduction of flexibilities to the regional development model and the increased sensitivity to internal development efforts should not devalue the externally assigned roles of a region. As assumptions of perfect mobility or perfect immobility cannot be made for interregional factor movements in a country, so the corresponding assumptions cannot be made about the external stimulation or internal inducement of regional development. An intermediary assumption has to be used. Intermediary assumpitons about factor mobility and internal and external motivation of regional development are especially relevant for medium-term analysis.

USE OF THE TIME VARIABLE:

Although the dynamic nature of regional development theories makes it imperative to treat the time dimensions explicitly, the use of time as a variable is often vague. The time dimension is handled in existing theories in two different ways. The first case time is simply used to order events in sequence, ignoring their duration. In the second case, as in stage theory, periods of qualitative changes in society are defined in unspecific lengths of duration. Whereas small scale changes and shorter time units are involved in the first case, the second case deals with comprehensive and larger changes in longer periods of time.

For an informed choice of the time variable Kurt Levin's[42] time depth concept should be recalled. According to Levin in describing a system, information about the direction and rate of change of its elements should complement a description of the system structure at any specific point in time. This can be accomplished only when the system is studied in a relevantly long span of time. The time depth considered in the analysis

41. J. FRIEDMANN, The Future of Urbanization in Latin America, *Studies in Comparative International Development*, 1970.

42. K. LEVIN, *Field Theory in Social Sciences*, New York: Harper and Brothers Publishers, 1951.

of system performance and structural change will be different. It is important therefore, that the rate of change in the system and the treatment of time be compatible.

In the stage type regional development models, qualitative changes are expected to occur as a result of the accumulation of small changes. The concept of time as deals with in the former approach however, does neither convey a notion of an accumulative porcess, nor specify a length. Rather, it is used for the analysis of performance in static theory.

Since the stage type models of regional development imply qualitative or parametric changes, the corresponding policy statements need also be revised at each stage. Yet in the first type sequential analyses, policy formulations would retain their validity for all times.

43. J.C. STABLER, Exports and Evolution: The Process of Regional Change, *Land Economics*, v.44, 1968, pp.11-23.

As Stabler points out, a most comprehensive incorporation of time in development theories is to be found in the historical approach.[43] Some of the other variables overlooked in the stage type of approach are also included in the analyses made within the historical time concept. Let us consider two countries or two regions which have reached the same development stage in different historical times. Within the context of stage theory there is no difference between those two regions even though they have traversed different historical times. With the concept of time used in stage type theory, the effects of two important variables are ignored. One is the level of technological development of the country or of the world as compared to that of the region at a certain stage. The second one is the development stages of neigbouring (adjacent) regions or nations. These two variables are especially important in identifying the direction of dominance and the pattern of interregional relations which determine the devemopment of a region. When stage type development models are used, the incorporation of these often neglected variables, would facilitate more realistic explanations.

THE LEVEL OF COMPLEMENTARITY AND SPECIALIZATION OF NATIONAL AND REGIONAL DEVELOPMENT THEORIES

Although many characteristics and subject are common to national and regional development theories, there seems to exists a certain dichotomy of interests of the investigators active in these schools. It can be stated apriori, that regional development theory is a general theory of which national development theory is but a special case. Yet within the fragmentary and loose structure of the existing theories there is little sense in insisting on such an assertion. This may indeed be the reason for the current level of specialization.

This specialization allows the national growth theories to emphasize on how growth is initiated in the system as a whole and how it is maintained and accelerated. Regional growth theories on the other hand, dwell-on the spatial spread of development, in diffusion processes and in the impacts of economic growth on spatial organization.

Within the context of this specialization, development is defined as an independent variable, and spatial organization as the dependent variable. But in this case the effects of different spatial configurations on the initialization and on the rate of economic growth are not considered in the aggregate

analyses of economic planners. Thus, interrelations between
spatial configurations and economic growth as a subject of
study resides within the specialization of regional development
theories. If regional development theorists could integrate
spatial organization patterns into economic development
theories will resume generality so as to accomodate national
theories as a special subcategory.

BÖLGESEL KALKINMA TEORİLERİNE SENTETİK BİR YAKLAŞIM
ÖZET (Bölüm 1)

önerme bir arada bulunmakta, ve varlıklarını sürdürmektedir.
Bu kuramları belirli gruplar içinde sınıflandırmak kabil olsa
bile, gruplar arasında kesin ayırımlar yoktur, kolayca birinden
diğerine geçilebilmektedir. Bugün elimizde, birbirleriyle
ilişkileri kolayca kurulabilen önerme gruplarının teşkil ettiği
yapı bloklarından oluşan oldukça esnek bir bölgesel büyüme
kuramı olduğu söylenebilir.

Bu durum yeterli bir kuramın geliştirilmemiş olmasından çok,
bölgesel kalkınma kuramlarının belirli bir tek soruya değil
oldukça farklı yapıdaki değişik sorulara birden cevap vermeye
çalışmasından doğmaktadır. Böyle esnek bir kuramsal alandaki
yapılaşmayı teşhis edebilmek için önce kuramın cevaplamaya
çalıştığı soruların neler olduğunun açıkça belirlenmesi
gerekir. Sonra, bu kuramsal alandaki önermeler bu sorulara
cevap vermesi açısından sınıflandırılarak, bölgesel kalkınma
kuramları alt gruplara ayrılabilir ve kendi içlerinde tutarlı
kuramsal bütünler haline getirilebilir.

Bu yazıda yukarıda özetlenen yaklaşım izlenerek, önce bölgesel
kalkınma kuramlarının cevaplandırmaya çalıştığı sorular beş
grupta toplanmıştır. Daha sonra bu soruların hangi politik
rejimlerde anlamlı oldukları araştırılarak, bulunacak çözümlerin
ne tür mekan organizasyonu politikaları geliştirmekte
kullanılabileceği ortaya konulmuştur. Bir anlamda bu kuramsal
alanın pragmatiği kurulmuştur.

Beş grupta toplanan bu sorulara paralel olarak, kaç grup
bölgesel kalkınma kuramı geliştirilebileceğini incelemeden
önce, bu kuramlarda kullanılan temel kavramlar ve yaklaşım
seçimleri üzerinde durulmuştur. Ele alınan konular, etkinlik,
kavramı, var olan nüfus dağılımının optimum yerseçimine etkisi,
firma düzeyindeki normatif yerseçimi teorisinden, davranışsal
yerseçimi teorisine geçiş, hareketsizlik derecesi kabulünün
bölgesel kalkınma kuramlarına etkisi, ülkesel mekan organizasyonu
politikası ile diğer ülkesel gelişme politikaları arasındaki
ilişkiler, bölgesel gelişme kuramlarında yeterli çok yönlülük
derecesinin sağlanmasında siyasal boyutun rolü, dengeli ya da
dengesiz bir kalkınma stratejisi seçilmesinin sorunları ve
bölgesel kalkınmanın bölge içi gayretlere hassasiyet derecesidir.

Bu sayıda yayınlanan yazı çalışmanın bu bölümüne kadar kesimini
kapsamaktadır. Yazının bundan sonraki sayıda yayınlanacak
kısmında ise, altı ayrı bölgesel kalkınma kuramı verilmektedir,
1) aşamalı bölgesel kalkınma kuramı, 2) ekonomik temel kuramı,
3) üretim fonksiyonu tipi gelişme kuramları,4) bölgeler arası
kayma kuramı,5) büyüme kutbu kuramı, 6) polarize gelişme kuramı.
Aynı yazıda her bir kuramın çekirdeği ile bu çekirdeğin yan
önermelerle nasıl zenginleştirileceği gösterilecek, ve kuramlar
arası ilişkiler kurulacaktır.