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One Region, Three Networks - Processes Of Self-Organization As A Strategy For Sustainable Regional Development

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One region, three networks

Processes of self-organisation as a strategy for sustainable regional development

Paper presented at the 40th European Congress of the Regional Science Association in Barcelona

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Abstract

The paper presents the results of an ongoing research project funded by the INTER-REG II- Programme of the European Union. The research is about three initiatives which are aimed at supporting regional development.

The whole project has two levels. At the research level the theoretical background will be formulated. The results will be compared with the empirical findings on the three initiatives. At the consultancy level the theoretical and empirical findings flow back to the actors of the initiatives.

The three initiatives are located in Austria, Switzerland and Germany around the Lake of Constance. They combine private and public actors in different ways and in different projects. The research project analyses the kind of organisation and the process of development within the initiatives. Three questions have to be answered:

- 1. What are the goals of the initiatives? Is there a coherent system of goals? Will the goals commit all actors? What is the basis of the co-operation between different actors? The analysis of the goals refers to the theoretical framework of sustainable regional development.*
- 2. How can the initiatives reach the goals? What are the capacities of management the three initiatives have? The analysis refers to the concept of regional change management.*
- 3. How can the initiatives maintain its power and its possibilities to act? What is about the flexibility and adaptability with regard to new actors and new influences? The analysis refers to the theories of self-organisation.*

The project is in a final stage. The theoretical framework has been done and the empirical analyses mostly are finished. The paper presents the theoretical framework. The presentation on the conference will show how the empirical findings can underpin the framework.

The first results of the project show a high degree of complexity connected with the research project. Especially the third part concerning the theories of self-organisation offers a lot of analogies out of natural sciences which are difficult to assess towards their meaning with respect to social organisations and processes of regional development. This third part lead to the heading of the project:

"Where goes the ship – and who pilots the helmsman?"

But first of all, to analyse the process of sustainable regional development it is necessary to clarify the goals and the basis of co-operation between different actors.

1. Goals and networking

To judge the goals of the three initiatives we refer to another research project funded by the European Community: Instruments for Sustainable Regional Development (INSURED, EC Environment and Climate Research Programme 1994-1998). In this project a set of *ten dimensions* was identified to be considered towards the goal of sustainable regional development.

- The first three dimensions are the common dimensions *of ecological, economic and socio-cultural development*. They refer to the material side of development which is the use, preservation and distribution of material resources. Development towards sustainability means especially to pay attention to the connections between the three dimensions.
- To take into account the normative background of the concept of sustainability *three equity dimensions* has to be added: the equity between social groups, genders, classes and so on (societal scale), the equity between regions (spatial scale) and the equity between generations (time scale).
- The concept of sustainable development cannot be implemented in a short time. According to the necessity to start a long-term process towards a fundamental and paradigmatic change which integrates the complexity of different goals and interests, the following *four dimensions reflecting the quality of the process* of development has to be added: the diversity of approaches, the subsidiarity within the vertical co-operation, the participation of all people and interests and the principle of partnership and networking.

The ten dimensions cannot be used as indicators for sustainable regional development. But they are an attempt to structure the discussion about projects and programmes in the way, that all important perspectives of the very broad concept of sustainability can be taken into account (see Thierstein, Walser 2000). With this theoretical framework we analysed the goals of the three initiatives and the foundation of the co-operation between different actors.

To analyse the kind of co-operation we referred to the theory of '*Regional Innovation Coalitions for Sustainability RICS*' (Thierstein 1997) and the theory of '*Regional Actor's Networking RAN*' (Minsch et al. 1996). Both theories reflect the necessity to integrate different actors according to their motivation within one network. In contrast with traditional approaches of networking the RICS' and RAN's do not integrate actors because of their functions as members of institutions or as actors with the capacity of decision-making.

Actually the term network is 'en vogue' and used in a very common way. Networks are said as cure-alls because they should be the appropriate tool to manage processes of regional change with an high degree of complexity. But in most cases all kind of co-operation between different actors is called 'networking'. Traditional networks are defined by a certain set of features: They are based on *informal relationships* with a *mutual character*. *Different actors from different issues* and institutions *co-operate* with a *long-term perspective*. The fundamentals of the co-operation are *trust and confidence* (see for example Scharpf 1993).

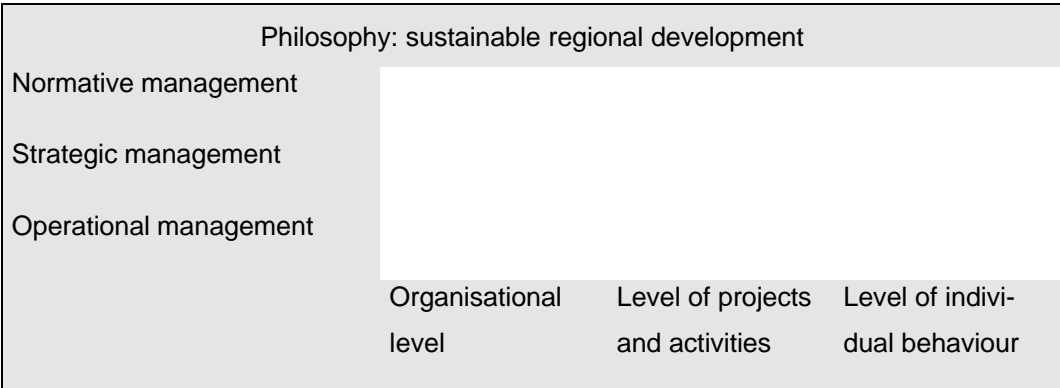
Such networks are not innovative 'per se'. They also can block innovation by a symbiotic exchange of resources and political power which does not allow new ideas to increase and spread (Grabher 1993). But the co-operation of actors with the same motivation towards sustainability allows to create a network with a common set of goals and values. It becomes a so-called 'rainbow-coalition' out of different fields and interest groups. With respect to the spatial and conceptional proximity the co-operation allows the exchange of ideas with different environmental and thematic references which can create innovation towards a sustainable regional development.

2. Managing regional change

To 'manage' regional change includes different problems. What kind of action can generate a structural change within a region? What kind of activities need what kind

of management? Which actors should be included in which stage of the process? And last but not least which different roles have to be fulfilled to complete the 'management' of a regional development process?

Sustainable regional development is not only a process of adaptation. It needs structural change concerning the *organisational level*, the *level of projects and activities* and the *level of individual behaviour*. According to the three levels there can be identified three types of management with a different range and depth of the effects achieved (Schwaninger 1997). The *normative management* works in a reasoning way, it creates the fundamental base of the process. The *strategic management* gives the main orientation towards the chosen path and the way of acting. The *operational management* is aimed at the implementation of concrete actions. All the three levels of management will not function without an superordinated common philosophy about the process. Such a philosophy can be seen in our case with the concept of sustainable regional development. The following scheme shows the types and levels of management which should be taken into account to enable regional development:



To influence structural change in an effective way three types of activities can be identified (Rey 1997): To *produce sense* means to create a common understanding about the problems to be solved, the visions for the future and the rules of the game. To *release resources* means to improve the capacity to act according to the problems to be solved; it includes the identification of available resources and to enable processes of learning in the sense of empowerment. To *promote activities* means to construct different scenarios to make possible suitable measures of steering; it includes continual evaluation and knowledge of methods of problem solving. Producing sense, releasing resources and promoting activities have to be combined equally. They are mutual influencing types of activities.

The 'management' of regional development also requires different types of actors. *Different functions* can be distinguished. Descending from economic theories of management (Doppler/Lauterburg 1994) the functions and the respective roles must be represented among the actors of the 'Regional Innovation Coalitions for Sustainability' who try to manage the process of development.

The first function within the management is *leadership*. Leadership means to give the 'push' to the process. The function of leaderships includes the ability to gain confederates and to produce motivation by creating enthusiasm. It includes also to integrate and combine different actors under a common vision. Leadership at the same time means to take the political responsibility for the process.

Another important function of management is represented by so-called '*change teams*'. Change teams are responsible for the ongoing process in terms of organisation and accompaniment. They do the everyday work and keep together the different actors within the network.

A third important role is the role of the '*multipliers*'. They represent the interface between the RICS or Ran and other networks – thematical, institutional or professional ones. Multipliers are responsible for the spreading of the ideas and projects to give the basis which is necessary to move towards sustainable regional development.

Last but not least the *broad public* is an important actor. Those people work within certain phases or on certain problems. They do not work constantly and sometimes restrict their engagement on informing themselves. But it is important to create an open space within the process of development to enable the broad public to participate.

In the theories of management two contrary proceedings can be identified. *Organisational development* tries to include all people concerned from the beginning, especially within the phase of defining goals and strategies. *Business reengineering* limits the participation on the phase of implementation, goal-setting and strategical planning is restricted on an inner circle of management. Within the most theories of regional development the 'organisational-development' approach seems to be the adequate proceeding in this case. Regional development needs a lot of participation from the beginning and participation includes measures of empowerment. But this normative claim should be judged in a more detailed way according to the real

course of many initiatives aimed at regional development. In fact mostly a few actors determine the course of an initiative or a project. But to reach long-lasting effects it seems to be important that the strategical work does not take place in a secluded circlet but in a open 'ring'. People mostly did not participate from the beginning but they want to have the chance to participate if they want and they want to know what is going on to support the process ideally.

All these functions – leadership, change teams, multipliers and broad public - can be kept by different individuals. It is not necessary to have a single leader within the network. It is also possible to get a political leader and a 'charismatic' leader. But all the functions must be represented within the network of actors.

3. Self-organisation

There are different elements forming the management of processes of regional development. Originally these elements are connected with individuals representing a certain function in the hierarchy of an enterprise. In the case of regional development there is a lack of hierarchical steering. To combine these elements therefore needs an adaptation on the characteristics of networking, a systemic approach.

The theories of self-organisation can be used if the network – in our case the RICS or RAN – can be described in terms of a self-organising system. Such a system is characterised by an 'organisational closeness' combined with an 'energetic openness'. In the case of an initiative to support regional development it means, that the initiative can fix its own proceeding only with recourse to its own resources and capacities. There is no external (political or financial) power with the authorisation to give instructions to the initiative. On the other hand there is an energetic input and output in the form of manpower, money, information and all other kind of resources representing 'energy'.

It is possible to describe a RICS or RAN in terms of self-organisation. It implicates some consequences about the management of processes of regional development on the one hand and about the network's adaptability, viability and capability to act on the other hand. Until now some further remarks on self-organising systems can be formulated to build the basis for a future research agenda:

1. Self-organising systems develop according to the physical 'law of entropy'. Such a system continuously is confronted with decisions about strategies and reactions against certain impulses from the system's environment, about relevant communication and so on. A RICS or RAN concentrates on certain strategies and partners, priorities and communication lines which seems to be able to support the implementation of the system's goals. Every strategic decision determines further decisions. The possibility how to act will be restricted more and more. A dense and complex pattern of preferred system behaviour emerges. This pattern provides difficulties in orientation for 'newcomers'. The system gets poorer concerning its 'windows of opportunity' but it gains complexity during its development.
2. The environment of a self-organising system can influence the system only to a certain degree. It cannot influence the system's behaviour in a selective way. The system can handle information autonomously. In doing so the system decides which information will be more or less relevant for its own purpose. There is a tendency within the system's development to create a specific artificial environment out of a set of communication patterns and structures of knowledge. This artificial environment determines the choice of relevant themes, actors and interests and can prevent the system's adjustment on the changing conditions of the real environment.
3. A self-organising system is structured in a non-hierarchical way. The mutual steering mechanism is based on the interaction of the different elements of the network. It leads to a structure of redundancy. The co-action of redundancy and self-reference enables the network to create internal norms, standards and traditions which together creates the 'corporate identity' of the system. A self-organising system can create a kind of personality. With its own philosophy and attitude the system builds up its own 'framework of reference' which can lead to a kind of illogical and volatile behaviour like in individual behaviour.

All three elements show the momentum of a self-organising system which should be taken into account if the system's capability of management will be analysed.

4. Outlook

Until now with our project we got a system of goals and a framework of management which can be used to improve sustainable regional development. But there is a gap

in perception concerning the importance of the theories of self-organisation for the management regional development.

We gained some further insights about systems behaviour but concerning the knowledge about influencing or even steering this behaviour we are at the beginning. More questions are to be answered about the system's behaviour and the impacts of such systems towards (sustainable) regional development. Further research can lead to a improved understanding of the mechanism of private commitment and public support and can help to identify favourable and hindering factors.

The presentation on the conference will show how the empirical findings can underpin the theoretical framework and what questions arise from the analysis.

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