

# Beyond Territorial Innovation Models: The Pertinence of the Territorial Approach

OLIVIER CREVOISIER

*Groupe de recherche en économie territoriale (GRET), Institut de sociologie, Université de Neuchâtel, Faubourg de l'hôpital 27, CH-2000 Neuchâtel, Switzerland. Email: Olivier.crevoisier@unine.ch*

CREVOISIER O. Beyond territorial innovation models: the pertinence of the territorial approach, *Regional Studies*. Research on territorial innovation models (TIMs) has had and still has a considerable impact on innovation studies in a broad range of fields (political economy, geography, sociology, administrative and political science, etc.). This paper suggests that a broader approach – territorial economy – which became structured to a considerable extent thanks to research on innovation, is emerging. It has much to give when applied to other current social issues (mobility, financialization, etc.) and to theoretical improvement (that is, it can upgrade one's understanding of economic change by putting space and time at the centre of economic theories).

Territorial economy    Territorial innovation models (TIMs)    Institutional approach    Relational approach    Innovative milieu

CREVOISIER O. 领域创新模型之外：领域方法的相关性，区域研究。关于领域创新模型的研究已经并且一直在较广的领域范围对创新研究产生显著影响（政治经济学，地理学，社会学，管理以及政治科学等等）。本文指出一个覆盖面更广的方法 — 领域经济学 — 这一方法由于创新的研究而被纳入更大范围。如果将其应用于当前的社会问题研究（移动性，金融性等等）以及理论进展（即通过将空间以及时间置于经济理论的中心，该方法能够提升个体对于经济变化的理解），该方法的应用潜力会更大。

领域经济    领域创新模型    制度方法    相关性方法    创新环境

CREVOISIER O. Au-delà des modèles territoriaux d'innovation: la pertinence de l'approche territoriale, *Regional Studies*. Les travaux sur les Modèles territoriaux d'innovation (territorial innovation models – TIMs) ont eu des impacts considérables sur les études sur l'innovation dans de très nombreux domaines (économie politique, géographie, sociologie, sciences politiques et administratives, etc.). Dans cet article, on suggère qu'une approche plus large – l'économie territoriale – qui s'est largement structurée à partir de la recherche sur l'innovation, émerge. Elle peut apporter beaucoup à la compréhension d'enjeux sociaux contemporains (comme la mobilité, la financiarisation, etc.) et la réflexion théorique (plus précisément, elle peut améliorer notre compréhension du changement économique en mettant le temps et l'espace au centre des théories économiques).

Économie territoriale    Modèles territoriaux d'innovation    Approche institutionnaliste    Approche relationnelle    Milieu innovateur

CREVOISIER O. Jenseits der territorialen Innovationsmodelle: die Relevanz des territorialen Ansatzes, *Regional Studies*. Die Erforschung von territorialen Innovationsmodellen (TIM) wirkte und wirkt sich in einem breiten Spektrum von Feldern (politische Ökonomie, Geografie, Soziologie, Verwaltungs- und Politikwissenschaften usw.) beträchtlich auf Innovationsstudien aus. In diesem Beitrag wird die These aufgestellt, dass ein breiterer Ansatz – der der territorialen Ökonomie – im Entstehen begriffen ist, der sich in erheblichem Ausmaß aufgrund der Forschungsarbeit über Innovation strukturiert hat. Bei einer Anwendung auf andere aktuelle soziale Themen (Mobilität, Finanzialisierung usw.) und auf theoretische Verbesserungen hat dieser Ansatz viel zu bieten (d. h., er kann das Verständnis der wirtschaftlichen Veränderungen verbessern, indem er Raum und Zeit in den Mittelpunkt von Wirtschaftstheorien stellt).

Territoriale Ökonomie Territoriale Innovationsmodelle (TIM) Institutionalistischer Ansatz Relationaler Ansatz  
 Innovatives Milieu

CREVOISIER O. Más allá de los modelos de innovación territorial: la pertinencia del enfoque territorial, *Regional Studies*. Los trabajos sobre los modelos de innovación territorial han tenido, y todavía tienen, una notable repercusión en los estudios sobre innovación en numerosos ámbitos (político, económico, geográfico, sociológico, administrativo y de ciencias políticas, etc.). En este artículo sugerimos que está surgiendo un enfoque más amplio – la economía territorial – que está en gran medida estructurado a partir de los estudios sobre innovación. Tiene mucho que aportar cuando se aplica a otras cuestiones sociales contemporáneas (movilidad, financialización, etc.) y a la mejora teórica (es decir, puede mejorar nuestra comprensión del cambio económico al situar el espacio y tiempo en el centro de las teorías económicas).

Economía territorial Modelos de innovación territorial Enfoque institucional Enfoque relacional Entorno innovador

JEL classifications: R, R1, R10, B, B5, B52

## INTRODUCTION

Various critical surveys, assessments and retrospective overviews of the research relating to territorial innovation models (TIMs) over the last twenty to thirty years have today become highly topical. This paper intends to contribute to this debate as a representative of the research stream regarding innovative milieus: one that was initiated in the mid-1980s by Philippe Aydalot (MATTEACCIOLI, 2004) and the Group for European Research on Innovative Environments (GREMI) for a synthesis and retrospective (CAMAGNI and MAILLAT, 2006; for some updated research questions, see COLLETIS-WAHL *et al.*, 2008).

This opportunity has a twofold purpose. Firstly, it permits one to state one's reactions to the literature that has been read and research that has been carried out following, or in parallel to, one's own work and to respond to some recurring criticisms. Secondly, and based on a retrospective overview on one's part plus various assessments published during these last years (LAGENDIJK, 2006; MOULAERT and SEKIA, 2003; SIMMIE, 2005), one can look towards the future and ask oneself how, and under what conditions, a territorial approach to economic questions is pertinent today. From the outset, it should be affirmed that such an approach is considered to be essential. Greater importance should be attached to it, and it should go well beyond purely 'regional' questions. If one is sufficiently ambitious (and probably overambitious), one could even imagine it as an alternative, within public debate, to the neoclassical or more generally to the neo-marginalist approaches. Naturally, it is necessary to update reflection on the subject in order to adapt it to the concerns of a society caught up within more pronounced globalization. Theoretical ambitions could also be included, stating how territorial approaches enrich the neoclassical or institutionalist conceptions within economy and geography.

A starting point will now be stated: research into innovative milieus, industrial districts and other TIMs had – and still has – the objective of understanding

relations between economic, social and spatial forms of organization. Why does a given region or country, in a given context, have a different quantitative and qualitative dynamic than another? Inversely, how is the territory transformed as a result of the economic dynamics? This is by no means a question of micro- or macro-economics, but very much an approach which takes into account from the very beginning the various scales, the 'here and the elsewhere', the past and the present, and the present and the future. Moreover, an economic approach that takes space and time into consideration sheds a unique light on numerous questions raised today. Work on the TIMs has had a considerable impact on studies relating to innovation in a very wide range of fields (political economy, geography, sociology, political and economic science, etc.). It is therefore believed that the territorial approach, which has become structured to a considerable extent thanks to research on innovation, still has much to give by its application to other current concepts and issues at stake. On this note, the first section of this paper will therefore be devoted to the various criticisms made in relation to TIMs and perspectives thereof, with the aim to identify the strengths behind this area of research that should, in the author's opinion, be preserved and extended within what should be called 'territorial economy'. The second section will handle current questions and the way in which the territorial economy could provide a response to them.

## TERRITORIAL INNOVATION MODELS (TIMS) IN THE LIGHT OF CONTEMPORARY THEORIES

TIMs are those various models that, from the middle of the 1980s, tried to understand the changing geography of economic development, from mainly nationally organized economic systems to regional dynamisms within markets that were becoming internationally

more open. TIMs were defined, compared and criticized by MOULAERT and SEKIA (2003). This term regroups a certain number of theories such as industrial districts, *milieux innovateurs*, new industrial spaces, local production systems, etc. The lead was initially taken by AYDALOT (1986) and the GREMI. Several others, like the Californian school of economic geography, added new concepts (SCOTT, 1986; STORPER and WALKER, 1989). The approach of industrial districts developed sooner, especially regarding the link between the characteristics of the local society and politics and long-term economic development (BECATTINI, 1990; GAROFOLI, 1992). It came a little bit later to the question of innovation. All these approaches had in common a certain number of ideas and, partly, concepts such as economies of agglomeration, learning and interaction, innovation processes, local governance, endogenous development, etc. Today, approaches such as regional innovation systems or learning regions are still developing along the same lines. Behind these commonalities TIMs also presented a significant number of divergences concerning the core of innovation dynamics, the role of institutions, their understanding of regional development, etc. (MOULAERT and SEKIA, 2003). Therefore, their theoretical unity should not be overestimated.

The present paper has tried to develop questions and issues that are most of the time common to the various 'schools' of this stream of research, but with a special stress on the innovative milieus. The reason is the personal background of the author, who participated from 1988 in the research network of the GREMI.

### CRITICISM RELATING TO PROXIMITY ECONOMY

Over the last twenty years there have been a certain number of misunderstandings regarding the way how TIMs, including innovative milieus, developed their research questions and empirical results. The most striking example of this, which is still cited today, concerns the notion of proximity and its role within economic dynamics. Authors such as Boschma or RALLET and TORRE (2005), in a special edition devoted to TIMs (BOSCHMA, 2005), seem to take a completely opposing view of TIMs. The TIM approaches:

take for granted the positive role of proximity, there is a strong need for empirical studies that assesses the impact of proximity on the performance of firms in different contexts in space and time.

(p.42)

In reading this, one is comforted, on the one hand, since this research programme is exactly what GREMI, as well as most empirical research about TIMs, has been working on since the mid-1980s. From the outset, the issue has precisely been one of identifying the *differing*

roles of proximity for given actors, economic logics, etc. From the beginning of its programme, GREMI has examined cases not only of regional successes, but also of failures. The programme's strength is indeed that it has carried out systematic research that made it possible to show *how proximity plays a 'positive' role* and where, of course, proximity is *not* pertinent! The objective has always been to identify and develop theories regarding the role of proximity in relation to distant relationships, carefully identifying what kind of actors interact and according to which modalities, with a view to carrying out what kind of project, and what kind of territorial processes come into play. The surprising aspect is that many authors have only noted successful cases showing that proximity *can* play a role in economic dynamics. This is understandable to some extent, since it is of course what the TIMs generally sought to explain and put forward. At the time, the endogenous economic dynamism that could be observed in certain regions appeared inexplicable. Starting from this point, a large number of case studies led to interesting results. For instance, RATTI *et al.* (1997) provided a systematic comparison of regional trajectories that have met with success or have been blocked.

The conclusions of these empirical works were understood as a demonstration of the beneficial role of proximity in regional development. It was indeed what they were, except that these proximity relying development processes were identified *only where some kind of innovative milieu* was functioning and not anywhere else. Therefore, the positive effects of proximity were context-dependent results observed in empirical research and conceptualized in TIMs and in no way a general law of regional development.

To put the TIMs into perspective, the approach to an economy of proximity consisted of affirming that proximities of a non-spatial *nature* (organizational, institutional, etc.) existed. Such a project, however, asks a certain number of questions from the point of view of spatial theory.

First, there is a hint of positivism when one seeks to reveal, by means of various arguments, the existence of relations that are independent of space. When an enterprise chooses to become organized in the form of one establishment or several, is this an organizational issue or a spatial one? This does not reflect the fact that the relations or the economic, technological or administrative rationality have a nature of some kind. Including or excluding space within the presuppositions of one or another approach is an ontological choice.

Second, the project could also appear as having an uneven basis because two ontologies are being mixed. The first one is that of geography and of territorial approaches within social sciences in general. Their fundamental thesis is that the constraint of organizing human societies on the surface of planet earth largely explains the socio-economic dynamics that exist. The fact that in the course of history this constraint is

moving towards a less exclusive dependency on proximity changes nothing within the thesis or indeed the pertinence of the approach. In fact, analysing and interpreting the emancipation and re-anchoring movements that occur with regard to *places* by means of constructing relations between them (the *space*) has always been what geography is about (naturally among other aspects). Other social sciences have developed a second type of ontology that initially excluded space: here one is of course referring to political economy and particularly to neo-classical economics, based on the development of equations inspired by Isaac Newton's physics but which remove the element of space (distance, speed, acceleration) and replace it by that of price, with the irritating result that one could be led to believe that economy can be seen – in ontological terms – as being totally independent of space (CORPATAUX and CREVOISIER, 2007). This positioning can of course be defended. The problem, however, is that within the proximity approach one is, on the one hand, mixing certain relations that would be those that are spatial by their 'nature' and in ontological terms – that is, geographical proximity – and, on the other hand, relations that would be by nature and in ontological terms 'a-spatial'. Since two different epistemological registers are being used, a coherent conceptual corpus cannot be achieved. One remains at a level of distinctions that have a certain analytical interest but which can never permit one to handle the fundamental question, which is the relation between economic organization and spatial organization.

This leads to a general property of the territorial approach that characterizes the innovative milieus, that is, that of integrating space within the initial ontology and considering all the relations as spatial rather than isolating certain components thereof, such as organization or more generally economic rationality.

### THE AUTONOMY OF DEVELOPMENT ON THE BASIS OF THE REGION

In their introduction, MOULAERT and SEKIA (2003) provide an extremely good description of the context in which the question of TIMs has emerged and become structured. The beginning of the 1980s was marked by crises on the part of regions with an industrial tradition and by the failure of traditional revitalization policies. In parallel, more attention was being drawn to certain successes at both a regional or a local level. In the author's opinion the central idea of that period is very much one of *endogenous* development, that is, development that is not provoked, induced or driven by actors outside the region, but one with its own logic, an *autonomy*, which can only be understood via the actors, relations and the dynamic *within that region*. To date, this point remains central and still needs to

be precisely explained in order to prevent any misunderstanding.

It should briefly be recalled that autonomy by no means signifies autarchy and is in fact the opposite thereof. Autarchy means closure towards the exterior, whereas autonomy is what characterizes any entity, biological being, organization, region, etc. capable of handling its relations with the outside world. According to this approach, for example, a human being has constant exchange with his/her environment: breathing, dialogue, etc. His/her internal organization permits him/her to regulate these exchanges, to grow, to survive and, to a certain extent, to adapt to the pressures exerted on him/her by the environment.

Perhaps the main contribution provided by the GREMI has been its efforts to characterize this dynamic of autonomy, whether within the region or outside it, based on a constructed proximity, and which characterizes the emerging development dynamics within changing environments.

This point asks for more precision and clarification. Several critics (Rallet, Storper, etc.) have claimed that the innovative milieu has something of a tautological aspect: why is the milieu innovative? Because it innovates. SIMMIE (2005) raised the same question:

One of the problems raised by the innovative milieu thesis is how the highly desirable externalities arise in the first instance. Explanations slip too easily into the argument that the innovative milieu assist innovative firms while at the same time the presence of innovative firms creates the innovative milieu that is supposed to be assisting them. (p. 793)

Within paradigms inspired by biology, of which the innovative milieu is one, autonomy is precisely characterized by circular causalities, that is, processes which are interlinked with each other in a closed manner while exchanging with the exterior. This reflects the concept of *autonomy* as developed by VARELA (1989), LE MOIGNE (2001) or MORIN (2005). In very simple terms, an organism can absorb nourishment because it is alive. This nourishment permits it to live and consequently to absorb nourishment, etc.

This criticism of innovative milieus as a closed chain of processes is in the author's opinion meaningful within a mechanistic paradigm. In fact, the necessity of 'explaining' a phenomenon by means of variables that are exogenous to the system is only comprehensible for heteronomous systems that are driven by instructions coming from the exterior. So-called endogenous variables (in the sense of traditional equations systems) must be separated from exogenous, explanatory variables. In the same way, when a milieu innovates it opens up new productive questions, new opportunities for innovations, and as long as the actors are mobile to a certain extent, it will innovate once again. This question of a chaining together of processes which characterize autonomy on a specific spatial scale is a central one

within *territorial economy* (see above). It has by no means been sufficiently studied.

To resume, the author does not think that it is possible to understand *endogenous* development in the mechanistic paradigm by constantly seeking external causes. On the contrary, it is the closed chain of processes that characterizes emergence and permits one to avoid the ultimate recourse to creationism. It is possible to criticize the theory of innovative milieus in the sense that it takes the regional scale as being the one in which the emergence of innovation and autonomous development is most likely to take place. Today, moreover, the pertinent spaces concerned have admittedly changed. Economic dynamics and innovation processes are probably much more multi-local (emerging through interactions within and between several places) and more multi-scale (mobilizing institutions enforced at various scales at the same time) (CREVOISIER and JEANNERAT, 2009) (see below). However, in spite of this necessity to step radically out of localism, one essential gain from TIMs is the idea that the cumulative, auto-reinforcing dynamics that characterize economic processes are both the product and the producer of specific economic-spatial forms.

This autonomy must by no means, however, be understood as an automatism or as a process devoid of actors. It is another fundamental aspect of the innovative milieu approach. Endogenous development can only be triggered by deliberate action on the part of entrepreneurs (in the sense described by Schumpeter) who are situated (or in today's terms 'institutionalized').

### ENTREPRENEURSHIP, HUMAN FREEDOM AND PUBLIC POLICIES

The intuition on the part of AYDALOT (1986), when formulating the fundamental questions of the GREMI research programme, was that entrepreneurs were not independent of the milieu but a result of it. It should be noted in passing that this idea dates back a considerable way, since SCHUMPETER already formulated it in his *The Theory of Economic Development* (1912). However, Schumpeter did not pursue the idea and did not open the 'black box' that was the milieu.

Thus, development can only be triggered by an articulation between the opportunities that are opened up and formulated by the milieu and the deliberate determination of entrepreneurs. One is in a dialectic of human freedom and radical uncertainty *in relation to the context*: this being the final point that constitutes the originality of the territorial approach. It is a message to which considerable importance was attributed on a level of public policies and more generally of the stance taken regarding questions of development. On the one hand it is a highly positive message, since it indicates that development is possible because it depends considerably on the determination of local

actors to act collectively and in an innovative way. It is also a message that is not always easy to accept from the point of view of public policies. How often, in fact, has one heard the question 'What must I do to have an innovative milieu in my region?' From this point of view, approaches in terms of clusters or regional innovation systems are – a priori – easier to implement. However, in terms of the innovative milieu approach, they do not develop the question of entrepreneurship and human freedom to a sufficient extent so tend towards a certain automatism. From the innovative milieu point of view, it is not sufficient to juxtapose and 'combine' the various elements that constitute an innovation system for it to function, but the perspective must be reversed. It is 'animation' and the interactions on the part of the actors that constitute the key to triggering the process. If the actors involved do not have the capacity to appropriate a project and activate it, there is no knowing whether investing in the various components of an innovation system (research centre, training programmes, various aids to innovation, etc.) will lead to a local dynamic.

### THE RELATIONAL APPROACH AND THE TERRITORY

To date, the territorial approach could be assimilated with one within the field of micro-economics. This amalgam is frequently made. Moreover, the relational turn in economic geography (BATHELT, 2006; BATHELT and GLÜCKER, 2003) is moving closer to this perspective: it is the relation among the actors that leads to development, they who link the past and the present and also the present and an uncertain future. Concerning this 'relational turn', one can nevertheless distinguish two dimensions. The first is a methodological one: spatial-economic dynamics are identified in a way that resembles that of an investigator, by examining the networks of actors. The second is a theoretical dimension and based on the questions of relations, individualism and holism.

Concerning the methodological aspect, one fully subscribes to the relational approach. In fact, fieldwork on the TIMs has largely taken place in this manner: one moves from one actor to another in order to understand the dynamics of innovation, asking each of them questions on the subject, on the actors and their relations, and on the geography of those relations. The dynamic within their context can then be reconstituted. Only human beings are capable of speech; there is thus no choice but to proceed in this manner. However, when speaking to an individual, one always has to clarify whether he/she is speaking to a larger entity (for instance, a company), to an individual, with their many dimensions, or just to one part of this person constrained by the situation (for instance, when the interviewee plays the role of a manager who is presently

facing an interviewer). Individuals and their rationalities are largely dependent of the situation. Therefore, this method must not be confused with the individualist theoretical posture: it is not because one puts questions to the individual actors that one is advancing the theory that society can be understood and constructed in a satisfactory way on the basis of individuals.

On the theoretical level, in fact, the territorial approach must go further. The approach via the actors – around which geography is currently re-centring – supposes that it is possible to dissociate the context, on the one hand, and the actors, on the other hand: the latter are supposedly autonomous in relation to the context, equipped with a certain degree of rationality and thus form a coherent entity. A genuine meso-economic posture calls for putting into perspective the ‘descendant’ effects of the structures on individual types of behaviour, but should also avoid falling into the opposite excess, that is, the idea that society can be sufficiently understood based on individual types of behaviour since individuals are, from an ontological point of view, separate from the context and thus equipped with a coherence of their own. In this, the approach via institutions is one that in the author’s opinion is frequently misunderstood and misinterpreted. The fundamental concept is not the actor but the *relation*, whether this latter is called an institution, proximity, a convention or a territory. The actors are no longer autonomous, sufficient, equipped with a rationality that is independent of the context, but are *institutionalized* actors. They are traversed by logics that shape them and go beyond them, but on which they act in return. One is in an *open structuralism* (BILLAUDOT, 2001), but one that is explicitly territorial. The actors act within a multi-local and multi-scale context while being influenced – or ‘controlled’, to use the vocabulary of John Commons – by institutions, structures, macro-economic regulations, etc., that cannot be reduced to interaction among actors, however powerful these interactions may be. Actors in interaction produce the territory, but one should not lose sight of the fact that the territory shapes the actors, including their rationality. The pitfall that should be avoided is that of sliding into methodological individualism.

This critique may sound too hard, as most authors in economic geography who developed this approach are clearly sensitive to the effects of contexts. Nevertheless, from a theoretical point of view, attention should be paid partly to depart oneself from today’s renewal of interest in economic geography for theories such as those of LATOUR (2005). The latter postulate that situations can be understood by looking at the relations between the players and the objects. The present author is not at all convinced that this gives a satisfying account of what is a spatial context. More precisely, institutions, understood as the rules of the games, cannot be considered as entirely contained in relations between the players of a given situation.

Industrial economists have approached questions related to territory and have identified ‘proximities’ of

an organizational or institutional nature, etc. (RALLET, 2005). In the present author’s opinion this is simply another word for ‘relation’. Geographers, on the contrary, noting the upswing of scales within the functioning of the economy, call for a ‘relational turn’. Within this dialogue between disciplines, the risk is to overlook the issue at stake, and for proximity and relation to remain notions that are devoid of meaning. The essential point is to understand the effects of territories on economic dynamics, and from a point of view that is not only concrete, but also, and above all, from one that is theoretical. This, indeed, is the project of *territorial economy*.

On this subject, there is another major theoretical issue that has not yet been grasped or at least not with sufficient clarity. When one puts forward the fact that spatial economic dynamics develop within a context, that they link the past and the present (*path dependency*), the present and the future (*futurity*, as Commons calls it), and the ‘here and the elsewhere’, etc., the meaning of ‘context’ is not clearly understood (CORPATAUX and CREVOISIER, 2007). In fact – and this is a central question – is this ‘context’ external to the actors’ dynamics, or do those dynamics constitute it? Or both at the same time? Can the ‘territory’ or space be assimilated with this ‘context’? Again, what is their exteriority regarding the dynamics that are observed? Should ‘context’ be understood in a spatial sense or one of systemic theory as a metaphorical environment that comprises all the elements that influence the process isolated by thoughts, but that are not systemized by space?

On these issues, the *relational turn* still leaves open several questions. One does not really know if players and/or relations are parts of the territory or contextualized in it, or both. Moreover, there is in the author’s opinion still some confusion between the relations (the concrete identifiable interactions between players) and the institutions (the rules of the game that govern those interactions and which are usually part of the context). These elements do make obscure whether the relational turn is a shift towards some really contemporary way to deal with collective actions or if there is still some old-fashioned propensity for methodological individualism. In short, there is sometimes a disregard about the role of history and institutions (SUNLEY, 2008).

From this point of view, the *new evolutionary geography* (BOSCHMA and MARTIN, 2007) currently remains clearly micro-economic (the author speaks here from the strictly theoretical contributions). Initially, in these models players are located in various ‘spaces’. Space is an entity distinct from the actors; it exists independently of players and players independently of space. Their rationality is not dependent of the context. Space is ‘neutral’, virgin and therefore plays no role. It is a stage on which players are located. Firms then innovate and shape it and may even create new places. Nevertheless, novelty and radical uncertainty in the sense described by Keynes remain difficult to imagine since this school mobilizes probabilistic models that suppose

that all future situation are specified at the outset (BOSCHMA and FRENKEN, 2006).

Regarding these points, territorial economy considers that the territory is *at the same time* both exterior, inherited by the actors, and internal, produced by these interactions on the part of institutionalized actors. The territory is *always concrete*, both specific and generic, stable and in change, local and extra-local, affecting the actors and affected by them (CORPATAUX and CREVOISIER, 2007).

### THE MOVE TOWARDS THE CONCEPT OF INSTITUTION AND MULTI-SCALE DYNAMICS

Current work is intensively mobilizing the concept of institution and more widely the work carried out by former US institutionalists such as John Commons and Thorsten Veblen or that of new institutionalists such as Jefferey Hodgson. This movement towards the concept of institution should be examined with care. During the 1990s, the innovative milieu and industrial district approaches placed the accent on the *rules of competition/cooperation*, on *trust*, on *relational capital*, etc. One became used to mobilizing Williamson's concepts in order to emphasize the institutional aspects of interactions. More widely, it was a case of taking into consideration the *local community* in which interpersonal relationships – alongside proximity and professional and family relationships or others – played a decisive role within economic dynamics. At the time, in fact, it was a question of making a distinction between the present approach and the dominant vision that saw major enterprises as those behind economic dynamism: it was necessary to explain that decentralized entities such as industrial districts were also capable of innovating and being competitive.

Once again, and like all the other TIM approaches, innovative milieus have never claimed to be alone in the world! From the very outset the literature on the subject refers to differing dynamics, in particular linked to major enterprises. In fact, TIM approaches are mainly constructed in opposition to capitalist dynamics that are characterized by hierarchical control and mastering distant relations, but partially articulated with the latter.

In the author's opinion, the fundamental point is always the same: the way in which dynamics that are on the 'bottom up' (coming in an endogenous way from local or multi-local communities), on the one hand, and those on the 'top down' (from industrial or financial capitalism), on the other hand, are articulated.

Within this discussion, today's highly systematic use of the notion of institution can be interpreted in two ways. Firstly, one could reproach the way it masks not only the fundamental differences between the micro-/meso-interactions that have to a varying extent become routine between actors, but also the action of the large

enterprises, the major world-level organizations that regulate trade, currency, technology and migrations. In fact, the actors and logic involved are not the same: recalling BRAUDEL (1979, 1985), one even frequently finds strong opposition between, on the one hand, regional dynamics characterized by the small scale, submission to market mechanisms and the constraint of recourse to collective action in order to achieve financial survival, and, on the other hand, actions by those who, thanks to their organization, can circumvent the markets and can master and organize long-distance relations. Of course, both levels have to be taken into account if one wants to understand the picture.

Secondly, the move toward the notion of institution draws advantage from this disadvantage. It makes it possible to imagine the multi-scale dynamics that characterize today's economy. A single concept is used – the institution – to identify and explain the interactions among actors of any size and the regulations. In fact, a theoretical continuum is created between interactionism, institutionalism and the theory of regulation (COLLETIS-WAHL 2007). Setting up a trade fair in order to sell local products in a given region of France is in fact closely linked to national, European and international regulations and also to public policies on these different scales. All in all, current dynamics are largely multi-local and multi-scale (CREVOISIER and JEANNERAT, 2009). Separating the scales could lead to neglecting the extraordinary growth of medium- and long-range interactions that, in addition to the local scale, characterize the present era and as such should be taken into account to an appropriate extent. This articulation of the various streams of thought that have too frequently opposed each other permits one to develop a perception of how the various scales are articulated, of the move from micro to macro, and to take context into account (ANGEON and CREVOISIER, 2009).

### RENEWED QUESTIONING, MAINLY AS A RESULT OF INCREASED MOBILITY AND THE INSTITUTIONAL INTEGRATION OF EUROPE AND OF THE WORLD

There can be no doubt that the innovative milieus and the TIMs in general were marked by the social concerns of the period during which the questioning behind them was formulated. It should be recalled that state structural policies had failed, and that new technologies – in particular information technology and micro-electronics – had permitted regions in the west and south of the United States, in Japan, and to a lesser extent in Taiwan and South Korea to take their place within international exchanges while European countries were undergoing a major crisis. The move from the national scale to the regional, plus that from mass production to technological innovation – meaning a move from the large enterprise to networks of small and medium-sized enterprises – are all characteristic of

the breaks that took place during that period. Today, there appears to be general agreement with the notion that these elements should be reviewed.

The criticisms of the innovative milieu approach are clearly justified in the light of today's situation. They are not justified, however, if they are placed in the context of the period during which the TIMs emerged. The author believes that applying such criticisms to the models developed at the time is therefore an anachronism. At present, however, they are useful in order to formulate new research questions.

The new questions essentially revolve around the following points (COLLETIS-WAHL *et al.*, 2008). Firstly, considerable growth in the mobility of persons, knowledge, information, capital and goods has been witnessed. This increasing globalization, with the growth of interdependencies between distant places resulting from it, confronts territorial collectives with new questions. How can local or even national coherence be achieved between the production systems and those for training and research, between productive and residential activities, between these activities and the natural milieu, etc., at a time when demands on them, pressures, interdependencies with the exterior, are multiplying and gaining intensity? The TIMs of the 1980s were based on the thesis that the production factors were to a large extent immobile! Capital was not conceptualized in these models. It was implicitly considered as automatically adapting to the projects of the real economy. Regarding knowledge, the role of some mobile knowledgeable individuals was sometimes taken into account, but the collective competence was explicitly considered as the main, locally developed and non-transferable resource of the region. Only goods were considered as being mobile, as 'tradable'. Since then, forms of interconnection and exchange among increasingly distant places have multiplied: on an institutional level, with multiple free trade agreements and financial legislation; and on a technical level, with the development of new information and communications technology and the growth in goods transport and air passenger transport. It is time to focus on how regions can exist and maintain some coherence within multi-local knowledge and production networks. *Mobility and anchoring* of knowledge, people and capital has probably become one of the most central issues for research (CREVOISIER and JEANNERAT, 2009).

Secondly, and in accordance with the criticism by Moulaert and Sekia that TIMs are too focused on the offer, one should move beyond the original export-based theory underlying them. The basic idea was that production systems possessing a certain degree of coherence on a regional level existed, even if only in terms of the labour market, the training and research system, and the financial circuits. Competitiveness consisted of exporting the goods or services. The flow of revenues thus generated could then maintain activities that were

induced into the region, intended for its residents. Innovation was the modality whereby these exports were maintained or grew. Today, with the mobility of consumers, commuters, etc. there are very few activities that can be seen as strictly 'induced'. Workers can live at a considerable distance from their workplace and travel within the framework of their jobs. Residents of a place travel more and more widely for leisure purposes or even shopping. Regarding capital, the traditional accumulation circuits on a regional or national scale are to an increasing extent being replaced by long-distance networks: savings accumulated from dispersed sources are invested, via highly concentrated financial markets, in multinationals with branches in many countries. Accumulation thus takes place less and less on a regional or even a national basis, but within reticular spaces that are no longer marked by adjacency (CORPATAUX *et al.*, 2009).

The third series of questions applies to the financialization of the economy and its consequences on the real economy and on the actors and their activities. The TIMs, and more generally regional science as a whole, are exclusively based on the concepts and theories of the real economy. Financialization nevertheless leads to other logics, other rationalities within the economy. It is characterized by the growth of stock market capitalization within economies, that is, the increase of the role of mobile and liquid capital within the control and growth of enterprises. This results in a whole series of phenomena that TIMs are no longer capable of taking into account. Firstly, the actors considered as decisive within TIMs, that is, small and medium-sized enterprises in local hands or autonomous affiliates of industrial groups, are today integrated – to a massive extent – within major financial groups that always operate at an international level. The 'boss-entrepreneur-owner' figures have disappeared and given way to managers, even within small structures. The consequences of these changes on the local involvement of the economic actors, on the accumulation circuits, on choices within the area of innovation and investment, etc., have not yet been sufficiently studied. It is no longer possible for territorial dynamics to be understood without being aware of the rise of these actors who are now dominants: affiliates of groups quoted on the stock exchange, their parent companies and the financial markets. The way in which financial logics and the real economy will be articulated in the future must be taken into account. Here again, a multi-scale approach ranging from the local level to financial interdependencies at extremely long distance will prove essential.

The fourth and final area that should be broadened is that of the very notion of development. The TIMs consider that development takes place by means of innovation, and more particularly technological innovations. Today, it is necessary to move beyond this concept. In fact, innovation is to an increasing extent moved forwards by non-technological elements:

by socio-cultural dynamics. The motion picture industry has become the United States' leading export industry. Cultural resources are increasingly mobilized in highly numerous types of production (sport, the media, the clothing industry, the agro-food industry, the health sector, tourism and leisure, etc.). This does not mean, however, that technology is no longer important. Nevertheless, technology is in a certain sense the victim of its success. Since it has become flexible and omnipresent, the main question today is one of knowing what to do, what services can be imagined, and no longer to know how to supply them.

Even beyond broadening the notion of innovation, it is the very concept of development that must be questioned today. The systemic effects of economic innovation on societies and on the environment mean that it can no longer be isolated, nor can its sustainability be neglected. The interdependencies, demands and pressures mentioned above mean that at all levels it has become essential to take sustainability into account or even to use the good health of local companies and their natural environment in order to develop. One of the main suggestions on the part of Moulaert and Sekia is to broaden the notion of territorial innovation. 'There is a need to broaden the discussion on territorial innovation in all its dimensions, as a lead theme for the progress of humanity at the local level' (MOULAERT and SEKIA, 2003). One cannot but agree.

### THE THEORETICAL OPENING: TOWARDS A GENUINE TERRITORIAL ECONOMIC THEORY

Numerous criticisms have been made of territorial innovation models (TIMs), either directly or indirectly: their propensity for inventing new concepts or their repeated announcements of a turn to new paradigms. This was certainly true at the time during which the field was being constituted. What is striking today, and particularly via the papers that provide the overviews that are being discussed here, is the fact that the field has, on the contrary, been fairly well marked out. It was necessary to see TIMs in retrospect, some years later, but it is nevertheless clear that after a period during which research was exploratory, later work was far more confirmatory, notably with the development of econometric studies (for example, CAPELLO and FAGGIAN, 2005). We were thus perhaps in a classical production cycle of scientific knowledge.

As has been seen above, new questions are being raised today which are calling for exploratory research. Taking into account new questions supposes that the theories will evolve. Social science theory is above all a matter of adapting one's competencies to the changes taking place at the time and to questions facing society. The development of the financial markets and their consequences can no longer be

understood via theories on metallic money, and the social issues at stake are different. Reformulating turns, paradigms or agendas is the job of social science researchers, and what is wrong with that? Some believe that science is characterized by rigour – which implies the use of abstract mathematical concepts and relations. For some, the aspect that can be really problematic is if fluctuations and the lack of precision within new concepts and theories prevent communication among researchers and between researchers and society.

More generally, what do the papers by MOULAERT and SEKIA (2003) and LAGENDIJK (2006) bring? Placing the TIMs in perspective, grouping articles on them together and taking a retrospective stance is extremely interesting in itself. By underlining certain divergences, but above all by showing how these approaches form part of a common field, these studies in fact lead one to believe that the progressive autonomization of a new field of knowledge is being witnessed. Another 'turn' and a paradigm change, some could say! But is it not changes to ideas that permit the world to change?

Over the last twenty years, political economics has developed in an increasingly abstract way. The neo-marginalist approach, taught by means of mathematical modelling and manipulating data in the form of figures, essentially consisted – on a theoretical level – of making students forget the aspects of space and time, geography and history. Faced with this, it is believed that the TIMs mark a first victory within what will be called *territorial economy*. In the TIMs, in fact, time and territory play an essential role in the very definition of innovation. From now on, it is no longer possible to consider innovation as a purely economic phenomenon that is independent of the territory. Within economics, as seen by Schumpeter and the evolutionists, innovation is a break/filiation in time. Since studies on the TIMs were carried out, innovation has also and above all been seen as a comparison between a milieu – a system of local actors – and the global situation or the places 'elsewhere' that are complementary to it or compete with it. It is in fact very much this qualitative comparison that permits the actors to become aware of what they are, and to imagine a possible future in which they are innovative in comparison with others. The territory, the relation to other people and things, is at the heart of the emergence of something new. It is perhaps in this area that the legacy of the TIMs is most important.

Over recent years, the slow emergence of an authentic territorial approach to economic concepts and theories has been seen. This approach can take two directions. Firstly, it can be one of explaining the underlying, nearly always tacit conceptions of space and time in economic theories (CORPATAUX and CREVOISIER, 2007). Secondly, and taking on a far more ambitious role, it can provide new foundations for the concepts of political economy by putting the territory at the centre. Time and space cannot be dissociated from the

very nature of economic phenomena, and under no circumstances should they constitute a simple ‘scene’, an external, inert support.

The development of finance, for example, has taken place in a way unlike that of innovation, for which the role of proximity was clearly demonstrated. The financial industry is what constructs and uses the mobility and liquidity of capital (CORPATAUX and CREVOISIER, 2007). By making the ownership of financial securities mobile, the financial industry permits holders of capital to move away from proximity, to invest – at long distance – in the entire financialized economy. It has thus contributed towards the development of new information and communications technologies to interconnect institutions beyond borders, etc. that make such circulation possible. It can thus be seen as a

fundamentally spatial industry that today plays a similar role within the economy as the railways did in the nineteenth century: a vision that is completely the opposite to one of an activity totally abstracted from space.

Enriching public debate by including a territorial approach permits the economy to be considered in context. This is intellectually stimulating – and could also be useful to society.

**Acknowledgement** – The author especially would like to thank several people who read this paper and made enriching comments: Leila Kebir, Denis Maillat, Valérie Angeon, Véronique Peyrache-Gadeau and José Corpataux. Two anonymous referees also helped to improve the paper.

## REFERENCES

- ANGEON V. and CREVOISIER O. (2009) Régulation, institutionalisme et développement territorial: une question d'échelle, in MAGER C. (Ed.) *Jeux d'échelle, développement territorial et enjeux méthodologiques*, pp. 1–16. Observatoire de la ville et du développement durable, Lausanne.
- AYDALOT P. (1986) *Milieux innovateurs en Europe*. Groupe de Recherche Européen sur les Milieux Innovateurs (GREMI), Paris.
- BATHELT H. (2006) Geographies of production: growth regimes in spatial perspective toward a relational view of economic action and policy, *Progress in Human Geography* **30(2)**, 223–236.
- BATHELT H. and GLÜCKER J. (2003) Toward a relational economic geography, *Journal of Economic Geography* **3(2)**, 117–144.
- BECATTINI G. (1990) The Marshallian industrial district as a socio-economic notion, in PYKE F., BECATTINI G. and SENGENBERGER W. (Eds) *Industrial Districts and Inter-firms Cooperation in Italy*, pp. 37–51. International Labour Organisation (ILO), Geneva.
- BILLAUDOT B. (2001) *Régulation et croissance: une macro-économie historique et institutionnelle*. L'Harmattan, Paris.
- BOSCHMA R. (2005) Role of proximity in interaction and performance: conceptual and empirical challenges, *Regional Studies* **39(1)**, 41–45.
- BOSCHMA R. and FRENKEN K. (2006) Why is economic geography not an evolutionary science?, *Journal of Economic Geography* **6(3)**, 273–302.
- BOSCHMA R. and MARTIN R. (2007) Editorial: Constructing an evolutionary economic geography, *Journal of Economic Geography* **7(5)**, 537–548.
- BRAUDEL F. (1979) *Civilisation matérielle, économie et capitalisme: XV<sup>ème</sup> au XVIII<sup>ème</sup> siècle*. Armand Colin, Paris.
- BRAUDEL F. (1985) *La dynamique du capitalisme*. Flammarion, Paris.
- CAMAGNI R. and MAILLAT D. (2006) *Milieux innovateurs: Théorie et politiques*. Anthropos-Economica, Paris.
- CAPELLO R. and FAGGIAN A. (2005) Collective learning and relational capital in local innovation processes, *Regional Studies* **39(1)**, 75–87.
- COLLETIS-WAHL C. (2007) Dynamiques territoriales, micro et macro liens, un essai de construction d'une typologie. Paper presented at the XLIII<sup>ème</sup> colloque de L'ASRDLE, Grenoble-Chambéry, France, 2007.
- COLLETIS-WAHL K., CORPATAUX J., CREVOISIER O., KEBIR L., PECQUEUR B. and PEYRACHE-GADEAU V. (2008) The territorial economy: a general approach in order to understand and deal with globalisation, in ARANGUREN QUEREJETA M.-J., ITURRIOZ LANDART C. and WILSON J. R. (Eds) *Networks, Governance and Economic Development: Bridging Disciplinary Frontiers*, pp. 21–29. Networks, Cheltenham.
- CORPATAUX J. and CREVOISIER O. (2007) Economics theories and spatial transformations: clarifying the space-time premises and outcomes of economic theories, *Journal of Economic Geography* **8(4)**, 367–379.
- CORPATAUX J., CREVOISIER O. and THEURILLAT T. (2009) The expansion of the finance industry and its impact on the economy: a territorial approach based on Swiss pension funds, *Economic Geography* **85(3)**, 313–334.
- CREVOISIER O. and JEANNERAT H. (2009) Territorial knowledge dynamics: from the proximity paradigm to multi-location milieus, *European Planning Studies* **17(8)**, 1223–1241.
- GAROFOLI G. (1992) Les systèmes de petites entreprises: un cas paradigmatique de développement endogène, in BENKO G. and LIPIETZ A. (Eds) *Les régions qui gagnent – Districts et réseaux: les nouveaux paradigmes de la géographie économique*, pp. 81–102. Presses Universitaires de France, Paris.
- LEGENDIJK A. (2006) Learning from conceptual flow in regional studies: framing present debates, unbracketing past debates, *Regional Studies* **40(4)**, 385–399.
- LATOUR B. (2005) *Reassembling the Social: An Introduction to Actor–Network–Theory*. Oxford University Press, Oxford.
- LE MOIGNE J.-L. (2001) *Le constructivisme*. Coll. Ingenium. L'Harmattan, Paris.
- MATTEACCIOLI A. (2004) *Philippe Aydalot, pionnier de l'économie territoriale*. L'Harmattan, Paris.
- MORIN E. (2005) *Introduction à la pensée complexe*. Le Seuil, Paris.
- MOULAERT F. and SEKIA F. (2003) Territorial innovation models: a critical survey, *Regional Studies* **37(3)**, 289–302.

- RALLET A. T. (2005) Proximity and localization, *Regional Studies* **39(1)**, 47–59.
- RALLET A. and TORRE A. (2005) Proximity and localization, *Regional Studies* **39(1)**, 47–59.
- RATTI R., BRAMANTI A. and GORDON R. (Eds) (1997) *The Dynamics of Innovative Regions: The GREMI Approach*. Ashgate, Aldershot.
- SCHUMPETER J. (1912) *The Theory of Economic Development*. Harvard University Press, Cambridge, MA.
- SCOTT A. (1986) High technology and territorial development: the rise of the Orange County complex, *Urban Geography* **7**, 3–45.
- SIMMIE J. (2005) Innovation and space: a critical review of the literature, *Regional Studies* **39(3)**, 26–40.
- STORPER M. and WALKER R. (1989) *The Capitalist Imperative. Territory, Technology, and Industrial Growth*. Basil Blackwell, New York, NY.
- SUNLEY P. (2008) Relational economic geography: a partial understanding or a new paradigm?, *Economic Geography* **84(1)**, 1–26.
- VARELA F. (1989) *Autonomie et connaissance*. Le Seuil, Paris.