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Relational and evolutionary economic geography: competing or complementary paradigms?

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**Relational and evolutionary economic geography: competing or complementary
paradigms?**

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Abstract

Economic geographers have recently been confronted with attempts to constitute both relational and evolutionary economic geography. The two proposed paradigms have much in common, such as the perception of space as being socially constructed instead of a pre-given entity with causal powers. Until now, however, astonishingly little has been written about the differences between these proposed paradigms. By comparatively focussing on three research issues, the paper concludes that the conceptual differences are rather subtle and that the relational approach seems to include a wider and therefore, more unspecific perspective to explain the distribution of economic activities over space.

Key words:

Paradigms, economic geography, relational economic geography, evolutionary economic geography, comparison

1. Introduction – common features of a relational and evolutionary approach

As several scholarly observers have notified, human geography in general and economic geography in particular, is full of enthusiastic, but often superficial attempts to embrace theoretical thinking from neighbouring social and economic sciences (Cloke and Johnston, 2005; Allen et al., 1997; Massey et al. 1999; Jones, 2009; Hamnett, 2003; Sunley, 2008; Scott, 2000). What starts with the adoption of some ideas and notes to explain phenomena, sometimes ends with a so-called “turn” in the discipline or the proposal of a true paradigm. Economic geographers have recently been confronted with attempts to constitute even two new paradigms within their field of study, relational (Bathelt and Glückler, 2003a) and evolutionary economic geography (Boschma and Frenken, 2006; Boschma and Martin, 2007). The aim of relational economic geography is “to formulate research questions which are associated with the analysis of economic relations using a geographical lens” (Bathelt and Glückler, 2003a, 128). It can be seen as part of a broader set of streams of relational thinking within human geography (for an overview see Jones, 2009) and economic geography (see Sunley, 2008). For the sake of clarity and comparability, in this paper the main focus will be on the epistemological paradigm of relational economic geography as proposed by Bathelt and Glückler (2003a), with critical realism as its epistemological perspective, whereas the focus will be much less on other ontological relational perspectives in economic geography, such as relational perspectives on globalisation (Amin, 2002), global production networks (Dicken et al., 2001; Coe et al., 2008) and cities and regions (Amin, 2004), which can be regarded as being part of the much broader relational turn in economic geography (Sunley, 2008). Bathelt and Glückler’s (2003a, 2003b) relational economic geography is a deliberate

attempt to build up a new paradigm within economic geography; as they clearly distinguish this new paradigm from older paradigms, such as Länderkunde and regional science.

Evolutionary economic geography, on the other hand, deals with “the processes by which the economic landscape—the spatial organization of economic production, distribution and consumption—is transformed over time” (Boschma and Martin, 2007, 539). The proposed epistemological paradigm of evolutionary economic geography in the key article of Boschma and Frenken (2006) is in some ways similar to and therefore comparable with the attempts by Bathelt and Glückler (2003a). Here they set apart evolutionary economic geography from institutional and neoclassical economic geography.

Both proposed paradigms have become important for analyzing the economic landscape and seem to replace the prevailing neoclassical paradigm (Schamp, 2007, Ibert, 2008). The change of paradigms coincided with the upcoming organisation of economic activities in a new, post-Fordist way where outsourcing and specialized production, network linkages and flexible adaptation to market demands play major roles (Boggs and Rantisi, 2003: 109). At the same time the creation of knowledge and competences of firms, temporary work organisations (projects) as well as a socio-cultural embeddedness of firms emerged as new research objectives within economic geography (Ibert, 2008: 7). The established neoclassical approach fails to tackle these new research challenges because firms are conceptualized as black boxes where internal processes are ignored, economic agency is considered to be under-socialized and dynamics or processes are neglected in favour of rather consistent structures in order to explain economic agency in space (Ibert, 2008).

Evolutionary and relational paradigms on the contrary, seem to fit the outlined research agenda of economic geography much better. First, both paradigms do research on *intra- and inter-firm relations* by which competitive advantage is constituted (Boggs and Rantisi, 2003: 112). Secondly, they deny the neoclassical assumption of economic agency resulting in an under-socialized and atomistic behaviour of firms. Instead, a relational and evolutionary framework acknowledges the *embeddedness of economic action* in context-specific structures of social and institutional relations (Bathelt and Glückler, 2003a: 125; Boschma and Frenken, 2006: 280). Broadly speaking and as shown below in more detail, both proposed paradigms of economic geography place emphasis on the influence of surrounding formal and informal institutions and have derived parts of their theoretical arguments, albeit with a different extent, from the previous ‘institutional turn’ (Sunley, 2008:2; MacKinnon, 2008: 1454).

A third fundamental difference between the neoclassical and evolutionary and relational approach considers the research *object* which is expected to mould the economic landscape. Whereas the former concentrates on manifested structural conditions such as technological standards or infrastructure at a certain point in time, the latter two take into account the firm’s social relations and its historical or developmental paths (Bathelt and Glückler, 2003a: 134; Boschma and Frenken, 2006: 280). Consequently, *space* has to be treated as a socially constructed entity which is initially neutral. So-called spatial or regional characteristics are neither pre-given nor durable. The evolutionary and relational approaches assume spatial structures to be created by social processes operating over space and both share a critical stance towards a fixed territoriality of institutions (Bathelt and Glückler, 2003a: Boschma and Frenken, 2006). Economic actors themselves transform or create their regional environment according to their needs, but are, at the same time, also conditioned by a certain institutional framework at different spatial levels (Boschma and Frenken, 2006). This rather process-

oriented conception is contradictory to the neoclassical perspective where space is similar to a container with defined characteristics which determines economic agency (Bathelt and Glückler, 2003a: 124).

Compared to the neoclassical approach the evolutionary and relational perspectives show similar core assumptions about economic behaviour, the focus of analysis and the conception of space. On closer inspection though, can the proposed evolutionary and relational paradigms be regarded as *competing paradigms* of economic geography? Are there really fundamental differences between the evolutionary and relational approach or do we have to deal with rather subtle distinctions instead? And either way, which way should be followed in order to create conceptual clarity within our discipline?

At first glance, the relational as well as the evolutionary paradigm of economic geography claim to be dominant or more comprehensive whilst the other approach is integrated as an important constituting feature. On the one hand, according to Bathelt and Glückler (2003a: 128) and Emirbayer (1997: 311) *the relational paradigm* can be seen as a theoretical framework or mode of analysis which integrates central aspects of the evolutionary approach such as path dependence. Human action is seen as a historical process which results from previous and ongoing economic interactions. The role of path dependence in several turns in economic geography is also stressed by Martin and Sunley (2006:398) and Scott (2000).

On the other hand, *evolutionary economic geography* is influenced by a relational perspective as it emphasizes the “processes and mechanisms that make for or hinder the adaptation of economic landscape” (Boschma and Martin, 2007: 537). Instead of defined entities such as firms, individuals or regions, (historical) processes on different spatial levels are seen as

responsible for economic change (Boschma and Martin, 2007: 545). Also, a relational approach can be identified in the key challenge of an evolutionary economic geography which deals with explaining the rise and structural change or transformation of e.g. regions, clusters and networks (Boschma and Martin, 2007). Although studying relations and networks seems qualified for analyzing the evolutionary, reinforcing and dissolving mechanisms of spatial structures, it is not the only level of analysis in evolutionary economic geography. The latter is shown for instance in the work by Klepper (2007) who focuses on the dynamics of firm populations in explaining the spatial evolution of industries, not on network relations.

Until now, astonishingly little, however, has been written about the differences between the two recently proposed paradigms. Moreover, there has been no debate yet between the representatives of both paradigms, neither has the question been analysed whether the proposed paradigms are competing or complementary. This is problematic, as the paradigms play for instance a role in teaching economic geography and it is hence essential to be able to point at the differences. Also for individual researchers in economic geography who want to position themselves, there is need for a debate about how the paradigms differ from each other. The need for the latter is shown by some authors, such as Lee and Saxenian (2008: 157), who mention the work by representatives of both perspectives in one sentence: “During the last decade, an ‘evolutionary turn’ has begun to emerge in economic geography (Bathelt and Glückler, 2003a; Boschma and Frenken, 2006).”

This paper, therefore, wants to start a theoretical debate within economic geography by opposing the evolutionary to the relational approach. In the next three sections, we will do that by concentrating on three current research objectives of economic geography, which, in our view, represent the research scope of contemporary economic geography with respect to

different spatial levels and the aggregation of actors (Boschma and Frenken, 2006: 293, 295). (1) On the micro-level the decision-making of the *firm* is analyzed (Section 2), (2) the spatial evolution of *sectors* and the co-evolution of firms, technologies and territorial institutions are focused at the meso-level (Section 3), whereas (3) the convergence or divergence in spatial systems like *regions* is subject to the analysis of the macro-level (Section 4). In this comparative analysis we will highlight consistent and complementary factors as well as differences in an objective way. In the concluding Section 5, we will then critically assess and discuss the found differences between the two proposed paradigms, as well as the future direction of economic geography.

2. Assumptions about the decision-making of firms

In order to understand the enabling and restrictive factors of a firm's locational choice the underlying assumption of decision-making has to be taken into account. As outlined previously, the relational as well as the evolutionary approach of economic geography acknowledges the *embeddedness of economic behaviour in structures of social interaction*. More precisely, from a relational view embeddedness is characterized by dyadic (relational) and network (structural) relations of economic actors whereas a strong emphasis is on the latter (Glückler, 2001: 214-15). The same holds true for the evolutionary approach where complex interactions between economic actors are hold responsible for a certain spatial order of economic activities (MacKinnon et al., 2009: 11).

Accordingly, both perspectives reject economic behaviour to be governed by profit or utility maximization, only, and also, accept the notion of an actor's incomplete information about the

market; in sum, the neoclassical assumption of perfect rationality is substituted by the idea of bounded rationality. From an evolutionary perspective, economic decision-making mainly relies on organizational routines (Boschma and Frenken, 2006: 277; MacKinnon et al., 2009: 10) conceptualized as intra-firm behaviour which is largely based on experience and tacit knowledge. The relational view explains economic behaviour from “multiple logics” (Yeung, 2005: 41) which involves both, relations within the firm and with its suppliers, customers and institutions (Bathelt and Glückler, 2003a: 125-26).

Altogether, social relations appear to enable and constrain the decision-making of firms such as its locational choice. Nevertheless, the evolutionary view differs slightly from the relational perspective in terms of *institutions* as a further influencing factor for spatial outcomes. In the following, the different understandings of institutions in terms of its characteristics, spatial levels and significance within the decision process of economic actors are outlined.

Within the evolutionary approach institutions are opposed to the “quasi-fixed elements such as the firm and organisational routines” (Essletzbichler, 2009: 3), they are perceived as more durable and being attached to the meso- and macro-level of the economic landscape (Schamp, 2005: 618-19) such as industrial relations or technology standards (Boschma and Frenken, 2009: 2). The relational perspective does not differentiate between spatial levels but rather distinguishes between informal and formal institutions, as is done in evolutionary economic geography (Boschma and Frenken, 2006; Malmberg and Maskell, 2007). It is implied that informal institutions such as conventions or behavioral norms shade into formal ones such as law and regulations by continuous reproduction (Bathelt and Glückler, 2003a).

Another difference between the two approaches applies to the *ascribed importance to institutions* in order to explain locational decision-making. As mentioned before, the evolutionary approach mainly focuses on organizational routines. In their recent paper Boschma and Frenken (2009: 2) affirm the marginal role of institutions due to its “too loose”, “non-binding” and too “general” features. The overall logic of an evolutionary perspective is to explain the spatial distribution of economic activities from the micro-behaviour of actors such as firms (Boschma and Martin, 2007: 541).

In contrast, the relational approach does not commit itself to a hierarchy of institutions ranging from more to less important modes of interaction, organisations or scales which shape locational outcomes. Instead Sunley (2008: 13-14) points out that recent relational work leaves scalar units behind and substitutes a former territorial for a relational and topological imagination. In place of bounded territorial entities the relational view stresses flows, relational proximity and “nonterritorial orderings” (Sunley, 2008: 14), resulting in no prioritization of a single scale a priori (Boggs and Rantisi, 2003: 114). Thus, the differentiation between explanatory variables on the micro- and macro-level, which is not necessarily spatially defined, as suggested by the evolutionary perspective, should not be reproduced by the relational approach, if taken seriously.

Despite the outlined institutional constraints of economic behaviour a firm’s decision-making does not follow automatically as a law of cause and effect. Rather, institutions are interpreted as *sets of opportunities or conditions*. With respect to the evolutionary perspective, this might be best expressed by the idea of variety drawn from evolutionary economics where different outcomes under the same environmental circumstances can be observed, or by Boschma and

Frenken's (2009) suggestion of institutions being orthogonal to organizational routines¹. From the relational perspective, Bathelt and Glückler (2003a: 127-28) refer to the principle of contingency, stating that "identical preconditions for human action do not necessarily have the same consequences at any time and place". Hence, the firm's decision for a particular place can neither be predicted nor deduced from the locational behaviour of other firms but derives from its specific relational characteristics.

So far, the relational and evolutionary readings of economic geography show rather subtle differences regarding the decision-making of firms.

3. The spatial evolution of sectors

The evolutionary as well as the relational approach to economic geography quote Storper and Walker's (1989) concept of windows of locational opportunity to explain the emergence of new industrial sectors (Bathelt and Glückler, 2003a: 134; Boschma and Frenken, 2006: 290). Both approaches extend this concept with further ideas as we will show below.

Within evolutionary economic geography the spatial evolution of sectors resembles the transformation of neutral space into 'real places' characterized by place-specific sectors, networks, routines and institutions (Boschma and Frenken, 2006: 290). Due to the fact that firms are considered to constitute their own environment, new sectors can emerge in many different places. This locational freedom is reinforced by a poor match of locational

¹ Boschma and Frenken (2009: 1) argue "that territorial institutions are to be viewed as orthogonal to organisational routines in that each territory is characterised by a variety of routines, and in that a single firm can apply its routines in different territorial contexts." Hence, institutions do not exert a deterministic influence on firm behaviour but allow for their varieties leading to differences in spatial outcomes.

requirements of new sectors and the existing regional production structure (Boschma and Lambooy, 1999: 422).

Whereas the impact of regional conditions on the locational behaviour of a firm remains unsolved, Boschma and Lambooy (1999: 423) work out 'generic' parameters which exercise a minor influence on the locational choice. They refer to unspecific factors such as general knowledge, skills or service providers and particularly to urbanization economies creating an advantage of sectoral flexibility. The concept of localized generic factors explains why certain places are likely to become new industrial sites while others are potentially excluded because of deficient generic conditions. But as they seem to be widely available in space, generic features do not serve as an adequate explanation for the evolution of new industries in distinct regions.

Instead, Boschma's (1997: 21) case study of Belgium's industrial history demonstrates that chance or random events and human agency in terms of creative capability have a considerable impact on the initial stages of sectoral development. Owing to creative processes induced by collective learning, generic features of the region are transformed in specific assets which in turn, foster localization economies and increasing returns in a local context (Boschma and Lambooy, 1999: 425). The emphasis of chance and creativity or interactive learning provides an answer to the prosperity of certain regions whereas other places endowed with the same generic factors fail to develop further. Although one cannot predict where new industries emerge, it is not an entirely random process and differs from industry to industry. Boschma and Wenting (2007), for instance, demonstrated that the British automobile industry emerged on the foundations of related industries (such as coach and cycle making sectors), which provided related knowledge and skills (see also Klepper, 2007).

Again, evolutionary economic geography stresses the role of organizational routines in terms of creative behaviour and collective learning. In contrast, institutions are perceived as generic conditions and only marginally influence the spatial evolution of new industries. Moreover, institutions co-evolve with new technologies and markets and are understood rather as a side-effect of industrial growth:

“If institutions play a role, it will be more often in an endogenous manner as entrepreneurial firms, consumers and government officials engage in collective action to establish new institutions. Yet, it is up to empirical research to determine whether supportive institutions, which come into being as an outgrowth of the development of a new industry in a region, really made the difference” (Boschma and Frenken, 2009: 5).

Relational economic geography also takes Storper and Walker’s (1989) model of windows of locational opportunity as a starting point. To achieve a more complex understanding of industrial development Bathelt and Glückler (2003a: 135) argue for some conceptual additions, as is demonstrated in a case study of Leipzig (Bathelt and Boggs, 2003), which we deal with below.

As far as the spatial selection process of new sectors is concerned, the case study of Leipzig is in accordance with the outlined Belgium case. The new media cluster in Leipzig did not develop out of the former book publishing industry and thus, does not follow a pre-existing technological path. It lacks the institutional embeddedness in the previous industrial context, although the new media cluster emerged in the same city as the old industry (Bathelt and Boggs, 2003: 285). The rise of a new industry is considered as a phenomenon being

independent of industrial traditions or history, and driven by spontaneous start-up activities (Bathelt, 2002: 585). But instead of relating the industrial emergence to chance or random events Bathelt refers to the role of key agents such as the Middle German Television and Broadcasting Service which has stimulated the co-location of media-related industries. Furthermore, the specific socio-economic embeddedness in “specialized local resources, skills and shared trust, norms, routines and other local institutional structures” (Bathelt 2002: 587) is emphasized which creates a regional competitive advantage and promotes regional growth. This reference to localized capabilities in order to explain the spatial evolution of new industries goes beyond organizational routines and processes of interactive learning, as suggested by the evolutionary approach. In the case of Leipzig, Bathelt (2002: 286) underlines the significance of institutional structures such as higher education and training programmes, incubator organizations and the creation of institutional thickness. In the relational understanding, routines and creativity are only one of many factors driving regional and sectoral growth (Bathelt and Boggs, 2003: 288). The strategy of the main television and broadcasting service MDR in Leipzig illustrates how an economic actor shapes his own environment and becomes creative in terms of Boschma and Lambooy (1999). By outsourcing functions to subsidiaries and subcontractors, a local supply and support sector was established.

According to both perspectives it is hard to predict where new industries emerge. The relational approach differs from the evolutionary view with respect to its conceptual additions. Whereas for the latter the institutional environment is not necessarily an influencing factor for the future development of new sectors, the relational approach perceives institutional structures to be a highly influential part of localized capabilities.

4. Convergence or divergence of spatial systems

This section focuses on the process of structural change and mechanisms leading to regional growth or decline respectively. As outlined before, the evolutionary as well as the relational perspective define collective learning as an important factor for the stimulation of regional growth. They agree upon knowledge-creation as a major driving force for market competition (Boschma and Frenken, 2006: 278; Bathelt and Glückler, 2003a: 135).

Within the evolutionary approach the process of knowledge accumulation occurs within the firm in terms of search behaviour through trial-and-error and at the meso-level of an industry. Thereby, market competition acts as a selection function “causing ‘smart’ fit routines to diffuse and ‘stupid’ unfit routines to disappear” (Boschma and Frenken, 2006: 278). As a result, firms which have established the fittest routines are supposed to become superior in an industry and persistently grow.

Bathelt and Boggs (2003: 278) take a wider approach to explain regional development through interactive learning: ”Thus, interactive learning is concerned not only with creating technological and organizational innovations (...), but with creating wider institutions that circulate capital in all its forms (i.e., human, financial, cultural, physical, and social). Thus, regional development paths take place within a wider social context.” Above all, the development of an industrial region depends on its capability to adjust and (re-)invent itself, for example by rebundling local resources. Due to ruptures, neglected capacities of marginal or novel industries can be rearranged to shape new developmental paths (Bathelt and Boggs, 2003: 276-77).

Evolutionary economic geography assumes that established spatial patterns tend to be largely irreversible due to its path-dependent evolution. Lock-in situations appear because specialized industrial regions endowed with particular resources, competences and institutional structures are unable to match changing market requirements. The learning and creative capability within the industry is dangerously limited (Boschma and Lambooy, 1999: 416); in other words, the existing organizational routines do not fit the new situation any longer whereas, at the same time, the internal selection process fails due to consolidated routines regarding problem solving. Besides insufficient organizational routines, built-up agglomeration economies with respect to better infrastructure and services are held responsible for negative lock-ins (Boschma and Lambooy, 1999: 418).

Again, relational economic geography argues for a broader approach to explain the evolution of industrial regions, without prioritizing the firm-level as a particular important category. But what Bathelt and Boggs (2003: 269) criticize most is the impression of continuous path-dependent trajectories given by the evolutionary approach in general and Arthur's (1988) model in particular. Instead, they advocate the conceptual integration of political or sectoral crises and ruptures in order to match a more complex reality. In comparison to evolutionary economic geography, however, the relational paradigm is rather silent on how to analyze and explain exactly convergence vs. divergence of regional development at the macro level.

5. Discussion and Conclusions

All in all, the two proposed paradigms have some core elements in common, such as their criticism of neoclassical economic geography. This paper has shown, however, that there are

at the same time some conceptual differences, which are summarised in Table 1. For illustrative purposes, it may over-emphasize the ‘extremes’ of conceptual differences, in order to distinguish between the paradigms. Most of these differences have become clear by looking at how the proposed paradigms tackle the three above-asked key questions of economic geography; others emerge by carefully reading the theoretical literature on the two paradigms and their first criticisms (Sunley, 2008 on relational and MacKinnon et al., 2009 on evolutionary economic geography).

Compared to the evolutionary approach, the relational perspective is less focused on history. Although it works with evolution and path dependence, it is more static in its approach, particularly in comparison with evolutionary economic geography (Table 1). Relations and networks are the main level of analysis in the relational paradigm, whereas evolutionary economic geography works with the firm (location), the industry (spatial evolution) and regional systems (evolution) as the main units of analysis. The relational perspective does not overemphasize the role of organizational routines in terms of individual and organizational knowledge and skills, and denies the firm to be the main explanatory variable of spatial outcomes on the firm, sector and regional level. Instead, the relational approach is reluctant to scalar categories in the first place due to its focus on relations and flows. Also, the relational perspective *integrates institutions* much stronger and does perceive them as important in all conditions in the analysis of regional development. In contrast to evolutionary economic geography, for which markets are important as selection mechanism, in the relational paradigm “the market all but disappears in social relations, giving rise ... to ... an economy where the market remains a black box and is simply taken as pre-given” (Berndt and Boeckler, 2009: 5).

Table 1: Conceptual differences between relational and evolutionary economic geography.

	Relational	Evolutionary
concept of time	static & snapshots	dynamic & evolution
level of analysis	relations	firm, industry, regional system
explanans of economic landscape	social interaction, networks	firm routines
institutions	informal and formal	sectoral, informal and formal
	operating at multiple levels	operating at macro level
	important, no hierarchies/scale	not necessarily important, in favour of routines
methodology	case-study, mainly qualitative	both quantitative and qualitative

Interestingly, MacKinnon et al. (2009: 135) take on these issues and argue for the integration of institutions in the evolutionary approach: “While this conception of institutions and individual actors would be broadly accepted by many economic geographers, some of the recent contributions to EEG have risked relegating the role of institutions in shaping processes of economic change ... There seems to be little interest in how institutions are actually constructed and endure over time, which requires a deeper engagement with older institutionalist conceptions of instincts, habit, language, and power”.

Finally, concerning methodology, relational economic geography mainly works with qualitative case-study research, whereas evolutionary economic geography is much broader in its methodological scope. This has become particularly clear in the book edited by Frenken

(2007) in which methods range from model building and quantitative time series analysis to qualitative case-study research. This plurality of methods is a reflection of the involvement of both geographers and economists in evolutionary economic geography, whereas in relational economic geography only geographers are involved.

The combination of a rather wide conceptual approach and narrow methodological perspective in relational economic geography has been seen critically and we agree with that. Relational economic geography appears to be *too abstract or imprecise* and too concerned with context-specific case-studies which potentially *lack theoretical generalizations*. Sunley (2008: 15) recently criticized the compatibility of the relational principles suggested by Bathelt and Glückler (2003a) with a range of economic theories. As pointed out in Section 1, the evolutionary approach can easily be integrated in the relational perspective as both consider path dependence. Also, due to the variety and interpretations of networks and relationships involved in relational phenomena (Sunley, 2008: 7) the relational approach is in danger of losing its theoretical input; instead of a transparent and defined research frame with selected relations and networks the analyzed relationships seem rather arbitrary (Sunley, 2008: 16). It seems rather odd, that research results might be challenged by the same theoretical framework as different relations are analyzed. But the imprecise and rather loose handling of central theoretical terms constitutes a major critique of the evolutionary approach, too. Core features such as path dependence (Martin and Sunley, 2006), evolution (Hodgson, 2009) or selection (Essletzbichler, 2009) require clear definitions which have not reached its full potential yet.

Furthermore, the vagueness of relational economic geography is illustrated by its research goal, which is *the de-contextualisation* of principles of socio-economic exchange in a spatial

perspective (Bathelt and Glückler, 2003a). How such a de-contextualisation and hence some form of *generalisation* is achieved, remains relatively unclear, as has been criticised by Schamp (2007: 245) and Sunley (2008: 17). Moreover, the flat ontology of networks streams within relational economic geography has led to a struggle to explain broader social and institutional structures, power relations and the relation between agency and structure, also at different scales and layers (Sunley, 2008).

Why do these proposed paradigms subtly differ? This can be partly explained by their roots and functions. Paradigms are also prone to path dependence. As Boschma and Frenken (2006, 273, 274) rightly observed: “From the 1980s onwards, economic geography moved away from traditional economic analysis and transformed into a more interdisciplinary approach using insights from social, cultural and political sciences” and “Neoclassical economists are renewing their interest in geography while geographers are moving away from economics”. To some extent, relational economic geography, given its strong links to sociology, is on the path moving away from economics, whereas evolutionary economic geography, given its strong link to evolutionary economics, has taken the path back into the direction of economics (Figure 1). Moreover, functionally, relational economic geography can be considered as an attempt to bring existing concepts in economic geography under one roof, whereas evolutionary economic geography aims at introducing existing theoretical notes in evolutionary economics into economic geography in order tackle key questions of economic geography.

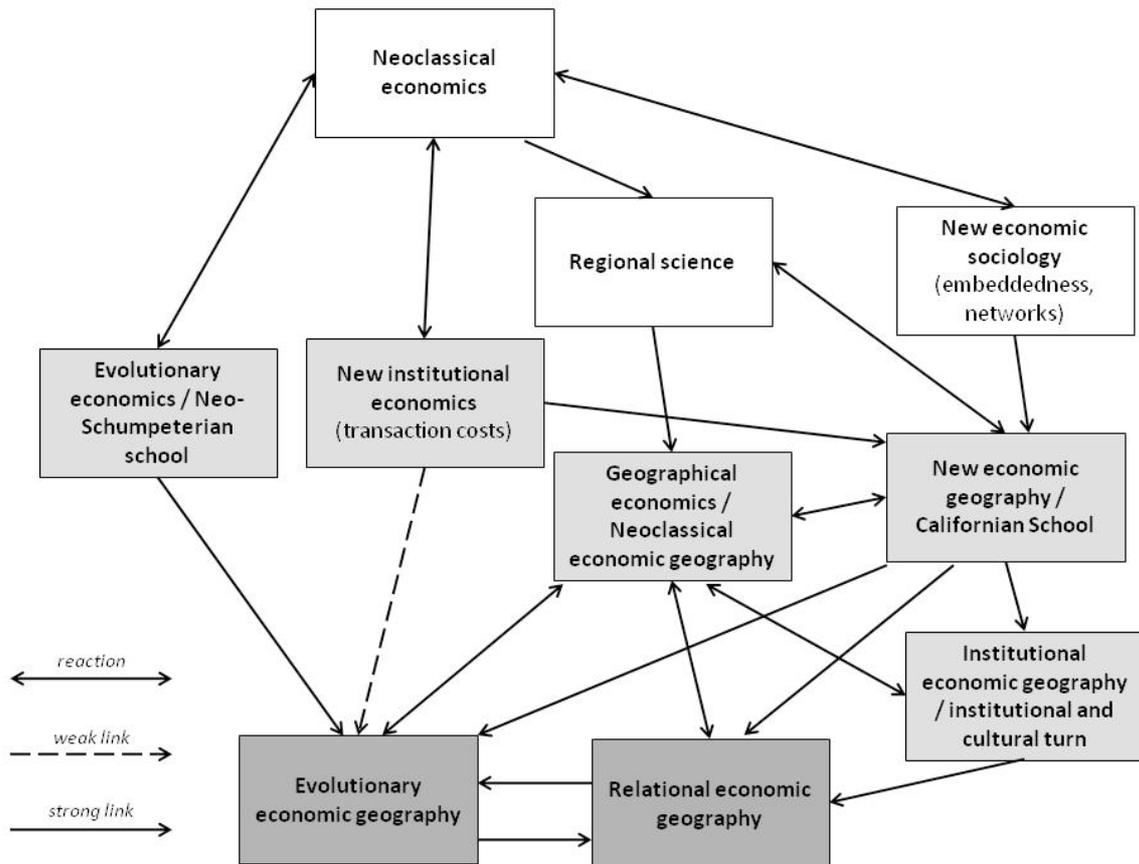


Figure 1: The position of evolutionary and relational economic geography in the pedigree of theories of economic geography and related disciplines.

Source: authors' design, inspired by Scott, 2000 and Schamp, 2007.

Finally, are relational and evolutionary economic geography competing or complementary paradigms? All in all, relational and evolutionary economic geography do not seem to compete that much, i.e. there is hardly a debate going on between representatives of the two proposed paradigms in order to attract scholars from the other camp. The only critical note we found was of Martin and Sunley (2006: 429): “In our view it is vitally important that evolutionary economic geography continues to research and explore questions of path dependence, not least because the topological snapshots of much current so-called ‘relational’ economic geography can easily lose sight of history dependence and historical explanation”.

After comparing these two recently proposed paradigms, which way should economic geography go? In our view *evolutionary economic geography has more potential* to become the new dominating paradigm in economic geography, as it has clearer conceptual notes and research foci to explain key empirical phenomena in economic geography, whereas relational economic geography has been more an exercise to find commonalities in a broad series of theoretical concepts. It is, however, much less useful in explaining empirical phenomena in economic geography. This is for instance shown in the Bathelt and Glückler's (2003b) textbook, in which they try to apply the key notes of relational economic geography to explain globalisation in the last chapter of their book, but do not convincingly reach their goal. The problem with relational economic geography is also that it overlaps with a large range of perspectives not only in economic geography, but also within human geography (Jones, 2009) and that these are hard to entangle, which is much less the case with evolutionary economic geography.

The *larger attractiveness of evolutionary thinking* in economic geography is shown by the greater amount of empirical papers that have recently been published (Hassink, 2005, 2007, 2009; Cho and Hassink, 2009; several chapters in Boschma and Martin, 2009; Simmie and Carpenter, 2007; Schamp, 2005; Grote, 2004; Stam, 2007), special issues (Hassink and Shin, 2005; Boschma and Martin, 2007; Grabher, 2009), edited books (Shapira and Fuchs, 2005; Frenken, 2007; Boschma and Martin, 2009), workshops, such as in Cambridge and Jena (at the Max Planck Institute of Economics) as well as special sessions at the Global Conference on Economic Geography in Beijing and at AAG Annual Meetings. Moreover, evolutionary thinking has been applied to define and improve existing theoretical concepts in economic geography, such as regional innovation systems (Cooke, 2004) and clusters (Staber, 2009;

Menzel and Fornahl, 2009; Lorenzen, 2005). Evolutionary economic geography also has something to say about regional policy issues (Boschma, 2005, 2008; Hassink and Klaerding, 2010), although this is also the case with relational economic geography (Bathelt, 2006; Bathelt and Dewald, 2008), with strong similarity in policy advices.

Scott (2000, 494; 2004), in his seminal overview of economic geography theorising, clearly indicates the influence of evolutionary thinking on current research in economic geography, whereas he hardly mentions relational perspectives in his work.

Both approaches are still in an embryonic stage of development, but given the stronger explanatory power of the theoretical notes and concepts in evolutionary economic geography, its future seems to be more promising than that of the relational approach. This is not to say, however, that we dismiss relational economic geography altogether, nor do we think that there is only one valuable paradigm in economic geography. Relational economic geography certainly has strengths in explaining certain important phenomena in economic geography, such as knowledge transfer, production networks, supply chains and money flows, for instance. Instead of competing, evolutionary and relational economic geography are much more complementary and mutually formative paradigms, and, so we hope, an intensive debate will lead to a fruitful exchange between the two paradigms.

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