Sketching the Contours of an Integrative Paradigm of Economic Geography

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JEL: R; R1

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Abstract

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1. Introduction

Over the last fifteen years, we have been observing an increasing fragmentation of economic geography, both concerning schools of thought, perspectives, paradigms, themes and the educational background of researchers (Peck, 2015; Barnes and Sheppard, 2010; Muellerleile et al., 2014). Other terms and phrases that have been used to describe the situation in economic geography, as sub-discipline of human geography, include fragmented pluralism, silos, heterogeneity, lacking core questions and canon, too many splitters, too heterogeneous and a very unfavorable conceptual trade balance with neighboring social science disciplines. These observations are not only based on looking at what is published by economic geographers, but also by observing what is presented and debated at conferences, such as the Global Conferences on Economic Geography and economic geography sessions at annual meetings of the American Association of Geographers. Muellerleile et al. (2014: 12, 16), in particular, are very clear in observing that due to pluralism economic geography does not benefit from a disciplinary core (that is a theoretical and methodological canon), "… something that we believe economic geography lacks relative to other disciplines …" Moreover, "methodological and theoretical diversity … make it difficult to isolate a disciplinary core" (Muellerleile et al., 2014: 11). Finally, in this sense, Rigby's call for papers for the Global Conference on Economic Geography in Oxford in 2015 speaks volumes: "There are no central questions, canonical methods or privileged ways of knowing. This is economic geography!"

Concerning *schools of thought, perspectives and paradigms*, we have currently no fewer than four of them in the relatively small sub-discipline: Evolutionary Economic Geography, Relational Economic Geography, Institutional Economic Geography and Geographical Political Economy (they are also considered as the conceptual foundations of economic geography in the New Oxford Handbook of Economic Geography, see Clark et al. (2017)). Global production networks can be considered as an additional theoretical approach. In a broader perspective one could even see New Economic Geography or Geographical Economics as part of the paradigms in economic geography (Barnes and Christophers, 2017b), although we take a very critical stance towards that attempt (Hassink and Gong, 2017). First, Geographical Economics is a sub-discipline of economics, whereas economic

geography is a sub-discipline of geography, so from a disciplinary point of view it would be difficult to see it in another way. Secondly, one of the few aspects uniting all paradigms in economic geography is the critical stance towards geographical economics (among others because of its *homo economicus* assumption and too simplistic treatment of geography by working with neutral space) (Muellerleile et al., 2014: 13). One of the reasons why we have relatively many paradigms in a relatively small sub-discipline, might be "… the discipline's small size where key individuals play such an influencing role. Ideas are taken up not because they have been worked out in response to other positions but because star players within the discipline introduce them. This also partly explains the rapidity by which new approaches are introduced into the discipline …" (Barnes, 2006: 12).

Also concerning *themes*, we can observe an enormous breadth in economic geography, ranging from topics related to financial geography, digitalisation, developmental issues, environmental economic geography or sustainability transitions. War veterans even seem to be a topic dealt with by economic geographers, as has been shown in last year's Roepke lecture in economic geography. During its history, economic geography has always been strongly focusing on empirical topics with a strong societal need, so changing societal needs and grand challenges (Coenen et al., 2015) might lead to new research themes. Aoyama in particular initiated and encouraged a debate about these emerging themes in economic geography (Aoyama et al., 2011a). However, these emerging themes are seldom linked to clear, core questions of economic geography or paradigms (an exception would be the attempt to link environmental economic geography to the evolutionary paradigm by Patchell and Hayter, 2013). How to place for instance developmental economic geography or financial geography in theoretical economic geography? Concerning the latter, Hall (2010) for instance does not cite any economic geography theorist in her review article of finance and economic geography but only refers to cultural economy as the theoretical core of financial geographers: a typical example of the outward looking approach of economic geographers. By approaching the area of finance in such a way, it is not well integrated into economic geography as a whole.

Finally, the poly-vocal character of economic geography also counts concerning *language areas*, a fragmentation and pluralism so far unknown to a large part of Anglo-American economic geographers. Particularly in the literature about schools of thought, perspectives

and paradigms, there is a strong tendency to ignore the non-English speaking world as a basis for theoretical debate (Hassink, 2007; Paasi, 2015).

So, although there have been arguments in favor of engaged pluralism and building bridges between the above-mentioned paradigms and themes (Barnes and Sheppard, 2010; Hassink et al., 2014), we would argue that what we see in reality is a continuing trend of mainly fragmented pluralism; small groups of scholars working isolated from the other turfs without much interaction and exchange. Moreover and related to the previous point, economic geography also clearly lacks a theoretical core and key core questions and it tends to look too much outside for theoretical ideas and concepts.

What is the reason for this fragmented pluralism? First, the reason might be related to the underlying question economic geographers want to answer, which has a "how did we get here" character (Krugman, 2011: 3), and the hermeneutic way of doing research aiming at understanding instead of explaining and testing hypotheses. Related to this issue of the underlying questions and the scientific rationale is the overall theoretical weakness of human geography lacking of a canon, which is even a problem of geography as a discipline as a whole. Despite some attempts in the past (Bunge, 1979; Hard, 1990), geography, basically, lacks a core theory.

Secondly, and related to the first reason, is the science culture in economic geography (Peck, 2015). According to Peck (2015: 14) the "theory-culture in (Anglo-American) economic geography is, amongst other things … anti-canonical …" Moreover, "… today's economic geography seems to be rather less about a few Big Arguments and instead more of a continuing cacophony. There is more … live-and-let-live than there is active raking over of differences" (Peck, 2015: 16). In a similar vein, Muellerleile et al. (2014: 12) observe: "… we believe that economic geographers' hesitance to "discipline" each other contributes to the inability to pinpoint just what economic geographers do and, thus, how they enrich larger debates".

Thirdly, the fragmentation concerning themes can certainly also be explained by the mechanisms of academic capitalism and the need for scholars to make a career by occupying niche topics and paradigms "… pressing forward with new approaches in the endless struggle to come out on top in the stock-market of ideas" (Scott, 2000: 496).

However, why is fragmented pluralism a problem? Despite the fact that there are certainly advantages related to pluralism, such as the ability to explain many different and complex phenomena, fragmented pluralism is unfavorable for the sub-discipline of economic geography. In our view, economic geography should strive for more unity and coherence, or what Peck (2015) called lumping, for four reasons.

First, we are not able to answer the overarching questions of economic geography to a satisfying extent if we confine ourselves to one of the existing schools of thought, perspectives or paradigms, which can be vividly illustrated by some recent PhD theses in economic geography (Evenhuis, 2015; Hu, 2015; Steen, 2016; Weig, 2016). Secondly, students and early-career scholars lack orientation because of strong fragmentation (see in particular Muellerleile et al. (2014), representing young economic geographers attending the Summer Institute in Economic Geography). Thirdly, it leads to identification problems and hence to some extent to the question of the raison-d'être of economic geography vis-à-vis Geographical Economics and other neighboring social sciences and sub-disciplines (Peck, 2015: 32). With all the enthusiasm for neighbouring theories and emerging themes (Aoyama et al., 2011a), economic geography tends to lose sight of its raison d'être and its identity. Moreover, this problem has been worsened by economic geographers crossing the borders to neighboring social sciences, such as is the case in the UK where more and more economic geographers take positions at business or management schools. This further strengthens an outward looking attitude and weakens the position of economic geography as a sub-discipline (Bradshaw et al., 2016). Because of the lacking core and identity, economic geography's voice is hardly heard by geographical economists and other neighbouring social sciences (Hassink et al., 2016). Fourthly, too many paradigms and theories also lead to a lacking disciplinary language and voice to policy-makers and other practitioners. This unfavorable fragmented pluralism concerning themes and paradigms is clearly the underlying motivation for writing this paper.

In a previous paper one of the co-authors advocated for engaged pluralism (Hassink et al., 2016). Meanwhile we are convinced that we are currently *in need of a new and Integrative Paradigm of Economic Geography,* one that builds upon existing schools of thought, perspectives and paradigms, and that compensates for overall weaknesses in economic geography. We know that some colleagues see many virtues in pluralism, such as the

plurality with which one can understand and explain complex phenomena, with which we agree. Our opinion, however, is that fragmented pluralism in economic geography has become a real problem, as has been pointed out above, and we see the main solution to this problem in strengthening its paradigmatic core. Therefore, this paper aims at developing the contours of an Integrative Paradigm of Economic Geography, which should allow economic geographers to clearer show their core competences vis-à-vis neighboring social sciences, such as Geographical Economics.

Since the Integrative Paradigm of Economic Geography builds on existing paradigms, we will first discuss them from a pluralism perspective in the following Section 2. Based on their strengths and some overall deficits, we will then come to an overall discussion and aim of economic geography in Section 3. In Section 4, we will put more flesh on the bones of the integrative paradigm, by proposing a core of the paradigm, whereas the three main ontological foundations will be introduced in Section 5. The causal mechanisms between these ontological foundations and between them and the core, as well as the derived guiding research questions will be shown in Section 6. The epistemological foundation and methodological issues around the integrative paradigm will then be elaborated on in Section 7. In Section 8, we will draw some conclusions and will come up with future perspectives for the Integrative Paradigm of Economic Geography.

2. Pluralism Concerning Schools of Thought, Perspectives and Paradigms of Economic Geography

Different terms have been used in economic geography to identify both the dominant theoretical views in the sub-discipline, such as schools of thought, perspectives and paradigms, and the changes in theoretical views through time, such as turns, transitions and paradigm shifts. Although we realize the variety of terms, for the sake of simplicity we will largely confine ourselves to the term paradigm and paradigm shifts in this paper. A paradigm is a research-guiding perspective or perception that leads to a consensus among a certain group of scientists for a certain time period (Weichhart, 2012: 54). Paradigms consist of certain ontological foundations building together theories and concepts that explain the

causal mechanisms between the ontological foundations. Moreover, paradigms are embedded in underlying epistemological foundations or theories of science, such as positivism, critical rationalism, critical realism, hermeneutics or Marxism/ structuralism (Blotevogel, 2015). Finally, they have a primary research focus and guiding research questions.

According to Kuhn (1962) there is only one paradigm at the time until anomalies start to exist and a revolutionary period creates the basis for the emergence of a new paradigm, which is incommensurable (rationally not comparable) with the previous paradigm. In reality, however, in many social sciences, such as human geography and economic geography, several paradigms co-exist, go through cycles of increasing and decreasing popularity, and are to different degrees commensurable to each other (Weichhart, 2012). Moreover, the Kuhnian idea of science-based anomalies and revolution is not the only reason for the emergence of a paradigm. Other reasons include the changing needs and trends in the society and economy as a whole, the discovery of theories from neighboring disciplines, as well as the pressures of academic capitalism leading to the searching for new niches in order to gain attention.

Several attempts have been made to present an overview of economic geography's paradigmatic history and state of the art (Scott, 2000; Sheppard, 2006; Coe et al., 2013; Hassink et al., 2014; Barnes and Christophers, 2017a, 2017b). In their textbook, Coe et al. (2013), for instance, conceive post-war economic geography in the Anglophone world to consist of three periods: positivist economic geography (regional science, revival of German location theories), structural economic geography (Harvey, structures play the key role, inequalities, normative concepts: gender, race, but also institutions, global production networks), and finally post-structural economic geography (no one truth, neither through structures, nor through quantitative analysis and universal laws). Barnes and Christophers (2017b) recently distinguished Geographies of Capitalism (including political economy), Geographies of Business (including clusters, industrial districts etc.), Geographical Economics and Alternative Economic Geographies.

Most of these overviews, particularly the ones in textbooks, look at the paradigms from a historical perspective. In this paper, we focus on current paradigms, although we acknowledge that it is important to know where they come from. As has been pointed out in

the introduction, currently the following main paradigms of economic geography can be distinguished: Evolutionary Economic Geography, Relational Economic Geography, Institutional Economic Geography and Geographical Political Economy (see also Hassink et al., 2014). Two of these, the evolutionary and relational one, have been deliberately presented as paradigms, with the aim to dominate the sub-discipline of economic geography. Global production networks (GPN) can be considered as an additional theoretical approach. It goes beyond the scope of this paper to deal with all the perspectives in much detail, but we will provide short sketches in the following in order to enable a fruitful exchange in the remainder of this paper. For an overview of some of the main characteristics of each paradigm, see Table 1 and for more detailed accounts of the individual paradigms, see Boschma and Frenken, 2017; Bathelt and Glückler, 2011; Sheppard, 2011; Gertler, 2010; Yeung and Coe, 2015.

Evolutionary Economic Geography (EEG), which is growing fast, attempts to overcome differences between economic geography and geographical economics (see Boschma and Frenken, 2006). It 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). Important explanatory notions used in this paradigm include path dependence, lock-ins, related variety and unrelated variety.

Relational Economic Geography (REG) "focuses on a relational understanding of economic action which is analysed in spatial perspective" (Bathelt and Glückler, 2011: 6). Relational here means to put emphasis on actor networks and interrelations, power, social agency, socio-cultural embeddedness of actors in multiple networks, and the interrelatedness between scales at individual level, when explaining the success of firms and regions, rather than on firm-centred organisational routines. Bathelt and Glückler's (2003) REG 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* (regional description) and regional science. They also argue that a relational perspective provides better concepts for *comprehensively* theorizing institutions, power, social agency and particularly the interrelatedness between scales (Bathelt and Glückler, 2003).

Table 1: Overview of current paradigms of economic geography with key characteristics.

Paradigm	Key theoretical background	Key concepts	Key questions/topics	Methods	View on Place/Space
EEG	Evolutionary economics	Routines; path dependence/ creation; lock-ins; (un)related variety; branching	Evolutionary processes of economic activities	Deductive and inductive	Neutral space => real place
REG	Relational turn in social sciences; economic sociology	Networks; power; social agency; embeddedness	Interaction and interrelations between different agents, and their influence on economic activities	Inductive	Multiscalar places
IEG	Institutional economics; the French Regulation School	Formal institutions; Informal institutions	The role of institutional settings on economic performance	Inductive	Real places at different scales, place dependence
GPE	Political Economy; Marxian Economics	Capitalism; labor; capital; inequalities;	Capitalism and uneven spatial development; the relationships between the state, labour and capital	Deductive	National places
GPN	International business theory	Global production networks; Strategic coupling	Historic origin and dynamic evolution of global production networks over time; strategies of transnational corporations, states (at several spatial levels) and NGOs	Deductive and inductive	Multi-level, places

Sources: Boschma and Frenken 2006; Bathelt and Glückler 2003; Sheppard 2011; Gertler, 2010; Yeung and Coe 2015.

The somewhat older paradigm of *Institutional Economic Geography (IEG)* focuses on formal and informal institutions at several spatial scales (Martin, 2000). Gertler (2010) puts a strong emphasis on geographical variation, namely through a better understanding of how formal and informal institutions at different scales interact to produce a specific outcome. According to him "… individual agency, institutional evolution and change over time,

interscalar relations, and comparative case study methodologies have pride of place" in IEG (Gertler, 2010: 2).

Geographical Political Economy (GPE) is a term that can include a variety of approaches, as illustrated by Sheppard (2011) and Jones (2016), who use it as an umbrella for several trends within economic geography. Nonetheless, GPE is mainly concerned with the relationships between the state, labour and capital and the inherent tendency of capitalism to generate uneven spatial development in the definitions of Pike et al. (2009) and Martin and Sunley (2015b). In terms of its research applications, GPE tends to privilege the impact of external investment on regional development, or the power asymmetries between transnational corporations and local firms. It primarily thinks of capital-labour relations and the state regularities as those with the most influence on the evolution of territorial disparities (MacKinnon et al., 2009: 131).

Global production networks (GPN) has recently been upgraded from an analytical framework, working with the conceptual categories of value, embeddedness, power and strategic coupling, toward a dynamic theory (Yeung and Coe, 2015). The latter aims to "explain why and how three competitive dynamics - optimizing cost-capability ratios, sustaining market development, and working with financial discipline - interact with firms and nonfirm actors … to produce … different actor-specific strategies for organizing global production networks …" (Yeung and Coe, 2015: 32).

Most of these paradigms are highly influenced by economics, in particular by heterodox economics, a fuzzy and heterogeneous group of approaches that mainly shares a critical stance to mainstream economics. It includes Analytical Marxism, Evolutionary Economics, Feminist Economics, the French Regulation School, Institutional Economics, Marxian Economics, Neo-Ricardian Economics, the Performativity Approach, and the Polanyian Approach (Barnes and Christophers, 2017a). Peck (2015) goes even so far as seeing economic geography itself as a branch of heterodox economics.

These paradigms reflect general pluralism in several ways. First, they differ concerning their primary research focus and guiding research questions. Secondly, there are differences between paradigms concerning their explanatory value in different countries or varieties of capitalism: GPE, for instance, is mainly popular among Anglo-American economic

geographers, much less so in Germany, for instance. EEG, on the other hand, is more popular in Europe than in the USA, partly also because the variety of capitalism dominating in Continental Europe and Scandinavia favours more incremental innovations than radical innovations, which thrive better in the variety of capitalism found in the USA (Hall and Soskice, 2001).

What is worse, however, is that we can observe several signs of fragmented pluralism. First, some of the paradigms have been launched by creating fragmented pluralism, which has been particularly the case with EEG and REG. They seem to be presented as the main paradigm of economic geography, putting other paradigms and theories in the shadow. They are presented as hegemonic paradigm, starting with a kind of fragmented pluralism in order to justify the raison d'être of a new paradigm. Secondly, there is little or hardly any cross-referencing between the paradigms. This particularly becomes clear in the key launching publications where the paradigms were presented for the first time. When Boschma and Frenken (2006) launched EEG they compared it with geographical economics and IEG, but they did not position it vis-à-vis REG or GPE. Also in later publications, such as Boschma and Frenken (2017), there is no change concerning this issue. The same counts for Bathelt and Glückler (2014) in their recent article on institutional change in economic geography, where they confine themselves to a relational perspective on institutions, without properly acknowledging IEG. Finally, in their recent launching article of the GPN theory, Yeung and Coe (2015) do not make reference to EEG, REG, IEG, or GPE explicitly. Neither do they cite any of the founding fathers of these paradigms, such as Boschma, Bathelt, Barnes, Sheppard etc. Therefore, they do not make an attempt to position their theory in a broader paradigmatic discourse in economic geography. Despite the pleas in favor of engaged pluralism, cross-citation between paradigms has not increased much recently (for two exceptions, see Pike et al. (2016) and Martin and Sunley (2015b); the former trying to bring together GPE and EEG, the latter in addition also IEG). In a way, it demonstrates the continuation of silo-thinking without much exchange in economic geography.

Despite these differences and fragmented pluralism, there are at the same time also striking similarities and complementarities between the different paradigms, which have been insufficiently pointed at (for exceptions, see Hassink et al., 2014 and Martin and Sunley, 2015b). Most of them stem from a unifying critical stance towards geographical economics,

among others because of its *homo economicus* assumption and positivistic epistemology, which make them incommensurable with the latter paradigm. Ontologically, they share a strong focus on evolution, networks and institutional context, which will be further worked out in Section 3. Moreover, they share in principle a common epistemological foundation which is based on critical realism[1]. At the same time, they also share a too weak conceptualization of space, place and scales, arguably as a consequence of a too strong focus on heterodox economics (see also Rodríguez-Pose, 2011).

3. From Fragmented Pluralism to an Integrative Paradigm of Economic Geography

So if we can observe fragmented pluralism on the one hand, and some clear similarities and complementarities between the paradigms, on the other hand, what can be the solution to the problem of fragmented pluralism?

One solution that did not work to a sufficient extent, according to our view, is to plead in favor of engaged pluralism (see our remarks made above). There is no strong reason to believe that engaged pluralism will emerge spontaneously, despite earlier pleads in favor of it (Barnes and Sheppard, 2010; Hassink et al., 2014; on a critical note see also Simandan, 2011). The following quote shows how difficult it is to achieve engaged pluralism: "The stubbornness by which specific combinations of space, time, and economy have been held together within the five styles of research historically characterising economic geography is ample testament to the power of social interests in maintaining separation" (Barnes, 2006: 11).

Another solution could be to favor one of the existing paradigms to become the dominant paradigm of economic geography. On the one hand, Peck (2015: 1) states that "contemporary economic geography shows little sign of becoming unified around a single program or dominant perspective, frequently bridling, in fact, at the very suggestion" (see also Martin, 2011: 67). On the other hand, he and some other Anglo-American economic geography theorists recently cautiously argue in favor of GPE becoming the dominant

[1] Personal correspondence with Emil Evenhuis.

paradigm or at least the shared *Weltanschauung* (Peck, 2015; Hudson, 2016; Sheppard, 2017). Between the lines Peck (2015) wishes that GPE will become the unifying theoretical big-tent in which economic geographers would like to live (see also Sheppard and Barnes, 2017).

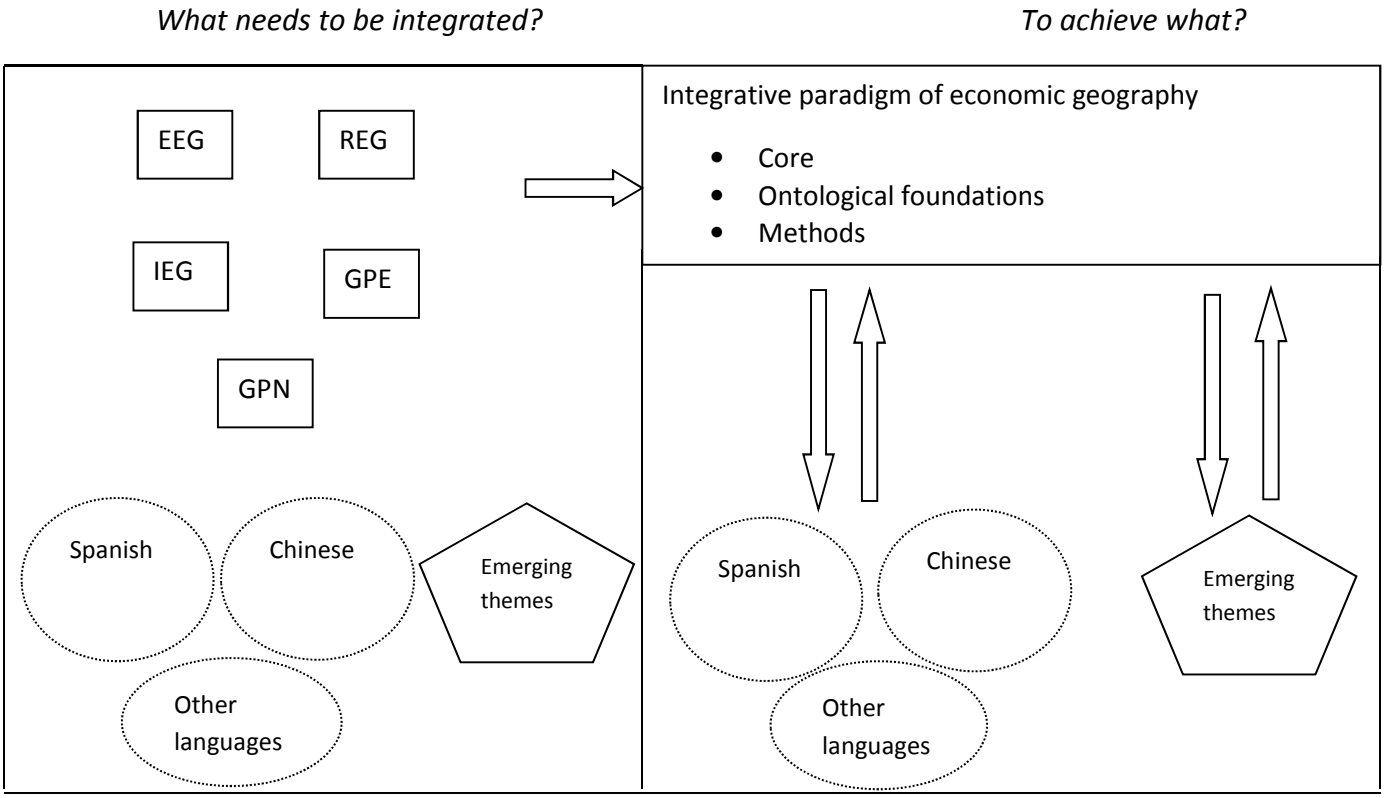
We do not agree for four reasons. First, no empirical research results have convincingly showed that the proposed paradigm is better able to explain the key questions in economic geography than the other existing paradigms. Secondly, it is not only a relatively small paradigm concerning the number of publications and citations; it also has an outspoken ideological standpoint and is hence not a very consensus-oriented or integrative paradigm. Thirdly, since most of the existing paradigms emerged with the help of fragmented pluralism, there will be little motivation to join such as existing paradigm by the advocates of the other paradigms. Fourthly, from an international economic geography perspective: GPE and post-structural geography is by far strongest in the US and the UK, but is weak in many other parts of the world, such as in Germany, Sweden and the Netherlands in continental Europe and also in China, Japan and South Korea, to name just a few countries.

In our view, the solution for this paradigmatic standstill is a new integrative, internationally useable paradigmatic core that is not confined to a small group of countries and economic geographers. Such an Integrative Paradigm of Economic Geography would enforce a movement from fragmented pluralism to engaged pluralism in a more fundamental way (Figure 1). It would make sure that economic geography as a whole gets stronger, both internally, but also vis-à-vis neighboring social sciences. In this paper we will build the contours of such an integrative paradigm by looking at overlapping categories within existing paradigms and at overall weaknesses. Paradoxically, we see, despite the observation of fragmented pluralism, clear overlapping and complementary notions and concepts between the paradigms, commensurabilities, such as critical realism, as has been pointed out at the end of Section 2[2]. Based on them, the aim of such an integrative paradigm is to create

[2] For other purposes, Peck (2016) recently lumps together several parts of economic geography into so-called economic geography 2.0. In the early 2000s, a short-lived discussion took place about the identity and core of the sub-discipline of economic geography (cultural turn) in reaction to the new economic geography of Paul Krugman (see in particular Antipode special issue). That is meanwhile, however, a long time ago and since then heterogeneity and fragmented pluralism have increased.

overarching added value out of existing paradigms so that the whole will be greater than the sum of its parts.

Figure 1: The functions and potential achievements of the integrative paradigm



In order to achieve this goal, the first step would be to define the Integrative Paradigm of Economic Geography. The definition and related research questions follow from an analysis of overlapping categories and overall weaknesses. The former we have started to analyze in the previous Section 2. One overall weakness we see among most of the current paradigms is the relatively weak conceptualization of space, place and scales, due to the strong external orientation of existing paradigms towards neighboring heterodox economics (see also Rodríguez-Pose (2011) for this observation).

As has been described in the previous section, definitions of economic geography differ from paradigm to paradigm. Each paradigm has its own main aim and main questions, but often they do not sufficiently refer to the overall aim and questions of economic geography. Often

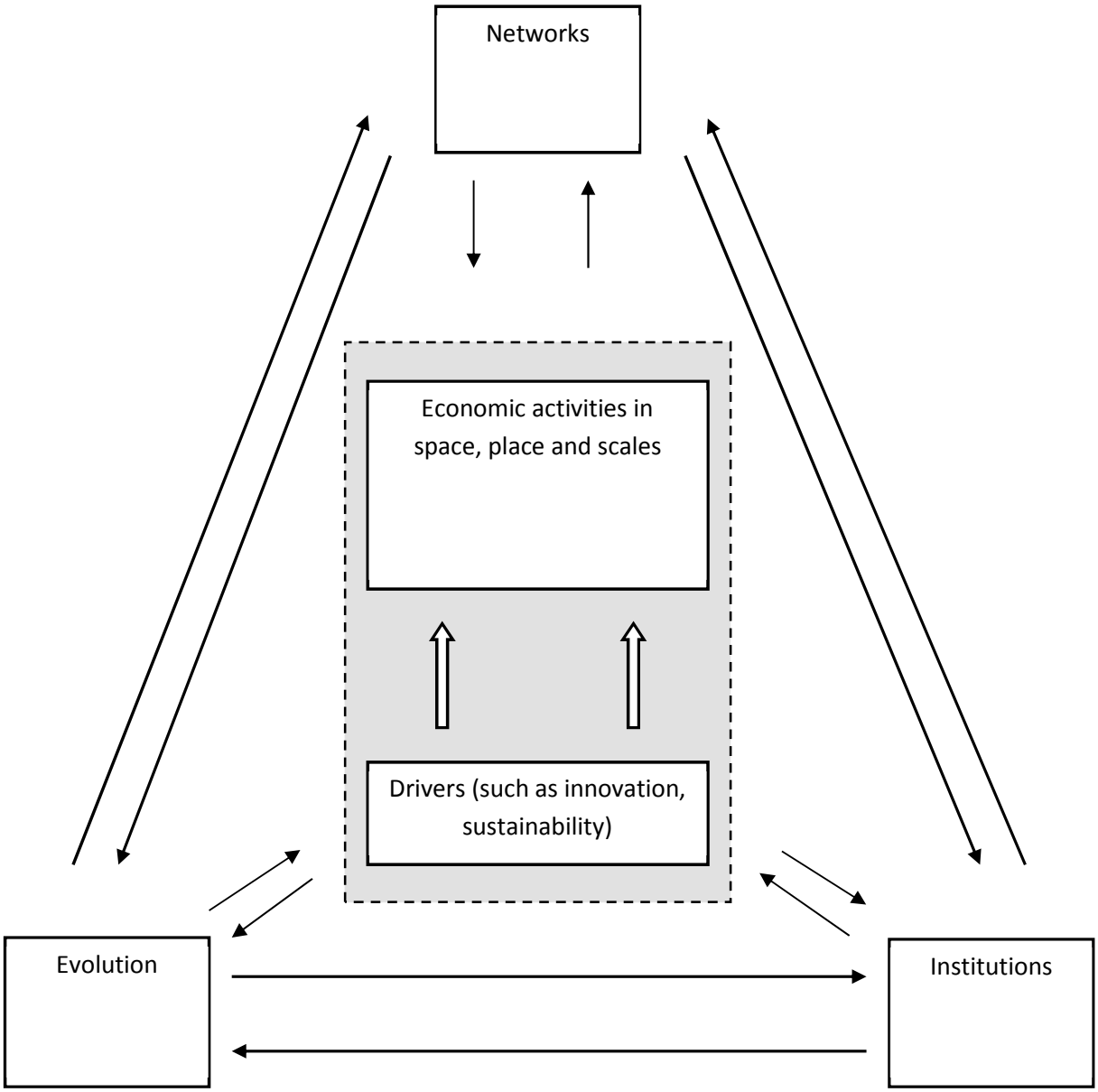
the aim and questions of each individual paradigm does not cover all research topics in economic geography. In addition to the definitions of economic geography in the different existing paradigms, there have been legion attempts to come up with definitions of the overall sub-discipline of economic geography (e.g. Barnes and Christophers, 2017b; Martin, 2011).

The Integrative Paradigm of Economic Geography aims at analyzing and explaining the location and spatial distribution of *economic activities* and their *drivers* both in *space* and *places* and at different *scales,* as well as their *evolution*ary processes and *networks* in their *institution*al context. The terms in italics in the definition refer to the main core (space, places and scale, as well as the drivers of economic activities) and three ontological foundations (networks, evolution and institutions) of the paradigm (Figure 2), which will be elaborated upon in the next sections.

We consider economic activities as activities by a broad group of actors, that is not only firms, but also labor unions, NGOs, consumers etc., whose actions are influenced by a large variety and sometimes conflicting drivers (innovation, competitiveness, sustainability, social justice etc.). Our paradigm is in that sense also integrative as it does not focus a priori on a certain group of actors or drivers, as is often the case with existing paradigms in economic geography. Economic activities are of course also analyzed in aggregated and concentrated forms, i.e. in a specialized form in industries and clusters, but also overall within a place, such as in regional economies. These regional economies are always analyzed in their embedded situation in larger entities such as national economies or global production networks.

Concerning the three selected ontological foundations, networks, evolution and institutions, we do not only regard them as the key lenses of contemporary economic geography, they are also at the same time objects of study for many economic geographers. Moreover, they figure prominently in all the existing paradigms of economic geography, albeit to different extents. Compared to existing paradigms, however, in the integrative paradigm the ontological foundations are stronger linked to the core geographical concepts of space, place and scales.

Figure 2: The core and ontological foundations of the Integrative Paradigm of Economic Geography



As the proposed paradigm is an internationally oriented integrative paradigm meant for researchers in different parts of the world doing research in countries with different varieties of capitalism (Hall and Soskice, 2011), we are cautious with a priori normative statements about social justice, social inequalities etc. as is for instance prominently the case in Geographical Political Economy. Although we are not against normatively influenced research in economic geography, the positionality of paradigm proposers does not allow a

priori normative statements, as they might be important in their home turf, but not to the same extent elsewhere. Moreover, norms lie at the basis of the drivers of the economic actors and their activities and are hence more an empirical question, not a fundamental one having the same importance everywhere. Social inequality, for example, will be a more pressing question in the USA and the UK than in Scandinavian countries, whereas fostering entrepreneurship might be a more relevant research question in Scandinavian countries than in the USA and the UK.

In the next two Sections, the core and ontological foundations of the new Integrative Paradigm of Economic Geography will be further worked out.

4. The Core of the Integrative Paradigm of Economic Geography—Space, Place, Scales and Drivers

As we have argued earlier, current economic geographical research is more outward-looking than inward-looking when seeking disciplinary inspirations, namely, economic geographers are influenced to a larger degree by heterodox economics than by human geography (Thrift and Olds, 1996: 333). This is what we see as a big deficiency of current economic geographical literature as the geographical root of the sub-discipline becomes less and less visible. Therefore, in the integrative paradigm, we pay particular attention to the issues of space, place and scales, and view them as the core of the paradigm.

4.1 Space— both as fixed entity and networked geographic becoming

Based on different philosophical understandings (e.g., Newtonian vs. Leibnizian, or substantivalism and relatinalism), a step-by-step shift in the conceptualization of space from ‘absolute’ to ‘relative’, and to ‘relational’ has been observed in human geography (Jones, 2009). Relational space is a paradigmatic departure from the concerns of absolute and relative space, because it dissolves the boundaries between objects and space, and rejects

forms of spatial totality. The relational notion of space implies the idea of internal relations: external influences get internalized in specific processes (Harvey, 1973, 2006).

Although a relational perception had considerable appeal at the end of 1990s and early 2000s (e.g., Massey, 2005; Amin, 2004), it also has its own problems (for critiques, see Allen and Cochrane, 2007; Jones, 2009). To take things forward, Jones (2009: 496) suggests to consider a conceptual compromise "…between space as territorial anchorage and fixity and conceptions of space as topological, fluid and relationally mobile."

We find such a combined perception of space as both fixed entity and networked geographic becoming very helpful for the Integrative Paradigm of Economic Geography. As claimed by Harvey (2006), for economic geographers, space can be anything absolute, relative, or relational, since it depends largely on the nature of the phenomena under investigation. A combinatory substantivalism and relationalism perspective is conducive for economic geographical research at least in two aspects: on the one hand, while researchers belonging to different paradigms perceive space differently, currently almost all paradigms have, more or less, based their research on the relational and socially constructed perceptions of space (Jones, 2009; Garretsen and Martin, 2010; Rodríguez-Pose, 2011). Economic geographers now increasingly emphasize that identifying and analyzing the various networks of linkages and flows across space is essential for understanding the economic landscape. On the other hand, economic activities do not happen in vacuum, but are indeed based in certain locations. These locations, are often fixed territories, such as spatial agglomerations, clusters, industrial districts, innovation milieus, etc., which have long been (and still are) the key objects of research by economic geographers.

Overall, such a combinatory understanding of space provides the common ground where all kinds of economic geographical research could be built upon. It is, however, important to point out that these two dimensions of space are not exclusive and rival to each other, contrarily, they are complementary, and mutual strengthening: distant networks, linkages, flows, and transactions are embedded in, and strongly influence specific locations where firms, households, and a multitude of supporting institutions and organizations are bound together. On the other way around, such networks and external pipelines are always, in turn, reshaped by the processes of spatial economic agglomeration and local social, cultural, institutional context.

4.2 Place—location, locale and sense of place

While place and space have been used interchangeably by many scholars, some studies have argued for distinctions between these two concepts (see, for example, Agnew, 2011; Wainwright and Barnes, 2009). For the Integrative Paradigm of Economic Geography, we also see it as important to distinguish place from space, as both are entangled with different concepts in economic geography (Wainwright and Barnes, 2009).

Agnew (2011) has outlined three fundamental aspects of place as a meaningful site—location, locale, and sense of place. Location refers to an absolute point in space with a specific set of coordinates and measurable distances from other locations; Locale refers to the material setting for social relations—the way a place looks; Sense of place refers to the feelings and emotions a place evokes (Cresswell, 2014), which, in turn, is related to geographical imaginations (Cresswell, 2008; Klein and Tamásy, 2016).

Although research in economic geography has long prioritized space over place (Taylor, 1999; Wainwright and Barnes, 2009; Garretsen and Martin, 2010), Wainwright and Barnes (2009: 982) notice that in the 1980s and 1990s "… the recording and analysis of the counterpunctual spatial regulation in place… dominates… economic geography" (for a similar observation, see Rodríguez-Pose, 2011: 348). Recently, we see a resurgence of research in economic geography that tends to prioritize space over place again. These studies, among others, borrow much from heterodox economics, such as much of the EEG research. These studies are significant in contributing to the understanding of the multidimensional proximity, distance, networks, external linkages, however, the real places, and the socio-economic, cultural linkages of the agents within certain places are getting less and less prominent. Therefore, by making place one of the key elements of the core of the integrative paradigm, we pay special attention to the social, cultural, and economy relations of specific places investigated by economic geographers. Such an attention to the specificity of certain places is particularly conducive to an inclusive development of the economy, as it stresses not only economic relations (which economic geographers have paid attention to) within and beyond a place, but also cultural and social relations, which are key to a socially inclusive development. This attention, however, should not obscure economic

geographers´views from so-called non-places, such as airports, motorways, supermarkets etc. and other ubiquitous landscapes often emerged because of economic interests and related to the narrative of the loss of meaning of place (Augé, 2008; Arefi, 1999; Phelps, 2004). Finally, the locations of places investigated in the integrative paradigm are not merely confined to the global North, central areas and large metropolises, but also extend to peripheral, rural areas and the global South.

4.3 Scales—both as an object of inquiry and epistemological construct

Human geographers from different sub-disciplines perceive scales diversely: while political geographical approaches are concerned with the social construction of scales as *material sociospatial entities* (Smith, 1995; Brenner, 2001; Harvey, 2001), recent poststructuralists view scale as an *epistemological construct* that presents specific socio-spatial orderings (Marston et al., 2005; Moore, 2008).

Each of these two approaches has its own strengths and limitations (for a detailed elaboration, see MacKinnon, 2011), and are, to some extent, complementary to each other. Based on such an understanding, the integrative paradigm takes a view of scale as both an object of inquiry and an epistemological construct (MacKinnon, 2011). Such an understanding of scales is neither favoring an ontological view of scales as material entities, nor prioritizing scales as an epistemological framework. It rather highlights the fact that "… it is often not scale *per se* that is the prime object of contestation between social actors, but rather specific processes and institutionalized practices that are themselves differentially scaled" (MacKinnon, 2011: 22-3).

On the one hand, scales are formed and altered by economic and social relations— they are socially produced. Scales *per se* are not fixed or given. Rather, they are fluid, contingent and process-based, in a state of dynamic change, transformation and reconfiguration. Based on this understanding, in the integrative paradigm, the theoretical priority of scalar configuration resides not in a particular geographical scale (i.e., local, national or global), but rather in the process through which particular scales become constituted and subsequently

transformed. Moreover, scales are not necessarily hierarchical and vertical; they can also be horizontal exemplified by networks and linkages among different administration regions. Hierarchical and nested geographic scales are often taken-for-granted by economic geographers. In contemporary economic geographical literature, scales are treated simply as different levels of analysis (from local to global) in which the investigation of economic processes is set. And this has even been strengthened in empirical work in economic geography in recent years (particularly those quantitative analyses) because pre-given and hierarchical administration regions are the units for which official data are available. Although this is unavoidable to some extent, at least in the integrative paradigm, researchers should notice that such scales are not fixed, and given, but are constantly changing, shaped by social, economic powers.

On the other hand, powerful and institutionalized practices and discourses are another crucial dimension of scales (Paasi, 2004). Such an epistemological understanding directs attention to the ways in which scalar narratives and discourses constrain or enable certain ways of seeing, thinking and acting. It opens up to investigation an array of questions about how scale operates as epistemology, showing what we 'know' about the world. Social and economic practices and processes play an important role in producing scalar categories, and vise versa. It is important, however, to notice here that scale practices and narratives are not built from scratch; rather, they are strongly influenced by pre-existing scalar structures, created by post processes of social and economic practices.

Overall, a combination of substantivalist and relationalist perceptions of space, and a social, cultural, and economic understanding of place are taken as the common ground of the integrative paradigm. Moreover, as different economic processes may operate at different scales, issues of geographical scale should also be taken seriously. In the integrative paradigm, scales are understood both as an object of inquiry as well as an epistemological construct.

4.4 The drivers of economic actors and activities in space, place and scales

The location and development of economic activities is decided by a large group of different economic actors. Several, and sometimes conflicting, drivers lie behind these decisions and are a source of economic dynamism and change. Identifying the key actors, but particularly also their drivers is a key task of economic geographers in the framework of the Integrated Paradigm of Economic Geography. Innovation can be regarded as the most significant driver of economic actors and activities, as has been stressed in the economic geography literature for decades now (Shearmur et al., 2016). It is also the key engine of regional economic growth, as well as a source of regional economic adaptability and resilience, which are key issues in current economic geography (Martin and Sunley, 2015a; Gong and Hassink, 2017b). Innovation, as a driver of economic activities, is obviously linked to place by classical agglomeration advantages as well as by the stickiness of collective tacit knowledge creation in clusters, such as Silicon Valley. There is a whole range of other concepts related to innovation, such as knowledge creation and knowledge bases that make clear the persistence of spatial concentrations of innovative activities and the role of agglomeration effects explaining this persistence.

However, the integrative paradigm emphasizes a broader range of drivers than just innovation and related entrepreneurship and competitiveness, the drivers that have been particularly stressed in extant paradigms (see also Aoyama et al., 2011b). We argue that currently an increasing number of different, sometimes conflicting drivers both affect economic activities in place and are affected by place-specific context. They include, for instance, creativity (Gong and Hassink, 2017a), financial profit (stock exchange), sustainability, de-growth (Krueger et al., 2017), social entrepreneurship (Smith and Stevens, 2010), social justice (labor unions) or crime (Ganau and Rodríguez-Pose, 2017) and corruption (Warf, 2016). Concerning the latter drivers, they are the drivers for industries hitherto hardly researched by economic geographers, such as the drug industry, the refugee industry or the sex industry. Part of the reason for paying less attention to these alternative drivers and industries might lie in the limited amount of statistical information available. Most of these hitherto little-researched drivers, however, have a high degree of context- and place-specificity and are therefore highly relevant for economic geography. Since drivers are

strongly context dependent and therefore place also plays a key role in explaining geographical differences between drivers, in our view they belong to the core of the integrative paradigm. One potential reason for different degrees of context- and place-specificity of drivers is related to the way economic actors are embedded and influenced by different institutions, one of the three ontological foundations of the integrative paradigm that will be dealt with in the next section.

5. The Ontological Foundations of the Integrative Paradigm

5.1 Networks

In economic geography, networks have been intensively studied by scholars over many years and they have used the terminology in theories of geographical clusters, regional innovation systems, global cities, international production systems and globalization (Glückler, 2007). Networks have been understood in different ways in social sciences: as an empirical object of knowledge, as a theory, and as a methodology. Most research in geography seems to refer to networks as objects of study, e.g., informal networks, project networks, strategic networks or regional networks (Glückler, 2013). In addition to that, network could also be taken as a perspective, which is closely related to the relational thinking in economic geography.

Within the existing wisdom, networks and linkages are particularly of key concern in REG and GPNs (Bathelt and Glückler, 2011; Dicken et al., 2001). EEG focuses much more on the dynamics (or time-dependence) of networks (Glückler, 2007), or in another way, all kinds of flows, that are relevant to economies (Boschma and Frenken, 2006). GPE stresses networks and flows in particular concerning inward investments and capital and their role in asymmetric power structures leading to geographical inequalities, whereas they play a less prominent role in IEG.

From the early 1990s on, territorial development is theorized to be embedded in networks of local actors and spatial proximity (Yeung, 2005). These sorts of local and regional relations and interactions are labeled as 'regional networks' by Grabher (2006). While this stream of research has provided rich knowledge on local industrial clusters, regional innovation systems, agglomeration economies, it has received criticism of 'spatial fetishism'. Another strand of research that has been increasingly taken up during the last decades is the strategic networks (or inter-organizational networks). This line of studies have explored the relations embedded in all kinds of networks among economic actors—individuals, firms and organizations. The emphasis on inter-organizational networks, actor networks, and (global) production networks of these studies, has highlighted the role of social and economic relations of individual actors. Geographically, it also extends network research from local and regional to extra-local or even global scales (Dicken et al., 2001; Bathelt et al., 2004; Glückler, 2013). However, it has been criticized for using network analysis either to explain the network characteristics of individual nodes through social and spatial antecedents, or to explain the economic outcomes associated with node characteristics at the sacrifice of network structures (Sunley, 2008; Glückler and Doreian, 2016).

Recently, research on networks in economic geography tends to be broader in topics. Some pay attention to the issue of positional analysis of network (Glückler and Panitz, 2016; Prota, 2016), some explore the dynamics of networks (Glückler, 2007; Ter Wal and Boschma, 2009; Turkina et al., 2016), and some work on the multi-level nature of networks (Brailly, 2016).

Glückler (2017) recently stresses that we need to explore conceptually what is the role of space for the evolution of networks (originally he uses 'creation of networks', but we consider the broader term 'evolution of networks' more proper). This forms half of the network understanding of our integrative paradigm, the other half, as will be elaborated on later, is the impact of the dynamics of networks on territorial economies.

The dynamics of networks is an interesting but less explored topic of networks (Ter Wal and Boschma, 2009). We see a dynamic perspective on network essential since a static view cannot well explain the increasingly dynamic and complex development of economies. The evolution of networks can be related to the neo-Darwinian principles of selection, retention and variation (Glückler, 2007). And the trajectories of networks formation are independent of geography. Unlike individual entities, the selection of networks usually involves two pairs

of actors. The traditional idea of external environment mainly acting as selecting force is only partially valid in this context, as the agency and strategies of companies, organizations and individuals also count much. However, one issue that has been commonly accepted on network research in economic geography is that geographical proximity (and the supportive external environment related) is conducive to network formation. To reproduce networks (retention mechanism), geographical location is of great relevance. Particularly, two processes are important for place-dependent effects on the network trajectory: local externalities of communication and organizational inertia (Glückler, 2007). The former is related to the benefits of agglomeration economies, while the latter is linked to the efforts made by corporate to build trust and long-term collaborations. Variation of networks usually involves new ties formation, as well as old networks dissolution. Variation of networks could happen in multiple spatial scales. Some variation could happen when actors in localized networks establish new extra-regional linkages (global bridging). Some could be the results of connections between co-located but different actors (local bridging). Some are based on the fact that weak ties are co-located while the strong linkages in a topological cluster are geographically separated (local brokering). Others are related to temporary clustering of relevant actors (mobile brokering) (Glückler, 2007).

As elaborated above, the impact of geography on network trajectories is only half of the concern of the integrative paradigm, the other half, however, is related to the influence of network evolution on territorial development. The establishment of production and consumption networks between actors belonging to different positions of the global value chain is always important for the development of certain regions. For example, actors in developing countries that are selected as the strategic partners by international incumbents usually tend to have a better chance of development and thus result in the overall prosperity of the region where they are located. It is based on such an understanding, that many regions (or cities) in less developed countries around the world are competing fiercely to attract FDI, as they know that such an establishment of networks would be beneficial to the general regional development in the long-run. The retention of existing linkages, be they local or global, also require the efforts from both economic (strategies of companies) and non-economic organizations (policies of local government) to maintain a favorable condition for network reproductions. The variation of networks at a regional level always leads to the prosperity of certain regions while meanwhile the decline of other regions. Here, the

position of actors in the global value chain is thus very important in deciding the development of territorial economies and their selection, retention and variation of networks with partners can also lead to different development trajectories of regions involved. Different from the inter-organizational network research, here adequate attention is paid to the structure of the networks, as well as the relative positions of actors in such networks.

5.2 Evolution

Evolution is a critical perspective in the Integrative Paradigm of Economic Geography. It is particularly the merit of an evolutionary perspective that modern economic geography moved beyond snapshot economic geography. Nowadays, it is commonly accepted in economic geography that we cannot understand economic activities in places and space without looking at where they come from in time. Such dynamic and evolutionary perspectives are not only vital for understanding the past and the present of economic activities in space, but also helpful in predicting the future of development.

EEG has contributed most to the understanding of the significance and fruitfulness of taking an evolutionary perspective in researching economic geographical phenomena. In addition to EEG, REG and IEG also strongly stress the importance of evolution and dynamism. Moreover, recent attempts have been made to link GPE to evolutionary thinking (Pike et al., 2016). Furthermore, conceptual work has been done on upgrading and downgrading processes of clusters in GPNs, as well as an evolutionary perspective on strategic coupling between strategic assets found in regional economies and the needs of transnational corporations (MacKinnon, 2012).

Previous work in EEG, mainly enlightened by Generalized-Darwinian theory (adopting variety-selection-retention, or VSR, in analyzing socio-economic systems) in evolutionary economics, has provided insight on path dependent nature of cluster (path dependence, lock-in), agglomeration externalities and related/ unrelated variety, the spatial evolution of industries, and so forth (Boschma and Frenken, 2011). In the integrative paradigm, such a

well-informed perspective on evolution should still play a central role in researching the evolutionary processes of economies within certain regions as it not only emphasizes the 'historical unfolding' of the economic landscape, but also provides evolutionary concepts, analogies and metaphors inspired by evolutionary thinking in other disciplines (Martin and Sunley, 2015b: 713). However, we also see rooms for other approaches. Among others, here we would draw insights from complexity theory, evolutionary developmental biology, and developmental systems theory (see Martin and Sunley, 2007, 2015b) and elaborate on how a complexity and developmental approach of evolution could be linked to the understanding of space, place and scales—the core of the integrative paradigm.

Although EEG has been informed and heavily influenced by Generalized Darwinism which assumes a close homology between evolution in nature and the evolution of the socio-economy, recently, such an understanding has increasingly been criticized outside economic geography. Alternatives such as complexity theory, evolutionary developmental biology, and developmental systems theory have been proposed meanwhile. Recently Martin and Sunley (2015b), informed by the debates in biology, evolutionary economies and some other disciplines, posit that a developmental turn should be taking place in EEG. To date, evolutionary economic geographers tend to focus on the micro-level of the firm, or, on the spatial evolution of the population of firms that make up a particular industry, while insights on the meso- and macro-level circumstance that shape and are shaped by the micro-level analysis remain relative scarce. The primary implication of adopting a developmental perspective is that economic geographers need to take a more systemic and holistic understanding of spatial economic evolution—one that considers not only industrial evolutionary dynamics itself, but also the wider economic, institutional and socio-political structures contributing to and are shaped by such dynamics (or in Martin and Sunley's (2015b) words, 'deep contextualization'). Linking to the core of the integrative paradigm, evolution should be related to specific place. Previous evolutionary concepts such as path dependence, path creation and lock-ins are strongly related to specific places and path dependence has even been linked to place dependence (Martin and Sunley, 2006; Hassink, 2010). However, little insight has been provided on the impact that industrial dynamics have on local society, culture, institutions and so on. Therefore, a shifting from evolution (of economy) to co-evolution (of economy and the broader socio-cultural contexts) is favored in the integrative paradigm.

Although there is still no universally accepted complexity theory, complexity thinking does provide some interesting concepts and ideas for thinking about the economic landscape and its evolution. A complex system has several characteristics—multi-scalar, openness, non-linear dynamics, limited functional decomposability, self-organization and emergence, and non-deterministic (Martin and Sunley, 2007). As such, a complexity perspective on spatial economic evolution assigns importance to explicating the roles of self-organization and emergence. The spatial structures that constitute the economic landscape—cities, clusters, local regions, and so forth —to certain extent, can be viewed as emergent. Emergence is a source of innovative and evolutionary change, and is itself a dynamic, recursive process. Similar to the developmental thinking, a complexity perspective also stresses that such spatial structures are not solely the outcomes of micro-actions but also of meso- and macro-levels of behaviors and actions, and their impact on the micro-actions. Overall, in addition to concepts such as path dependence, related variety, lock-in, branching, etc., several concepts and ideas in complexity theory, such as plasticity, robustness, emergence, niche construction and self-organization, might potentially be used in the integrative paradigm in exploring the mechanisms and models of evolution and change. Such a complexity system is also strongly related to the core of space, place and scales as it on the one hand, is itself a multi-scalar system, and on the other, highlights the connectivity, networks among different agents and actors, and the geography of new knowledge creation (Weig, 2016).

Finally, evolution is not always about continuity and stability, it sometimes, can also be related to sudden shocks, exaptation, perturbations, and critical moments at multiple scales. Thus the evolutionary outcomes of economy or regions might not necessarily lead to path dependence, lock-in, branching, instead, they can also contribute to path-creation, emergence, resilience, niche construction, plasticity, and so on. In this integrative paradigm, we also pay adequate attention to these evolutionary processes and results.

5.3 Institutions

Institutions, both in the sense of informal institutions (norms, values, conventions and traditions), as well as formal institutions (laws, regulations and organizations), are important

socially constructed elements of the environment of economic actors and their economic activities (Gertler, 2010, 2017; Martin, 2000). They are hence one of the key ontological foundations of the integrative paradigm of economic geography. They arguably have the highest degree of place-specificity of the three ontological foundations of the integrative paradigm. In our view it is not fruitful to stress the separation of informal and formal institutions, but to analyze their complex inter-relationships (Zukauskaite et al., 2017; Bathelt and Glückler, 2014; Gertler, 2017). From an economic geography perspective "the central idea … is that the competitive advantages (or disadvantages) and innovative potential associated with particular regional economies are shaped in large part by their distinctive institutional configurations and the unique 'cultures' of economic practice they foster" (Gertler, 2017: 3). Institutions and organizations have by no means always positive effects on economic activities in places. In fact, the rigidities of the so-called institutional hysteresis (Setterfield, 1993) can potentially lead to highly contingent local political and institutional lock-ins, which are hindering flexibility and adaptability of key economic actors (Hassink, 2010). This also underlines the importance of analyzing the efficiency and quality of institutions for explaining regional economic inequalities (Rodríguez-Pose, 2013; Rodríguez-Pose and Garcilazo, 2015). At the micro-level, we stress the relationships between institutions and socio-economic practices, that is the "the stabilized, routinized, or improvised social actions that constitute and reproduce economic space, and through and within which diverse actors … and communities … organize materials, produce, consume, and/or derive meaning from the economic world" (Jones and Murphy, 2011: 367). Studying practices in relationship to informal institutions also show the empowerment and disempowerment of some economic actors over others is hence important concerning understanding and explaining unequal power relations between actors because of race and gender, for instance.

The impact of institutions and organizations is certainly not confined to the local and regional level; in fact, they provide the background for socially constructed space and place at different scales. Institutions can be either conceived as a sort of routine extension of firms (upward causation), affecting the evolutionary paths of regional economies and clusters, or in a more downward causational way, in which national organizations, such as the state and labor unions are key institutional actors affecting local and regional economic activities through policies, laws and regulations. Place specificity is partly caused by the specific

combinations of formal and informal institutions, as well as context and contingency at several spatial scales. In this context, places are embedded in specific Varieties of Capitalism, such as the Liberal Market Economies (US, UK) and the Co-ordinate Market Economies (Germany, Scandinavia) (Hall and Soskice, 2001; Hall and Thelen, 2009). Varieties of Capitalism, however, should not close our eyes for the importance of regional variations within these Varieties of Capitalism (see Peck and Theodore, 2007; Schröder and Voelzkow, 2016; Zhang and Peck, 2016; Lim and Horesh, 2017). The latter point at the contingent and dynamic inter-relationships between organizations and institutions at several spatial levels, which has been recently stressed by Grillitsch (2015) and Grillitsch and Rekers (2016).

Another important aspect of institutions and organizations in the integrative paradigm is the way they affect the drivers of economic activities. Because of place-specific norms and values we can find economic actors who are interested in sustainability and social entrepreneurship in some places and less so in other places. Moreover, it is particular informal institutions affecting values essential to economic activities in places, such as risk aversion, risk taking attitude, tolerance, openness etc.

Institutions are not only highly place-specific and key to understand the drivers of economic activities and hence strongly related to the core of the integrative paradigm, they can be closely connected to the two other above-mentioned ontological foundations, as well. On the one hand, they provide the background for networks established between different economic agents; on the other hand, they are highly relevant for understanding and explaining the evolution of economic activities in places. In fact, institutions themselves change through time and this might or might not co-evolve with industrial changes in regions and countries. In this context Martin and Sunley (2015b, 724) recently stressed that : “Not only do institutions of all kinds and at all scales condition, constrain and enable the operation of evolutionary mechanisms in the economy, but also these same institutions are themselves subject to similar such evolutionary mechanisms and processes: an economy and its institutional forms and arrangements co-evolve. *Institutions are both context and consequence of economic evolution* [italics in original]”.

6. Guiding Research Questions, Causal Mechanisms and Bridging Concepts

As has been laid out in the previous sections, the integrative paradigm consists of a core and three ontological foundations. It aims at analyzing and explaining the location and spatial distribution of *economic activities* and their *drivers* both in *space* and *places* and at different *scales,* as well as their *evolution*ary processes and *networks* in their *institution*al context. The following guiding research questions start from the integrative paradigm's core:

- What are the key drivers of economic actors and how do they influence their activities?
- How do places affect the drivers of economic actors and their activities?
- How do economic actors and their activities affect places and non-places?
- How do economic actors perceive and construct space and scales?

As has been pointed out in the previous section, the paradigmatic core, i.e. to economic activities in space, place and scales and the drivers of these activities, are mutually inter-related to three ontological foundations, networks, evolution and institutions. The latter are not only strongly linked to the core, but also complementary to each other. There are clear causal mechanisms between the related ontological foundations and between the ontological foundations and the core, which are formed by so-called bridging concepts[3]. We consider these bridging concepts as essential for strengthening the coherence of the integrative paradigm. Key bridging concepts include co-evolution (Gong and Hassink, 2017c), cluster life cycle and evolution (Menzel and Fornahl, 2010), regional innovation systems (Tödtling and Trippl, 2011), institutional thickness (Zukauskaite et al., 2017) and strategic coupling (Coe et al., 2004; MacKinnon, 2012). It would go beyond the scope of this paper to discuss here in detail how bridging concepts build causal mechanisms between the ontological foundations and the core and we would like to leave that for future theoretical

[3] There are of course also concepts and theories within the ontological foundations, such as path dependence within evolution.

contemplations and empirical research. We also realize that in some cases there are still missing links between ontological foundations that need to be uncovered, as has been recently done by Zukauskaite et al. (2017: 8) concerning institutional thickness ("how institutional thickness evolves over time is still poorly understood"). We regard, however, these guiding questions and bridging concepts as particularly essential from an integrative paradigm perspective, and expect future empirical and conceptual research in economic geography to further strengthening the coherence between the ontological foundations and the core.

7. Epistemological Foundation and Methodological Issues

Since the integrative paradigm stresses very much place-specific context and contingency, critical realism is its logical epistemological foundation, a foundation it shares with most existing paradigms, as has been stated at the end of Section 2. Critical realism "… necessarily takes contingent historical premises and specific social conditions, and aims to produce hypothetical and conditional conclusions …" (Lawson, 1997: 50; see also Yeung, 1997; Pratt, 2009; Bathelt and Glückler, 2003). Logically following from such an epistemological foundation is the use of qualitative methods, focusing on qualitative case-study research. Moreover, the guiding questions of the integrative paradigm posed in Section 6 are "how questions", to which also qualitative methods fit well. This does not mean that we reject a priori the use of quantitative data in economic geography, as they are needed to reveal problems and to describe phenomena, whereas qualitative methods such as case studies and interviews are needed to understand and explain phenomena (Barnes and Christophers, 2017b). Although the integrated paradigm, as such, favors qualitative methods, we see also interesting potential for combining and mixing quantitative and qualitative methods in economic geography, as we have recently elaborated on elsewhere (Hassink et al., 2016). However, as has been pointed out by Boschma et al. (2014: 1316), the use of mixed methods is still relatively rare in economic geography. "Whilst the first [quantitative] perspective sees the territory as a container and a provider of certain differentiating categories (e.g. urban

versus rural), the second [qualitative] perspective would look at it as a unique determinant in itself … ."

Despite favoring qualitative methods and emphasizing place- and context specificity, we agree with Bathelt and Glückler (2003: 128) that the application of critical realism "… does not mean … that research ends with a contextual explanation of singular events in particular locations and circumstances at a given time. Instead, another important step … is to go beyond individual events … in order to identify common aspects of the causal mechanisms that affect economic action". The latter key process is referred to as de-contextualization, which is "… a methodology to identify trans-contextual, more-or-less necessary circumstances and structures from contextualized events" (Bathelt and Glückler, 2003: 128). However, this is by no means an easy task and several attempts have actually led to "dangerous half-way de-contextualization" (Maloutas, 2011: 40).

8. Conclusions

In this paper, we have criticized the current fragmented status of economic geography. Actually, economic geography was arguably for the last time united in response to New Economic Geography during the cultural turn in the early 2000s. After that, we had several simultaneous, hence weaker, and less unifying turns and paradigms. More recently, we have seen several recent contributions arguing in favour of engaged pluralism and cross-fertilisation (Barnes and Sheppard, 2010; Hassink et al., 2014; Clare and Siemiatycki, 2014; Muellerleile et al., 2014). In this paper, we have gone one step further than pleading in favour of engaged pluralism. In our view it is now time to establish a unifying turn, hence our manifesto for an Integrative Paradigm of Economic Geography in this paper. This new paradigm is integrative in the sense of integrating currently debated paradigms. In this paper, we have presented how the contours of such an integrative paradigm look like. We define such an integrative paradigm as a paradigm aiming at analyzing and explaining the location and spatial distribution of economic activities both in places and at different scales, as well as their evolutionary and innovation processes and networks in their institutional context. It consists of the following core: space, place and scales and their drivers; and the

following three ontological foundations: networks, evolution and institutions. Although we mainly integrate the existing paradigms into the integrative paradigm, our own emphasis, and hence the key value added of the paper, lies in considering space, place and scales, as well as a broad set of drivers of economic actors, as the core of the integrative paradigm. We stress this core as we see it as one of the weaknesses of the existing paradigms, which have been too much focusing on importing non-geographical concepts from heterodox economics. Of course, putting geographical notions back into the core of economic geography should not lead to a narrowing down of empirical topics. The integrative paradigm favors methods that are capable of revealing problems and are useful in contributing to the understanding of the economic phenomena in certain places. It also works with a wide variety of spaces, clearly going beyond absolute or neutral space. The function of the integrative paradigm clearly lies in providing orientation and being a point of reference for international economic geographers, but also for researchers working on emerging themes (Aoyama et al., 2011a).

However, these are only the contours, which for sure need to be worked out concerning three main issues. First, in future, the spatial conceptualization of the Integrative Paradigm of Economic Geography needs to be strengthened by a stronger exchange with theories within human geography.

Secondly, we need more future theoretical work by non-Anglo-American economic geographers on integrating non-English speaking parts of economic geography (Hassink et al., 2017). Our guess is that Anglo-American economic geographers like to be splitters, because they can use their own language in cultivating heterogeneity and by doing that building in our view unnecessary high entry barriers for non-Anglo-American economic geographers to participate in the conversation. For the rest of world we need lumpers who reduce complexity and hence barriers to entry. However, we leave the integration of non-Anglo-American economic geography to future conceptual work.

Thirdly, we stressed critical realism as the main scientific underlying epistemological foundation of the integrative paradigm and de-contextualization as a key procedure in realizing some form of generalization of research results. However, we need more work on how exactly such de-contextualization actually works (see also Maloutas, 2011).

We are not against pluralism, as it can lead to learning opportunities, openness and flexibility, issues for which geographical economists envy us. We are, however, at the same time in favor of core questions, core theoretical concepts and hence an identifiable sub-discipline, for several reasons, such as having a clear voice vis-à-vis geographical economics and policy-makers, as has been laid out in the introduction of the paper.

We realise that our undertaking is a tight-rope walk between a somewhat more mono-perspective economic geography with a stronger identity and an arbitrary, multi-perspective economic geography with a weak identity.

Finally, in order to enrich the contours of an Integrative Paradigm of Economic Geography we need a changing academic culture in economic geography, a cultural that takes the identity of the sub-discipline more seriously and that goes beyond the anything-goes and live-and-let-live attitude. A culture that is not only open to new ideas and concepts from heterodox economics, but that is also willing to discuss and debate the core questions and definitions of economic geography. We should dare to ask each other how empirical topics relate to the core questions and building blocks of our discipline, and what our specific and unique contribution is to those research questions that are also analyzed by other human geographers and social scientists from neighboring social disciplines, such as economics and sociology.

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