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Institutional Entrepreneurship for Knowledge Regions

In Search of a Fresh Set of Questions for Regional Innovation Studies

Abstract

This paper investigates conceptually the institutional change process and innovation underpinning the knowledge-based regional development from the point of view of institutional entrepreneurship. The main aim is to raise institutional entrepreneurship among the debated concepts in regional development studies. The paper sets out to discuss the following question: What kind of conceptual base provides empirical studies with a fresh set of research questions and hence point of departure in a study of the ways in which actors influence the course of events and aim to change the very institutional setting in which they are embedded?

1 Introduction

In many regional development policy-making arenas, actors take pains to find ways in which to transform old institutions so as to make them fit better the emerging economic order that is fairly commonly labelled as the knowledge economy (Cooke, 2002). Policy-makers across the world aim to forge new partnerships, build networks, create regional innovation systems, foster creativity, boost learning and push clustering forward. All this reflects, in one way or another, the basic assumptions of the contemporary research agenda that in the knowledge economy the creation of a local high-level knowledge pool with strong internal links and pipelines to global knowledge sources is the way to construct regional advantage (e.g., Asheim et al, 2006; Bathelt et al, 2004; Cooke et al, 1997; de la Mothe and Mallory, 2004). Consequently, it is evident that regions or cities aiming to

reinvent themselves as “learning regions” (Morgan, 1997), “intelligent cities” (Komninos 2002) or “creative cities” (Landry, 2008) need to be able, one way or another, to mould all those recurrent patterns of behaviour (habits, conventions, and routines) and constitutive rules and practices that prescribe appropriate behaviour for specific actors in specific situations (Morgan, 1997; March and Olsen, 2005).

The current research agenda and policy wisdom suggest, at a general level, that the main challenge remains more or less the same as earlier: how to create new institutions or transform existing ones governing economic performance to match, this time, the constantly evolving global knowledge economy. And indeed, institutions are emerging as central objects of interest both in economic geography (e.g. Martin, 2000; Gertler, 2010; Rodriguez-Pose and Storper, 2006) and in social sciences generally (e.g. Hollingsworth, 2000). The central argument for studying institutions lies in the assumption that institutional setting affects the innovation in many ways. Consequently, a multiplicity of concepts dealing with this relationship has surfaced: institutional capacity (Healey et al, 2002), institutional infrastructure (Hall, 1999), institutional thickness (Amin and Thrift, 1995 and institutional environment (Hage, 2006; Hollingsworth, 2000).

In spite of a relatively generally shared understanding that institutions guide evolutionary trajectories of regions in subtle but pervasive ways their role in regional development puzzle, as Gertler (2010, 2) maintains, is still poorly understood and under-appreciated within regional development studies. The number and vast use of the concept of institution highlight the importance of institutions in socioeconomic understanding but also its fairly general explanations to regional economic development. This may partly be due to the fact that, while the regional development studies have so far focused quite a lot on identifying the generic knowledge-based regional development model(s) and institutions behind them, the actual actors have remained in the shadows, as famously

criticized by Markusen (1999). Also Gertler calls for studies with explicit focus on individual agency, institutional evolution and change over time as well as inter-scalar relations (Gertler 2010, 2). In other fields of enquiry individual agency has gained more attention already earlier (see e.g. John 2006; Scharpf 1997; Parto 2005).

According to Normann and Garmann Johnsen (2009) it is common in the fields of regional innovation system studies, cluster studies and various knowledge dynamics oriented pieces of work that the authors focus on challenges, practices, and solutions but do not say much about leadership and/or politics. As they also maintain, power and institutional theory are seldom explicitly discussed in the context of regional innovation systems or other related studies. For their part, Maskell and Malmberg (2007, page 610) pose an interesting question for this line of research: "...how can these same people, by an act of will, ever step outside an innate institution and change it?" According to them there exists an obvious theoretical blind spot in relating institutional change to micro behaviour. This paper seeks to fill exactly this conceptual and empirical gap in a context of knowledge-based regional development and innovation systems by bringing institutional entrepreneurship forward.

The argument here is that we should know more, not only about institutions, their role in economic development and how they change, but also about how a great number of actors with divergent interests, varying normative commitments, different powers, and limited cognition create and recreate institutions (Streeck and Thelen, 2005, page 16). Indeed, we do not know much about who works, or how and why they work to change prevailing institutions for knowledge-based regional development and consequently, the nature of institutions often remains at an overly conceptual and generic level. It seems that agency, institutional change and policy process are black boxes for knowledge-based regional development scholars as well as innovation scholars (Lyall, 2007; Uyerra, 2010;

Witt, 2003). Many studies treat policy issues as if innovation systems automatically function well or as if they self-transform themselves without conscious effort or much organizing and instituting in many policy arenas. As Uyarra (2010) concludes, innovation scholars implicitly assume an unproblematic and straightforward translation of policy recommendations into the formulation of related policies. Regional development literature has more or less neglected individuals as active change agents. New institutional studies have taken agency more into account but from the perspective of continuity (Emirbayer and Mische 1998) and contextually determined action (Beckert 1999, 778). Taking institutional entrepreneurship as an approach we can explain better changes in innovation policies and other development efforts (Garud et al 2007).

From these premises, this paper aims to raise *institutional entrepreneurship* among the debated concepts in regional development studies (and related disciplines) and hence to contribute especially to the literature on knowledge-based regional development by searching conceptual avenues to add the individual actor (institutional entrepreneur) to the core analytical lenses in the analysis of institutional change for regional development. Consequently, this paper continues the ‘institutional turn’ (Jessop, 2004, page 23) that not only directs our attention towards hard and soft institutions (Gertler and Wolfe, 2004) but towards self-reflexive individuals, too (Amin, 2001). This paper aims to bring forward better alignment between knowledge-based regional development studies (especially innovation studies), new institutionalism and leadership studies. It draws from all three of these.

Institutional entrepreneurs are actors (organizations and/or individuals) who, first of all, have an interest to change particular institutional arrangements and, second, who mobilize resources, competences and power to create new institutions or transform existing ones (see Battilana, 2006; DiMaggio, 1988). They may possess a position to attack institutional

arrangements but some of them may not have it. It is worth mentioning already at the outset that this paper does not answer to the question who institutional entrepreneurs actually are. It would be tempting to assume that mayors, leading policy makers and other acknowledged authorities would somehow automatically be institutional entrepreneurs. This often is a false assumption, and therefore there is a need for both conceptual development and more fine-grained empirical analyses before we can reliably answer to the question who institutional entrepreneurs in given situations actually are.

The research question discussed here is: What kind of conceptual base provides empirical studies with a fresh set of research questions and hence point of departure in a study of the ways in which actors influence the course of events and aim to change the very institutional setting in which they are embedded? In the Section Two, innovation challenge is identified and linked to institutional change. The Section Three moves the discussion forward by introducing the concept of institutional entrepreneurship and the Section Four discusses and frames the concept of institution. Section Five then discusses institutional change. Finally, Section Six concludes the conceptual discussion by raising four sets of questions for the future studies on institutional entrepreneurship.

2 Knowledge economy and innovation systems challenge institutions to be changed

In the late 2000s it is rather generally accepted that the capability of regions to generate, apply and exploit new knowledge and to innovate is in the core of their competitiveness in a knowledge economy and, that this process cannot be fully understood without studying social and institutional forces too (Lundvall, 1992). In the knowledge economy, according to Cooke (2002), (a) knowledge is quickly out-dated and new knowledge is constantly challenging the old; (b) scientific knowledge (incl. social sciences) is respected and permeates society faster than ever before; and (c) existing knowledge is used to create new knowledge. Consequently, the aim of contemporary development policies often is to

cultivate some specific differentiated and locally rooted but extra-regionally connected knowledge bases and to foster links between academia, industry and the public sector, i.e., to construct knowledge-based regional advantage. (see e.g. Asheim et al 2006.)

Reflecting the search for something new both the rapidly expanding policy-oriented and theoretical literature on regional development has celebrated such (city-) regions as Silicon Valley, Cambridge, Boston and Singapore as the stars of the knowledge era. However, in the midst of an intensifying global innovation race, there are more and more voices warning policy-makers about the dangers of ‘imitate the best practice’ and ‘replicate Silicon Valley’ strategies fairly commonly adopted by many regional policy-makers. It is believed here that regional advantage cannot be constructed on one ‘best practice’ model but with more fine-tuned development policies reflecting the different conditions and problems of respective regions and regional innovation systems (Tödling and Trippl, 2005). It is not possible to transfer institutions from one place to another and hence, a need to understand better place-specific institutional change dynamics emerges as crucial. (Rodriguez-Pose and Storper 2006.)

To make the situation even more challenging, and simultaneously more interesting, Crevoisier and Hugues (2009) suggest that knowledge economy is a vast global playground for different knowledge and different players to interact in complex production-consumption systems that are multi-locational in nature. From this point of departure regions need to develop themselves not only as central locations in a national system but as attractive hubs of wider and more global systems. All this calls for manifold institutional changes and simultaneously makes the identification of spatial levels of institutions even more a challenging task.

Innovation system literature provides this paper with a general but specific enough framework to search for a conceptual basis for institutional entrepreneurship in the context

of 'knowledge regions'. Regional innovation system studies are here seen as a rather specific sub-branch of broader research agenda on knowledge-based regional development. Innovation is a good point of departure for studies focusing on institutional change for five reasons. First, as 'new creations of economic significance' innovations are widely accepted as primary sources of economic growth in a global and capitalistic economy (e.g., Edquist, 2005; Freeman, 1987). Second, innovation requires a proper environment to flourish and a well functioning system to support it and hence, as Asheim and Coenen (2005) argue, in innovation studies it is important to take account of the institutional and political frameworks found at the regional, national and/or supra-national level in which specific organizational change processes and related development efforts are embedded. This is in line with Asheim and Gertler who define innovation system as 'institutional infrastructure supporting innovation within the production structure of a region' (Asheim and Gertler, 2005, page 299). In short, the system of innovation encompasses the determinants of innovation processes, i.e., all important economic, social, political, organizational, and other institutional factors that influence the development, diffusion, and use of new knowledge (Edquist, 2008, page 5) and have an influence on individuals', firms' and organizations' learning capacity and hence on their ability to innovate (Lundvall, 1992; Lundvall et al, 2002).

Third, at the core of the innovation system literature is the view of innovation as an evolutionary process, hence both institutional change and institutional entrepreneurship ought to be studied against a moving multi-dimensional target. State-of-the-art understanding presents innovation as a complex process characterized by ambiguity, uncertainty and institutional inertia, where innovation emerges in systems that exhibit rather heterogeneous structures and defy traditional geographical, technological or institutional characterizations (Fagerberg 2005; Tether and Metcalfe, 2004). Consequently,

and fourth, innovation is an outcome of an interactive process and, to boost innovativeness new reciprocal relationships need to be fostered as well as old ones untied. This poses several delicate questions about how to change reciprocal and often delicate inter-personal relationships between autonomous agents; how to intervene in soft relational institutions. Fifth, most importantly, creation, abolishing, and changing institutions are among the most important activities in maintaining (and also increasing) dynamism of innovation systems (Edquist, 2008, page 15).

3 Framing the concept of institutional entrepreneurship

3.1 Why institutional entrepreneurship and regional innovation systems?

Based on their extensive literature reviews on regional innovation systems Uyarra (2010) and Uyarra and Flanagan (2010) conclude that more often than not in these and related studies actors are seen as components of the system rather than as purposive agents. Additionally, as they argue, innovation studies tend also to focus more on the presence or absence of predefined actors and institutions than on their roles, relationships, and performance not to mention the lack of discussion about the emergence, evolution, restructuring, or even disappearance of actors and institutions (Uyarra and Flanagan 2010, page 683). Consequently, one of the central challenges in the regional innovation system studies is to show how and why embedded actors become purposive, motivated and enabled to promote institutional change for innovation, and to that end we also need to discover how various individuals and groups exercise power and aim to influence (see Sotarauta 2009).

So far, there are no explicit studies on institutional entrepreneurship in the context of regional innovation systems (and more broadly on regional development) and therefore, at this point of time, the point of departure is the notion that by focusing more on institutional entrepreneurs instead of actors as system components we might be able to add analytical

leverage both on studies on institutional change and regional innovation systems. The basic premise is that institutional entrepreneurs are the core of endeavours to shape the institutional base for innovation systems but that not all actors working for change are institutional entrepreneurs. Institutional entrepreneurship provides an analytical framework of how various agents behave; how they interact, relate and evolve with wider institutional constellations. Especially important for this line of study is the notion that micro-agent change leads to macro system evolution, i.e. before change at a macro level can be seen, it is taking place at many micro-levels simultaneously.

We are in line with Kay (2006, 39) who maintains that ‘to understand how institutions evolve (and regions develop), it may be more fruitful to aim for a more fine-grained analysis that seeks to identify what aspects of a specific institutional configuration are (or are not) negotiable and under what conditions’. These kinds of micro-approaches are usually more actor-centred than macro-approaches and more often than not they concentrate on entrepreneurial behaviour of innovative firms that give rise to knowledge creation and diffusion inside firms and within a region (Uyarra 2010, pages 122-123). However, entrepreneurial behaviour of institutional entrepreneurs (whoever they are; possibly politicians, policy makers and other civic activists) who are engaged in various regional development efforts is more or less a neglected issue. Institutional entrepreneurship highlights agency, interests, legitimacy, strategy and power in the analysis of regional innovation systems (Levy and Scully, 2007).

3.2 What qualifies an actor to be labelled as an institutional entrepreneur?

Institutional entrepreneurship is challenging some of the prevailing notions of institutional change as well as regional development. It is usually assumed that institutions select behaviour (March and Olsen 1996, pages 251-255) but in the final analysis actors actually have some freedom to operate (Jessop 2004, page 40). As DiMaggio and Powell (1991)

maintain, institutions can also be approached as outcomes of complex social processes and as such are seen as products of human agency. Streeck and Thelen (2005, page 16) point out that institutions are ‘continuously created and recreated by a great number of actors with divergent interests, varying normative commitments, different powers, and limited cognition.’ As they also point out, both ‘rule makers’ and ‘rule takers’ shape institutions and, here, institutional entrepreneurship is an analytical lens to delve into these processes.

Institutional entrepreneurs can be individuals, organisations or groups of actors who not only introduce the needed change and/or innovation but work to change the broader context so that the innovation has a widespread appeal and impact (Maguire et al., 2004; Battilana et al 2009). According to Garud et al (2007, 957; see also Battilana, 2006) institutional entrepreneurship refers to the ‘activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones’ and is mainly associated with DiMaggio (1988, 14) who maintains that ‘new institutions arise when organized actors with sufficient resources see in them an opportunity to realize interests that they value highly’. Consequently, the endeavours to shape the institutional base for innovation systems reflect the many strategies adopted by relevant groups of actors aiming to break out from the past path and create new ones. Therefore, to be regarded as institutional entrepreneurs actors must fulfil two conditions; (1) they initiate divergent changes; and (2) actively participate in the implementation of these changes (Battilana et al. 2009, 67). Of course, it goes without saying that the freedom of institutional entrepreneurs to forge change is often limited in a world dominated by rigid structures, politics, major economic players and formal policies. These actors are constrained by the very same institutions they aim to change. The many ambitions of collaborating and/or competing actors to shape institutions for regional

development are a form of 'embedded agency' (see more, concerning embedded agency, in Battilana, 2006; Leca and Naccache, 2006; Seo and Creed, 2002).

3.3 Social filter and institutional entrepreneurs as bricoleurs

By definition, an actor needs to be intentional in action to be recognized as an institutional entrepreneur. However, in studies on institutional entrepreneurship it is important to distinguish forms of institutional change that are relatively spontaneous and emergent from those that take shape with considerable conscious policy formulation and co-ordination. This distinction provides us with clues as to what can be directed and how, and to what extent, and under what circumstances (Sotarauta and Srinivas 2006, page 314). Clearly, conscious efforts to change institutions and emergent development patterns are in many ways intertwined. Intentionality of purposive change agents needs, more or less, to be adjusted to emergent properties being outside the reach of institutional entrepreneurs; the interplay between intention and emergence is understudied as a two-way process.

Intentionality does not suggest that an institutional entrepreneur automatically and always strives for a certain result (Battilana et al 2009; Mutch 2007). Institutional entrepreneurship may also exist as a way of acting even though the change would not happen or the outcome is unanticipated. Also, an actor (whether individual, organization or group of either) may be an institutional entrepreneur without a vision of great societal change in the first place (see also Battilana et al, 2009, 70). Sometimes institutional entrepreneurs may simply aim to melt a frozen situation whatever the outcome might be. All this releases us from studying actors as conscious and calculative engines of change and enables us to approach institutional entrepreneurs as reflective change agents, who both push for change, adapt to changes in their operational environment and to activities of other actors. Intentionality may hence evolve during a change process and therefore

different time perspectives are also worth looking at more in detail to truly understand the nature of institutional entrepreneurship in time.

Although there is plenty of variation in the actions and strategies that institutional entrepreneurs take they all ‘combine, re-combine and re-deploy’ different logics behind different institutional pillars (Mair and Marti 2009, page 431; see about institutional pillars Table 1 below). Maquire et al (2004) as well as Mair and Marti (2009) collect entrepreneurial actions under the common denominator of bricolage. The capacity of institutional entrepreneurs to act as bricoleurs for change and innovation depends on (a) the dominant ‘social filter’ that is a unique combination ‘of innovative and conservative elements that favour or deter the development of successful regional innovation systems’ (Rodríguez-Pose, 1999, page 82) and most notably (b) their capacity to mould social filters. Social filters act as ‘conditions that render some courses of action easier than others’ (Rodríguez-Pose and Crescenzi 2008, 52) and thus highlight the importance of changing socio-cognitive institutional pillar (see below, Table 1). Indeed, according to Sotarauta’s (2009) study on power and influence tactics in regional development efforts the most important forms of power are what he labels as ‘interpretive power’ and ‘network power’ and, this suggests that institutional entrepreneurs work to change social filters by using their personal networks and social skills in affecting cognitions.

A core belief underlying our approach is the importance of understanding interactions between actors and their institutional settings. It is more or less impossible to understand institutional entrepreneurship without understanding how actors shape institutions they are embedded into and how institutions shape their actions. This calls for processual, relational, contextual and systemic understanding that locates institutional entrepreneurship not in the attributes and position of individuals but in their actions and relationships connecting actors in change processes. The concept of institutional entrepreneurship raises

many other intriguing questions, e.g.: How can actors innovate and renew institutional settings if their beliefs and actions are all determined by the very institutional environment they wish to change? Who are the institutional entrepreneurs in the cases under scrutiny? How do they earn/take their positions? How do they resolve the paradoxical situation in which they aim to change those institutions that frame their very actions, etc.?

3.4 Institutional entrepreneurship and leadership capacity

Institutional entrepreneurs initiate flexible institutional strategies that require collective action crossing many institutional, sectoral and organizational borders. Therefore, to make a difference, institutional entrepreneurs need a well-developed leadership capacity. In the context of urban and regional development, the literature on institutional entrepreneurship as well as leadership is very scarce indeed (the exceptions include Benneworth, 2007; Chapain et al, 2009; Collinge and Gibney, 2010; Gibney et al, 2009; Sotarauta and Linnamaa 1999; Sotarauta 2005; 2009; Stimson et al, 2009). Institutional entrepreneurs are required to be able to determine the direction for change with, through and by people, bring people together on one track and inspire them. What they need is cultural/cognitive skills like framing and persuading to deal with various forms of established power, procedural skills to deal with procedures in the issue in question, political and interactional skills to link the initiative with the dominant political agendas, and develop alliances (DiMaggio, 1988). Institutional entrepreneurs often have to overcome structural power by outmanoeuvring dominant discourses and coalitions, and therefore they are actors who have a greater range of assets than others in the region for stretching constraints, mobilizing competencies and resources and being able to acquire needed power to do so. As Senge (1990) reminds us, leaders are responsible for building organizations in which people continually expand their capability to understand complexity, clarify vision and improve shared mental models. Thus institutional entrepreneurs are responsible for

institutional flexibility, and particularly for choreographing and directing learning processes that aim to change the three pillars of institutions (see Table 1 below).

Institutional entrepreneurs are required to lead not only within the boundaries of the organizations and communities that authorize them, but they consciously need to reach organizations and communities across the boundaries to reach such spheres in which their actions and words may have influence despite having no authorization (Sotarauta, 2005). As pointed out by Healey et al (1995) and from a different point of view also by Sotarauta and Kautonen (2007), the mobilization of institutional strategies can no longer be described as ‘top-down’ or ‘direct and control’ models. Institutional strategies, however, are not easily mobilized. Strategy preferences on how to mould institutions are formed and reformed by balancing different interests and seeking third solutions. Often they emerge from complex processes and are thus also dependent on the logic of the situation and political judgement as to what is feasible and what is not, and therefore the question of the nature and forms of power in the context of regional development appears to be among the key questions in regional development studies. As Gibney et al (2009, page 5) note, ‘knowledge-based economic development increasingly implies the adroit integration of economic, political and social life – the facilitation and stewarding of group-based learning and innovation.’ They also maintain that the processes of regional development are characterized by interdependency, reciprocity and the pooling of resources over an extended period of time. As they say, collective action requires ‘a form of leadership that seeks to generate, renew and sustain the collective learning cycle. It is not time-limited but time-extensive – it is leadership that is able to look beyond the short-termism of performance goals, the ‘statutory’ and the ‘contractual’.’ (Gibney et al, 2009, page 9).

There is a need to see leadership in a new light. Even if leadership is often seen as a formally constituted hierarchical power, in a world characterized by inter-institutional

overlaps and distributed power, and many conflicting or mutually supporting aims and policies, leadership needs to be reconceptualised and institutional entrepreneurship studies studied three perspectives in mind: a) the *process* perspective that informs a study on dynamism of regional innovation systems and secures a temporally conscious approach (see institutional change typology above), b) *network* perspective that informs about the social relationships of the actors in and beyond a regional innovation system and c) *governance* perspective that informs about the wider systemic issues framing and moulding both the actual systems and journeys as well as forms of institutional entrepreneurship.

Again, fresh questions emerge: What kind of leadership do institutional entrepreneurs exercise in innovation systems; how do they aim to influence, who are their followers, and how do they interact with other key actors to mould institutions, etc. Next, we take a look on institutions that institutional entrepreneurs aim to change.

4 The concept of institution in innovation studies and beyond

Both the 'old' and 'new' strands of institutionalism emphasize the importance of institutions in economic activity and draw attention to the 'evolutionary' aspects of it (Parto 2005, 22). According to Parto (2005, 22) the old institutionalists are generally 'commended for drawing attention to the complex and "instituted" nature of the economy but criticized for vagueness on how best to incorporate complexity into economic analysis'. For their part, according to Parto, the new institutionalists 'may be praised for bringing institutions into economic analysis but criticized for remaining largely within the limited bounds of the neoclassical conceptual framework'. For institutionalists, key to understanding the processes of growth and change are the institutions of the economy, as well as individual preferences. But understanding institutions requires appreciation of complexity, continuity, and evolution in historical time. (Parto 2005, 22).

In innovation studies, and knowledge dynamic studies more broadly, institutions are usually defined fairly straightforwardly as rules-of-the-game and organisations are seen as players (e.g. Edquist, 2005), but, as Hodgson maintains, also an organization can be, and often is, institution in itself (Hodgson 2006). Institutions frame the actions and choices of many actors and organisations often carry this kind of role (e.g. universities in their own countries and regions and Nokia in Finland). In regional development studies the question usually is, why certain institutional arrangements facilitate economic development of regions while others seem to hinder it (Rodríguez-Pose and Storper 2006, pages 2-3). To answer this question, we need to reconsider the fairly clear-cut distinction between institutions and organisations and to appreciate the notoriously complex and context-sensitive nature of the concept. Ultimately, the question is what institutions govern economic development of a specific region in specific times and hence also, what is an institution, is a context-specific open empirical question.

Of course, different schools of thought define institutions differently. From a sociological viewpoint an institution reflects societal forces (Lecours, 2005, page 8). Sociological institutionalism stresses the cultural-cognitive elements while the rational choice institutionalism sees institutions essentially as coordination mechanisms (Hage, 2006; Hollingsworth, 2000) and stresses the regulative elements. According to this view institutions change constantly to compensate changes in markets (Martin, 2000, page 83). Historical institutionalism, for its part, is complementary to these views as it adds a political dimension to institutional change by putting an emphasis on the normative elements. For historical institutionalists institutions are systems of economic, social and political power relations (Martin, 2000, page 83) that affect the distribution of resources and power between the actors embedded in them (Campbell, 2006, page 507). But, as Campbell (2006, page 507) notes, institutions are ‘settlements that are forged through

bargaining and struggle'. In many institutional approaches these branches are seen as exclusionary.

For our purposes, a relatively comprehensive view on institutions that cross the various schools of thought is needed for future theoretical and empirical studies on institutional entrepreneurship and hence the definition of Morgan (1997, page 493) provides us with a good generic point of departure. According to Morgan, institution refers to recurrent patterns of behaviour (habits, conventions, and routines), and as Hodgson (2006, page 2) simplifies, institutions are 'the kinds of structures that matter most in the social realm: they make up the stuff of social life'. For their part, March and Olsen (2005, page 4) note that institutions are 'a relatively enduring collection of rules and organized practices, embedded in structures of meaning and resources that are relatively invariant in the face of turnover of individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals and changing external circumstances.' Consequently, language, money, law, systems of weights and measures, table manners, and firms (and other organizations) may thus all be institutions (Hodgson, 2006, page 2).

In the systems of innovation literature such factors as intellectual property rights laws; other laws; various standards; environment, safety and ethical regulations; organization-specific rules; industry specialization and structure; governance structure; financial system; structure of the research and development; R&D investment routines; training and competence building system as well as operational cultural factors (see e.g. Edquist 2005 and 2008; Autio, 1998; Braczyk et al, 1998; Howells, 1999) are raised as institutions. Consequently, given the nature of the institutions listed as important in innovation literature changing them requires daunting efforts indeed.

The three-dimensional view on institutions introduced by Scott (2001) compiles different schools of thoughts in one framework and hence appears as useful for efforts to

understand and explain institutional change. According to Scott institutions are composed of regulative, normative and cultural-cognitive elements. More or less all scholars underscore the importance of regulative aspects of institutions. The regulative pillar highlights institutions as a constraining force that regularizes behaviour. Here, rule setting, monitoring, rewarding and sanctioning activities are the ways to attempt to influence future behaviour. The normative pillar includes both values and norms and thus lays emphasis on rules that introduce a prescriptive, evaluative and obligatory dimension into social life. The normative pillar stresses factors that point towards what is preferred and/or desirable and to standards on which existing structures are based (Scott, 2001, pages 51–54). The cultural-cognitive pillar recognizes that external frameworks shape internal interpretation processes (Scott, 2001, page 57) and therefore abolished, renewed and/or totally new institutions change the ways actors see, interpret and understand themselves, their actions and positions in wider structures.

TABLE 1. Institutional pillars and carriers (Scott, 2001, page 77)

	Pillars		
Carriers	<i>Regulative</i>	<i>Normative</i>	<i>Cultural-Cognitive</i>
<i>Symbolic systems</i>	Rules, laws	Values, expectations	Categories, typifications, schema
<i>Relational systems</i>	Governance systems, power systems	Regime, authority systems	Structural isomorphism, identities
<i>Routines</i>	Protocols, standard operating procedures	Jobs, roles, obedience to duty	Scripts
<i>Artifacts</i>	Objects complying with mandated specifications	Objects meeting conventions, standards	Objects possessing symbolic value

5 Institutional change – incremental and abrupt, continuous and discontinuous

A simultaneous emphasis on dynamism of innovation systems and a need to shape institutions highlight institutional flexibility as an important factor in long-term development of regions. Institutional flexibility, however, is a rather paradoxical concept. As has become evident above, institutions are more often than not seen as sources of

stability and order (Scott, 2001, page 181) and not as sources of change and innovation. However, as Harty (2005) points out, this understanding is more theoretical than empirical in nature. Innovation studies have stressed the importance of innovation facilitating institutions and hence such questions as (a) how to promote institutional and organizational change for better innovation systems and, (b) how to create, abolish, and change something that is stable and a source of order and a product of emergent properties, emerge as crucial. To understand better how institutional entrepreneurs aim to do all this we also need to understand the nature of institutional change. Lundvall et al (2002, page 225) argue that in the innovation system studies, there is a need for deeper understanding of transformation processes at the institutional level. They argue further that the institutions themselves are actually not important as such but the processes of institutionalization are.

The many definitions of institution highlight the fairly shared view of the constraining nature of institutions in the literature. This kind of restrictive perspective in which deviating actions are sanctioned is complemented by the recent literature that also acknowledges the enabling role of institutions (Hage, 2006; Hollingsworth, 2000; Scott, 2007). Here, an institution is interpreted both as an object of changes itself and as a constraining as well as an enabling and incentivizing structure for change (see Soskice, 1999, page 102). Howells (1999, page 78) provides a good point of departure for a search for answers by noting that the institutional structure for innovation coevolves with actors and new technology, and the interaction between structure and actors is bidirectional.

The basic difficulty in change and development studies usually is that there is an implicit assumption that it is possible to distinguish periods of equilibrium from periods of change. According to Weick and Quinn (1999, page 363), for long the basic view on change remained more or less the same. It was based on Lewin's notions of change as a three-phase sequence of events: melt the old, make change and freeze the new. From this

point of view change is seen as a discontinuous period between periods of stability and continuity. More often than not, however, it is stressed that change is the normal state of affairs and stability is just an anomaly (Pettigrew, 1992; Tsoukas and Chia, 2002; Weick and Quinn, 1999). Consequently, in studies focusing on change, a distinction between abrupt, discontinuous and periodic, on the one hand, and a continuous, incremental and relatively linear view, on the other hand, is fairly common.

Streeck and Thelen (2005) argue that gradual transformation seems to be the most promising view on change in modern capitalistic societies instead of abrupt change leading to discontinuity (breakdown and replacement). This argument reminds us that not all incremental changes are reactive and adaptive for protection of institutional continuity (reproduction and adaptation). As a result of an accumulation over longer periods of time of subtle, seemingly minor, changes a considerable discontinuity may surface beneath the apparent stability. Streeck and Thelen's argument is in line with Campbell's (2006, page 508) conclusion that even changes that appear dramatic and radical are in practice less revolutionary than they may seem. Gradual transformation, 'creeping change', denies the possibility of an optimum state and highlights constant search as a core in any institutional (organizational) change process and hence, a punctuated equilibrium kind of change, where radical innovations take place between institutional reproductions, is not a viable option to study change (Streeck and Thelen, 2005). This ontological argument is crucial. Since the optimum cannot be reached there always is a gap between the 'ideal' and the real (Streeck and Thelen 2005, pages 8–9).

TABLE 2. The four types of institutional change (Streeck and Thelen, 2005, page 9)

		Result of change	
		<i>Continuity</i>	<i>Discontinuity</i>
Process of change	<i>Incremental</i>	A. Reproduction by adaptation	B. Gradual transformation
	<i>Abrupt</i>	C. Survival and return	D. Breakdown and replacement

Hall and Thelen (2009) divide the role of agency to institutional change into three main types: a) reform (institutional change explicitly directed or endorsed by the actors; b) defection (key actors cease behaving according to the rules and practices prescribed by a pre-existing institution); and c) reinterpretation (the actors learn new ways of thinking and consciously create new interpretations of themselves, rules as well as practices without abolishing the institution itself. We argue that a good deal of a long process of institutional change can be understood as a coevolution between several institutions and organisations acting on them. Different actors in a region may respond to different pressures but they need to cope with the moves made by the other influential actors too. To understand these kinds of institutional change processes we should ask more specifically: How do institutional entrepreneurs deal with change? What kind of change strategies do they launch? Do they understand and use the power of ‘creeping change’ or do they use brute force and aim for breakdown and replacement? And, more realistically, what is the combination of change strategies they adopt in specific situations at specific times?

The simplified research agenda behind all the questions raised in the above Sections is presented in Figure 1.

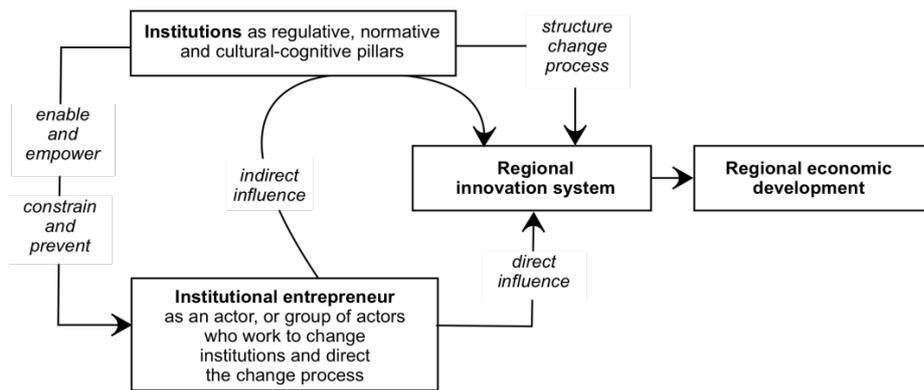


Figure 1. Relationship between an institution, institutional entrepreneurship and other actors

6 Conclusion – four sets of questions raised

Gertler (2010, 7) poses a challenging question for all the students of regional development and innovation: ‘how does one account for and understand the layering of institutions and their multiscalar interaction?’ We do not have an exhaustive answer to this challenge but we propose that by following and analysing the activities of institutional entrepreneurs we might get additional analytical leverage. We endorse Gertler’s view that too micro-level analyses on regional development would not provide much insight on institutional change. Gertler (2010, 4) maintains that ‘the still vogueish adherence to actor-network theory diverted collective attention to the minutiae of everyday practice, as reflected in texts, artefacts, and people. In the rush to document the seemingly never-ending ways in which actors and networks produce specific outcomes, sight was lost of the larger institutional architectures that shape and constrain individual choices, and that create geographical divides and discontinuities within the global economy: in other words, ‘too much actor, not enough structure’ (Gertler 2010, 4). Institutional entrepreneurship might be a way to find a balance between structure and actor.

Indeed, it seems that ‘one of the most common pitfalls of an institutional approach is the constant temptation to want to ‘read off’ individual behaviour from national (or local)

institutional structures. (Gertler 2010, 5.) Consequently, this paper proposes that there is a need to address contemporary challenges in the field of (regional) innovation studies by analysing the encounters of institutional entrepreneurs and institutions, i.e., the ways in which actors aim to change the very institutions that govern their own activities. The proposition, however, is not to take regional innovation studies towards leader-centric approaches; on the contrary, to study institutional entrepreneurship is to study forces changing the institutions governing regional innovation systems and more broadly regional development. Hence, no causality between actions of a single actor and/or groups of actors and institutional change is predestined in this line of study. At best, institutional entrepreneurship studies are a form of process-oriented inquiry where the role of actors is fleshed out by analysing the change processes. Consequently, taking institutional entrepreneurs as units of analysis might shed light on the key processes of institutional change and this might also lead to practical policy recommendations on how to influence, lead complex processes and hence to embed the capacity to change strategically in the regional innovation systems.

The wider scientific goal here is to contribute to conceptual and methodological development of knowledge-based regional development and innovation studies by taking institutional entrepreneurship under closer investigation. But who are these actors, what do they do with whom to create new institutions and/or to abolish or change the old ones, and why and how? Are they individuals, coalitions, organizations or what? Being the first take on institutional entrepreneurship in the context of knowledge-based regional development and innovation systems this paper does not yet answer the questions raised but frames the research agenda and the conceptual tool-kit to look for answers to four sets of questions. The *first* set of questions focuses on the question of who they are. To answer this question such a methodology is needed that enables a search for institutional entrepreneurs through

the process, instead of pre-selection of leaders according to their formal positions. Institutional entrepreneurship goes beyond the formal positions. There may be actors who mould the institutions without most of us even noticing it and not all the 'big cheeses' can be classified as institutional entrepreneurs. Consequently, the question 'who are they' must be considered as an open empirical question. Additionally, it should not be assumed that individual actors could change institutions alone. Institutional entrepreneurship ought to be studied as a multi-actor and multi-scalar phenomenon in time. The proposition is that there are always several institutional entrepreneurs who either compete or collaborate. Some of them lose their positions while new ones surface. Another proposition is that in each case institutional entrepreneurship is like a relay, conscious or unconscious, but nobody is in charge from 'day one' to the end (if the start and end can even be identified).

The *second* set of questions emerging from the above discussion focuses on the relationship between institutions and institutional entrepreneurs. Indeed, 'how can these same people, by an act of will, ever step outside an innate institution and change it', as Maskell and Malmberg (2007, page 610) put it. Can they actually do it or is institutional entrepreneurship simply an illusion and emergent properties stronger than conscious efforts to mould institutions – how does emergence and intention interact in time? Basically the second set of questions revolves around the following research questions: (a) How do institutions facilitate and/or hamper regional knowledge-based development (or basically any relevant phenomena) and (b) How do key actors (institutional entrepreneurs) influence the course of events and aim to change the very same institutional setting in which they are embedded? All this leads to the *third* set of questions that on its part revolves around strategies adopted by institutional entrepreneurs and their leadership capacity. How do they aim to do what they aim to do, how do they establish new governance and power systems, how do they deploy the existing systems of power and governance as resources in their

endeavours, what kind of power do they have and how do they exercise influence? Additionally, more research is needed to establish in what kind of local and regional contexts institutional entrepreneurship is possible, whether there are such local/regional operational cultures that suppress this kind of entrepreneurship and make it impossible to surface. Consequently, the *fourth* set of questions deals with the soil in which institutional entrepreneurs emerge, operate and learn their skill.

Ultimately, to repeat and conclude, the aim of taking institutional entrepreneurship under close scrutiny is to add analytical leverage to endogenous development processes and find a fresh lens that enables studies operating in between macro and micro issues to have an intensive analytical micro-level lens – by looking close, one may see far.

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