Abstract

Since its launch in the mid-1990s, the learning region has been much debated by academics and applied in regional policies, which are as such positive signs. However, the concept has also been criticised for its fuzziness and its spatial (or regional) fetishism. By applying a cultural and relational perspective, the paper postulates a shift from the learning region concept that studies regions as places of learning to a new analytical framework, learning in space, which studies culture-influenced learning processes in relations or networks of people and organisations.
Keywords: learning region, learning in space, cultural perspective, relational perspective

JEL Codes: R58 - Regional Development Policy, R5 - Regional Government Analysis, R - Urban, Rural, and Regional Economics
1. Introduction

In the framework of the contemporary transformation from an industrial to a knowledge-based economy, the learning economy (LORENZ and LUNDVALL, 2006), learning regions and also learning cities have been propagated as future concepts for successful economic development in many countries of Europe (MORGAN, 1997; HASSINK, 2007; ASHEIM, 2009; BOEKEMA et al., 2000; OECD, 2001; BELLINI and LANDABASO, 2007). The debate about learning regions has not been confined to an academic and abstract one, it has also been taken up by the OECD (2001) and the EU (BELLINI and LANDABASO, 2007) and numerous policy initiatives launched under the label of learning regions (LAGENDIJK and CORNFORD, 2000).

Reading the literature on the learning region, three not mutually excluding angles can be distinguished from which this concept has been launched (see also ASHEIM, 2009; RUTTEN and BOEKEMA, 2007b). First, some authors have developed a theoretical-structural perspective considering the learning region as a spatial outcome of grand societal and economic changes at the macro level. This perspective has been launched by FLORIDA (1995) who broadly defines learning regions as the outcome of the shift from mass production capitalism to global, knowledge-intensive capitalism. These ideas have not been taken up by others to a large extent (one exception is CREVOISIER (1999), see also ASHEIM, 2009). Secondly, more authors have written about the relationship between entrepreneurial learning, innovation and spatial proximity at the micro and meso level (BOEKEMA et al., 2000; SCHAMP and LO, 2003). For their competitiveness firms depend on innovation processes. Firm innovation processes increasingly take place in interaction with other organisations, be it with other business partners, such as customers,
suppliers or competitors or with public research establishments, higher education institutes, technology transfer agencies and regional development agencies. Innovation processes nearly never take place any more in isolation. The spatial environment provides different local, regional and national institutional contexts for interactive learning. From this perspective, the learning region can be considered as learning by interacting between actors who are linked to their location or embedded in their region: elsewhere learning by interacting in its present form would not have been possible. Collective learning processes and a collective tacit knowledge are linked to the location because of the coinciding of social, cultural and spatial proximity (Maskell and Malmberg, 1999; Cooke and Morgan, 1998; Boschma, 2005). This collective tacit knowledge in regions affects both individual and organisational learning (OECD, 2001). Low stocks of it can impede learning, high stocks, on the other hand, can lead to path dependence and lock-ins (Hassink, 2010; OECD, 2001). Thirdly, most authors have launched the concept as a theory-led regional development concept from an action-related perspective at the meso-level, which aims at achieving and/or supporting collective learning processes (Morgan, 1997; Butzin, 2000; OECD, 2001). The regional level is more and more seen as the level that offers the greatest prospect for devising governance structures to foster learning in the knowledge-based economy (Cooke and Morgan, 1998; Lorenzen, 2001; Boekema et al., 2000). According to the OECD (2001, p. 24) the learning region is "characterised by regional institutions, which facilitate individual and organisational learning through the co-ordination of flexible networks of economic and political agents". Regional policies are crucial for stimulating individual and organisational learning, because policy-makers can address path dependence that goes beyond the interest of single agencies and firms (OECD, 2001). Both, changing the industrial structure and institutional unlearning are issues that can fruitfully be
addressed by regional policy-makers. As the learning region is a model, it is not possible to identify examples of actually existing learning regions (OECD, 2001). There are various trajectories towards the goal to become a learning region. To stimulate the development of collective tacit knowledge in regions is an important element of the learning region strategy. The network is open to learning, both intra-regionally and inter-regionally (HASSINK and HÜLZ, 2010), and willing to unlearn.

However, despite its positive resonance among academics and policy-makers and no matter from which angle you look at the learning region, many critical voices about it can be heard, as well (ASHEIM, 2009, HASSINK, 2007, COOKE, 2007, HUDSON, 1999). HUDSON (1999) asks himself what is new about the concept. MALMBERG (1997, p. 576) observes another significant shortcoming: "The questions in urgent need of an answer may thus be phrased: what are the precise characteristics of 'learning regions'?" According to COOKE (2007) learning regions waxed and waned quickly because the concept is unreflective and leads to the absorption of old information. In a similar critical vein, this paper will point out a number of weaknesses, such as the fuzziness, normative character and strong overlaps of the learning region concept with other similar concepts as well as its too strong focus on the local fix. We argue that the learning region in its current form should be abandoned: we see few chances for it to survive as a promising and sound theoretical concept in regional studies and economic geography. However, we also identify an important merit of learning processes which deserve further research attention. The capacity of both individuals and organisations to engage successfully in exchanging and generating knowledge is regarded as a crucial component of economic performance in the knowledge-based economy. Therefore, “... identifying and
strengthening the factors that can support ... economic learning have become critical
goals for policymakers and academic researchers alike” (Benner, 2003, p. 1809).

The aim of this paper is, therefore, to contribute to a better understanding of such
learning processes by proposing a new analytical framework, learning in space, which
applies a cultural and relational perspective. Thereby we emphasize that culture in
terms of value based practices significantly influences people's ability to exchange and
generate knowledge. Hence culture is considered to affect innovation activities at least
indirectly. Furthermore, we highlight the relational rather than regional/territorial
nature of learning processes because they do not stop at the border of a region.
Altogether, the paper postulates a shift from a learning region view of studying regions
as places of learning to a new analytical framework, learning in space, studying culture
based learning processes in relations or networks.

The paper begins with a systematic overview of the learning region's main points of
critique (Section 2). Since we are convinced that learning processes are of key
importance for the innovativeness and competitiveness of regions, we will propose an
alternative analytical framework, learning in space, in Section 3 which helps to tackle
the main questions and challenges derived from a critical view on the learning region.
Section 4 will summarise the main results of this conceptual paper.

2. A critical stance on the learning region

No matter from which angle the learning region has been launched (see Introduction),
recently critical voices on the learning region have become loud which prevent the
learning region from becoming a fully-fledged theoretical concept in regional studies (Hassink, 2007; Cooke, 2007; Martin, 2001, p. 98; Crevoisier and Jeannerat, 2009). They include: (i) not regions but actors learn, (ii) the normative character of the concept, (iii) the overlap with other concepts of regional innovation strategies, (iv) its fuzziness, (v) and not getting beyond the local fix.

Not regions but actors learn

Asheim (2009) highlights that learning processes first of all, require people to initiate and participate in the exchange and creation of knowledge, not regions per se; the regional level is argued to become important due to the social and institutional embeddedness of actors creating territorialized learning processes. It is criticized that regions are at risk of being perceived as collective actors taking over the rationalities of firms. According to Cumbres et al. (2003, p. 333) “One of the main effects of these analytical shortcomings is to encourage an ontologically false treatment of regions as strategic agents with causal powers of their own ... The learning region literature in particular displays this tendency towards spatial fetishism, rooted in a conceptual slippage from the level of the firm to the level of the region”. Thus the policy attention is turned towards the development in regions instead of centring on evolving processes of regions.

A normative concept

A normative concept suggests a distinct way of handling regional innovation deficits usually concluding in one-size-fits-all solutions. This has been convincingly criticised
and resolved by Tödtling and Trippl (2005) with respect to regional innovation systems, but also the learning region tends to be a normative approach: it firstly lacks a sound empirical base and therefore, rather represents a theory-led model. In contrast to most of its siblings in the family of territorial innovation models (TIMs) (Moulaert and Sekia, 2003), who are mainly based on experiences in growth regions such as Silicon Valley, Baden-Württemberg or the Third Italy, the learning region is not derived from experiences in any particular region. It did not develop any typologies or other categorisations that point to the relevance of the institutional context of application or emergence. Secondly, the concept appears to stick to unique policy principles which can be applied to a broader range of regions, thus tending to one-size-fits-all solutions (Hassink and Lagendijk, 2001, OECD, 2001); learning regions are supposed to foster innovation activities when regional actors are integrated into flexible, bottom-up, participatory and horizontally based networks, stressing the actor’s autonomy of action and structural organisation as flat hierarchies (Asheim, 2009).

An overlapping concept

As the learning region can be considered an eclectic concept (Fürst, 2001), it strongly overlaps with several existing theory-led development models and policy-oriented innovation concepts such as clusters, industrial districts or regional innovation systems (Moulaert and Sekia, 2003). Learning regions belong to this TIM-family, situated somewhere in between the extremes of abstract theories and regional policy strategies. Some authors see learning regions as successors of these somewhat older theory-led development models (Asheim, 1996, 2012), others, in contrast, see close links between the learning region and the innovative milieu concept (Butzin, 2000; Fürst, 2001).
We find the regional innovation systems approach (Cooke et al., 2004) to be most strongly overlapping with the learning region concept but also here opinions differ about the superiority of one concept over the other (Cooke and Morgan, 1998; Asheim, 2012). In other words, there is no consensus yet on what exactly distinguishes the concepts from each other and some advocates of the learning region think trying to draw lines between them is “something of an artificial exercise” (Healy and Morgan, 2012, p. 2).

In our view there are three main differences which, however, are subtle rather than significantly separating the two concepts (see also Cumbers et al., 2003). First, the learning region is in fact a conceptual model, whereas the regional innovation system concept has been far more empirically described and tested (Cooke et al., 2004). Secondly, the regional innovation system concept is a slightly broader concept than the learning region (Morgan, 1997). It contains a broader set of regional actors who affect innovation than the learning region, which is more focused on innovation support policies and agencies. Thirdly, there might be a difference related to the focus on ‘innovation’ of regional innovation systems and ‘learning’ of the learning region concept.

A fuzzy concept

Fuzzy concepts are considered to lack clarity as terminological definitions and applied methodologies are vague, scholars contradict themselves and empirical evidence is scarce or collected in anecdotal ways (Markusen, 2003). The learning region can be classed as a fuzzy concept in many ways (e.g. Hassink, 2007; Boekema et al., 2000; Martin,
2001; Cumbers et al., 2003): it has some methodological shortcomings with respect to clarity, rigour and operationalisation as well as diverse definitions and interpretations, as has been laid out in the previous section. According to Aoyama et al. (2011, p. 170): “… the learning region concept remains contested and is difficult to operationalize in research”. Seldom concrete examples are shown (exceptions are the OECD, 2001; Benner, 2003) and policy-makers do not make much effort to define what they actually mean by learning regions (Lagendijk and Cornford, 2000). It is argued that the concept appears to travel easily from academic circles to policy-makers and back without deep thoughts about its meaning (Hassink and Lagendijk, 2001). According to Markusen (2003) all this will turn out to be problematic if the learning region aims to become a solidified concept for policy makers based on sophisticated scientific work.

Not getting beyond the local fix

In order to stay competitive, companies must integrate locally specific competence with codified, generally available knowledge, or, in other words, they must link their own innovation system with national innovation systems and international knowledge flows (Fromhold-Eisebith, 2007). Policy makers, thereby, set different priorities of improving the learning region depending on the nation in which they operate. Accordingly, Asheim (2009) distinguishes an American from a European approach whereby the former stresses learning region strategies that enhance the quality of knowledge infrastructures and the latter emphasizes the improvement of trust and social capital.

Besides neglecting national differences in strategic foci the learning region concept is criticized for neglecting sectoral differences and the position of firms in global
production networks. By stressing the supply architecture for learning and innovation, it tends to ignore that "different kinds of products will 'demand' different kinds of innovation systems" (Storper, 1997, p. 107, 108). Firms in different industries need different partners for technological learning (chemical industry – public research establishments; building industry - customers) at different distances. Most regional policy-makers, however, have little knowledge about the global production networks in which regional firms are embedded (Herrigel, 2004). Although, due to the growing importance of global production networks, learning processes are therefore less and less confined to the local (Batheit et al., 2004; Faulconbridge, 2006), learning region strategies mainly focus on supporting intra-regional learning processes. Malmberg and Maskell (2006, p. 8) summarise the critique in the following way: “... the significance of local context has, perhaps, been overemphasized in the geography of learning discourse and ... explanatory models of localized learning have became overly introvert”. In defence of the learning region Healy and Morgan (2012, p. 23) argue that “Yet in itself this [the importance of non-local ties for learning] does not undercut the role of the regional space as a place which shapes the efficiency and effectiveness of the learning process”.

Based on the outlined points of critique we finally conclude that the learning region concept provides an insufficient basis for analysing and explaining development. Moreover, although the learning region has played its role as theoretical model in policy documents some ten years ago, more recently it has clearly lost its importance particularly in comparison with other TIMs, such as clusters and regional innovation systems. In the three most recent OECD documents on regions, innovation and policy, for instance, the learning region is mentioned only one time, whereas the other two
concepts are prominently dealt with throughout the reports (OECD, 2009, 2010, 2011). This clearly shows that it is over the hill as a policy influencing model.

However, the learning region has drawn attention to important issues of learning processes that are worthwhile to be thoroughly analysed. The criticism highlights that learning is an interactive process of individuals which takes place among and between actors such as firms, universities and research institutes. Learning is argued to happen in interrelationships or networks of people and organisations which are located at different spatial scales rather than being exclusive to the region. It becomes clear that the organisation of learning is influenced by the specific institutional context (e.g. industry, national innovation system) and that strategies to stimulate learning processes cannot be easily transferred across space in a one-size-fits-all manner. And finally, exchanging and producing knowledge appears to require a certain extent of social proximity which allows for accessing relevant resources via trust based relations on the one hand, and openness and diversity with respect to ideas, on the other hand. In the following section we suggest a new concept, learning in space, with a cultural and relational perspective in order to better understand how learning processes are arranged and linked to regional economic development.

3. Learning in space as an alternative to the learning region

After having criticised the learning region concept and having stressed the importance of learning processes in the knowledge economy, what alternatives are there in place? In the literature we observe two alternatives: localised learning and spaces of learning, which we will shortly present in the following paragraphs. We will also point out their
shortcomings and will then present our alternative, learning in space, which will then be deepened with a cultural perspective in Section 3.1 and a relational perspective in Section 3.2.

Localised learning is probably the most prominent alternative concept to the learning region focusing on learning in a local and regional setting. The concept has been developed by Mark Lorenzen, Peter Maskell and Anders Malmberg and has been elaborated in several publications (Lorenzen, 1998, 2001, 2007; Malmberg and Maskell, 2006). Localised learning is defined as “processes of technological and institutional development taking place in cities or clusters” by Lorenzen (2007, p. 799) and as “…how local conditions and spatial proximity between actors enable the formation of distinctive cognitive repertoires and influence the generation and selection of skills, processes, and products within a field of knowledge or activity” by Malmberg and Maskell (2006, p. 1). There has been surprisingly little interaction between the learning region and localised learning concepts in terms of cross-citations or debate about their core notions. Due to too many similarities with the learning region concept and hence its characteristics and also weaknesses (seen from the second angle (see Introduction)), we do not see it as a serious alternative. In a way they both stress too much the advantages of spatial proximity for learning processes, particularly when it comes to transferring tacit knowledge.

Spaces of learning, the second alternative, is a term used by Faulconbridge (2006, 2007) in his research on learning processes in advertising professional service firms. By using this term he particularly refers to global spaces of learning in an attempt to show that tacit knowledge can stretch far beyond the local fix. He also emphasises the role of
communities of practice for globally stretched learning in this particular industry. In analysing whether the local or global are significant for learning processes FAULCONBRIDGE (2006) also stresses the need for differentiating between transferring best practice and hence existing knowledge from the production of new knowledge. It is particularly the latter which is less tied to the local fix and hence more easily transferred globally. In our view, however, there are two disadvantages related to spaces of learning as an alternative to the learning region. First, the term has hardly been conceptualised by FAULCONBRIDGE (2006, 2007). Secondly, in our view it has a strong connotation to global spaces of learning.

We therefore propose learning in space as an analytical framework in between localised learning/ the learning region and global spaces of learning. Learning in space was firstly coined by LORENZEN (1997) in a EUNIT conference paper but was quickly dropped for localised learning, the concept described above. We propose to breathe new life into this concept. In our view learning in space refers to knowledge exchange processes between individuals and/or organisations at several spatial scales affected by cultural and relational factors. What is the function of learning in space in comparison to the learning region concept? We do not regard it as a normative, but rather as an analytical framework to do research on learning processes crossing several spatial scales, from a cultural and relational perspective. It goes beyond the local fix, as it does not a priori stick to one spatial scale. We stress the cultural perspective of learning in space (which has been largely neglected in the learning region literature), as we regard the influence of norms, values and attitudes on learning processes and outcomes as crucial. We also emphasise the relational perspective of learning in space as networks, multi scalar embeddedness, as well as power relations affect learning processes and outcomes.
Furthermore, both the cultural and relational perspective not only affect learning processes in a positive way, they might also hinder learning processes, something that has been largely neglected in the learning region literature.

In proposing this analytical framework we answer FAULCONBRIDGE’s call (2006, p. 519, 520) that “the focus should fall on the interconnections of a global knowledge economy as well as the regional ‘hot-spots’ and, consequently, that the development of more intricate conceptualizations of the influence of space and place on knowledge and learning are needed”. Our initiative is also supported by FAULCONBRIDGE’s (2006, p. 520) following statement: “astute analyses of the socio-cultural embeddedness of many forms of knowledge and economic practice deserve our consideration when theorizing the spatiality of knowledge and learning”. He refers to the work done by GERTLER (2004), who “identifies the potential importance of ‘local’ cultural and institutional values in restricting the effectiveness of globally stretched learning” (FAULCONBRIDGE, 2006, p. 520).

3.1 Learning in space from a cultural perspective

AOYAMA ET AL. (2011, p. 149) define culture in their textbook on key concepts in economic geography as “an organizing principle and a reference for decision making” which may be associated with a place or economic agent and which represents “a source of what makes a place unique and what connects a place to other places (i.e. networks)”.

To understand the influence of culture on learning in space we need to draw on several neighbouring disciplines of economic geography and regional studies that work at the intersection of culture and economy. International business studies, cross-cultural
management research and organisational studies often conceptualize culture as workplace behaviour which is based on shared norms, attitudes, beliefs and habits within the firm (Schein, 1992; Schwartz, 1999; Trompenaars and Hampden-Turner, 1997; Hofstede, 1991). Culture is argued to structure leadership styles, conflict resolution and negotiation, to name only a few (for an overview, see Kirkman et al., 2006). It also affects the arrangement of inter-firm relation, leading to different national business systems (Whitley, 2000) and business networks (Dodd and Patra, 2002; Tsang, 2006), for example, observes that in contrast to Ireland, Chinese business networks of the software industry rely heavier on ties to family, kinship and friends because they are assumed to emphasize in-groupness and particularism. Culture is hence commonly defined to be reflected in observable business behaviour although a strict cultural determinism is denied: instead of acting solely in accordance to the cultural environment, individuals are able to behave in new, creative or unexpected ways, too (Gertler, 2004; Hofstede, 1991). However, a main problem of these concepts is seen in the reference to a national homogeneity of cultural values, norms and attitudes. Most notably, Hofstede (1991, p. 5) describes culture as the “the collective programming of the mind” shared by individuals who grew up in the same social environment which he later specifies as nation states. This view has been heavily criticized (Gould and Grein, 2009; Gerhart and Fang, 2005), particularly because the relationship between national cultures and individual-level outcomes is not very clear (for an overview, see Leung et al., 2005). A national cultural construct also conflicts with studies that reveal different cultures within a nation, such as contrasting entrepreneurial cultures in two Japanese regions, Hamamatsu and Kyoto (Aoyama, 2009).
We, therefore, disagree with conceptualizing homogenous national cultures, but believe that a value based approach is fruitful for analysing learning in space. This has been successfully applied by several authors who analysed the causal linkages between cultural values of social groups and differences in regional economic performances: BEUGELSDIJK (2007) focuses on entrepreneurial attitudes at the regional level and concludes that, amongst others, a risk-taking attitude, personal responsibility and orientation towards performance and achievement is beneficial for regional innovativeness and growth. RUTTEN and GELISSEN (2010) find social values related to ‘self-expression’ (ambition, openess) and ‘tolerance’ (openness to new ideas and people) as the strongest predictors for regional innovation activities and wealth. And GRANATO ET AL. (1996) highlight that instead of a whole set of cultural values, one dimension appears to be particularly relevant: societies that place emphasis on ‘achievement motivation’ (individual autonomy and economic achievement) display comparably high economic growth rates. These studies are closely linked to the positive sides of social capital, defined as interpersonal relations which are only economically valuable when complemented by social, cognitive and regulatory institutions that foster such cooperative inter-firm relations (LORENZEN, 2007, see also MALECKI (2012) and BOSCHMA’S (2005) assessment of cognitive, organizational, social and institutional proximity). In contrast, other values, norms and attitudes have been conceptualized to hinder regional development: according to INGLEHART and BAKER (2000) ‘traditional values’, e.g. stressing consensus instead of conflict and obedience to authorities, are shared more often by low than high income societies. In a similar vein, there have been legions of empirical studies stressing the weaknesses of strong ties: too strong ties can lead to cognitive lock-ins and thus weaken regional economic adaptability (HAUSER et al., 2007; FLORIDA, 2003; HUBER, 2009; RODRÍGUEZ-POSE and STORPER, 2006; SAFFORD, 2009).
“Breaking such community norms and habits – *this is how we do things here* – may take generations, until which regional choices and outcomes might reflect a kind of path dependence” (PENDALL et al., 2007, p. 18, see also DURANTON et al., 2009).

The studies outlined so far focus on values and attitudes of individuals which, once they are translated into behaviour, influence learning in space. But learning in space is also affected by regional culture. This is defined as a crucial dimension of regional industrial systems which, apart from culture, are shaped by local institutions, the structure of industries and the internal organisation of firms (SAXENIAN, 1994). Thereby, culture is defined as “shared understandings and practices that unify a community and define everything from labor market behavior to attitudes towards risk-taking” (SAXENIAN, 1994, p. 7). A successful region, such as Silicon Valley, is observed to display a culture that values entrepreneurial risk-taking, competitive individualism and a strong sense of community-building and cooperation. This regional culture is complemented by a distinct corporate culture emphasizing autonomy in decision-making, flat hierarchies and participation as well as openness, e.g. in information sharing. More recently, JAMES (2005) has related a self-identified regional culture (values, norms, conventions and beliefs) of Mormonism in Utah to firm performances. Growth rates and R&D intensities are thought to suffer from, amongst others, an inward-looking attitude, self-sufficiency and a high importance of religion which are incorporated into practices and policies of Mormon-owned firms. In contrast, networking, openness, outsourcing and exploiting other firms’ competences are identified as key cultural elements influencing learning in space.
However, conceptualizing regional cultures leads to the same homogeneity of individual’s values within a given territory that has been previously rejected for the national level. Under this assumption it becomes difficult to explain the rise of different cultures of firms (corporate culture) that are located in the same region; in these cases, the assumed common regional cultural traits are apparently overridden by other factors, such as the size (Chew and Yeung, 2001) and ownership structure (Tsui et al., 2006) of the firm.

Thus we find ourselves in the dilemma of being convinced by outlined research that culture matters but, at the same time, we are struggling to define how cultural values of individuals are affected by whole regions, nations or places in general. Note that we only speak of a relationship between cultural values and regional growth. The direction of influence, however, has not been specified since the causality between the two factors is argued to work both ways (Granato et al., 1996; Inglehart and Baker, 2000). The main challenge, in our view, therefore is to overcome the fallacy of presupposing ‘territorialized’ cultural values which dominate the behaviour of people as well as within/between companies. In Table 1 it becomes clear that there are different scales of self-identified culture, ranging from the national to the individual, whereas Figure 1 shows that what is often perceived as territorial culture is in fact located at the intersection of layers.

Insert Table 1 here
We think that the latest work of Rutten and Gelissen (2010) and Gould and Grein (2009) provide an interesting approach to conceptualizing cultural influences on learning in space. They commonly suggest cultural values to be shaped and applied as economic behaviour in interpersonal networks or communities. Communities are argued to “involve a shared consciousness [based on values, norms, attitudes] that differs from that outside the community, and community practices are an important way for instantiating culture” (Gould and Grein, 2009, p. 247). By limiting a cultural impact to the realm of interpersonal/organisational networks a generalization of culture for whole regions or nations can be avoided in two ways: first, it allows thinking of various subgroups within one region holding different social values; in the view of Rutten and Gelissen (2010), the creative class might differ in this respect from traditional blue collar workers; and secondly, people who are involved in learning processes are not necessarily bound together at the regional scale but still hold common values that guide their ways of communication and interaction with business partners. The following subsection elaborates why learning in relationships rather than regions seems more fruitful for analysing the effects on regional economic growth.
3.2 Learning in space from a relational perspective

By stressing the cultural perspective learning in space is strongly related to the underlying attitudes, norms and values about learning. Moreover, the often territorially bounded, local and regional, understanding of cultural influences, we argue, should give way to a relational view of learning processes in space, which is strongly related to relational economic geography.

Relational economic geography represents a broader set of streams of relational thinking within economic geography (Yeung, 2005; Bat helt and Glückler, 2003, 2011; Boggs and Rantisi, 2003; Sunley, 2008). It is strong in theorizing institutions, power, social agency and particularly the interrelatedness between scales, which can be criticised for being too narrow and reductionist in many other approaches of economic geography. Thematic concepts gained attention that stressed the relational embeddedness of actors, firms and organizations in networks, e.g. global production networks (Coe et al., 2008). Special emphasis is placed on the embeddedness of firms and organisational structures in a wider network of social relations and institutions at different spatial scales (Bat helt and Glückler, 2003, p. 131, 133). It also stresses the interdependencies of factors on local, regional, national and global scales as well as the embeddedness of individual agents in multiple networks (Boggs and Rantisi, 2003, Yeung, 2005). It reveals firms as intersections of associated individuals who are involved in numerous networks within and across company boundaries, e.g. conceptualized as communities of practice, with each following their own logic and providing individuals with different access to resources and capabilities of power (Boggs and Rantisi, 2003, p. 112; Ettlinger, 2003). The focus is on actors’ networks and interrelations (Boggs and
RANTSI, 2003, p. 114), resulting in no prioritization of a specific scale per se. Relational economic geography provides a balanced view of structure and agency where identical structural preconditions do not necessarily have the same effects at any time and place (BATHELT AND GLÜCKLER, 2003, p. 127) but might vary according to specific conditions (contingency). There is a strong focus on power relations or ‘power geometries’ (YEUNG, 2005; BOGGS AND RANTSI, 2003, p. 114). Economic change and spatial differences of economic outcomes are explained by different degrees of power inscribed in three dimensions of relationality, namely actor-structure, socio-spatial and scalar relationality (YEUNG, 2005, p. 43).

In one of the latest attempts to save the learning region concept from demise, RUTTEN and BOEKEMA (2007a) propose a relational view on the learning region, as well, with elements of structural, relational and social embeddedness derived from the sociological perspective of Durkheim and Granovetter. At first glance, there is little that distinguishes our view from their proposal. Norms, rules, values and conventions are declared as social institutions or capital operating at the regional level as part of social embeddedness; also, they can be analyzed as individual characteristics and thus, be found in concrete dyadic relations. However, what we criticize is the retained regional focus and the effort to identify precisely the effects of inter-firm networks, regional knowledge infrastructure and social capital on the process of regional learning (RUTTEN and BOEKEMA, 2007a). This is exemplified by their definition of the learning region: “... as the theory that explains regional learning; that is, the process of knowledge creation between actors within a region while accounting for the characteristics of that region, its actors and the relations between them” (RUTTEN and BOEKEMA, 2007a, p. 276). Knowledge creation is not always and primarily regional, neither in theory (BATHELT et
al., 2004) nor in practice (Schamp, 2009), because national and global agents and institutions play crucial roles for learning processes in small and medium-sized enterprises and multinational corporations.

This critique is not new but reinforced by the presented cultural perspective which is based on the idea of overlapping and interdependent levels of culture, particularly centered on the interrelation between corporate and (regional) network cultures (James, 2006). Norms, values and attitudes at the regional level can thus neither be viewed as “ingredients of innovation networks” (Oerlemans et al., 2007, p. 174) nor added to the “shopping-list’ of necessary institutions” (James, 2006, p. 197) and treated as independent variables, in order to enhance regional competitiveness. Consequently, implementing policies that foster participation, openness and cooperation between regional actors means to penetrate all cultural levels; concentrating on the region only, is too narrow-minded. This way, cultural proximity provides stronger arguments than spatial (regional) proximity per se (see Boschma, 2005), for analyzing and influencing learning in space. In line with a relational perspective, the region then increasingly has to be treated as a level of analysis or spatial cutout of a broader cultural landscape created and reproduced by the interplay between various cultures (see also Klaerding, 2009, 2011). That is why we suggest speaking of learning in space rather than learning regions.

All in all, after discussing alternative concepts to the learning region, namely localised learning and spaces of learning, we launched the alternative framework of learning in space in this Section 3, because we are convinced that it both compensates for some of the weaknesses of the learning region concept and fills a conceptual gap in the currently
available literature. We particularly emphasised the significance of the cultural and relational perspective for learning in space. Although these two perspectives have their problems, as has been laid out in the two subsections above, we see clear value added in them in relation to learning in space: culture particularly affects the transfer of tacit knowledge and the organisation of network structures which crucially affect interactive learning processes. The main value added of the relational perspective lies in conceptualising the intersections of scaled factors, the embeddedness of actors in multiple networks, as well as power relations, all factors affecting interactive learning processes.

4. Conclusions

As has been shown in this paper, a large group of scholars in economic geography, regional economics and spatial planning have published widely on learning from three angles, from a macro angle, which draws limited attention, and from the more prominent angles of firms and regional innovation policy. This paper has also shown that the learning region concept suffers from five main weaknesses, namely (i) not regions but actors learn, (ii) the normative character of the concept, (iii) the overlap with other concepts of regional innovation strategies, (iv) its fuzziness, (v) and its too strong focus on the local fix. In order to solve some of these problems, a shift from learning region to learning cluster has been proposed in previous critical publications (Hassink, 2007). That would mean, however, that the learning region would become a sub-concept of clusters.
Learning, however, is too essential for innovation and competitiveness to be treated as a sub-concept of clusters or regional innovation systems. Therefore, in our view learning deserves separate and full conceptual and empirical attention in regional studies and economic geography. In our view learning in space, which is distinctive enough from clusters and regional innovation systems and less bound to the regional level, as has been laid out in this paper, is a sound and promising alternative to the learning region as we knew it. Learning in space refers to knowledge exchange processes between individuals and/or organisations at several spatial scales affected by cultural and relational factors. We do not regard it as a normative, explanatory concept, but rather as an analytical framework to do research on learning processes crossing several spatial scales, from a cultural and relational perspective.

We do realise, however, that the cultural perspective, as well as the relational perspective are not equally relevant for dealing with the angles and criticisms presented in this paper. The cultural and relational perspectives contribute to all angles, but can be particularly well integrated in to the angle of learning firms. Regarding criticism, they are well suited to resolve the criticism of the too strong focus on the local fix, as culture cuts through various analytical levels and scales. Moreover, the variety of cultural influences does not allow for the prevailing claim of a unique, normative model of learning. Concerning methodological issues, however, both the learning region and the cultural and relational perspectives suffer from fuzziness. In advocating this direction, we are in line with colleagues such as SCOTT (2004, p. 489), who argued “for culture” … but “against the cultural turn”, which he regards as overly abstract and too far from economic reality.
Our proposed conceptual shift brings up three research avenues about learning in space that are, compared to the learning region literature as we knew it, much more concerned with the concrete role of non-regional actors in terms of their channels and magnitude of influence on learning processes. The first research avenue revolves around international actors, such as multinationals and migrant workers, and their culturally influenced (values, norms, attitudes) learning in space. Potential research topics include home-country effects of multinationals on learning processes with their foreign subsidiaries, a topic that arouses new interest due to the increasing importance of multinationals from emerging economies, such as China and India (Dohse et al., 2012), as well as the role of migrant workers and cross-regional communities of practice affecting interactive learning processes. The second research avenue is supposed to tackle questions around culturally influenced power relations in learning in space. Potential research topics include autonomous vs. authoritarian work practices, the rate of participation in knowledge networks, the role of supervision in knowledge enhancement and exchange and error management in relation to learning processes. These two avenues need to be complemented by a third avenue focussing on changing or persisting cultures at several scales and the consequences of change or persistence for learning in space. Such a research avenue could lead to empirical research on culturally influenced path dependence and cognitive lock-ins as learning hindrances and lacking adaptability.

Sound empirical research on these culturally and relationally influenced issues will safeguard the important position of learning processes in regional studies and economic geography, but in a much less normative and strict spatial strait-jacket than the previous learning region literature.
Acknowledgements

We would like to thank Roel Rutten, Pedro Marques and four anonymous reviewers for comments on earlier versions of this paper. The usual disclaimer applies, however.

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Table 1: Scales of self-identified culture

<table>
<thead>
<tr>
<th>Scale</th>
<th>Influences on self-identified culture</th>
</tr>
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<tbody>
<tr>
<td><strong>National</strong></td>
<td>• open-door policy: capitalist influence, growth</td>
</tr>
<tr>
<td></td>
<td>• industrial policy/programmes</td>
</tr>
<tr>
<td></td>
<td>• legal system</td>
</tr>
<tr>
<td></td>
<td>• education: learning techniques</td>
</tr>
<tr>
<td><strong>Regional/industrial</strong></td>
<td>• size, degree of maturity</td>
</tr>
<tr>
<td></td>
<td>• persistency/fluctuation of companies</td>
</tr>
<tr>
<td><strong>Corporate</strong></td>
<td>• size/age</td>
</tr>
<tr>
<td></td>
<td>• market strategy</td>
</tr>
<tr>
<td></td>
<td>• ownership</td>
</tr>
<tr>
<td><strong>Individual</strong></td>
<td>• trust in persons/institutions</td>
</tr>
</tbody>
</table>

Source: KLAERDING and HASSINK, 2011
One less prominent angle, somewhat isolated from the angles presented above, is the learning region as a concept to analyse the role of higher education institutes for regional learning processes (RUTTEN et al., 2003; KEANE and ALLISON, 1999).

It is in our view particularly the regional innovation systems concept that is much stronger bound to the regional (administrative) level and which fits much better as a tool to explain innovation disparities between regions and is hence a better basis for regional innovation policy than the learning region concept.