Towards a Conceptualization of Ecologies of Knowledge - Integrating the habitat and firm in virtuality and locality

Nikodemus Solitander,

Corporate Geography / Dept. of Marketing
Swedish school of economics and business administration, Finland
nikodemus.solitander@hanken.fi

ABSTRACT This paper uses the perspective of ecologies of knowledge to show the necessity of avoiding to juxtapose relational proximity to geographical proximity at a time when clusters are evolving into complex orchestrated ecologies, composed of different organisations and institutions that straddle multiple spatial scales. In doing this it also explores how space and geography matters in an increasingly digitalized society. The ecological perspective is deployed in a case study of the Arabianranta project in Helsinki, Finland. The paper analyses how the project aims create the leading geographical centre of art and design in the Baltic area. The vision of the project is to increase innovation and knowledge diffusion by co-locating firms, institutions and residential projects in a limited geographical space, but also by creating a borderless "virtual village", which is constantly connected to a global knowledge network. The case highlights the growing need for adopting an ecological perspective on knowledge diffusion, a perspective that recognizes both the need for localized communities and virtual communities as necessities for innovative activities.

Key-words: ecologies of knowledge, creativity, habitat, virtual space

Suggested Track: F.   Communities of practice, knowledge networks and networking

1. INTRODUCTION

"We have a community of language, custom, belief; but a society for purposes of business, travel, or scientific knowledge. Commercial partnerships are of particular importance; but even though a certain fellowship and community may exist among business partners, we would hardly speak of a 'commercial community'. And it would sound quite revolting to make the linguistic compound 'joint-stock community'." (Tönnies, 2001 (1887), p.18) The above quotation is taken from Ferdinand Tönnies' seminal work "Community and Society", and it serves as a fitting reminder of how positions change over time. Today joint-stock communities and other forms of corporate communities have been able to shrug off their once "revolting" sounding connotation. We are living an era where the communal feature of the corporation is branded and traded as a solution for innovation, creativity and possible higher earnings. But during the times of Tönnies the communal feature of corporations was not so evident, thus he made a distinction between what was to become known as Geshellshaft and Gemeinshaft. Gemeinshaft (community) is loaded with the notion of common language and traditions, a sense of "us", kinship and friendship, and to a certain extent based on an idyllic representation of the local. Geshellshaft is associated with particular fleeting roles and services provided, it was seen by Tönnies as artificial, segmented and superficial as compared to gemeinshaft.

With the revitalized interest in the role of proximity for innovation and knowledge diffusion, it is worthwhile to return to some of the ideas of Tönnies and the to role of communities. The territorial configuration that has received the most interest from research on creativity and innovation is arguably what is commonly labelled as "clusters". Clusters are the loci of much research not least because they tend to crystallize the interplay and importance between geographical proximity, and relational proximity. On one hand clusters show that agglomeration effects are still strong in the economy (Cooke, 2001; Leamer & Storper, 2001; Porter, 2000), on the other hand clusters often consist of firms with extensive non-local networks (Dicken, 2003; Dunning, 1998; Grabher, 2002; Owen-Smith & Powell, 2004).

Today we can see an increasing overlap between strands of knowledge research that focus on the role of communities. This includes research on both geographical entities and communities, which is evident in the learning region approach (Asheim, 1995; Florida, 1995; Lundvall & Johnson, 1994; Morgan, 1997), and organizational communities, which in turn has centred much around the ideas of communities of

practice (Brown & Duguid, 1991; Lave & Wenger, 1991; Wenger, 1998; Wenger & Snyder, 2000). Although they tend to emphasise different aspects of the proximity argument for creativity and innovation, they share the perception of the communal feature of innovation, where creativity and learning are not seen as a product of knowledge of gifted people or technologies (Amin & Thrift, 2004). To a certain extent, however, the dichotomies of relational proximity versus geographical proximity, global networks and local production systems have not evolved dramatically since the ideas of geshellshaft and gemeinshaft. Yet the discourse of policy clusters shows an increasing effort to blur the boundaries of relational and geographical communities.

Increasing interest among policy makers has mirrored the heightened interest among academia and the ever-increasing studies of clusters. In Finland alone one can observe several initiatives that are labelled "cluster initiatives": the biotech clusters in Viikki (Helsinki) and Turku Bio Valley, and the IT clusters of Innopoli (Helsinki) and Technopolis (Oulu), just to mention a few. The mentioned policy clusters all aim at reproducing some of the positive externalities connected to geographical clusters following Marshall's (1927) observations of specialised local labour pools; shared specialised non-traded inputs and infrastructure; and what has later been labelled "knowledge spillovers". The emphasis in these theories is that none of these sources of externalities is internal to a particular firm (Gordon & McCann, 2000).

Policy cluster initiatives, however, have to a certain extent been a hit-and-miss process. Many a cluster project in the form of science parks and technological centres has not been able to go beyond the preparatory stages of the creative process (Törnqvist, 2004). In other instances, such as the celebrated example of Silicon Valley, the neglect of social development and ecological innovation has arguably undermined the cluster competitiveness in the long run (Benner & Dean, 1998; Gerstleberger, 2004). Cluster initiatives have generally been kept apart from urban development, which in part explains the lack of holistic perspective. This seems to be changing, as there are initiatives that take the idea of clustering one step further by adding the idea of "regional cohesion" into the equation. Regional cohesion is here interpreted to include a strategy of developing a "common vision" (Cooke, 2001) or a common "regional identity" (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Farrell, 2004; Houtum & van en Lagendijk, 2001; Süssner, 2002) for a particular geographic entity or locality. This identity that can seemingly be shared by firms, policy planners and the inhabitants alike, and which can lower the barriers for

knowledge spillover and diffusion, consequently raising the level of creativity and innovation in the firms which are located in the particular region.

This paper endorses the ecological perspective (Brown & Duguid, 2000) to mediate the learning region and the communities of practice perspectives in order to understand the discourse that shapes current and envisioned cluster projects. It is argued that a perspective that avoids juxtaposing relational proximity to geographical proximity is needed at a time when clusters are evolving into complex orchestrated ecologies composed of different organisations and institutions that straddle multiple spatial scales (Morgan, 2004).

1.1. Aims and approach

This paper examines the conceptual bridging of two strands of knowledge and community literature, through the lens of ecologies of knowledge. It demonstrates the increased diffusion of the community aspects in firms and regions through the analysis the policy cluster of Arabianranta. Cluster literature, investment promotion material, and habitat promotion material is reviewed to provide evidence of the construction of particular clusters where innovation is promoted through increasing interaction between firms and governments, and an integration of the firm and the habitat.

2. Toward an ecological perspective on the knowledge economy

"The Gemeinschaft by blood, denoting unity of being, is developed and differentiated into Gemeinchaft of locality, which is based on a common habitat. A further differentiation leads to the Gemeinschaft of mind, which implies only co-operation and co-ordinated action for a common goal." (Tönnies, 1957, p.42)

2.1. The learning region

The learning region approach characterizes regions as collectors and repositories of knowledge where spatial proximity will generate learning advantages. The assertion is that knowledge diffusion and innovation are fundamentally a geographical processes. At the core of this approach is the idea that "tacit knowledge does not travel easily" as shared geographical contexts and norms, face-to-face communication and personal relationships are needed in order to successfully transfer knowledge from one individual to another. The research tradition tends to make quite a sharp distinction between tacit and codifiable knowledge, positing that

some forms of tacit knowledge cannot be transmitted distance. This school of thought places great emphasis on the benefits of industrial clustering and spatial proximity for innovation and learning (Amin & Cohendet, 2004; Morgan, 1997; Wolfe, 2002). Consequently, the territorial configuration that has gathered the most interest from recent research in economic geography with regards to knowledge diffusion is industrial clusters and agglomerations (Maskell, 2001). This approach has been criticised on the basis that it uses space as an explanatory factor for economic action and decisions (Bathelt & Glückler, 2003). An example of this is the portrayal of local production systems as "better" than global production systems, based on the fact that they are local. This has been labelled "spatial fetishism" (Massey, 1994; Massey & Meegan, 1985). There is scant evidence that traded interdependencies and collaborations occur locally, or should occur locally for the cluster to be dynamic and prosperous (Malmberg & Power, 2003). The intuition inherent in regional studies of "the more localized interaction the better", draws to an extent of the subject's implications for policymaking, traditionally an inherent feature of applied economic geography. Applied research of economic geography is often directed to inform public policy, whereas applied communities of practice is often directed to increase profits of private enterprises.

2.2. Communities of practice

The learning region approach is often juxtaposed to the community of practice (CoP) approach (Brown and Duguid 1991; Wenger 1998), and in some of its assumptions and applications it can be considered a rival theory to the latter. The CoP approach tends to play down the importance of geographical proximity, and instead emphasize the role of organizational proximity in a successful transfer (Gertler, 2003). It can be regarded as an extension of Durkheim's (1984 [1893]) observation that modern society develops more around communities of shared interest (practice) than around location. Durkheim's argument has then been developed and applied on organizations and the matter of tacit knowledge. The general assumption is that firms' competitive advantage is embedded in the tacit knowledge of its workforce. According to the CoP approach the tacit knowledge can be transferred by the sharing of experiences among members of the same interest group (Wenger and Snyder 2000). The assumption, similar to that of the leaning region is that competitive advantage is embedded in the tacit knowledge of its workforce. The diffusion of tacit knowledge is facilitated by shared understanding and common identity between members in practice-based groups, but face-to-face interaction is not considered a

necessity for diffusion (Gertler 2003; Morgan 2004). Indeed, there is a growing base of research that applies the idea of CoP to the creation of virtual communities (Zucchermaglio and Talamo 2003; Koh and Kim 2004; Nemiro 2004). Since its conception the CoP approach has become an important management tool, but seen from a learning theory perspective the framework has arguably shed some of its original, fundamental elements in order to conform to management expectations and the framework set by capitalist construct (Contu and Willmott 2003; Lave 2004; Vann and Bowker 2004).

2.3. Ecologies of knowledge

Social science research tends to distinguish between "geographic communities" and "relational communities". Relational communities are distinguished from geographic communities on the basis that it "involves human relationship without reference to location" (Koh & Kim, 2004). Originally the strength of geographical communities was based on measures of social bonding and behavioural rootedness. Social bonding for geographical communities was measured based on such factors as the ability to identify neighbours, feeling part of the neighbourhood, and the number of neighbourhood children that the respondent can identify. Behavioral rootedness refers to years of community residence, whether renting or owning one's home, and expected length of residency (McMillan & Chavis, 1986). Authors such as Morgan, however, argue against this distinction, with the position that in the knowledge economy the distinction between relational and geographical proximity becomes superfluous: "The spatial fetishism lies in the assumption that there is something called 'geographical proximity' which does not involve relational proximity, implying that the social interactions which constitute 'local' action are somehow natural, primordial, or automatic, when in fact they have to be actively constructed like any other relational asset, whatever the spatial scale." (Morgan, 2004, p.11)

This view parallels some of the notions put forward by French sociologist Emile Durkheim (Durkheim, 1984 [1893]), who maintained that modern societies move toward a social type based on organic solidarity, where the cohesion has to be more actively constructed than in prehistoric societies. This is certainly the case in clusters and industries that lack a common historical background. The construction of proximity is here measured in units of hours, days, months, or years, rather than kilometres, miles and hectares. An industrial cluster is not a "natural construction", it is "concept-dependent" (Sayer, 1992) and thus not impervious to the meanings that theory ascribe it.

Interestingly the use of the organic metaphor of industrial systems is also displayed in the ecologies of knowledge perspective (Brown et al., 2000). This perspective can be seen to incorporate the views of the learning region and the communities of practice perspective, but without creating a hierarchy or dichotomy between geographical and relational proximity. The creation of dichotomies in the cluster discourse is interesting since the cluster as a unit of analysis could contribute to overcoming "false dichotomies" of manufacturing and services, public and private, large companies and small companies (Malmberg, 2002; Malmberg et al., 2003). Ironically, much cluster research has been preoccupied with measuring the magnitude of local firm relations versus global firm relations (Malmberg et al., 2003).

Brown and Duguid use the metaphor of "ecology", to broaden our understanding of the interplay between the region and the organisation in the process of knowledge diffusion. Our understanding of knowledge diffusion is ushered away from perceiving the success and failure of knowledge transfer from the perspective of the individual firm. : "…[Observed] interfirm relations encourage an ecological perspective [emphasis added] that, like Marshall's view, considers the region or the cluster as a whole. From the point of view of an individual firm, knowledge that leaks to another is lost. From the perspective of the ecology as a whole, however, it is much more productively used." (Brown et al., 2000, p.165) "The point of view of the individual firm" has generally been adopted by research in knowledge management. Economic geographic research usually adopts an equally restrictive view, but here the role of the individual firm is neglected and instead anthropomorphism (Keating 1998), a form of "spatial fetishism" (Amin and Cohendet 1999; Morgan 2001) is advocated. In this approach space (the region) is used as an explanatory factor for economic action and treated as a separate unit of analysis. The ecological perspective, however, maintains the importance of including both the individual firm and the region in analysing knowledge diffusion (Brown and Duguid 2000).

This paper does not consider the ecologies of knowledge to be a territorial configuration but rather a perspective to analyse cluster dynamics. From this perspective there can be no "paradigm of an ecology of knowledge". The lesson learned from clusters is that portraying that there is something of a paradigm cluster will create a discursive hierarchy that is mainly focused on high technology regional success stories, and in the process it would eliminate the multitude of cases from the focus of theoretical studies. A paradigmatic cluster is also of little help for "ordinary" and peripheral regions (Martin & Sunley, 2003). The ruptures of the effects of social

decline and unsustainability in Silicon Valley can already be seen (Gerstleberger, 2004). The constant elevating of the superlatives around technological innovation from cluster research became blind to the social conditions. The organic solidarity perspective of Durkheim acknowledged that the industrial world could have disastrous effects on the individual if community solidarity is weak (Durkheim, 1951 [1897]).

We posit that, to an increasing extent, new policy clusters and the cluster discourse are as much about the sense and sense-making of place as they are about creating tangible positive externalities that can enhance creativity and innovation.

2.3.1.   Creative ecologies and the genius loci

Managerial action is almost exclusively connected to non-managerial actions (Czarniawska, 2002). In many senses the surrounding environment of the firm, be it the city itself or the neighbourhood, often provides the chaos that is needed to spawn creativity (Törnqvist, 2004). This is balanced with the order and structural stability of the firm to create a dynamic and competitive cluster. A milieu of pure chaos cannot breed creativity, and correspondingly, neither can a milieu of pure structural rigidity. The history of the Finnish design industry can be seen as a case of the point: The renaissance periods of Finnish design coincides with two periods of structural instability and uncertainty (Stenros, 2004): at the break of the 20th century during the height of Finnish strive for independence and looming nationalism, and after World War II during times of uncertainty and restructuring. Similar accounts are present in other recounts of Finnish design history, one that emphasizes the role of the firm can be seen in the narratives of the success of the Finnish jewellery designers who worked for the House of Fabergé prior to the Russian Revolution. This case highlighted how the hierarchical structures of the firm held together the creative process against a backdrop of chaos to the very end (Forsman & Solitander, 2004).

These observations highlight the problem of constructing geographical clusters, which are en vogue today. As Törnqvist (2004, p.) notes*: "*Even in well-planned science parks and technological centers it has proved difficult to go beyond the preparatory stages of the creative process […] for the most part, synergistic effects are lacking in such situations." It becomes a question of how much method can be brought into the madness.

2.3.2.   Virtual communities: The other third space

Urban sociologist Ray Oldenburg uses the term "third space" when referring to locations that prompt informal public gatherings. He contrasts these public locales, such as cafés, restaurants and gyms, to the first place (the home) and the second place (the workplace) (Oldenburg, 1999, 2002). It is possible to perceive that these third spaces can exist within the firms, as illustrated in the celebrated case of Xerox water-cooler (Brown et al., 2000). Researchers such as Törnqvist (2004a; 2004bb) and Saxenian (1994) contest that these spaces provide the informal meeting places needed to convey tacitness and form a sense of cohesion. It has been argued that the Internet cannot allow the space needed for "handshakes" (Leamer et al., 2001), and that there exist arguments for returning to including more of these third spaces in city (and cluster) planning (Oldenburg, 1999).

We do, however, contest that virtual communities have an important role to play from a third space perspective, and that this is not in odds with creating a physical sense of place, but rather it can be complimentary and an important medium for place and sense making. A virtual community has been defined as "a group of people with common interests or goals, interacting predominantly in cyberspace" (Koh et al., 2004, p.76).   Virtual communities are characterised, by among other things, anonymity. In the terms of urban sociologists like George Simmel, a concealment of the personal is the individual's response to the complex rhythms of city life (Allen, 2000). Just like evidence suggest that off-line meetings play a critical role in enhancing the low social presence of IT-mediated environments (Koh et al., 2004), anonymity (of the IT environment) balances the need to dissociate from the hyperactivity and overstimulation of a modern metropolis (Allen, 2000). As will be illustrated in the case of the Arabianranta design cluster, virtual communities can play an important part in creating the genius loci of a geographical cluster.

3.   The Finnish cultural economy

There is an increasing interest among policy makers and firms in Finland to engage and create knowledge clusters, with the aim to enable and facilitate innovation and knowledge diffusion in and between firms. From a global knowledge economy perspective Finland arguably has two economic sectors that rise above others; from a historical perspective the design and cultural industry has played an important part in establishing the Finnish knowledge economy on the international map (Stenros

2004), but during the last 20 years the ICT sector, however, has surpassed and left the design industry in its shadow as the spearhead of Finnish competition (Castells & Himanen, 2002). Arguably the design industry is now more acknowledged as a supporting actor in the success of the domestic flagship industry, ICT. The boundaries between artisans, designers and ICT workers are, however, fuzzy and are in many instances artificial (Lintula, 2002). The supporting functions of the two industries notwithstanding, what connects the ICT and the cultural industry is that they are both knowledge intensive industries. Their core is made up of what Florida (2002: 8) labels the "creative class". The manifestations of creativity, be they technological, economic or cultural, are in this view inseparable (Florida, 2002).

The rise of the ICT sector has also, naturally, meant a shift in research focus. A large bulk of the application of knowledge theory concentrates on high-technology "text-book" clusters (e.g. Silicon Valley). Notable, however, is that even in the Finnish economy, often depicted as a forerunner in high-tech societies, a large part (approx. 70%) of the industry is still classified, according to OECD classification, as medium or low-tech industries. Yet a large bulk of the literature has placed great emphasis on high-tech clusters and regional success stories, whereas there is a clear lack of research of "grey-mass" clusters and cluster initiative failures (Malmberg & Maskell, 2002). This paper strongly posits for more research on knowledge diffusion in sectors not labelled as high-tech, as they still are knowledge intensive and innovative industries, although this might not be reflected in quantitative measures such as R&D expenditure (Asheim, 2001; Forsman et al., 2004). The cultural industry is an example of this, creativity and innovation are key components of success, yet in these sectors the indicators of innovation and creativity are more subjective than gauges of R&D costs.

There is also an increasing need to venture into less researched areas of the knowledge economy since the Finnish economy has arguably become too dependent on the ICT sector (Castells et al., 2002; van den Berg, Pol, van Winden, & Woets, 2004). In summary, the cultural industry clusters remains largely underinvestigated (Scott, 2000). The position is that the cultural industry is more inherently linked to the overall wellbeing of the ICT ecology of knowledge of the Finnish economy, than portrayed in some previous research (e.g. Castells et al., 2002). It is an integral part of the knowledge economy and still possesses a base for widening the competitive advantage of the Finnish economy. This can also be mirrored in recent policy cluster initiatives for the cultural industry in Finland, for

example the Arabianranta project (Sotamaa, 2004) and the CREAFIN project (Koivunen, 2004; Markkanen, 2004), which both explicitly aim for cluster benefits for the Finnish cultural industry. It is possible to distinguish between cluster policies that aim for establishing functional clusters and/or geographical clusters. In the case of a functional cluster the benefits of geographical proximity are not evident. Following Malmberg and Power (2003) this paper posits for this distinction. Unlike Malmberg and Power, however, a tripartite view of the cluster phenomenon is not supported, thus it is argued that what Malmberg and Power brand as policy clusters are either functional or geographical, but not a different territorial configuration. The CREAFIN project could be seen to entail a functional cluster (The Finnish Creative Industry), whereas the Arabianranta project could be seen to entail a geographical cluster.

3.1. Overview of the Arabianranta project

The ecological perspective is deployed in the study of the Arabianranta project in Helsinki, Finland. The project portrays the vision of how to enhance (national) innovation through the artificial creation of a creative cluster. The aim is to create "the leading geographical centre of art and design in the Baltic area" between the years 2005-2010. The vision of the project is to increase innovation and knowledge diffusion by co-locating firms, institutions and residential projects in a limited geographical space. The co-location of residential and technological development on a single site is portrayed as an integral part of Helsinki's innovation policy. There is a clear indication to make a distinction of this project and other cluster projects such as science and industrial parks. As the investor material reveals: "Hopefully the new workforce coming to Arabianranta will also inhabit the area. In this way we can construct a real, living community, which is not deserted by nightfall. This cannot be achieved in the clusters and business parks constructed outside the city in remote peripheral areas" (Raina 2004)

There is a strong portrayal of a core in cluster initiatives in general. The cluster itself is often strengthening the image of knowledge diffusion as a process where knowledge is diffused from the core to the periphery. The vision of a cluster as a spearhead for innovation, a core for industrial innovation is conspicuous. Many cluster initiatives are also based on an image of a core firm or institution. In the case of the Arabianranta the core of the cluster is portrayed to be the University of Art and Design Helsinki, the Pop and Jazz Conservatory, and an old ceramics factory owned by the HackmanGroup (an industrial design company). In 2004 HackmanGroup was

11

acquired, and now is part of an international design conglomerate owned by ABN AMRO Capital, which includes other high design companies like Arabia, Iittala, BodaNova, Höganäs Keramik, Rörstrand ja Høyang-Polaris. Indeed the name Arabianranta (the English translation would be Arabia Beach) is directly derived from the Arabia brand and the Arabia ceramics factory, which used to be situated there.

The pervading idea behind Arabianranta follows the growing trend of commercial policies in Finland, with closer cooperation between business, the regional government and the national government. There is also a policy of creating linkages between the small and bigger firms in the region, thus giving the SMEs and start-ups access to international networks and markets (van den Berg et al., 2004).

When analyzing the way Arabianranta is portrayed it becomes evident that a lot of emphasis is put on the historical importance of the location. It is portrayed as the birthplace of Helsinki City: "the almost mythic site of medieval Helsinki" (Bunschoten, Hasdell, & Hoshino, 1996). These accounts make little reference to the fact that the area has for a long time been unpopulated because of the polluted soil left by the ceramic factory. The factory itself, with its smokestacks has been left intact as a reminder of the area's near history.

3.2. Art for art's or community's sake?

There is a certain sense of Durkheim in the Arabianranta project: Increased innovation and the creation of externalities is foremost on the agenda, "the creation of the leading cluster of arts and design". But amidst these typical cluster policy efforts there is the looming of making explicit the "Scandinavian societal communitarianism". Social development and the integration of the habitat are made explicit aims. This can be seen to rest on the notion that in a setting of high workforce turnover, immigration and increasing internationalization the individuals may be brought close in the spatial sense but remain remote in a social sense (Allen, 2000; Simmel, 1950).

The physical milieu itself reflects the same strive for increased creativity. This mindset is visible in the architecture itself, as it aims to fuse spare time and work into "one good, esthetical city life" (Mäenpää, 2000) The "creative atmosphere" is made explicit by the large number of artwork and statues scattered around the area, both from artist living in the area, but also artist based abroad. The city has stipulated that property developers have to allocate 1-2 % of the acquisition costs for artistic

projects. The projects are coordinated by an "artistic coordinator" based at the School of Arts and Design, who also acts as an agent between the property developers, architects and artists. The "theme" of these projects is to be based on the "area's history and nature". This can also be seen as an effort to create symbolic knowledge and to create a visual historical narrative for a previously uninhabited area.

3.3. The Helsinki Virtual Village: making sense of place

Despite the emphasis on physical localization the project is also about creating a borderless "virtual village", Helsinki Virtual Village, which is constantly connected to a global knowledge network. Community members can access the seamless, ubiquitous system using cell phones, PDAs, digital television, and PCs, as all households are connected to the broadband infrastructure (Metropolitan Area Network). All new houses must be connected to this unified network. Features still under development are location-based data retrieved from mobile handheld devices to help people in Arabianranta coordinate their work and social lives.

This visioning seems to follow the Finnish approach for developing the competitive advantage of the cultural sector: "Helsinki Virtual Village provides the opportunity for business, students and inhabitants to network and share their knowledge and know-how." (Raina 2004) The HVV platform provides, in addition to an array of local information, the local community of firm and residents to co-ordinate their activities.

The case highlights the growing need for adopting an ecological perspective of knowledge creation and diffusion: A perspective that recognizes the need for both localized communities and virtual communities as provisions for innovative activities from the perspective of both firm and region. There is a growing role of the local in creating and establishing virtual communities. Virtual communities have been portrayed as a location that enables cohesion of its members, thus facilitating the transfer of knowledge (Bagozzi & Dholakia, 2002; Halla & Graham, 2004; Zucchermaglio & Talamo, 2003) and bolstering creativity (Nemiro, 2004; Rheingold, 1991). This reasoning follows some of the aspects put forward by the managerial theory branch of the communities of practice approach (Lueg, 2001).

The very construction of the formulation "virtual village" plays on the strong sense that the local has in creating perceptions of community. The village is the region the virtuality refers not to the infinite spacelessness and bounderless feature of the net, it refers to the virtual mirroring of the city itself. What brings the people together on the net is their location. The virtual village is then connected to the larger network and

possibilities of the World Wide Web, just like the city is connected to the world through formal and informal networks and markets: "There are several commonalities between HVV and the notion of traditional village communities… The campfire is replaced by technique… [But] a community cannot be built without face-to-face interaction" (Raina 2002, press release)

The image of a virtual village as the alter ego of an urban agglomeration is interesting, as it underlines the construction of senses of community on different spatial levels. In the case of Arabianranta and Helsinki Virtual Village the construction of the local "we" is arguably most actively driven through the virtual community. The sense of regional cohesion is thus not only actively constructed in the neighbourhood itself, but also in the virtual neighbourhood. The virtual village, as a concept displays the deliberate attempt to use the geographically embedded placeless community to strengthen a community defined by geographical locality.

This highlights the perception that local relations, the sense of the regional-self, is not primordial or automatic, they can be nurtured and cultivated on non-local spatial levels (Morgan, 2004). And as the Helsinki Virtual Village example displays "natural" relationships can be developed through placeless relational platforms. But it also emphasises the rather artificial trichotomy of virtual communities, relational communities and geographical communities.

4. Summary and conclusions

We can witness increasing efforts to break down the boundaries between the firm and the region. On one hand regions are increasingly seen as competing with each other, thus they adopt similar techniques as firms, and weave themselves into the nets and networks of companies. The efforts to construct porterian clusters highlight these ambitions. Regions, cities and neighborhoods brand themselves as clusters in increasing efforts to attract multinational companies, and with that an increasing possibility of a networked cluster. It remains contested, however, if regions can compete similar to that of firms (Krugman, 1999)

In the clusters themselves we can observe orchestrated efforts to further embed the firm in the region and the region into the firm. We have labeled the perspective to analyse these efforts ecologies of knowledge, based on the concept of Brown and Duguid (2000). The ecological metaphor aside, we contest that clusters are seldom, however, "natural", neither through their geographical proximity nor through their

relational proximity. Geographical proximity is greatly overlapped by relational proximity, and the geographical communities have to be nurtured and developed in similar fashion to "communities of practice" (Morgan, 2004). This observation also calls for more cross-disciplinary cluster studies that increasingly incorporate theory making from urban sociology as well art.

The "false dichotomy" of public and private that is exposed by a cluster perspective (Dicken & Malmberg, 2001; Malmberg et al., 2003) has become central in the policy cluster discourse. The Arabianranta project can be seen to take this questioning of dichotomies one step further as it questions the conceptual divide of the individual, i.e. the neighbor/inhabitant and the worker. The constant exposure to a manufactured creative atmosphere is manifested in symbolic knowledge of the buildings and artwork. The neourbanist mindset of fusing leisure- and workspaces is visible in the architecture itself. The constructed physical surroundings of the cluster, an aspect not evident in cluster literature in general, can almost be seen as a manifestation of Marshall's concept of "something in the air".

The space of the ecologies of knowledge is built on the ideas of symbolic knowledge just as much as economic knowledge. Ecologies of knowledge are both portrayed as ideal for economic activity and living. Although much emphasis is laid on the locality itself the discourse of the Arabianranta project makes no distinction on the local or global scale of activity, neither for the firms or the inhabitants.

The Helsinki Virtual Village project shows some interesting features: the companies and inhabitants are presented with the opportunity to become less location dependent through the state of the art broadband communication network and wireless technology that has been installed in the area. This is displayed as a unique opportunity of global reach, yet it is only available to those who settle in an approximately 85-hectare area. The discourse is almost paradox: become more placeless through restricting yourself to a limited geographical area. The externality of the infrastructure is available on basis of location, but this does not per se, mean increased creativity or innovation for the firms. The utilization and actual creation of knowledge is organization dependent, the ecology of knowledge of the firm has few spatial boundaries since it links different ecologies to each other across the globe. But it is far from a "placeless" process. The same dichotomy of local versus global is further disintegrated in the way community sense, here seen as gemeinshaft, is promoted through virtual community of Arabianranta. This observation follows the tentative critique of Morgan (2004) of not assuming that local relations, or local

communities are any less actively constructed and nurtured than non-local relations. The HVV platform also shows an increasing fusion of the producers and users of the network and information services.

We argue that, contrary to some PR accounts, there is nothing utopian in the project itself, rather it is a step in the continuum of manifesting creativity and innovation in spatial configurations to spearhead competition. The cluster is a construct of capitalist framework where the dichotomy of workers and neighbors, gemeinshaft and geshellshaft, public and private, local and global is fused into a knowledge producing system. The actual interrelations become of secondary importance, it is the symbolism of the local ecology with "infinite" global connections that grows into one of the most important externalities of the discourse. The Marshall's notion "something in the air" is repeatedly manifested in the policy discourse, and becomes a matter of "something in your face".

5. REFERENCES

Allen, J. 2000. On George Simmel-Proximity, distance and movement. In M. Crang (Ed.), *Thinking Space*. London: Routledge.

Amin, A., & Cohendet, P. 2004. *Architectures of knowledge: Firms, capabilities, and communities*. Oxford: Oxford University Press.

Amin, A., & Thrift, N. 2004. Introduction. In A. Amin, & N. Thrift (Eds.), *The Blackwell Cultural Economy Reader*. Oxford: Blackwell Publishing.

Asheim, B. T. 1995. *Industrial districts as "learning regions" : a condition for prosperity?* Oslo: STEP group.

Asheim, B. T. 2001. *Project Organisation and Globally Distributed Knowledge Bases*. Paper presented at the Conference on Global Economic Change, Worcester, USA.

Ashmore, R. D., Deaux, K., & McLaughlin-Volpe, T. 2004. An Organizing Framework for Collective Identity: Articulation and Significance of Multidimensionality., *Psychological Bulletin*, Vol. 130: 80-114.

Bagozzi, R. P., & Dholakia, U. M. 2002. Intentional social action in virtual communities. *Journal of Interactive Marketing*, 16(2): 2-22.

Bathelt, H., & Glückler, J. 2003. Toward a relational economic geography. *Journal of Economic Geography*, 3(2): 117-144.

Benner, C., & Dean, A. 1998. Growing Together or Drifting Apart? Working Families and Business in the New Economy—a Status Report on Social and Economic Well-Being in Silicon Valley. San Jose, CA.: Working Partnership USA and Economic Policy Institute.

Brown, J. S., & Duguid, P. 1991. Organizational Learning And Communities Of Practice. *Organization Science*, 2(1): 40-57.

Brown, J. S., & Duguid, P. 2000. *The social life of information*. Boston: Harvard Business School Press.

Bunschoten, R., Hasdell, P., & Hoshino, T. 1996. Arabianranta, Helsinki. In J. Verwijnen, & P. Lehtivuori (Eds.), *Managing Urban Change*. Helsink: University of Art and Design.

Castells, M., & Himanen, P. 2002. *The information society and the welfare state : the Finnish model*. Oxford: Oxford University Press.

Cooke, P. 2001. *Knowledge Economies : Clusters, Learning & Co-Operative Advantage*. London: Routledge.

Dicken, P. 2003. *Global Shift-Reshaping the global economic map in the 21st century* (4 ed.). London: Sage.

Dicken, P., & Malmberg, A. 2001. Firms in territories: A relational perspective. *Economic Geography*, 77(4): 345.

Dunning, J. H. 1998. Location and the multinational enterprise: A neglected factor? *Journal of International Business Studies*, 29(1): 45.

Durkheim, E. 1951 [1897]. *Suicide: A study in sociology*. Glencoe, IL: Free Press.

Durkheim, E. 1984 [1893]. *The division of labour in society*. Basingstoke: MacMillan.

Farrell, M. 2004. Regional integration and cohesion—lessons from Spain and Ireland in the EU., *Journal of Asian Economics*, Vol. 14: 927: Elsevier Science Publishing Company, Inc.

Florida, R. L. 1995. Toward the learning region. *Futures*, 27(5): 527-536.

Florida, R. L. 2002. *The rise of the creative class : and how it's transforming work, leisure, community and everyday life*. New York, NY: Basic Books.

Forsman, M., & Solitander, N. 2004. *The Context and Diffusion of Knowledge in the Finnish Jewellery Industry - The role of The House of Fabergé*. Swedish School of Economics and Business Administration, Helsinki: Working Papers No.506.

Gerstleberger, W. 2004. Regional innovation systems and sustainability - selected examples of international discussion. *Technovation*, 23(9): 749-758.

Gertler, M. S. 2003. Tacit knowledge and the economic geography of context, or The undefinable tacitness of being (there). *Journal of Economic Geography*, 3(1): 75.

Gordon, I. M., & McCann, P. 2000. Industrial Clusters: Complexes, Agglomeration and/or Social Networks? *Urban Studies*, 37(3): 513-532.

Grabher, G. 2002. The project ecology of advertising: Tasks, talents and teams. *Regional Studies*, 36(3): 245-262.

Halla, H., & Graham, D. 2004. Creation and recreation: motivating collaboration to generate knowledge capital in online communities. *International Journal of Information Management*, 24(3): 235-246.

Houtum, H., & van en Lagendijk, A. 2001. Contextualising Regional Identity and Imagination in the Construction of Polycentric Urban Regions: The Cases of the Ruhr

Area and the Basque Country. *Urban Studies*, 38(4): 747-767.

Koh, J., & Kim, Y.-G. 2004. Sense of Virtual Community: A conceptual framework and empirical validation. *International Journal of Electronic Commerce*, 8(2): 75-93.

Koivunen, H. 2004. Onko kulttuurilla vientiä? Opetusministeriön, ulkoasiainministeriön ja kauppa ja teollisuusministeriön Kulttuurivienti -hanke

Selvitysmiehen raportti. Opetusministeriön julkaisuja 2004:22: Opetusministeriö, Kulttuuri-, liikunta- ja nuorisopolitiikan osasto.

Krugman, P. 1999. The Role of Geography in Development. *International Regional Science Review*, 22(2): 142-161.

Lave, J., & Wenger, E. 1991. *Situated Learning. Legitimate peripheral participation*. Cambridge: University of Cambridge Press.

Leamer, E. E., & Storper, M. 2001. The Economic Geography of the Internet age. *Journal of International Business Studies*, 32(4): 641-667.

Lintula, P. 2002. Käsityöyrittäjyys Euroopan Unionissa. In M. Luutonen, & A. Äyväri (Eds.), *Käsin tehty tulevaisuus: näkökulma käsityöyrittäjyyteen*. Helsinki: Sitra.

Lueg, C. 2001. Information, knowledge, and networked minds. *Journal of Knowledge Management*, 5(2): 151-160.

Lundvall, B.-Å., & Johnson, B. 1994. The learning economy. *Journal of Industry Studies*, 1(2): 23-42.

Mäenpää, P. (Ed.). 2000. *URBS: Kirja Helsingin kaupunkikulttuurista*. Helsinki: Edita.

Malmberg, A. 2002. Klusterdynamik och regional näringslivsutveckling–begreppsdiskussion och forskningsöversikt. Institutet för Tillväxtpolitiska Studier: A2002:008.

Malmberg, A., & Maskell, P. 2002. The elusive concept of localization economies - Towards a knowledge-based theory of spatial clustering. *Environment and Planning A.*, 34(3).

Malmberg, A., & Power, D. 2003. On the role of global demand in local innovation processes. In P. Shapiro, & G. Fuchs (Eds.), *Rethinking Regional Innovation and Change*. Dordrecht: Kluwer Academic Publishers.

Markkanen, J. 2004. Onko kulttuurillamme vientiä?, *Kauppapolitiikka*: 6-7.

Marshall, A. 1927. *Industry and trade: A study of industrial technique and business organization and of their influences on the conditions of various classes and nations*. London: Macmillan.

Maskell, P. 2001. Towards a knowledge-based theory of the geographical cluster. *Industrial and Corporate Change*, 10(4): 92.

Massey, D. 1994. *Space, Place and Gender*. Cambridge: Polity Press.

Massey, D., & Meegan, R. 1985. *Politics and Method: Contrasting Studies in Industrial Geography*. London: Methuen.

McMillan, D. W., & Chavis, D. M. 1986. Sense of Community: A Definition and Theory. *Journal of Community Psychology*, 14(1): 6-23.

Morgan, K. 1997. The learning region: Institutions, innovation and regional renewal. *Regional Studies*, 31(5): 491.

Morgan, K. 2004. The exaggerated death of geography: learning, proximity and territorial innovation systems. *Journal of Economic Geography*, 4(1): 3-23.

Nemiro, J. E. 2004. *Creativity in Virtual Teams: Key Components for Success*. Chichester: John Wiley & Sons.

Oldenburg, R. 1999. *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*. New York: Marlow.

Owen-Smith, J., & Powell, W. W. 2004. Knowledge Networks as Channels and Conduits: The Effects of Spillovers in the Boston Biotechnology Community. *Organization Science*, 15(1): 5-21.

Porter, M. E. 2000. Location, Competition, and Economic Development: Local Clusters in a Global Economy. *Economic Development Quarterly*, 14(1): 15-34.

Rheingold, H. 1991. A slice of life in my virtual community. In I. M. Harasim (Ed.), *Global Networks*. Cambridge, MA.: MIT Press.

Saxenian, A. 1994. *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Cambridge: Harvard University Press.

Scott, A. J. 2000. *The Cultural Economy in Cities*. London: Sage Publications.

Simmel, G. 1950. *The Sociology of Georg Simmel*. Wolff, Kurt (trans.), New York: Free Press.

Sotamaa, Y. 2004. Arabianranta – A Creative Cluster. http://www.uudenmaanliitto.fi/2/Yrjo_Sotamaa.pdf.

Stenros, A. 2004. The Story of Finnish Design, Vol. 2004. http://virtual.finland.fi/netcomm/news/showarticle.asp?intNWSAID=26967: Ministry for Foreign Affairs Finland.

Süssner, J. 2002. Culture, Identity and Regional Development in the European Union. *Informationen zur Raumentwicklung*, 4(5): 199-206.

Tönnies, F. 1957. *Community and Society*. New York: Harper & Row.

Tönnies, F. 2001 (1887). *Community and Civil Society*. West Nyack, NY: Cambridge University Press.

Törnqvist, G. 2004. Creativity in Time and Space. *Geografiska Annaler: Series B Human Geography*, 86(4): 227-243.

van den Berg, L., Pol, P., van Winden, W., & Woets, P. 2004. Helsinki in the Knowledge Economy, *European cities in the Knowledge Economy– The cases of Amsterdam, Dortmund, Eindhoven,*

Helsinki, Manchester, Munich, Münster, Rotterdam and Zaragoza. Rotterdam: Euricur.

Wenger, E. 1998. *Communities of Practice: Learning, Meaning and Identity,*. New York: Cambridge University Press.

Wenger, E. C., & Snyder, W. C. 2000. Communities Of Practice: The Organizational Frontier. *Harvard Business Review*, 78(1): 139-145.

Wolfe, D. A. 2002. Social Capital and Cluster Development in Learning Regions. In J. A. Holbrook, & D. A. Wolfe (Eds.), *Knowledge, Clusters and Learning Regions*. Kingston: Queen's School of Policy Studies and McGill-Queen's University Press.

Zucchermaglio, C., & Talamo, A. 2003. The development of a virtual community of practices using electronic mail and communicative genres. *Journal of Business and Technical Communication*, 17(3): 259.