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**Cluster Relations in the Media Industry:
Exploring the ‘Distanced Neighbor’ Paradox
in Leipzig**

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English abstract: This paper uses a multidimensional cluster concept which views processes of knowledge creation as being decisive in explaining how clusters are established, why they grow and how they reproduce themselves. It is suggested that clusters can only create new knowledge and continue to grow if the cluster firms have linkages with external markets and employ a mix of local and non-local transactions. The point made is that local interaction or ‘buzz’ and interaction through global or trans-local ‘pipelines’ create a dynamic process of knowledge creation which is key to understand a cluster’s growth process. It is argued that the lack of a reflexive mechanism of local and trans-local interaction is the reason as to why the Leipzig media industry cluster has stagnated in recent years after a decade of substantial growth. In this cluster, we are confronted with what I refer to as the ‘distanced neighbor’ paradox. Firms in the Leipzig media sector are neither characterized by strong pipelines to firms and markets outside the cluster, nor do they engage in intensive local networking and interactive learning. This paper explores the conceptual foundations of this phenomenon and applies it to the case of Leipzig.

German abstract: Der vorliegende Beitrag basiert auf einer multidimensionalen Clusterkonzeption, die Prozesse der Wissensgenerierung in den Mittelpunkt rückt, um die Entstehung und das Wachstum von Clustern zu erklären. Der Ansatz geht davon aus, dass Cluster nur dann in der Lage sind, fortgesetzt neues Wissen und Wachstum zu erzeugen, wenn die Unternehmen Verflechtungen zu externen Märkten aufbauen und somit ein Mix von lokalen und nicht-lokalen Transaktionen entsteht. Durch die Überlappung von lokalen und globalen oder trans-lokalen Kommunikations- und Interaktionsprozessen (‘Rauschen’ vs. ‘Pfeifen’) wird ein dynamischer Prozess der Wissenskreierung ermöglicht, der zu fortgesetztem Wachstum in einem Clusters beiträgt. Im empirischen Teil des Beitrags wird argumentiert, dass das Fehlen einer kombinierten Struktur von lokalen und trans-lokalen Wissensflüssen dazu beigetragen hat, dass das Leipziger Mediencluster nach einem Jahrzehnt anhaltenden Wachstums in den letzten Jahren stagniert. Empirische Untersuchungen des Mediensektors deuten dabei auf ein Problem hin, dass als Phänomen des ‘distanzierten Nachbarn’ bezeichnet wird. Die Leipziger Unternehmen weisen weder starke Pipelines zu Märkten außerhalb des Clusters auf, noch verfügen sie über intensive Netzwerkbeziehungen mit interaktiven Lernprozessen vor Ort. Der vorliegende Beitrag diskutiert die konzeptionellen Grundlagen dieses Phänomens und wendet sie auf den Leipziger Mediensektor an.

Keywords: clusters dimensions, buzz, pipelines, over-embeddedness, under-socialization, media industry, Leipzig

JEL classifications: D83, L22, L23, R10

1. Introduction

Recent work has provided evidence that processes of knowledge creation and innovation in a regional industry cluster cannot be fully understood by simply analyzing the internal divisions of labor. Actors and markets outside the cluster can also be extremely important in directing growth impulses and information about technological innovation into the cluster and thus require our attention. As Oinas (1999, p. 365) states, "... it seems evident that the creation of new knowledge (learning) might be best viewed as a result of a 'combination' of close and distant interactions." Clusters can only create new knowledge and continue to grow if they have linkages with external markets and employ a mix of local and non-local transactions (Scott, 1998). Or, in other words, the effects of local interaction and learning are much stronger and durable if they are constantly supported by feedback and new impulses from outside. The point here is that local interaction or 'buzz' and interaction through global or trans-local 'pipelines' create a dynamic process of knowledge creation which is key to understanding a cluster's continued economic success.¹ Therefore, it is argued that the role of proximity in day-to-day communication between a cluster's actors is greatly supported by knowledge inputs over larger distances from outside.

In investigating the development of the Leipzig media industry cluster, we are confronted with what I refer to as the 'distanced neighbor' paradox. Leipzig has a long history as a site of media industries. Its book publishing sector, centered in the city's 'Graphisches Viertel', dominated the German book trade from the 18th century until the mid-20th century. Today, Leipzig is only a shadow of its former glory as the center of German book publishing.

However, a new media industry has emerged during the 1990's, centered around the 'MDR' (Mitteldeutscher Rundfunk), a public broadcasting service. After substantial growth during the 1990's, this development has stagnated in recent years. Closer analysis reveals that further growth prospects are seemingly quite limited. I argue that a reason for this halt in economic

growth is due to the fact that firms in the Leipzig media sector are neither characterized by strong pipelines to firms and markets outside the cluster, nor do they engage in intensive local networking and interactive learning. This paper explores the conceptual foundations of this phenomenon and applies this to the case of Leipzig. The structures of internal (local) and external (extra-local) social relations of media firms in Leipzig are analyzed, the effects on the processes of knowledge creation and dissemination discussed and consequences for future development explored.²

This paper is organized as follows. In the next section, I argue that clusters should be analyzed using a multidimensional framework which allows for the identification of different configurations of clusters according to their development stage, process of knowledge generation and growth potential. Section 3 explores the internal communication processes in a cluster referred to as buzz. Decisive elements of trans-local communication and transactions to a cluster's development will be presented in section 4. It is argued that both internal and external interaction can be mutually reinforcing. In section 5, an overview of the 'ups and downs' of the historical development of Leipzig's media industries is given and the genesis of today's new media industry cluster described. Since Leipzig's media industry has not yet developed into a fully-fledged cluster, the empirical analysis in sections 6 and 7 concentrates on the nature of local and non-local supplier-producer-user interaction. Section 6 presents findings which suggest that the media firms primarily rely on the regional market and do not systematically explore external linkages. This poses limits on the process of knowledge creation. Section 7 shows that intensive interactions and close network relations between local firms are not very common in three segments of the media sector, i.e. (i) film/TV production, (ii) advertising/graphics/design and (iii) new digital media. This implies that the firms primarily rely on existing knowledge pools which are likely to stagnate over time. In the final section, the most important findings of this research are summarized and conclusions are

drawn regarding the limited potential for further knowledge creation and growth in this cluster.

2. Dimensions of the cluster and the missing external link

Due to the seminal work of Porter (1990) on the competitive advantage of nations, a new cluster concept has stimulated discussion in the social sciences which goes beyond traditional explanations of agglomeration in economic geography (Gordon and McCann, 2000). In more recent work, Porter (2000, p. 254) defines a cluster as “a geographically proximate group of inter-connected companies and associated institutions in a particular field, linked by commonalities and complementarities. The geographic scope of a cluster can range from a single city or state to a country or even a group of neighboring countries.” A number of aspects of Porter’s work have been identified, however, as being particularly problematic (e.g. Bathelt and Glückler, 2003; Martin and Sunley, 2003). This includes the neglect of the institutional foundations of clusters which are treated as mere residual factors. This problem contributes to a remarkable fuzziness in Porter’s (1998, 2000) recent writings with respect to the spatial boundaries of a cluster.

In order to evaluate localized networks of economic activity and their ability to become a driving force behind the evolutionary development of a region, it is decisive to place their structure within the process of knowledge creation. Processes of creating, combining, circulating and sharing existing and new knowledge are key in generating competitiveness and economic growth in the knowledge-based economy. These processes are particularly stimulated within industry clusters. The latter are viewed in this paper as *regional* sets of dynamic interrelated networks of industrial activities which benefit from co-location in many ways. They require the systematic establishment of linkages to external markets and knowledge pools in order to generate growth and avoid lock-in. Co-location provides manifold opportunities to benefit from interfirm linkages, high-density communication,

interactive learning, collective problem solving and enables firms to develop a common understanding and joint interpretative schemes. This does not, of course, imply that every agglomeration automatically results in increased competitiveness of the involved firms. I argue instead that fully-fledged, multidimensional clusters provide a particularly well-suited setting for firms to develop enhanced capabilities of knowledge creation and innovation and to access markets.

Maskell (2001) has pointed out that a good cluster theory should explain which forces enable a cluster to develop, which mechanisms result in localized knowledge generation and economic specialization and, finally, how an existing agglomeration is reproduced. This requires the application of an evolutionary perspective on the genesis and subsequent development of a cluster.³ Work in recent years has contributed to a better understanding of the structures and processes behind the evolution of regional clusters, emphasizing their ability to create knowledge and disseminate it between its actors (e.g. Malmberg and Maskell, 1997, 2002; Cooke and Morgan, 1998; Maskell, 2001; Bathelt, 2002; Bathelt, Malmberg and Maskell, 2004; Cooke and Huggins, 2001; Clark, Tracey and Lawton Smith, 2001; Pinch, Henry, Jenkins and Tallmann, 2003; Clark and Tracey, 2004). This literature allows us to distinguish clusters along their vertical, horizontal, power, institutional and external dimensions.

Vertical dimension: This dimension consists of complementary firms, such as a network of supplier, service and customer relations. Once a specialized cluster of activities exists, this creates incentives for other suppliers and customers to move to this cluster. This process forms a localized value chain or parts of it. New firms starting up in this cluster gain access to economies of scale, reduce transaction costs and are able to distribute large parts of their products at low cost (Scott, 1988; Krugman, 1991; Fujita, Krugman and Venables, 1999). The existence of both a large pool of and a high demand for specialized labor in a cluster also

increases its attractiveness for other workers and firms in that particular area of specialization. Overall, the vertical dimension is important to understand how an established cluster can continue to grow. Industrial clustering is, however, not merely based on cost considerations, economies of scale and other kinds of traded interdependencies. Recent contributions by Storper (1997) and Maskell and Malmberg (1999a, 1999b) and others have pointed out the inadequacy of such a view in understanding the processes behind regional specialization and concentration. In emphasizing ‘localized capabilities’ and ‘untraded interdependencies’, they have shown that socio-institutional settings, inter-firm communication and interactive learning play a decisive role in regional innovation and growth. It has become clear that complex innovation processes rely heavily on intensive supplier-producer-user interaction and corresponding learning processes (see, particularly, Lundvall, 1988; Gertler, 1993, 2004).

Horizontal dimension: While often overlooked in studies of regional networks, this dimension is equally important as the vertical (Maskell, 2001; Grabher, 2001). The horizontal dimension refers to relations between firms and their direct competitors. While rivalry might prevent them from closely cooperating or directly sharing knowledge, it does stimulate product differentiation and increased efficiency. Firms benefit from co-location through which they are well informed about the characteristics of their competitors’ products and about the quality and cost of the production factors which they use. This enables the firms to effectively compare their performance with those of their competitors (Malmberg and Maskell, 2002; Maskell and Lorenzen, 2004). Strong interfirm rivalry serves to accelerate innovation and increase competitiveness (Porter, 1990).

Power dimension: A region’s horizontal and vertical dimensions are shaped by existing power relations and asymmetries which impact the agents’ ability to react collectively to changes in their regulatory environment and markets (Taylor, 2000; Bathelt and Taylor, 2002). To be considered as such, a cluster must develop mechanisms to enroll its firms in joint enterprise;

that is, the internal actors, as well as those external to the cluster, must view it as being different from its environment and act accordingly (Latour, 1986; Murdoch, 1995). The dynamics of unequal relationships enmeshed in circuits of power create and recreate the circumstances of buyer-supplier interactions and determine the efficacy of institutional support. Power as relationships creates rules of dominance and subordination within a cluster network (Allen, 1997), which help to settle conflicts between firms and to speed up decision-making processes (Clegg, 1989; Taylor, 1995). Firms are willing to accept some degree of inequality as long as growth impulses are being transmitted throughout the vertical networks of the value chain and are not restricted to ‘powerful’ actors at the end of the value chain.

Institutional dimension: In order to secure continued economic growth and knowledge creation in the future, institutions which encourage interfirm cooperation and collaboration projects and ensure reproductivity must be formed within the cluster (Amin and Thrift, 1995; Storper, 1997). Institutional arrangements, such as particular norms, rules, shared habits and conventions, do not exist *a priori* but are instead the result of ongoing social relations and are constantly being revised through social practice. Institutions are associated with the establishment of routines which tend to be carried out more or less automatically (Nelson and Nelson, 2002). This yields results which fall into the range of expected outcomes. Institutions thus make the actions of others more predictable because they reduce uncertainty in economic transactions (North, 1990). Without institutions, interfirm knowledge transfers and collective learning are impossible, preventing a social division of labor (Hodgson, 1988). Within a cluster, local institutions shape individual habits in firms, while shared experiences from day-to-day problem solving, in turn, support the creation and reproduction of institutions (Hodgson, 2003).

The horizontal, vertical, power and institutional dimensions are obviously stimulated by geographical proximity between the actors of a cluster, as proximity allows face-to-face

contacts and meetings to discuss joint interests on a regular basis, the development of shared attitudes and meanings and the reduction of transaction costs and risks. This is not sufficient, however, to stimulate continued innovation and growth.⁴

External dimension: Interactive learning and knowledge creation do not happen in isolation within a cluster. They depend on information about external markets and technologies. Therefore, clusters do not (and cannot) exist without connections to markets and knowledge pools in different regional and national settings (Bathelt and Taylor, 2002). The local innovative success of agents depends not only on internal or local assets, but also on external or extra-local assets and the capability of local actors to systematically acquire such external information and resources (Scott, 1998; Maillat, 1998). The external dimension has been especially neglected in many studies of the success and growth of clusters. Vatne (2001) claims that only few empirical studies have been able to identify the processes and mechanisms underlying spatial clustering. The dominance of localized learning and agglomeration factors over other, non-local influences which are not defined geographically is particularly questioned (see also, Oinas, 1999). It is also well-known that external markets and technologies are important triggers to stimulate knowledge creation and growth within a cluster (Bresnahan, Gambardella and Saxenian, 2001; Asheim and Herstad, 2003).

Of course, these dimensions should not be interpreted as being given components of an existing cluster. Each of these dimensions are not necessarily fully developed in real-world clusters. They differ in terms of their development stage and characteristics. In terms of Leipzig, the media industry is a fairly young cluster which has primarily developed along its vertical and institutional dimensions through processes of firm formation and institution building (Bathelt, 2002). It does not have a strong horizontal and external dimension and has not yet fully 'emerged' as a cluster in the minds of the actors. In fact, very few existing

clusters would perfectly fit the above model. The multidimensional structure described, thus, provides a starting point to analyze the complex social division of labor of localized production configurations and identify strengths and weaknesses. The key argument is that a cluster is only capable of generating dynamic growth and remaining competitive in the long term if it is fully developed in terms of its multidimensional structure.⁵

Of course, the cluster dimensions discussed do not necessarily develop in harmony with one another. As argued elsewhere (Bathelt, 2002), trade-offs exist which cannot always be resolved without conflict. These conflicts can cause inequalities and power struggles which then serve to deconstruct a cluster's consistent structure. For instance, close social relations within the cluster and the development of trust are important to stimulate interactive learning and knowledge creation. Over the long term, however, too much trust in internal networks and structures of blind confidence can develop within a cluster which might cause technological lock-in (Kern, 1996; Tracey and Clark, 2003). Further, if former competitors decide to specialize in different market segments, the social division of labor will increase at the expense of horizontal variety. As a consequence, the deeper the vertical division of labor the fewer opportunities to make comparisons with competitors and to secure a strong horizontal cluster dimension.

In short, the above discussion of cluster dimensions has emphasized that both local and extra-local linkages are important to secure a cluster's growth and competitiveness. In the next sections of the paper, it will be argued that local interaction, referred to as buzz, and interaction through trans-local pipelines establish a dynamic process of knowledge creation which is key to understanding a cluster's continued economic success (Bathelt, Malmberg and Maskell, 2004). This conceptualization will then be applied to the case of the Leipzig media industry cluster, with particular focus on the internal and external vertical and institutional relationships of the cluster firms and their social context.

3. Local networking and the ecology of buzz: creating meaning and membership

Locating within an industrial cluster has advantages that are not readily available to firms situated elsewhere. Co-location and face-to-face contacts within a cluster give rise to a particular information and communication ecology, which has been labeled its 'industrial atmosphere' (Marshall, 1927), 'noise' (Grabher, 2002a), or 'buzz' (Storper and Venables, 2004; Bathelt, Malmberg and Maskell, 2004). This buzz consists of specific information and continuous updates thereof, intended and unintended learning processes in organized and accidental meetings, the application of the same interpretative schemes and mutual understanding of new knowledge and technologies, as well as shared cultural traditions and habits within a particular technology field. These stimulate the establishment of conventions and other institutional arrangements. Actors contribute to and benefit from this buzz by just 'being there' (Gertler, 1995, 2004).

Participating in a cluster's buzz does not require particular investments. This sort of information and communication is automatically received by those who are located within the cluster region and who participate in its various social and economic spheres (Grabher, 2002a). The receipt of information, news, rumors, gossip and trade folklore about other cluster firms and their actions is virtually automatic. This occurs in negotiations with local suppliers, in phone calls during office hours, while talking to neighbors in the garden or when having lunch with other employees and so on. The nature of buzz is spontaneous and fluid. Co-presence within the same economic and social context generates manifold opportunities for personal meetings and communication and links actors in multiple ways as friends and business partners (Uzzi, 1997). As emphasized by Ettliger (2003, p. 161), "... at any point in time individuals engage in multiple networks associated with different rationalities, and these different networks ... [can be] overlapping networks", thus stimulating one another.

Firms systematically get to know about innovations and strategic changes which have been developed or are executed by their competitors, suppliers and customers. Intensive monitoring and observation serves to create rivalry and stimulates activities, such as imitation, reverse engineering and product differentiation (Maskell, 2001; Malmberg and Maskell, 2002). As Powell, Koput, Bowie and Smith-Doerr (2002, p. 294) have concluded from their empirical study about the advantages of venture capital (VC)–biotechnology firm clustering, “... there are real advantages that accrue to firms and venture capitalists to being ‘on the scene’ - unplanned encounters at restaurants or coffee shops ... or news about a seminar or presentation all happen routinely in such settings. The combined impact of access to ‘news’ and more effective monitoring help explain the pattern of VC clustering.”

Co-location within a cluster also enables firms to understand the local buzz in a meaningful way because it stimulates the development of a particular institutional structure shared by those who participate. This can result in the development of ‘communities of practice’ in the cluster (Brown and Duguid, 1991; Wenger, 1998; Gertler, 2001). Firms develop similar language, technology attitudes and interpretative schemes which encompass tacit combined with explicit elements (Lawson and Lorenz, 1999; Grabher, 2002b; Johnson, Lorenz and Lundvall, 2002). This is important because it serves as a sorting mechanism and helps the actors to recognize relevant signs and information and make use of it in a similar way as other cluster actors. Over time, experience in cooperations with regional actors stimulates the development of trust (Harrison, 1992). In some clusters, this trust might become the default value in interfirm communication and transactions (Maskell and Malmberg, 1999a). This can develop into a valuable localized capability stimulating further growth of these clusters. Start-up and spin-off firms, as well as others, locating to these regions might inherit this trust as an advance payment (Lawson and Lorenz, 1999; Malmberg and Maskell, 2002).

This should not be mistaken as arguing that each agglomeration of firms creates automatic, useful information about technologies, their development, applicability and markets. Of course, people only know *ex-post* how valuable the information is which they receive through local buzz. Further, the above argument does not imply that agglomerations always create the same sort of buzz. Intensive local buzz is neither a direct consequence of co-location, nor is all buzz equally relevant to the firms of a cluster. The example of Leipzig discussed in the empirical part of this paper demonstrates this quite clearly. It will be shown that firms hesitate to develop trust and do not engage in close social relations with near-by suppliers or customers, due to their experiences during the G.D.R. regime. It can be assumed that buzz only exists as a meaningful source of information if a cluster is characterized by well-developed horizontal, vertical, institutional, power and external dimensions. Since there are different options of organizing markets in the form of projects, networks or clusters, according to the transactional circumstances at hand (Maskell and Lorenzen, 2004), the particular mix of local buzz and non-local pipelines is also likely to vary across value chains, technologies and market segments. Some industries (e.g. fashion products) might, for instance, require more buzz than others (e.g. steel production), while other industries (e.g. biotechnology) would need more pipelines (see, also, Tracey and Clark, 2003). The model of buzz and pipelines presented in the next section seems especially relevant to knowledge-intensive or knowledge-driven industries.

4. ‘Over-embeddedness’ vs. openness and the role of trans-local pipelines

Meanwhile, as argued by Amin and Cohendet (1999, 2004), it has become clear that a cluster cannot unfold its growth potential in the long run if firms exclusively rely on internal markets and knowledge circulating through the local buzz.⁶ An increasing number of studies emphasize the need of extra-local linkages by referring to the dangers of local networks which are too close, too exclusive and too rigid. Such social relations could pose a threat to the

competitiveness of a firm or a group of firms. In an empirical study of the organization of production in New York's textile industry, Uzzi (1996, 1997) has detailed a phenomenon which he refers to as 'over-embeddedness' (see, also, Bathelt, 2002; Sofer and Schnell, 2002). He demonstrates that close social relations of suppliers with their customers are only positive to a certain extent. Following Granovetter's (1985) work, the study shows that close, long-term customer relations are usually advantageous because they enable both customers and suppliers to benefit from learning processes and to react quickly to market changes. But this can change when the majority of firms are closely linked with the same few customers. Uzzi (1996) demonstrates that firms are more likely to fail the more a group of suppliers is strongly embedded with the same set of customers.

This phenomenon of over-embeddedness is related to lock-in effects. Kern (1996) has suggested that the threat of technological lock-in and collective failure within a production network is related to the role of trust in social relations. Although trust provides an important basis for the development of long-term network relations (Granovetter, 1985), the development of too much trust can cause structures of blind confidence and gullibility to spread within a cluster network. As a result, traditional problem solving strategies, including those that are in need of change, may remain unaltered.

At this point, many studies of localized production configurations are aware of the importance to tap into external markets and engage in trans-local interaction (e.g. Quévit, 1991; Bramanti and Ratti, 1997; Maillat, 1998; Scott, 1998; Vatne, 2001; Bresnahan, Gambardella and Saxenian, 2001), to avoid "entropic death" (Camagni, 1991). Despite these insights, the structure of this interaction and the ways in which such linkages are established and maintained have hardly been analyzed in the cluster literature (see, also, Humphrey and Schmitz, 2002).⁷ Tracey and Clark (2003, p. 11) rightly argue that "... geographical clusters can no longer be (if, indeed, they ever could be) thought of simply as closed local systems."

The rising knowledge economy is not a regional or regionalized phenomenon (Tracey, Clark and Lawton Smith, 2002). In short, we can assume that it is often the trans-local, and sometimes even global, interactions which are at the core of individual and collective competitiveness of cluster firms. Owen-Smith and Powell (2002, 2004) use the term 'pipeline' to refer to such linkages. In contrast to the type of communication and interaction which occurs within the cluster, the knowledge flows and interaction in trans-local pipelines differ from local buzz. They are targeted towards certain, often pre-defined goals and are planned in advance. Unlike local buzz, non-local pipelines do not occur automatically and do not result from the spontaneous meetings of actors which have a mutual understanding and share the same interpretative schemes. They are, in fact, quite risky and require particular investments into new linkages with other firms (Bathelt, Malmberg and Maskell, 2004). Once a potential partner from outside has been found, it must be decided how much information should be given to that partner and to which degree the activities of that firm have to be monitored or controlled.⁸ The resulting interaction is, thus, greatly impacted by the degree of trust that exists between the firms. In contrast to local relations between cluster firms, there is no shared trust from which the new partners can benefit (Maskell and Malmberg, 1999a). Instead, the establishment of trans-local pipelines requires that new trust be created, a timely process involving substantial costs and investments (Harrison, 1992; Lorenz, 1999; Thomas, 2001). The partners on both ends of a pipeline have to develop joint interpretative schemes and common institutions which enable cooperation in particular projects. This is, of course, no simple task, as the cultural contexts in which firms operate have different roots (e.g. Schoenberger, 1997).⁹

Identifying the value and location of external knowledge and building pipelines to access that knowledge is, however, only part of the challenge when attempting to stimulate a firm's innovative capability. An important pre-requisite for a firm to successfully establish pipelines

is its ability to assimilate the arriving information and apply it successfully within its internal divisions of labor. Cohen and Levinthal (1990) have labeled this ability as being a firm's 'absorptive capacity' (Malecki, 2000). This capacity also depends on the way in which information can be transferred across and within the departments and sub-units of a firm which may be removed from the point where the pipelines enter the firm. The role of internal gatekeepers and boundary-spanners becomes crucial for translating externally produced knowledge into a form that can be internally understood by the departments or individuals for whom it is valuable (van den Bosch, Volberda and de Boer, 1999; Giuliani, 2002).

Overall, the particular combination of local buzz and trans-local pipelines generates a dynamic of knowledge creation within a cluster which provides the potential for enhanced learning capabilities and future economic growth.¹⁰ The local buzz benefits from trans-local pipelines which pump new information and rumors into the cluster. Of course, formal contractual alliances between firms from different regions and nations can differ in the way they enable and channel information flows and transactions. They can be permeable, open channels or more proprietary conduits. As shown by Owen-Smith and Powell (2004), open pipelines are more 'leaky' and, thus, function as 'sprinklers' which support the diffusion of information between the cluster firms. This stimulates additional buzz and serves as a basis for further innovation and differentiation in production. Intensive local buzz enables firms to identify the particular type of information which supports further innovation and ignore that information which is less important. Local buzz also helps firms to recognize the importance of trans-local pipelines and acquire knowledge about the establishment of such pipelines.

In the remainder of this paper, this conception, which emphasizes the importance of local and extra-local cluster relations, will be applied to the case of the Leipzig media sector. It will be shown that Leipzig's media firms, due to the structures and histories they experienced in the post-World War II period, hesitate to engage in close social relations with other local actors.

They have difficulties in establishing linkages with external markets and potential partners in west Germany and beyond. Since Leipzig has not yet developed into a fully-fledged cluster of the media sector, the empirical analysis concentrates on those cluster dimensions which have developed strongest. The following sections will, thus, focus on local and extra-local supplier-producer-user interaction as these dimensions were at the core of the empirical investigations. Only anecdotal evidence will be presented related to the horizontal and power dimensions of Leipzig's media sector (for a broader discussion of power relations, see Bathelt and Taylor, 2002).

5. Leipzig's changing media economy and the 'distanced neighbor' paradox

Already in the Middle Ages, Leipzig was an important trade and service center which had developed into a leading location for trade fairs in Europe (Schmidt, 1994; Gormsen, 1996; Grundmann, 1996). Leipzig also played a leading role in the German book publishing industry prior World War II (Schulz, 1989; Wittmann, 1999). In the 1930's, there were more than 300 book publishers and 500 allied firms with over 3,000 employees (Figure 1). Most of the firms were located in the 'Graphisches Viertel' (Graphical Quarter), adjacent to the downtown area (Denzer and Grundmann, 1999). The local production system at that time was that of a 19th century industrial district (Boggs, 2001).

The Second World War had a dramatic impact on the evolution of the local media sector. While the Graphisches Viertel was rebuilt following the Second World War, it was integrated into the international socialist division of labor. Leipzig's firms, thus, had little contact with their counterparts and markets in West Germany. Even though Leipzig was still an important location of the book publishing industry of the G.D.R., it was not able to retain its status as a national and international center of these industries (Denzer and Grundmann, 1999; Gräf, 2001).

At the time of the German Reunification in 1990, the book publishing industry, like most other industries, was not well positioned for market-driven competition. In 1990, the Förderverein Medienstadt Leipzig (Development Association of the Media City Leipzig), a loosely organized public-private partnership, began promoting the re-development of the Graphisches Viertel as a site of book publishing and affiliated industries (Baier, 1992; Denzer and Grundmann, 1999; Schubert, 2000). Their efforts largely failed, however. The Graphisches Viertel was neither able to grow into a center of traditional media branches nor did it develop into a significant location of the flourishing electronic and new media sector. Overall, book publishing underwent massive de-industrialization.

In the area of electronic media, such as radio, TV and film, Leipzig did not have a strong tradition (Sagurna, 1999, 2000). The G.D.R. radio, TV and film sector was centered in East Berlin-Potsdam. Despite Leipzig's lack of tradition in this industry, a new media cluster developed in the city during the 1990's around the activities of the MDR (Figure 2). The MDR was established in 1991 as a public broadcasting service of the East German 'Länder' Saxony, Saxony-Anhalt and Thuringia. With its main office located in Leipzig, the MDR employed about 2,050 individuals in the region in 1998 (Mitteldeutscher Rundfunk, 1999). In addition, there were about 1,000 to 1,500 freelance consultants who worked for the MDR. This broadcasting service rapidly became the most important formal institution in supporting the establishment of TV and film-related media branches in Leipzig (van den Berg, Braun and van Winden, 2001). In sum, Leipzig's media sector experienced two substantial ruptures during the 20th century which changed the nature of the local economy and the division of labor, including that of the media sector, in dramatic ways (for a more detailed account of the historical development, see Bathelt and Boggs, 2003).

Local growth in the media sector also benefited from privatization processes in the former G.D.R. television and film industry. In addition, firms of West German media firms

established branches in Leipzig or relocated part of their activities to the region to acquire contracts from and offer services to MDR. These ‘transplants’ played an important role in the development of Leipzig’s media industry since they brought professional expertise and specialized experience into the region which did not exist previously. Overall, a network of specialized activities and competencies developed which became an incentive for ‘euphoric’ local start-ups and university spin-offs (Bathelt, 2002).¹¹ Bentele, Liebert and Polifke (2003) estimate from a postal survey that the media sector in Leipzig employed 23,100 permanent employees and 9,700 freelancers in 2002, amounting to about 15% of the regional labor force. The regional cluster consisted of 750 to 1,350 media firms, depending on which definition and data source is used (Statistisches Landesamt des Freistaates Sachsen, 2001; Bentele, Liebert and Polifke, 2003). This indicates that Leipzig’s media sector has grown to a substantial size. It has developed into a secondary media industry center in Germany (Gräf, Hallati and Seiwert, 2001; Sydow and Staber, 2002; Krätke, 2002).

In the following sections, evidence will be provided that Leipzig’s media firms are lacking both linkages with external markets and close internal social relations. This supports a structure which I refer to as the ‘distanced neighbor’ paradox: firms are over-embedded with respect to their focus on the regional market, yet, at the same time, they are not interested in close linkages with their local (and non-local) customers. This represents a strange combination of ‘localism’ and ‘isolation’. Firms focus on their regional market but also keep some ‘distance’ to their local customers, giving rise to an under-socialized structure of social relations. It is argued that this combination of over-embeddedness and under-socialization will have severe impacts on prospects of knowledge creation and could threaten the cluster’s existence in the future.

6. Over-emphasis of the local market in Leipzig's media sector

The MDR and its activities have become the major driving force behind the growth of the media industry in Leipzig. The MDR is the largest local customer of the film and TV industry and has attracted many related service providers and suppliers (Sagurna, 1999, 2000).

Throughout the 1990's, the local activities of the MDR continuously expanded. Film studios were built and subsidiaries established to carry out specialized tasks. As one executive of the MDR pointed out, the strategy was to spin out functions into separate subsidiaries and subcontract other functions to local suppliers and services. The goal behind this was to establish a local supply and support sector for TV and film production and to cut costs. In addition, suppliers and service providers from other regions were required to set up branches in Leipzig or relocate their offices to the area to keep their contracts.

As a result of this policy, the MDR is no longer forced to rely on contractors located in different regions. Due to the increasing agglomeration of film and TV-related businesses, about 70% of the MDR's production contracts are with suppliers and service providers from within Saxony, Saxony-Anhalt and Thuringia (Reiter, 2000). Clearly, the activities of the MDR have triggered the development of a media industry cluster. The vertical and institutional dimensions have benefited from this which, in turn, led to further start-up and relocation activities, similar to what is suggested in the literature (e.g. Fujita, Krugman and Venables 1999). The establishment of the MDR has stimulated and directed the development of the local media industry in many different ways: (i) as an important institution which defines rules and formats in the film and TV business, (ii) as a customer which attracts other media firms and stimulates start-up processes and (iii) through its policy to favor local subcontractors, suppliers and service providers.

Overall, the genesis of Leipzig's media industry appears to be a successful example of industrial clustering through which new producer-user relations, specialized labor market

linkages and corresponding institutional settings have developed. There are, however, severe limitations to this growth process. Many media firms have had only limited economic success, as is indicated by overall sales and growth rates in sales. About 25% of the respondents (15 of 56 firms) had annual sales of less than 150,000 Euro (Table 1). In another study, Bentele, Liebert and Polifke's (2000) found that 20% of the sample firms reported having sales of less than 33,000 Euro. Obviously, a large proportion of Leipzig's media firms do not earn a reasonable profit which, in turn, would stimulate further investments.¹² Of course, there are also firms with sales of 1,250,000 Euro and higher, although their share appears rather small (only 7 out of 56 firms interviewed). These firms are particularly concentrated in the area of film and TV production. Most use very costly equipment and constantly have to reinvest to upgrade this technology. Large sales are, therefore, not necessarily an indication of fast-growing, dynamic enterprises.

A reason for this can be found in the strong orientation towards local customers and the focus on small, often local market segments. A large number of the survey firms almost exclusively sell their products and services to the regional market. They have hardly any external linkages to other market regions and distant customers. Or, in other words, they have not been successful or are not interested in establishing trans-local pipelines, as described by Owen-Smith and Powell (2002) and Bathelt, Malmberg and Maskell (2004). Almost 60% of the media firms interviewed (36 of 62 firms) sell more than two thirds of their products and services within the Leipzig region (Table 2). Although there is also a significant number of firms which have substantial sales outside the Leipzig region (i.e. 30% of the firms sell at least two thirds of their products and services externally), these have a limited impact on the local economy. Among these, we can find subsidiaries of large firms and small firms in niche markets, primarily in film production. Few of these are, however, large enough or have local networks strong enough to produce multiplier effects within the cluster. Overall, linkages of

Leipzig's media firms to other market regions are relatively weak.¹³ At first sight, this seems to be a similar trend to that identified by Brail and Gertler (1999) who estimate that the firms in Toronto's multimedia cluster derive 62% of their sales from regional customers. Closer analysis reveals, however, important differences between the Toronto and Leipzig cases. The Toronto economy consists of a large number of fast growing customer industries with access to large national and international markets. Similar to the observations of Owen-Smith and Powell (2004), these firms have open pipelines with external customers from which other local firms can also benefit.

In the case of Leipzig, local market orientation is more problematic than in Toronto because there is only a limited regional growth potential. There are only few large buyers of media products, which themselves grow at a limited pace. This combination of regional market focus and dependence on a limited number of customers bears the risk of encouraging the development of rigid, strong ties which are characterized by stagnation and over-embeddedness, as shown by Uzzi (1996, 1997) and Kern (1996).¹⁴ The single most important customer, i.e. the MDR, has completed its investments in the region and will not continue to grow at the same rate as in the past. In addition, the MDR is not very strong in the application of multimedia technologies and does not stimulate innovation activities in this field. Financial problems, related to mismanagement and losses in financial speculations, have also put pressure on the MDR to revise its local-content policy of spinning out functions to external suppliers and service providers (Bathelt, 2002). As a consequence, the MDR has broadened the variety of in-house production activities which has resulted in increased competition and price pressure in parts of the supplier segment.

Specialized film production firms for industrial users (e.g. producers of promotion and advertising videos) also do not have much business in Leipzig as there are not many potential customers located within the region. Most of Leipzig's large-scale manufacturing firms have

closed down or minimized production activities after Reunification (e.g. Schmidt, 1994). Furthermore, as one producer complained, those industrial firms which have remained in Leipzig tend to contract large parts of their work to well-known West German film production companies. Leipzig's new convention center also has problems competing against its powerful competitors in West German cities (Bode and Burdack, 1997). Contracts from the new convention center are lower than that which was originally expected. As a consequence, local firms in these media segments have a hard time staying in the market. The firms' locations in Leipzig can only be understood in terms of the particular personal trajectories of their founders in the post-World War II period. Some of the firms were, for instance, started up during the privatizing of a former 'Kombinat' (a state-directed, vertically and horizontally integrated G.D.R. firm). As the production of promotion videos is based on intensive interaction between producers and customers and requires their co-presence on many occasions, industrial customers in Germany select their media partners carefully. They either cooperate with highly-prestigious film production companies or near-by production firms and/or those that they have been in contact with over a longer time period. Neither of these reasons, however, favors film and TV production firms based in Leipzig.

Overall, this suggests that there are no strong trans-local pipelines which could provide Leipzig's media firms with access to external markets and, in turn, knowledge assets.¹⁵ This is, in part, related to the limited absorptive capacity of these firms in the sense of Cohen and Levinthal (1990). In fact, the deficits in the firms' knowledge of markets which have existed since the Reunification have never fully disappeared. The orientation towards local customers is also very much related to the lack of pipelines directed towards western markets in the post-World War II era and the orientation of the G.D.R. towards eastern economies. Further, it is due to the negative reputation of East German firms in media fields. Many media firms still have to fight an image of backwardness which dates back to the structures which developed in

the post-World War II period.¹⁶ This negative image is especially strong in technologically-sophisticated and/or design-intensive market segments. Founders and managers of some firms mentioned that they lost bids against West German competitors even though the products and services of these firms were more expensive. This implies that, in some instances, a company's location in Leipzig may serve as a competitive disadvantage against other firms which are based in West Germany.

7. The 'under-socialized' nature of economic relations in Leipzig's media sector

In having shown that customer linkages in Leipzig's media industry cluster are largely inward-oriented, bearing the risk of over-embeddedness, one would at least expect firms to engage in close relations and networks with other cluster firms as suggested in the literature. The case of Leipzig, however, does not conform to these expectations but, instead, displays a different linkage pattern (see, also, Metze and Schroeckh, 1998).¹⁷ According to these findings, it is argued that the structure of economic relations in Leipzig's media industry is also under-socialized. This provides an additional burden on the growth prospects of this cluster.¹⁸ Granovetter (1985, 1990) used the term 'under-socialization' to describe the nature of economic transactions in neoclassical economic theory. Here, economic action is purely regulated by market forces through the price mechanism. In this model of perfect competition, there is no need for additional interaction between economic agents.

Meanwhile, there is plenty of evidence which suggests that such a structure of social relations is unproductive in complex transactions and processes of knowledge creation which are plagued by uncertainty. Producer-user communication and interactive learning are central to the maintenance of a firm's long-term competitiveness (Lundvall, 1988; Gertler, 1993). In the following subsections, I will provide evidence that Leipzig's media firms are not generally

characterized by close social relations and interfirm interaction, as could be implied from the study of van den Berg, Braun and van Winden (2001). In contrast, many firms in (i) film and TV production, (ii) advertising, graphics and design and (iii) new digital media are seemingly not that interested in having close customer contact. They keep communication with their customers to a minimum and do not actively participate in the local buzz.¹⁹ This combination of over-embedded and under-socialized local linkages is what I refer to as the ‘distanced neighbor’ paradox.

7.1 Film and TV production

For many firms in the area of film and TV production in Leipzig, the MDR has become the most important and, sometimes, even the only customer. Since Leipzig does not have a strong tradition in film and TV production, new start-ups, specialized suppliers and experienced personnel were particularly attracted to locations close to the new MDR facilities, which were set up during the 1990’s. In the case of one firm which produces a monthly TV magazine, proximity to the MDR creates opportunities for regular meetings and face-to-face contacts with TV executives and producers. Through this, technical questions and adjustments regarding TV formats can be solved without much effort. It also provides opportunities to participate in existing and create new local buzz, as pointed out by Storper and Venables (2004). The advantages of proximity are even greater in areas such as the documentation of socio-political events and the integration of up-to-date information for news magazines. This often requires close, exact adjustments at both ends; that of the broadcaster and that of the news supplier. Other firms pointed out in their interviews that close communication in the pre-production and production stages of a TV show helps minimize the risk of expensive adjustments at later stages. These firms make extra efforts to have continuous communication with the MDR. Here, co-location and visibility clearly generate potentials for efficient inter-

personal translation of information between the cluster actors (Latour, 1986; Allen, 1997) and reduce transaction costs.

There are some seemingly very innovative firms in the Leipzig film and TV sector, such as Saxonia Media Filmproduktion, a Leipzig-based production company of films, made-for-TV movies and TV series, which apply new forms of project organization, in the way described by DeFillippi and Arthur (1998) and Grabher (2002a). Their production activities are organized around a number of core individuals who form larger teams consisting of smaller groups of specialists. They have known one another for a longer time period and have previously worked together in subgroups on repeated occasions. Cooperation in temporary projects requires intensive, open interaction to meet creative, technical and accounting standards. Learning by doing, by watching and by interacting takes place through sequences of hectic activity intermixed with quiet periods within a high-trust environment (DeFillippi and Arthur, 1998). The occurrence of such intensive forms of interaction in Leipzig has led van den Berg, Braun and van Winden (2001, p. 115) to conclude that “[s]trategic interfirm cooperation in the media cluster is frequent, and takes many different forms.” Although the authors acknowledge that the media sector is not yet fully developed, limiting possibilities for local film and TV producers, they describe its structure as highly flexible, interactive and project-based in character. However, this is only characteristic of a small part of the film and TV production segment in Leipzig. Further, Saxonia Media Filmproduktion and other Leipzig media firms which are involved in project-based work do not have strong regional linkages. Their partners originate from different parts of Germany, especially from larger media centers such as Munich and Berlin (e.g. Krätke, 2002).²⁰ As a consequence, their material and knowledge inputs into the local media cluster are limited. They do not require local buzz, nor consciously stimulate its development.

Although intensive, close interactions between local firms would be expected within a cluster context, they are not the rule in Leipzig's media industry. In fact, they are rather an exception. Proximity to the MDR is often primarily used to get information about new developments regarding this institution. Direct participation in the development of new TV formats is seemingly rare. Not a single firm interviewed mentioned that they were directly involved. A number of interviewees emphasized that proximity helps establish good personal relations with MDR employees, as this also eases business relations and is a prerequisite in acquiring insider information. According to Uzzi (1997) and Ettliger (2003), such multiplex relationships strengthen the actors' capabilities to access resources, adjust to changes in the business environment and take risks. Over time, these social relations could stimulate joint problem solving and the development of trust and reciprocity. In many cases, such structures are, however, not likely to develop in Leipzig, as transactions are largely standardized and decision making and information exchange quite hierarchical. One service provider to the MDR emphasized that joint problem solving does not occur because the MDR managers she works with "do not have an ear for this". They pre-define the exact services they need and expect them to be executed without much discussion and at a low price. The interviewee mentioned that the MDR is not interested in the firm's ideas and suggestions for innovations. Regular contracts would not leave much room for creativity, brain storming and the like. Other TV and film suppliers described their relation to MDR in a similar way. They criticized that economic transactions are usually exactly specified and that such rules and regulations are subject to little change once in place. Therefore, the need for regular meetings and social interaction which could be potentially fruitful is extremely low. Once a supplier relation has been established and initial adjustments are made, the need for personal meetings and further modifications drastically drops. Based on past experience, some firms had also developed negative feelings towards the MDR.²¹ Others accused the MDR of being unreliable and not

fulfilling its promises. Overall, it seems that the nature of social relations is not conducive to the stimulation of high-quality buzz in Leipzig.

Most smaller firms in the industry appear to operate independently and somewhat isolated from other media firms.²² They neither look for partners to cooperate in complex projects nor do they actively involve suppliers and service firms in their activities. Exceptions do, of course, exist. One film company, for instance, regularly collaborates with two technical suppliers which are located right next door within the same incubator facility. However, supplies which are acquired locally are often fairly standardized and do not require specific adjustments or interaction.

Film production firms in Leipzig are fairly integrated and have enough capacities to do most tasks in-house. Contractors, such as camera teams and technical experts, are only used if a particular shot is done at a distant location and the transfer of equipment would be too expensive or if internal capacities are already employed in other projects. Cooperation with external partners is, thus, often restricted to cases where it is necessary to overcome capacity shortages and increase flexibility. If such arrangements occur, they tend to take place within existing networks of social relations. Often, partners are preferred which have already been involved in former projects to minimize the risk of failure (Granovetter, 1985).

Surprisingly, even firms within the same incubator center sometimes do not know much about one another. For instance, this seems to be the case in the facilities of the Media City Leipzig. This is another indication that firms do not actively participate in the local buzz.

Communication between firms was characterized by one interviewee as being fairly poor and restricted to smalltalk. There are seemingly not many occasions where technical developments or industry trends are discussed with experts from other firms. One representative of a production company criticized this and mentioned: "Television people are full of themselves. They all want to do their own thing, even though what they do is more or

less the same, in the end.” Fierce competition which exists in some media segments does not stimulate interaction in innovation processes but rather forces prices to drop. This serves to spread feelings of distrust and suspicion.²³

The overall low degree of interaction between local TV and film companies is also related to the fact that the Leipzig media industry cluster is not yet fully developed (Bathelt, 2002).

There are, for instance, only a small number of TV and film production companies which could be potential customers for specialized suppliers and service providers. Although the city hosts firms and experts in many different stages of TV and film production, including film set, scenery, lighting and other technical equipment and support, their services are often fairly broad and could not meet unusual or sophisticated needs in particular projects. As will be confirmed in the next sections, local interaction and communication in the Leipzig media industry cluster is seemingly limited, does not involve complex adjustments and restricts the potentialities of producing and consuming local buzz.

7.2 Advertising, graphics and design

While the development of the modern advertising industry in West Germany benefited from the investment decisions of large, prestigious American agencies in the post-World War II period (Jentsch, 2004), this industry was quite insignificant in East Germany under the G.D.R. regime. As a consequence, the present structure of firms in Leipzig still differs from that in West German cities. Further, there are differences in consumer tastes, in humor, ‘advertising culture’ and the like (Nöcker, 2003). The industry is characterized by small owner-led agencies which often focus on print media and require limited creative inputs. Important customers which could attract international network agencies are still largely missing. Given the fact that this industry is thus in an infant stage in Leipzig with little support infrastructure, the ‘agency hopping’ of employees is very limited. Here, a further stimulus in the establishment of latent networks is lacking (Grabher, 2002a).

Work in advertising, graphics and design businesses is typically project-based and customer-specific and, thus, involves close communication and coordination between producers and their customers (Grabher, 2002b). As in other knowledge-intensive services, such as business consulting, initial customer contacts are often based on referrals by former customers and benefit from the effects of having a good reputation (Glückler and Armbrüster, 2003). In advertising, the early stage of a project requires that the customer closely interacts with the advertising agency's account manager, account planner (strategist) and its pool of creatives. In doing so, the actors become familiar with each others visions and are able to come up with a joint advertising concept which satisfies the particular customer needs based on the agency's strengths. From successful projects, longer-term producer-customer relations and partnerships can develop. This general structure of advertising projects can also be identified in Leipzig. Compared to the structures identified in the most dynamic and leading centers of advertising, graphics and design, such as London (Grabher, 2001), interesting differences exist, however.

Many of Leipzig's advertising firms seem to define themselves as full-service agencies which try to solve all customer needs in-house. They are not involved in an extensive social division of labor with external specialists or complementary partners. Most firms interviewed have very little contact with other specialized agencies and do not cooperate with other firms. If, however, a customer demands that a contract be changed to include another area of expertise (e.g. from advertising towards marketing or from classic advertising towards web design), firms will become involved in strategic partnerships with other specialists. One manager of a small agency said: "We do not offer such services ourselves but look for a strong partner who fits with us and is technologically advanced and up-to-date in terms of marketing. We have to fulfill our quality standards." In another case, communication with the founder of a neighboring internet firm led an agency to engage in a joint project which combined both

areas of expertise. Such cooperative practices are, however, still rare. More often, existing subcontracts involve relatively little interaction, thus, limiting the potential for the generation of creative ideas. Such linkages, in turn, do not serve to trigger the quality of the local buzz. Several interviewees pointed out that they try to reduce communication with customers to a minimum to save time and money. Their strategy is to limit intensive customer contact to the early stages of a contract and, from this, develop long-term business relations. Often they concentrate on regional customers. This has obvious advantages to the agencies. For instance, one founder of an advertising agency mentioned that potential problems can easily be straightened out in personal meetings. At the same time, face-to-face contacts in ongoing business relations would not be as frequent as they are in new business relations. In fact, some managers viewed intensive communication with customers as a burden or “something that distracts one from the really important things” to be done. Few firms are engaged in networks with firms in the film and TV production segment and other media industries. Many do not intend to cross boundaries towards other media segments to tap into new experimental product designs or create new markets.

A founder of an agency mentioned that she tried to develop trust relations with her customers to avoid written contracts. After a difficult start-up period, where it proved to be difficult to find local customers, she was more and more successful and developed personal relationships with some customers beyond the needs of her business. At the time of the interview, a lot of the business was agreed upon by simply “shaking hands”. The advertising, graphics and design agencies which primarily focus on the regional market seem to have difficulties attracting customers from other regions, especially from West German cities.²⁴ Their growth potential seems rather limited. In addition, these agencies are also threatened by competitors from West Germany which establish small branch offices in Leipzig to gain market access but execute most of their production and design activities outside the region. Through this,

opportunities for the development of a broader buzz are basically exported. This also creates fierce price competition in an already tight local market. As a consequence, competition for local customers does not primarily depend on innovativeness and creativity. It serves to freeze ‘conservative’ structures in the Leipzig media industry and blocks off social practices, such as interactive learning. It produces something like a ‘catch 22’ situation. Firms focus on price rather than on creativity and innovative design which would be a requirement to access large external markets. Therefore, firms continue to rely on the stagnating local market and miss developments which take place elsewhere. Again, this situation is characterized by both the lack of pipelines and the presence of under-socialized local relations. It thus appears that Leipzig’s prospects to develop into a prestigious center of advertising are clearly limited. Relatively few interviewees seemed to be aware of the importance of ongoing producer-user interaction and contacts with external customers as a means to capture new trends and improve competitiveness. One founder of a graphics agency said: “Our products cannot be bought from the shelf, they have to be tailored. You cannot move on with a concept without your customer. ... He has to be in the boat - right there. This is decisive ..., otherwise you develop products that are not what the customers want.” It is not surprising that such quotes were only found in interviews with firms which had a strong customer base beyond the Leipzig region.²⁵

In the area of graphics, interactions between self-employed graphics specialists and experts from other media segments seem to be more common. On a project-basis, one interviewee regularly cooperates with a group of three or four specialists from other areas. This interaction is particularly important in complex projects which combine competencies from different media fields, such as graphics, software, web design, e-commerce and hardware. Such projects require that boundaries between technology segments are systematically crossed (Bengtsson and Söderholm, 2002). This is not an easy task to accomplish because it first

requires that the diverse group of specialists understands each others ideas, concerns and requirements. They then have to be able to draw from their different competencies to integrate these into a particular customer project. Similar to the knowledge transformation process described by Nonaka and Takeuchi (1995), this involves the articulation of various types of tacit knowledge and a recombination of this knowledge into a new concept, design or product (Nonaka, Toyama and Nagata, 2000).

If successful, such project work, of course, creates potential for interactive learning, knowledge creation and innovation. It is likely that interaction between specialists who have worked together on various occasions becomes more efficient over time. Therefore, these cooperative arrangements tend to be stable. Not surprisingly, such close cooperation also bears the risk of unintended knowledge transfers from one project member to another. This would be the case if one firm observes or spies on its partners in order to capitalize on their competencies. To avoid this, firms carefully select their partners (Giuliani, 2002; Bathelt, Malmberg and Maskell, 2004). Most of the firms interviewed focus on other local firms when they select project partners. This serves to stimulate the establishment of small local islands of cooperation within the Leipzig media economy. Overall, these social practices point towards new forms of networking and interaction in Leipzig through which common interpretative schemes could be established and more local buzz created and used in meaningful ways in the future (Wenger, 1998; Storper and Venables, 2004). However, such project work is not common practice.

7.3 New digital media

The general trend of firms having few trans-local pipelines and under-socialized local relations can also be found in the new digital media segment. Firms in this segment are engaged in web design and other internet and digital media services, such as e-commerce, 3-D animation, CD-ROM presentation, video animation and databank programming. Although it

is sometimes expected that such firms serve non-local markets, this is certainly not the case for the majority of Leipzig's new interactive media firms. Their activities are focussed on customers from within Leipzig and other East German regions. Since the number of manufacturing firms in Leipzig is still quite low, many firms in the area of new digital media have begun to offer services to public authorities and the local government. Given that these organizations are typically not among the most innovative, this customer base does not necessarily help firms in this media segment to develop an image as being creative or leaders in technology. As a consequence, many of the new interactive media firms continue to have problems to acquire customers in West German markets.

In contrast to most firms, some have successfully developed trans-local pipelines, from which others could learn how to access distant markets. A number of young, dynamic and innovative start-up firms do not focus on the Leipzig or East German market. Rather, they have familial relations and friendships that extend beyond the Leipzig region which they use to obtain contact with customers from other German regions. Further, they are able to win customers by applying high quality and state-of-the-art technology. Similar to the firms in film and TV production, these firms benefit from multiplex relationships which help to transfer social capital from private to business activities (Uzzi, 1997). One founder mentioned that he hopes that the effects of having a good reputation will serve to broaden his customer base throughout Germany over time.

Surprisingly, few of the new digital media firms seemed interested in partnerships with other firms. Several interviewees stressed that they "can do their job themselves and do not need help". If cooperative arrangements exist, these have usually developed with firms from West German regions. These relations enable access to external markets. Most firms in this sector work quite isolated from one another and are seemingly not that interested in getting to know how other local firms operate. There is neither much interaction with competitors nor with

complementary firms. In general, producer-user interaction is less developed than in the advertising, graphics and design segment. There is little local buzz which can spread under these conditions (Storper and Venables, 2004).

There are, of course, a few firms which actively involve their customers in developing new ideas and try to benefit from close interaction with customers. They particularly recognize the creative potential which can derive from systematic customer contact. One online-service provider had, for instance, established a meeting procedure that they refer to as the 'Kreatisch'²⁶ (creative table). Here, producer-user interaction takes place under a particular set of procedural rules within a given time frame in a particular place. This Kreatisch requires that each party involved in a contract prepares these meetings in a certain way and presents their views and requirements in a particular format. The founder of that firm said that the quality of their work and the degree of customer satisfaction had increased substantially through this procedure.

Despite such cases of interactive learning, most firms in this segment operate in isolation and are seemingly not aware of the potential benefits of close face-to-face contacts with customers. One founder of a web design company avoided intensive contact with his customers: "I fight for myself... I want my portion of the cake for myself and want to stay all by myself. That's why I do not want to join a club or partnership or anything else." Another interviewee pointed out that he preferred that contact with customers be standardized. He would typically ask a customer to pick some initial designs, texts and other visual elements and animative effects from a larger sample which he would present. In having developed a rough understanding of the customer's demands through a simple short conversation, he would trust his "own feeling" in coming up with a suggestion for this customer after a few days. Later on, changes and smaller adjustments of this initial offer would be done through e-mail. It seems that such business practices can only be successful in the long run if customers located in Leipzig

continue to acquire their business partners locally. In contrast, it is hard to imagine that such business practices could enable a firm to cope with customer needs in rapidly changing markets, as this requires much more interaction. Thus far, many new digital media firms in Leipzig benefit from long-term business relations with customers which they acquired in the past. Some small firms basically live off a handful of local customers.

In addition, competitors from other regions, students from the local universities and self-made specialists enter this media segment. This creates high price pressures in the local market, making it hard for many firms to remain in business. Even though competition might not be greater than in other media industry clusters, this still creates substantial problems for the media firms in Leipzig. Fierce price competition, existing negative sentiments against cooperative business relations (associated with personal experiences under the G.D.R. regime) and a lack of cooperative traditions and social practices block off intensive local communication and interaction. This serves to create another 'catch 22' situation. Due to a lack of interactive practices, firms are seemingly less able to benefit from local information flows and knowledge developed in Leipzig. Overall, this suggests that their ability to benefit from local buzz is quite limited (Grabher, 2002a; Storper and Venables, 2004). As a result, it would be difficult for these firms to access extra-local knowledge pools and develop pipelines with partners from other regions (Owen-Smith and Powell, 2002; Bathelt, Malmberg and Maskell, 2004). Under these circumstances, media firms could easily be limited to their regional market and continue to stagnate unless other businesses in Leipzig become more competitive and develop trans-local pipelines.

8. Conclusions

This paper argues that a cluster's economic success cannot be understood when the internal networks of supplier and customer relations are the only focus of attention. The use of a multidimensional cluster conception reveals the importance of the need to develop an external

dimension for a cluster to be successful in the long run. Specifically, firms in the cluster must establish a minimum of trans-local linkages with firms in other regions and nations to be capable of accessing new markets and technologies developed outside the cluster. Such pipelines can be viewed as an important mechanism to pump more knowledge into the cluster, which then circulates locally through transactional networks and the communication ecology of the cluster, i.e. the local buzz. Of course, as the case of Leipzig clearly demonstrates, this is by no means an automatic process.

Although Leipzig has grown into an important media center in Germany since the Reunification, it is argued that this new media industry cluster does not (yet) have the potential to create self-induced growth, involving enhanced processes of learning and knowledge creation. This is due to a situation which I refer to as the ‘distanced neighbor’ paradox. On the one hand, Leipzig’s media firms have problems acquiring contracts with distant customers, particularly those in West Germany. Instead, they focus on near-by customers. As the regional economy still suffers from the effects of the restructuring activities after Reunification, there are only a few buyers of media products. This increasingly results in a structure of over-embeddedness. On the other hand, many of Leipzig’s media firms are seemingly uninterested in intensive customer contacts or strategic partnerships with other firms. This contributes to an under-socialized structure of transactional networks within the region. The argument of this paper is that this is the worst of all possible configurations of localized networking. Many of Leipzig’s media firms are neither successful in establishing trans-local pipelines nor do they actively participate in and benefit from the local buzz. The negative consequences of this phenomenon have begun to take shape in recent years as is indicated by Bentele, Liebert and Polifke (2000, 2003).²⁷ According to their studies, the number of permanent employees and freelancers in Leipzig’s media industries has decreased

by 2,500 and 4,900 between 2000 and 2002, respectively. Furthermore, firm formation rates have dropped and the overall number of media firms decreased.

A core question is then: which policy initiatives could help stimulate knowledge creation, innovation and growth in Leipzig's media industry cluster? If we accept the above reasoning, a clear solution to this dilemma requires that the local and extra-local structures of social relations be altered to become more communicative and diversified. From this, we can make a number of recommendations which may help to frame a policy program to strengthen the media industry cluster and economy.

First, additional institutional support is needed to assist local media firms in their attempts to access distant knowledge pools and markets. Not all firms might want to develop trans-local linkages, however. This is not a problem, for as long as a minimum number of firms strive for national and/or international recognition and market access and intend to build pipelines. The formation of such pipelines is, however, not an easy task. Some founders of small media firms in Leipzig, for instance, were very interested in extending their transactional networks to West Germany but did not succeed.

Second, as has been shown in the previous section, local buzz seems underdeveloped. Local buzz could be supported, for instance, through the organization of specific, periodic events and the establishment of meeting places which attract people from different media businesses. Such events and places could provide opportunities for regular discussion rounds, informal meetings and day-to-day information exchange. They could provide opportunities for media people to get to know one another better, exchange information and knowledge and stimulate the development of trust.

Third, it is clear that such initiatives cannot be simply superimposed by policy makers and planners upon regional agents. The trigger would have to come from within the media sector, itself. Therefore, any initiative should enroll the involvement of the most important and

dynamic actors of Leipzig's media industry cluster, or this would be doomed to fail. Such involvement cannot be expected to happen spontaneously. It is a timely process which requires that each participant learns to incorporate collective matters of interest into his/her strategies and decisions.

Fourth, initiatives should be strengthened to assist firm formation processes originating in those regional educational facilities which have established specialized media programs. Start-up support could be specifically directed towards innovative media ventures and help synchronize the activities of various regional institutions, such as local banks and industry associations. One way to reduce the risk of founding a new firm and establish a broader competence base would be to support team start-ups.

Finally, policy makers should try to acquire one or more additional major film production companies or broadcasting services to broaden the cluster's horizontal and vertical dimensions. A positive impulse in recent years have been the decisions of the automobile manufacturers Porsche and BMW to establish larger manufacturing operations in Leipzig (Wüpper, 2001, 2002). This could stimulate some growth in local media branches. Another interesting initiative was the plan to establish a new broadcasting service in Leipzig which is particularly directed to meet the needs of elderly people, i.e. 'TV 50 Plus' (*Leipziger Volkszeitung*, 2002a, 2002b). Although the MDR was quite skeptical about this project, as it was viewed as direct competition, this could become a promising investment as half of Germany's population will be above the age of 50 in the year 2030. These people will have particular needs and consumption wishes, different from those of the World War II generation. This could, in fact, drastically improve Leipzig's chances for future processes of knowledge creation and economic growth in the media sector.

Overall, a regional policy initiative in Leipzig should be directed towards both the generation of local networks to provide opportunities for interactive learning and the formation of trans-local pipelines to secure longer-term growth potentials.

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Endnotes

¹ This argument has been developed in recent work by Bathelt, Malmberg and Maskell (2004); see, also, Bathelt and Taylor (2002), Owen-Smith and Powell (2002, 2004) and Storper and Venables (2004).

² This study is based on more than 100 interviews with media firms which were conducted between July 2000 and August 2002. Additional information about start-up processes in the media industry and public policies to support this development were acquired through 25 interviews with experts from local institutions, such as local planners, policy makers and bank representatives. All interviews were conducted in German and, when needed, translated into English by the author to be included in this paper.

³ Clusters do not exist in their final form from the very beginning but gradually develop in an evolutionary way (see, for instance, Belussi and Gottardi, 2000). The particular development paths of clusters, of course, vary substantially, depending on the circumstances which exist in a particular value chain at that time and place (e.g. Bathelt and Boggs, 2003). They might not even be recognized as clusters by actors and firms until their dimensions have unfolded and become visible.

⁴ To be precise, it is relational proximity and not spatial proximity *per se* which enables close social interaction and becomes an important source of competitiveness. Spatial proximity stimulates the generation of relational assets through the means of close social relations. Tacit forms of knowledge can be generated and disseminated based on face-to-face contacts, embedded routines and local institutional arrangements (Amin and Cohendet, 1999). Relational proximity, however, is not reducible to any particular territorial setting. It can also exist or develop between actors located in different parts of the world, thanks to modern technological and institutional developments that make easier both the transfer of information and the travelling of people across space (Bathelt and Glückler, 2003; Amin and Cohendet, 2004).

⁵ Of course, one could also argue that the problem of organizing industrial production is that of integrating and dividing labor (Sayer and Walker, 1992), i.e. in such a way as to produce goods in the quantity, quality and timing that is required by users and consumers. This involves complex control and coordination mechanisms which can be employed by different forms of relational proximity (e.g. Bathelt and Glückler, 2003; Amin and Cohendet, 2004). In this context, it could be suggested that clusters provide cognitive, spatial, organizational, technological, institutional and cultural proximity (or affinity) necessary to instigate and coordinate production and innovation processes (see, for example, Gertler, 1993; Rallet and Torre, 1998; Lee, 2001; Boschma, 2004). If we formulate problems of economic organization and innovation in abstract terms of multiple proximities which can substitute for one another or distances which have to be bridged (e.g. Bengtsson and Söderholm, 2002), however, the existing problems and motivations of the economic agents involved can easily be overlooked. In this paper, I much prefer to focus on economic action and interaction between the actors involved and the structure of social relations between them.

⁶ There is, of course, a much older literature which analyzes the relationship of intra- versus interregional production linkages. In regional economics and regional science, this work is based on regional input-output and export-base models (e.g. Isard, 1956; Richardson, 1978; see, also, Dicken and Lloyd, 1972). There are also numerous antecedents in the economic geography literature (e.g. Karaska, 1969; Gilmour, 1974; Taylor and McDermott, 1982; Schickhoff, 1983). In this body of empirical work, scholars have examined the regularities and geographies of economic transactions in different branch-specific, regional and national contexts. In contrast to this literature which primarily investigates the structure, extent and distance of input-output linkages, this paper focuses on the effects of local and trans-local interaction and its reflexive patterns in processes of learning and knowledge creation.

⁷ In picking up the argument of Amin and Cohendet (2004), one could even question whether there is an ontological difference between local and non-local knowledge transfers because both are intentional and need filtering to be understood. The argument provided in this paper, however, emphasizes the different nature of institutions in both cases. Local buzz builds upon existing institutions and, thus, does not require particular investments. In contrast, trans-local linkages require new institutions to be established which is a timely and costly process.

⁸ Podolny (2001) has emphasized that networks can also be viewed as prisms of the market and not just as pipes. This is because the quality of the existing network partners of a firm allows third parties to make judgements about the status of that firm. This helps these parties decide whether or not to develop a link with the firm.

⁹ An alternative way of conceptualizing the problem of pipeline formation is that of finding ways to bridge multiple distances (e.g. Rallet and Torre, 1998; Bengtsson and Söderholm, 2002).

¹⁰ This is not to say that local buzz and trans-local pipelines automatically result in double- or triple-loop learning processes (e.g. Tracey, Clark and Lawton Smith, 2002). However, this provides a particularly well-designed context to develop such learning capabilities. Clusters neither automatically develop a buzz-and-pipeline structure which necessarily increases the competitiveness of the firms nor do partnerships with firms in different markets spontaneously pump new knowledge into the cluster. In fact, the case of Leipzig demonstrates that a very different structure can result, i.e. a poor-buzz environment with few pipelines which blocks the regional growth process. The argument presented is that cluster firms can strengthen their market position and innovativeness if a cluster context develops which combines dynamic local networks with systematic openness and external linkages to major world markets.

¹¹ Most start-ups in Leipzig's economy during the 1990's were extremely small, with the majority having less than 10 employees (Hinz, 1998; Bathelt, 2002). Their impact on the labor market has remained limited.

¹² Despite this extremely problematic income situation, start-up firms in Leipzig are quite persistent in the local economy. Reports of market failures are relatively rare. Even firms with stagnating or shrinking sales survive over many years (Thomas, 2001). A lack of sales is often compensated through previous savings and other family members. According to Hinz and Ziegler (2000), the founders and employees of these firms try to survive in the market instead of trying to maximize their incomes. They are highly motivated and are willing to work for little money. Nonetheless, a wave of bankruptcies could occur in the upcoming years if sales do not grow substantially. Thomas (2001) refers to this category of founders who work at the economic margin as the 'new self-employed'. They also exist in other segments apart from the media sector.

¹³ Although this may seem a bit surprising, it is not just a characteristic of the media sector. In a large panel study of several hundred start-up firms in Leipzig during the early and mid 1990's, Hinz (1998) found that two thirds of the survey firms across all sectors were primarily oriented towards their regional markets. This orientation was substantially stronger than that found in a similar study which was conducted in Munich. The most important market strategy of Leipzig's start-up firms was to offer low-price items to local customers. Innovative strategies were clearly less important.

¹⁴ De Laurentis, Cooke and Williams (2003) report a seemingly similar structure of the media industry cluster in Wales. This cluster is characterized by a high dependency on local broadcasters, a lack of linkages with customers from other regions and few innovative relationships between local firms. Despite these similarities, there are, however, important differences between the two cases. In the case of Wales, the language barrier seems to be most important in understanding the cluster's structure. It serves as a 'natural' boundary of the media industry cluster as a lot of the TV programs produced are in Welsh. This protects local producers from external competition. In contrast with Leipzig, this also creates a particular market, large enough for small and medium-sized firms to survive. At the same time, however, this structure does not stimulate innovation and bears the risk of stagnation and lock-in.

¹⁵ This does not imply that all media firms intend to develop such linkages. There are seemingly few strong linkages with external markets, however, and firms which attempt to establish such linkages face substantial problems. Of course, one could argue that not all firms in a cluster require strong trans-local linkages. Some can simply rely on the local buzz which, in turn, provides information about extra-local developments. However, this

argument only holds at an individual firm basis and cannot be applied to the overall cluster level. If all cluster firms rely on local linkages, the lack of pipelines cannot be compensated for.

¹⁶ This clearly indicates that the origins of Leipzig's present economic problems are strongly related to the isolation policy of the G.D.R. with respect to western economies and its wider economic implications.

¹⁷ For other examples in East Germany, see Grabher (1996) and Brussig (2000).

¹⁸ Given this particular structure of social relations, one could ask whether Leipzig can really be considered a cluster or whether it is just an agglomeration of firms. As shown in previous work (Bathelt, 2002; Bathelt and Boggs, 2003), this spatial configuration has indeed developed towards a cluster, especially in terms of the evolution of its vertical and institutional dimensions. However, it remains open whether Leipzig will continue to grow and develop into a fully-fledged cluster.

¹⁹ In a study of the Sheffield metals cluster, Watts, Wood and Wardle (2003) also found that supplier-producer-customer relations did not involve much interaction beyond the economic. Interestingly, they found that social interaction was even more common with distant as opposed to local suppliers.

²⁰ As one manager of a large Munich film studio pointed out, Munich-based film production companies seem especially interested in longer-term cooperation with Leipzig's media sector, as opposed to Cologne where major privately-owned competitors are located.

²¹ Several interviewees pointed out that the MDR put pressure on them to move into the new facilities of the Media City Leipzig. One interviewee mentioned: "If some firms do not decide to move [to 'Media City'] then the MDR assumes that they are not that interested in further cooperation."

²² A study of Bühler (1999) provided evidence that this was also characteristic of other sectors. Most start-up firms in Leipzig did not develop extensive networks with other firms. Those firms which had a larger number of network partners, however, seemed more stable and successful than those without (Hinz and Ziegler, 2000).

²³ According to Thomas (2001), the 'culture of distrust' which has developed since the Reunification, or still exists from the previous time period, seems to prevent firms from engaging in network formation. In a study of firms in Saxony, Metze and Schroeckh (1998) suggested that distrust was still an important factor in the mid 1990's. It prevented loose linkages between firms becoming more intensive, involving close interaction between employees at different levels.

²⁴ In a cross-sectoral study of start-up firms in Leipzig, Hinz and Ziegler (2000) found that the firms which were in contact with West German consultants and institutions were generally more successful than those firms without such pipelines.

²⁵ One firm tried to overcome the image problem of East German agencies by establishing a close partnership with a Stuttgart firm which takes the initiative in all creative and design-intensive jobs. This cooperation was based on friendship ties and trust which had existed long before this cooperation was put into place. Other firms also formed trans-local pipelines, primarily based on pre-existing personal networks between key actors in these firms.

²⁶ The term 'Kreatisch' is a combination of the German words 'kreativ' (creative) and 'Tisch' (table).

²⁷ Since these studies only provide rough estimates, the figures have to be interpreted with care.

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Figure 1: Leipzig's traditional book publishing cluster, 1939

(Source: based on Bathelt and Boggs, 2003, p. 281)

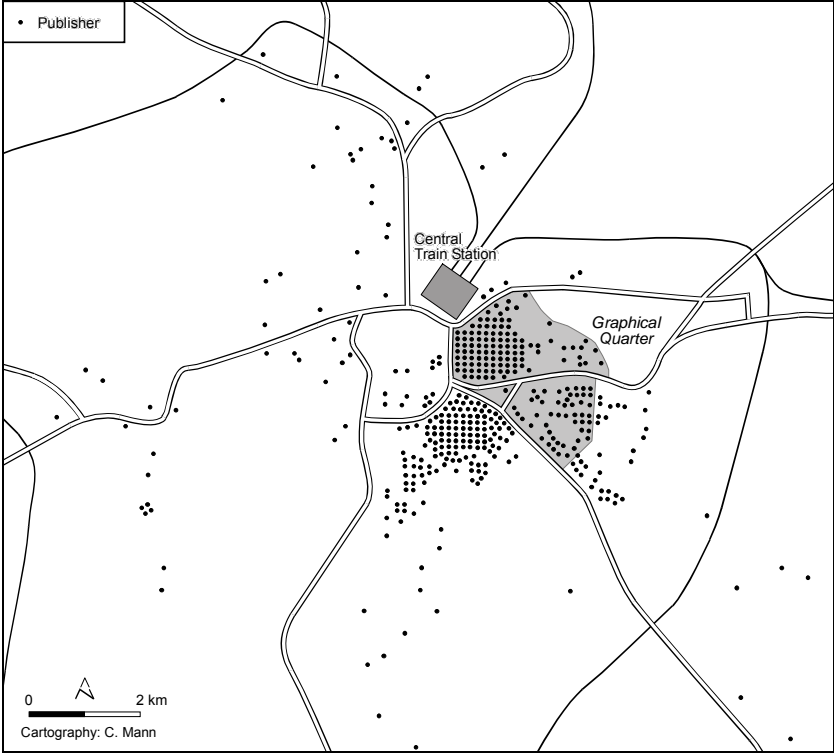


Figure 2: Leipzig's new media industry cluster, 2000

(Source: based on Bathelt and Boggs, 2003, pp. 284 and 287)

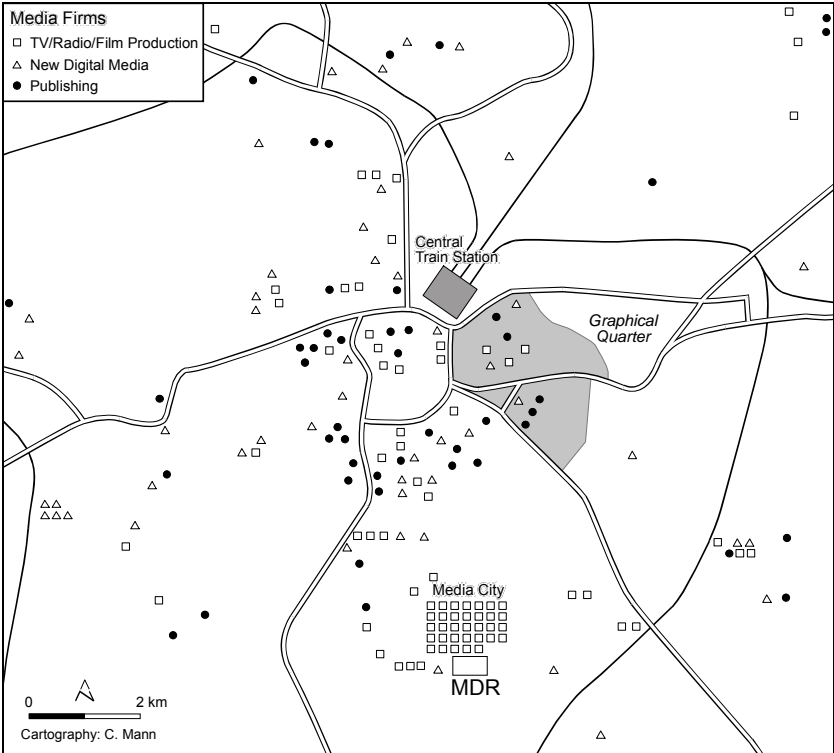


Table 1: Media firms in Leipzig by sales, 2000/2001 (Source: survey results)

Sales category	- Survey firms -	
	Number	Share (%)
Less than 50,000 Euro	1	1,8
50,000 - < 150,000 Euro	14	25,0
150,000 - < 400,000 Euro	12	21,4
400,000 - < 1,250,000 Euro	22	39,3
1,250,000 Euro and higher	7	12,5
Total	56	100,0

Table 2: Media firms in Leipzig by regional sales share, 2000/2001 (Source: survey results)

Regional sales share	- Survey firms -	
	Number	Share (%)
Less than 33.3%	18	29.0
33.3 - < 66.7%	8	12.9
66.7 - 100.0%	36	58.1
Total	62	100.0

