Towards a Spatial Turn in Organization Science? – A Long Wait

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The Need to Take Space into Account: Illustrations from Network Research

Although trained as an economist and organization researcher, given my long-standing interest in interorganizational networks of different kinds it comes as no surprise that places, spaces, districts, regions, etc. matter a lot to my research. Studying regional networks of professional service firms (e.g. Sydow 1996; Sydow et al. 1998), for instance, made me wonder what the role of spatial proximity in these kinds of networks might be. The answer is – of course – that it is often not place or space per se, but the social quality of (or enabled/enhanced by) spatial proximity that matters, for example, in terms of reduced cultural distance, homogeneity of customers, possibility of sharing resources, similarity of work practices, and so forth.

Research on project networks in the German television industry raised the (additional) question of the role of (regional) organizational fields. The institutional thickness of media regions seems to be a necessary requirement for the efficient and effective functioning of this extremely flexible, project-based form of organizing (Lutz et al. 2003). Again, it seems it is not place or space per se that matters, but the socio-spatial distance between political, educational, promotional and other financial institutions that are essential for producing television programmes through this rather parasitic organizational form. There is also the belief shared by these institutional actors that television production is and will stay important for the region.

Finally, my most recent research experience in the field of photonics (Sydow and Windeler 2003; Windeler 2003) is more ambivalent with respect to the role of space. On the one hand, spatial proximity seems (again) to be very important for organizational interaction. This widely shared view is a central assumption underlying the initiative of the German Ministry of Education and Research (BMBF) to support regional networking in the field of photonics (www.optecnet.de; see also www.kompetenznetze.de). On the other hand, the field of photonics, presumably more so than many others, is a truly global industry. This may be particularly true in those parts of the industry that develop the next generation of lithography technologies needed for the production of chips from 2008 onwards (Windeler 2003). Nevertheless, I assume that spatial proximity or regional structures also matter in this globalized organizational field.

The relevance of space – with area, direction, shape, pattern, volume and distance as key attributes (Harvey 1989: 203) – for organizing has not been a central issue in organization science, as is evident in the many so-called handbooks in this field. Beginning with the Handbook of Organization, edited by March (1965), which has no entry related to place or space, the much more recent Handbook of Organization Studies, edited by Clegg, Hardy and Nord (1997), at least refers to space in some of its more than 700 pages devoted to the physical setting of organizations in general and the aesthetic side of this in particular. Despite its more than 900 pages, Baum's (2002) most recent Companion to Organizations devotes only six entries in the subject index to the topic: spatial and environment variation (312), spatial economics (677), spatial organization of high technology (633), spatial structure (337; 563-565) and spatiotemporal framework (727). The only entry which elaborates the spatial dimension of organization is the second to last: under the heading of

Spatial Structure, Greve (2002) deals with the spatial distribution of organizations and its contribution to the evolution of organizational fields. Not surprisingly, the author refers to the well-known conceptual and empirical works in economic and social geography (e.g. Porter 1990; Krugman 1992; Harrison 1994; Saxenian 1994). However, he also cites a few organizational studies (also not surprisingly from an evolutionary perspective), documenting the fact that proximate competition increases mortality rates and that path dependency matters in the development of spatial structures.

It seems that organization science has only now started to develop an interest in, not to mention a sophisticated understanding of, the spatial dimension of organizing when confronted with empirical observations on the role of place and space in general and of regional contexts in particular. But these are mostly insights from geographical research. This interpretation corresponds to the fact that space inside organizations has hardly been considered at all by organizational researchers, although the physical separation of offices from the shop floor, for example, is as obvious as the influence of alternative spatial office and factory arrangements on the behaviour in and of organizations. And even the most post-modern forms of organizing (e.g. virtual enterprises, virtual teams) are not placeless – neither internally nor externally.

The Present State of Considering Spatial Issues: Close, but Still Erring

An evaluation of the present state of research on spatial issues related to organizations and interorganizational relationships can be approached from two angles: problem-driven and theory-driven. As far as the former approach is concerned, all organizations are necessarily associated with specific locales, and some of them (e.g. high-tech start-ups) appear to be particularly sensitive to local conditions. Although organizational practice is always situated in a particular (time and) space context and, therefore, must address questions of space, organization researchers have taken space mostly for granted or, at best, have treated it only implicitly. This is rather surprising, given, for instance, the 'interpretative turn' in organization science, which recognizes the importance of sense-making and meaning attribution and has freed the discipline from any kind of objectivistic epistemology. In consequence, meaning should have been attributed to space and it should also be acknowledged that space can, in turn, influence perceptions and interpretations. Nevertheless, organization science has hardly developed an explicit and conceptually 'ripe' understanding of place and space. Consider, for example, the case of firms, industries and even value chains which are often treated as if they occupied a single point in space. However, the spatial organization of a firm's value chain may well affect "the speed at which new strategies and technologies diffuse, and the effectiveness of organizational learning" (Barkema et al. 2002: 923). Consider, as a second example, the notion of hierarchy that, like many organizational concepts, is space-related. Speaking of those at the top and differentiating them from those at the bottom of a hierarchy has often a space-related and yet socially highly relevant correlate: the floor level of the office building. Although (post-) modernists may be watching out for functional equivalents, "the basic distinction between above/below symbolizes the spatial and, thereby, contributes semantically to the social ordering" (Drapper 2003: 111; my translation). Thirdly and finally,

mind the multinational corporation. As in the case of the spatial organization of a firm's value chain, neither organization practitioners nor organization researchers would question the idea that such corporations not only stretch across national boundaries and cut across cultures, but also extend into local and/or global space. This is true of traditional forms of organizing international activities (e.g. export, multinational corporation) as it is for the more modern, transnational firm that characterizes the rise of spatially distributed global firms, in particular (e.g. Bartlett and Ghoshal 1989). This becomes even more obvious when the process of internationalisation is conceptualized as one of entering foreign markets via interorganizational networks (Blankenburg 1995), particularly if the market or field is either a "localized production complex" (Scott 1988), a "cluster" (Porter 1990), a "creative milieu" (Maillat 1991), a "regional innovation system" (Braczyk et al. 1998), a "learning region" (Hassink 2001) or a "project ecology" (Grabher 2002). All these systems, by definition, have a spatial dimension – in terms of area and distance, in particular – and complement the spatial distance of multinational corporations with spatial "proximity to territorially defined institutions" (Amin and Cohendet 2004).

With regard to the more theory-driven perspective, the picture is less clear. Following Weick's (1969) early plea for a more processual view of organizing (rather than organization), considering time is now a commonplace in organization science (e.g. Antonacopoulou and Tsoukas 2002). Two of the most popular strands of organization theory – that is, evolutionary theory (including population ecology) and sociological neo-institutionalism – take in fact a processual stance that is sensitive to time and also to space. However, space is – still – considered by both strands to a much lesser degree than time.

In the latter tradition, some authors have at least pointed to the relevance of physical proximity in facilitating the creation of a shared reality and in reinforcing organizational conformity (e.g. Oliver 1991; D'Aunno et al. 1991; cf. Sahay 1997: 241). Other neo-institutionalists are even more sensitive to spatial proximity and distance, especially when analysing interorganizational networks (Powell et al. 2002).

In the former tradition of dealing with time, Lomi and Larsen (1996), for example, develop a density dependence model of organizational ecology that highlights the importance of localized structures of interaction for founding and mortality rates in organizational populations. The authors, who also give a concise overview of other empirical studies considering space within this research tradition, state that spatial structures are important, as the activities in and of organizations are defined in and by time and space. Hence, the recurrence of spatial concentration across industries and societies is seen as an important factor to explain the ecological dynamics of organizational populations involving more or less localized competitive and institutional processes. However, even in this prominent study, the concept of space remains rather opaque.

The spatial dimension of organizing has received more scholarly attention than in the area of ecological and neo-institutional organization theory in studies of interorganizational networks. The networks studied seem to be largely embedded in industrial districts, learning regions, and the like (e.g. Staber et al. 1996; Staber 2001; Brenner and Fornahl 2003). But these space-

sensitive studies are seldom carried out by organization scientists. And it is not by chance that Baum's Companion to Organizations refers, apart from the study by Lomi and Larsen (1996), only to these studies in the Greve's (2002) chapter on "interorganizational evolution".

To sum up, one may speak of a certain tendency to pay more attention to the spatial dimension of organizing, at least in some strands of organizational research. However, despite the general insight that all (inter-) organizational action, like all social interaction (Giddens 1984), occurs in time and place, both dimensions, and the spatial dimension in particular, have not received the conceptual attention in organization studies that they deserve from my point of view.

How to Theorize Space in Organization Science: A Proposal

Theorizing about time in and between organizations necessarily requires processual approaches, and so does theorizing about space. Only in this way organization theory can conceptualise how meaning is attributed to space, and how space influences, for example, sense-making processes. As outlined above, evolutionary and neo-institutional approaches most prominently qualify as such theories of organizing, but they downplay somewhat the role of intentional action. By contrast, other approaches, such as decision-making (Cyert and March 1963), emphasize the role of intentions and actions, but tend to neglect the importance of structures and institutions in the analysis of (inter-) organizational processes. This is even true for the discussion of structures that support (and delimit) sense-making processes. From my perspective, structuration theory, developed by Giddens (1984) as a social theory, but widely applied to analyse organizations (e.g. Ranson et al. 1980; Clark 2000; Pozzebon 2004) and interorganizational networks (e.g. Sydow and Windeler 1998; Windeler and Sydow 2001; Li and Berta 2002) and also referred to in human geography (e.g. Gregory 1989; Yeung 1998), provides the most balanced perspective on action and structure. The theory of structuration is only one of several ways to theorize social practice (see also Schatzki et al. 2000), but one of the few that is successful in overcoming the dualism of action and structure.

Moreover, Giddens (1984) brings, more forcefully than other perspective (including Luhmann's system theory; cf. Drepper 2003), time-space relations to the core of social, and hence organizational theory. He does this by building "upon the Wittgensteinian and ethnomethodological premise that structures are produced and reproduced in specific contexts. Structures are instantiated in social interactions and systems which are not only located in, and shaped by, time and space as an environment external to social relations, but which also, in turn, so shape the social content of time and space as to make them internal to social relations" (Bryant and Jary 1991: 13). Hence, it comes as no surprise that two of the few studies in organization science that do not take space for granted but explicitly deal with it, an investigation of IT implementation processes (Sahay 1997) and an analysis of the territorial embeddedness of Overseas Chinese businesses (Yeung 1998), extensively refer to structuration theory (and to Harvey's 1989 grid of social practices and Lefebre's 1991 production of space, respectively).

Without explaining every space-related concept that Giddens uses (e.g. locale as a setting for interaction; regionalization; front and back regions; physical co-presence; time-space distanciation; time-space edges; see Urry 1991 for a short overview and critical discussion), I would like to draw attention to the capacity of structuration theory to not only accommodate the spatial dimension, but to put (time-) space at its centre. From the perspective of structuration theory, organizations as well as interorganizational networks are, firstly, social systems that exist in time and space. For instance, an inter-firm network in the photonics industry that is led by Photonics Inc. and aims at the development and fab-less production of parts and components for the inter-net, is embedded in a region that, for a couple of years now and due to significantly increased organizational interaction, has been developing into a cluster within this emerging industry: Optical Technologies in Berlin-Brandenburg (OpTecBB; cf. Sydow and Windeler 2003). These systems, i.e. firms, networks and clusters in this case, exhibit structural properties which actors, such as the members of an organization, network or field, refer to in their actions and which they reproduce or transform in these very actions. For instance, in the case of OpTecBB the individual and corporate agents of this cluster in-the-making have to understand, accept and promote their collective goal or vision to become one of the leading photonic regions of the world. Moreover, they have to mobilise resources that enable them to pursue this collective strategy. If they are successful in doing this (what has already been proven at the very beginning of the developmental process) it makes it easier for the agents to develop the common understanding and to accept the effort as legitimate. This would further facilitate the process of becoming a leading cluster or learning region. More than other social systems, organizations like the parent company from which Photonics Inc. spun-off seem to "provide the power and capacity necessary to 'bracket' time and space in such a way that they are able to span greater or lesser time zones and geographical distances. These organizations are able to do so because of their control of 'allocative' and 'authoritative' resources" (Yeung 1998: 105, referring to Giddens 1984, 1987). Hence, the engagement of this particular kind of agents will surely be very beneficial for the process. However, they could also undermine the process if they would withhold, withdraw or even compete on resources necessary for the development of the region.

Organizations and interorganizational networks do not only exist in time and space (even when actors are both present and absent) and reflexively structure – organize! – social time and geographical space but, secondly, extend in time and space, depending upon their degree of institutionalisation. The more systems 'stretch' across time and space, "the more resistant they are to manipulation or change by any individual agent" (Giddens 1984: 171). In the photonics case mentioned above, the network led by Photonics Inc. has expanded over the last two years and now includes five university research institutes and ten subcontractors, out of which four of each sort are located in the Berlin-Brandenburg region. Thus, while obviously having a regional focus, the network stretches well beyond the cluster (www.OpTecBB.de). This means that the cluster has rather clear geographical boundaries while the network has not. However, due to its rather short time of existence, the network is, despite its spatial extension, not yet well-institutionalised and does not (yet) structure space to any significant degree.

Thirdly, individual and corporate actors, like organizations or even inter-organizational networks, are more or less sensitive toward local conditions of action. Over the time of network development, it seems that not only the actors in the network led by Photonics Inc., but many organizations in the cluster have become more sensitive towards the relevance of the region in terms of spatial proximity, shared understandings, reputation effects, and – last but not least – institutional support. Nevertheless, they conceive themselves, at the same time, as providing goods for the global marketplace. In somewhat more conceptual terms, structuration theory highlights the knowledgeability of agents despite the fact that much of their interaction rests on practical rather than discursive consciousness and that "the knowledgeability of human actors is always bounded on the one hand by the unconscious and on the other by unacknowledged conditions/unintended consequences of action" (Giddens 1984: 282). This may be particularly true with respect to the "spatial consciousness" (Sahay 1997) that enables actors to recognize the role place and space play in social practices, though in the case of OpTecBB in general and the inter-firm network led by Photonics Inc. in particular, the spatial consciousness of at least some actors seems to have increased.

On the level of structure, structuration theory distinguishes between rules and resources, i.e. rules of signification and legitimation on the one hand and resources of domination on the other. Both allocative and authoritative resources, which allow for power over material objects and agents respectively, are conceived as the prime carriers of time-space distanciation. Giddens' notion of distanciation refers to the role of "friction of distance" (Harvey 1989: 219) in social interactions: "Distance is both a barrier to, and a defense against, human interaction. […] Distanciation (cf. Giddens 1984: 258-259) is simply a measure of the degree to which the friction of space has been overcome to accommodate social interaction" (Harvey 1989: 222). Against this definition, the distanciation in the photonics cluster under investigation seems to have decreased somewhat: rules of signification and legitimation have developed and allocative resources have been shared, although the role of spatial proximity in this process would deserve more careful investigation, not least with respect to the effect it has on the local-global nexus. Is it possible or even likely that the distanciation decreases in the regional cluster and with respect to the global market place?

In societies of modernity and late modernity, the activities of individual and corporate actors are, on the one hand, increasingly reflexively organized. On the other hand, they are without any doubt more and more influenced by, or even depend upon, interactions with those who are absent in time and space. Under these circumstances, the activities are likely to be coordinated by means of system integration rather than by social integration which is normally achieved through face-to-face interactions (Giddens 1984). Organizations, and also interorganizational networks, make much use of the means of system integration, cut their path through time and space via (inter-) organizational actions (in which they more or less reflexively refer to these rules and resources and, thereby, reproduce or transform them), 'bind' time and space, and yet present themselves as increasingly spatially mobile. This can also be observed in the case of the network of firms strategically led by Photonics Inc. Being still a locally quite concentrated network led by a rather small firm, more

relevance is (still) attached to social integration than one would assume for firms acting in a global industry like photonics.

Concluding Remarks

While some kind of spatial 'turn' has already been noted in studies of innovation and learning (cf. Amin and Cohendet 2004), the broader field of organization science is still waiting for this turn to take place. Even if space is mentioned in the title of a study on virtual teams, as, for example, in the study by Maznevski and Chudoba (2000), one should not expect that this dimension of social practice is dealt with to any extent, and certainly not in the sophisticated conceptual and empirical manner this subject requires. This holds true even if these authors, as is the case in my own research (Sydow 1996; Sydow et al. 1998; Lutz et al. 2003; Sydow and Windeler 2003), draw on (adaptive) structuration theory. However, in sharp contrast to static and quite autistic (micro) economics, for an organization science that constitutes an interdisciplinary field of study with a dominant processual perspective there is at least some hope for more reflexivity with regard to space.

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