

The Effects of Spatial Proximity on Inter-organisational Relationships

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Abstract

This paper is concerned with the effects of space on interorganisational relationships. Much of the economic geography literature has been concerned with studying spatial agglomerations (e.g. industrial districts, clusters) whilst neglecting to characterise in detail the types of relationships that make up such agglomerations. By contrast, research in interorganisational relationships has stressed functional links in industrial networks but has neglected the role of space in fostering particular forms of relationships. This paper capitalises on the notion of territories as nexus of relationships, to propose an agenda for research into the role of spatial proximity in understanding industrial systems. Our proposal is to see spatial agglomerations such as industrial districts or clusters as spaces where firms are both territorially and functionally embedded (Dicken and Malmberg, 2001).

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Introduction

Much of the research that has focused on inter-organisational relationships within closed spatial boundaries (e.g. industrial districts, clusters) has ignored the fact that firms interact with other firms in both a local context and more geographically distant spatial locations. Our starting point is to ask the question: why do organisations choose to embed themselves in geographically proximate relations? To what extent are such relationships based on patterns of interaction facilitated by geographical proximity? This paper offers a ‘work-in-progress’ approach to current research and focuses on the role of spatial processes in interfirm relationships. The analytical concept of territories is developed as a means of differentiating various operational spaces and to analyse inter-firm relationships based on spatial proximity.

Organisations acting in a traditional Marshallian mode sought geographically close resources based on historically contingent economic, social and resources based factors. The process of combining and re-combining these productive resources was seen as providing the engine for growth and wealth creation. The discovery of ‘clusters’, ‘agglomerations’ and ‘industrial districts’ in which firms co-existed and co-operated provided evidence that such spatially defined formations were a significant driver to the success of these areas (see e.g. Saxenian 1994). Strong interorganisational relationships are often equated with a cluster, weak interfirm relations with the absence of a cluster. However, recent research is beginning to show that conceptually, the simple propinquity approach is under developed and lacks the richness of variety of particular contingent elements that are historically found in specific bounded locations (Maskell and Malmberg, 2002).

Clusters of firms have been found in many locations and assume a variety of forms. Such groupings and regions have been analysed to understand the forms, types and activities of such clusters as well as specific aspects that links organization to organization, for example, knowledge transfer, trust and technology (Markusen, 1996). However, the analysis of clusters often suffer from selective picking of certain criteria over other, less glamorous elements and tend to underspecify the types of relationships between the actors who make up the cluster. Any industrially active space has a unique historical

development process, some arising as spontaneous agglomerations of related actors and some as a consequence of public policy directed towards particular territorial/ political units (Mytelka and Farinelli, 2000) Particular spatial configurations of economic activity may lead to, and be influential in, economic growth but may not guarantee it. The economic benefits accruing from geographical propinquity of industries and services in *general* (e.g. in terms of locational economies) will differ from those that develop from geographical propinquity of *related* economic activity. As Maskell (2001) argues, the explanation for the existence of a cluster must account for the advantages that accrue to a variety of co-located firms in relation to a hypothetical single firm carrying out the same range of activities, using the same inputs and producing the same outputs.

The focus adopted in this paper is that of a contingent and contextual perspective to the impact of space on interorganisational relationships, taking into account historical antecedents as well as prevailing conditions, namely policy or institutional arrangements. Rather than take a purely locational focus or regarding territories as mere containers of economic activity, we define the concept of ‘territory’ in terms of patterns of interfirm relationships that are dependent on location-specific resources. This distinction has been summarized by Storper (1997, p.170) in the following terms:

“Territorialized economic development may be defined as something quite different from mere location or localization of economic activity. It consists [of] economic activity that is dependent on territorially specific resources – such territories being defined in terms of the context of certain inter-organisational or firm-market relationships.”

Theoretical Framework

Traditional Smithian economic theory of wealth creation sees specialization and division of labour as the drivers for further improvements and refinements in skills, techniques and resources that engender the development of new uses, designs, products and markets. Thus the refinements of products and services in markets where a clear and real need is identified, is linked to the innovative combining and re-combining of resources by individual organisations. As Penrose (1959) remarks, the productive resources the firm

controls are regarded as a bundle of possible services, rather than a fixed set of characteristics available as public knowledge. It is the heterogeneity of human and material productive services that makes firms unique. And, more tellingly, Penrose (1959, p. 77) argues that to discover more about the productive services of a resource can be done either by researching the features of the resource or investigating ways of combining its known characteristics with those of other resources. The growth of firms that Penrose describes is essentially one of self-reinforcing processes: the services that resources can render depend on the capacities of the people using them but the development of these capacities is partly shaped by the resources available.

Best (2001, p. 67) extended the Penrosean theme to economic growth via a networking theory of industrial organisation:

“Firms specialise in activities that utilise a similar capability and partner with other enterprises that specialise in complementary activities. The boundary between the firm and the market becomes blurred as the firm takes on resource creation functions; the firm and the market are no longer simply substitute means of resource coordination. Networking emerges as a means of coordination that can enhance the resource creation of enterprises. Open system dynamics or networking adjustment processes, in turn, foster capability specialisation, decentralisation and diffusion of design, and technological experimentation. The consequent regional diversity of enterprises and technologies, in addition, increase the opportunity for local innovation based on new combinations of existing technologies.”

In traditional Marshallian districts firms acting sought geographically close resources typically labour pools, specialist services, technology, local knowledge. The combination and re-combination of productive resources in spatially bounded areas provided the impetus for growth and wealth creation. However, to avoid falling into the trap of a ‘behaviour in space’ perspective we must guard against the notion that co-located resource factors provide an abstract logic for growth. Schmitz (1999, p.466) warns against the fact that: *“...clustering may be a major facilitating factor for a number of subsequent developments which may or may not occur”*.

Whilst there may be evidence of firms both interacting and forming relationships with other firms to provide complementary resources and taking advantage of opportunities based on resource complementarities and synergies, it is also the case that many spatial locations contain disparate firms, technologies, products and markets – in other words, they provide a variety of influencing contexts. Firms may be “inward looking” in the sense of sourcing a large share of their inputs or disposing of their outputs in the same territory, or they may interact with customers and suppliers located in distant places. Different territories will thus have different firm ecologies (Dicken and Malmberg, 2001).

Limits to the Spatial Proximity Approach

In recent years, with a few exceptions, there has been a general disregard for the spatial element in the study of clusters and industrial districts; social scientists are often unaware of the extent to which they abstract from space (Sayer, 2000) The conflating of individual firms’ operating environment into a single geographical location ignored the specific histories and activities of the firm, locational resources, the space it reaches in terms of its exchange relationships. This focus also ignored the relationship between specific inter-firm activities and the location of the firm (Dicken and Malmberg, 2001)

Space itself is inseparable from individuals, institution and organisations. Innovations such as specific production techniques (for example, lean production or Just-in-Time) show these factors in action, for they represent a resolution of time and space interaction in a co-ordinated form (Sayer, 2000). It is often thought that spatial propinquity and clustering are drivers for supporting inter-firm co-operation and activities as well as a being a *defining property* of such groups rather than just a relevant variable. (Staber, 2001a) Spatial locations, whether they are called cities, agglomerations or regions, as abstract conceptualizations, are not of much use. The relevance of a spatial perspective lies in the associations *and functions of factors that interact within and across a given space*. Thus, specific spatial forms have significance when they are bounded by particular objects and are affected by the context of those objects. Furthermore such spatial relations do not have to be of the direct type, that is, within contiguous boundaries, but

can be developed at a distance (Sayer, 2000). Such relations may be of differing types given the conditions inherent in different areas and therefore can involve the development of differing forms of interaction based on specific elements found within that area (for example, communication infrastructures).

Physical spaces containing particular firms and resources often go by value-infused appellations such as 'industrial district', 'region' or 'agglomeration'. Geographical locations should not be seen as single entities that are only linked to other geographical locations by distance. Locations have historical antecedents and a dynamic whereby in-flow and out-flow of resources can change the spatial form and relations within that area. Whilst in-flows will have an obvious effect on a particular location, outflows will also influence the destination of other locations; in other words, as an in-flow to another location an outflow will have implications and consequences for the combining/re-combining dynamics of other locations. The spatial perspective reflects a broadly based environment in which organizations operate, typically through market mechanisms, to coordinate and exploit production factors (Colletis-Wahl and Pecqueur, 2001) Rather than seek out or impose such generalizations on spatial groupings it is more useful from the outset to acknowledge that there are significant differences between social groups, productive units, procedures and practices and treat them accordingly (Sayer, 2000)

If interorganisational relations are not confined to single locations then a further feature of the spatially inspired perspective, and one that can add detail and richness to the types of relationships developed *across* space and *because* of space, is the mediation of such relationships across time and space. Where there are geographical 'gaps' there is a requirement to organize and control subordinate organisations that are far away in space and (relative) time as well as allowing these subordinates to influence and affect local actions. This has been termed systemness (Giddens, 1990) and refers to forms and structures of governance that include, but can also transcend, the prevailing local relational forms and structures.

Giddens (1990) differentiates between two methods of achieving systemness. Depending on the sophistication and disparate nature of groups and societies systemness is achieved via either *social integration* or *system integration*. Social integration holds, he suggests, when tradition and kinship binds together individual groups in legitimised relational

forms. This, Giddens asserts, works in limited spatial-temporal arenas. The greater the distances involved the more prone to erosion and breakdown are the social relations and hence the systemness. The problem is overcome in geographically separated and socially distinct areas by system integration where social relations are integrated into a form that moderates, mediates and controls not only social relations within a spatial context but the resources required to perpetuate the prevailing mode of economic production (Sayer and Walker, 1992). Dicken and Malmberg (2001) suggest that a systemic approach to industrial organisation implies a focus on the interactions and relationships between firms as well as the relations between firms and their wider surroundings. They further suggest that some approaches privilege the functional definition of systems where “...*the system is defined by various types of manifest relations – notably business transactions, collaborations and competition – between actors/firms who make up the system*” (op. cit, p. 348). However, these approaches tend to understate or disregard the role of space and territory in firms’ activities. In contrast, approaches focusing on territorially defined systems (e.g. industrial districts, innovative milieux) tend to stress the spatial elements of economic activity, whilst being suspiciously vague about the functional character of the system. All systems are, of course, both functional and territorial.

A systemic perspective is a suitable beginning to consider the specific elements that may be found in particular spatial settings. By utilising a systemic conceptualisation we may begin to consider differing spatial settings in a singular and individualistic way rather than try to subsume a host of supposedly common elements in a ‘catch-all’ category as well as accepting that, within single spatial settings, there can be a multitude of operating environments within which firms work. Many of these environments may be tangible, for example physical infrastructure, and many may be intangible, for example institutional issues.

With regard to conceptualising individual spaces Sayer (2000, p. 113) suggests that, on a practical level “... *in studying a firm operating in a particular locality, one might have to take account of a hierarchy of spaces ranging from the plant itself, through the local labour market, the local and regional administration bodies affecting the firm, the national context at which most regulations binding the firm hold, and the international context of a global market and supra national institutions, such as the World Trade*

Organisation. But there are also processes cutting across such as other countries that shape what is going on in any particular space”.

Sayer suggests that a relevant characteristic of space is its independence; whilst certain conditions are required to produce certain outcomes, spatial form has independence and flexibility and that, through human ingenuity, can produce desired outcomes from a variety of starting points. It is often difficult to make explicit what difference, if any, spatial form makes. Where it can be seen that numerous spatial forms exist successfully, space itself appears a relatively unimportant issue. However, this same breadth of flexible forms implies that space does make a difference; otherwise there would be no need for such flexibility. To use an all-encompassing category such as nation or a region or to conceive of space as a set of ordered, hierarchical levels maybe the wrong way to conceptualise social phenomena. As Sayer (2000, p. 119) reminds us: “...*the relevance of neat, nested hierarchies of nations, regions and sub-regions has been radically undermined or disorganised by globalisation processes*”

Whilst these factors are acknowledged as part of the wherewithal of capital to carry out its business, it is the relationships that are engendered by such factors that are the focus of this paper. Sets of relations based on functional aspects have, over time, formed possibly transient ‘spatial cultures’ based around processes, conventions, agents/institutions, the development of trust, and reciprocal modes of behaviour (Granovetter, 1994).

A Territorial Perspective

The utilisation of a spatial perspective allows only a limited view of organizational transactions as firms seek to locate and utilize production factors that may not anchor them to a specific place or motivate them to use local resources and embed themselves in local production arenas. A *territorial perspective*, however, transcends the notion of geographic space in absolute terms by acknowledging the relevant components contained within a bounded area as well as the mechanisms required to organize, monitor and control the relationships formed. Thus when the spatial view becomes more temporally

defined and contextualised into a territory-based focus it incorporates a number of related factors;

- it draws in an array of organisational forms;
- it takes a unique geographical location and analyses it in terms of the functional, material and physical qualities found within that location;
- it has the ability to move from a bounded locational concept to a more analytical device that can help understand the constituent parts of a location in relation to the organizations that operate within that location;
- it removes any reductionist or overly spatially based approaches.

We can, therefore, conceive of a territorial rather than a spatial approach, as being more analytically detailed in that it encompasses and explicitly caters for the types of relations brought about by spatial differences. A territory can be generically defined when it takes account of all the economic activities within a geographically bounded area (Dicken and Malmberg, 2001). This broad view would encompass such factors as firm, labour force, markets, suppliers, infrastructure and institutional agents. Clearly where these factors are found to be significantly integrated, and strong relations bind them together, a cluster is often assumed (Enright, 1998; Porter, 1998). Territories can contain a variety of firms, industrial systems, networks and institutional governance forms but at that level of analysis they can only make superficial analysis of interorganizational relationships. The generic term ‘territory’ is vague on the relations that constitute that territory as well as on the dynamics and connectedness of those relationships.

Whereas space is a single bounded area within which a range of economic resources` can be identified and physically positioned, many of these factors are only selectively available to the activities of organizations based in that area. Seen only as a ‘space’ or geographical location (that is, specific co-ordinates on a map) the spatial dimension is of limited benefit – whilst the co-ordinates of a particular location could not be disputed everything else contained within that bounded ‘space’ can be arbitrarily deemed relevant to the general economic/industrial environment. Thus the spatial dimension has no specificity; absolute space, to be conceptually useful, requires a specific, contingent

context. This paper utilizes the concept of territory as a way of overcoming this obstacle and suggests that territories are environments in which organizations are directly active and have a presence at a point in time, and are configured through relationships formed on the basis of activities and resources found within that specific environment.

Through the efforts of individual firms and other actors, relations are developed based on the required activities and resources. Such relations will be spatially drawn only if the interaction can be placed within that space – thus the type of relations developed is often analysed within the shape, size and topography of that space. The term ‘spatial relations’ somewhat misses the point in that it focuses on ‘space as a container’ rather than a more detailed perspective of ‘relations in space’ which extends that contingent approach to include more factors specific to the individual organizations. As a result of the contextualisation of particular spaces in which individual firms either can be physically located or relationally placed, the abstract spatial ‘container’ becomes a more relevant conceptual and analytical device when considered from the perspective of firm territories (Dicken and Malmberg, 2001) Firm territories explicitly include a spatial dimension but can assess the role of that dimension from the perspective of territorial relations. Dicken and Malmberg (2001) insightful contribution to this debate, introduces the notion of firms as intrinsically spatial and territorial entities. Firms are spatial in the sense that they are responsive to geographical distance and the spatial variations in the availability and access to the resources they require. And firms are territorial entities in the sense, that their activities in a number of areas (e.g. customers, suppliers, labour markets) have a territorial extent, which often differs in scale for each type of activity. But also, as Dicken and Malmberg (2001, p. 355) emphasise, firms derive some of their characteristics from, but also influence the characteristics of the territories in which they operate.

Territorial Relations

It has been asserted that territories are configured in a loose and informal manner, similar to inter-firm networks though these networks take a spatially concentrated form only when there are specific kinds of inter-and intra -firm relations which are mediated by territorially based systems of governance. (Sayer and Walker, 1992) Effectively territories are modes of organisation that allow a variety of production activities to be assembled within reach of each other. The territory is conceived by Sayer and Walker (1992, p. 141) as:

“...an extensive work site which brings disparate production activities into advantageous relation with each other, at a different scale or scope than the workplace or the firm. Other modes of organisation are also rooted in particular venues, where they become part of larger territorial configurations, even if they extend across boundaries. But territories are not just congeries of material objects, workers and firms; they are systems of social relations embodying distinct cultures and practices”

Dupuy and Gilly (1999) follow a similar line of argument. They suggest that the key to spatial organisation lies in the view that local productive systems not only comprise firms confined to that area, but can include subsidiaries or companies owned by industrial groups whose production boundaries may extend beyond the local area. A territory as defined by Dupuy and Gilly (1999, p. 208) refers to:

“...an historically constituted set of interlinked economic activities (R&D, design, manufacturing, commercialisation) co-ordinated in a variety of ways by firms, research centres, and other economic agencies and by local governments and other such socio-political institutions”.

Though the territory may be easily definable in terms of the forms and extent of existing governance structures, a territorial perspective faces problems in terms of being able to identify concrete boundaries. As the territorial extension of organisational groups become

increasingly difficult to define, as they develop different arrangements for the management of their internal and external relationships, the territorial perspective becomes all embracing (Dupuy and Gilly, 1999).

Whereas territories for Sayer and Walker (1992) are typically described as loose, disorganised and open, they contain what is desirable by capitalist production systems, namely "... a degree of integration [with other necessary components e.g. markets; labour] with a minimum of central control and a maximum of flexibility" (*op cit*, p. 141). The 'stickiness' (Markusen 1996) of certain elements within territorial clusters – based around local capabilities and relationships – generates dynamism for the territory in total. These features "...make certain territories especially apt when it comes to promoting the development of certain types of economic activity". (Dicken and Malmberg 2001, p. 357) Such benefits may be enhanced by the 'adaptive values' (Staber, 2001b) of territories that have a diverse industrial base. Such diversity, it is suggested, has strategic implications for some organizations in that "...firms that maintain a presence in a region that include several related markets can draw on cross-market information flows to enhance their knowledge about opportunities in ways that reduce competitive pressures" (Staber 2001b, p. 337).

This view is supported by Best (2001, p. xiv) who suggests that:

"...sustainable regional growth depends not upon the longevity of specific firms but upon a networked population of interacting, specialist business enterprises. Greater specialization within a region shifts the patterns of inter-firm relationships which rebound back on the specialization processes within firms. Understanding these relationships is crucial to distinguishing dynamic from static clusters."

There are thus various tensions within a bounded area that reflect the logic of production to pursue effective economic relations, the configurations of the types of firms gathered together in a specific area and the administrative and institutional arrangements that prevail within those bounded areas. The significant point is that whilst the administrative and institutional arrangements are spatially anchored, capitalist production is not. Rather, it requires activities and resources that may be available at numerous locations.

Individual firms are able to choose the most appropriate locations and develop relations with firms who are able to offer particular activities and resources.

For Sayer and Walker (1992, p. 141) the principle of territorial integration essentially involves three aspects of spatial interaction:

- “1. simple propinquity minimises the costs and efforts of movement, maximises access, and pools resources;
2. locational fixity of infrastructure and daily life provides a built environment of resources, lowers uncertainty and information costs of access, channel movement and reduces social distance
3. geographic boundaries – limits movement, turns social interaction inwards, and solidifies (and differentiates) social relations.”

Such characterisations, however, still retain static, physical location qualities and associated localised economic activities whilst acknowledging that firm boundaries do extend beyond a prescribed bounded space. Territorial integration of the types set out above provides reasons for maintaining the static, clustered perspective but there is evidence that proximity is not always a significant factor to firms’ interactions and that the ‘local milieu’ does not necessarily leads to collaborative and innovative benefits (Malmberg and Maskell 2002, p. 437) What benefits accrue to firms that operate in different territorial configurations? What relationships are formed when proximity is not a significant issue? Does propinquity suffice as a driver for economic growth?

The use of the term ‘territory’ has a relational as well as a spatial meaning. This can have the effect of evaluating the sets of operating environments in which firms act and interact for particular reasons. Firms deal with other firms on the basis of specific requirements and the argument for proximity is that it leads to reduced transaction costs. But what of the broader industry or market factors that directly or indirectly affect the relations between firms? For example there can be very different forms of relations between firms operating within a horizontal dimension and a vertical dimension – the former includes organisations who have similar capabilities and carry out similar activities and the latter where organisations have dissimilar but complementary capabilities. The consequences

are often summarised in terms of the vertical and horizontal dimensions of the cluster. Firms in the vertical dimension of the cluster will be business partners and collaborators whereas the horizontal dimension will contain rivals and competitors (Maskell 2001, p. 9). It is often assumed that most relationships are of the vertical type and a reflection of specific industry structures, technologies and resources. Exposure to innovative ideas, activities and solutions, it can be argued, may be more easily achieved through relationships in the vertical dimension, as amply demonstrated by industrial network studies (Axelsson and Easton, 1992; Håkansson and Snehota, 1995). However, the horizontal dimension does not preclude the development of innovative ideas and procedures but they may be developed within the firm and as such may be limited in scope and scale. Maskell (2001, p. 9) notes that: *“Even when trying hard it would be extremely difficult and often impossible for a single, multi-dimensional firm to replicate internally the processes of parallel experimentation taking place among independent firms doing similar things in the cluster”*

Loasby (1998, p. 75) makes the argument that in an industrial district the alignment of closely complementary capabilities can be effected without vertical integration, as would be expected from Richardson’s (1972) seminal framework. A network of specialised producers at each stage of the production process is able to preserve the distinctive outlook of their specialisms, enabling them to perceive more productive opportunities and conduct a wider range of experiments than would be possible within the confines of a single firm. Best (2001, p. 67) notes that this open system dynamics or network adjustment processes foster further specialisation, decentralisation and diffusion of capabilities for experimentation. The consequence is territories with a high diversity of technologies and capabilities that increase the possibility of locally based innovation through new combinations of technologies and capabilities.

We can thus talk of territories as bounded spaces, within which specific sets of functional relations are formed, the nature of such relations reflecting resources, technologies and organisational processes. Within that bounded space there are structures and mechanisms (for example institutional actors) that may aid firms develop relationships with other firms who may, knowingly or unknowingly, be exposing themselves to potentially valuable activities.

An important factor in assessing interorganisational relationship is that they are differentiated by production systems (Best, 2001; Sturgeon, 2002). As we mentioned earlier, the nature of changes and developments in production processes have produced not only different methods and techniques (for example, JIT) but also contingent forms of relationships. The efficiency of any productive system depends on the input from supplying firms – and the efficiency of any supplier depends on the type of relations it forms with other organisations. Any re-combining dynamic (Best, 2001) must become contextually defined as the development of territories can depend on the aggregate abilities of organisations found within the territory to create and preserve specific resources and offer them to productive organisations at a cost lower than the costs generated through market transactions. (Colletis-Wahl and Pecqueur 2000, p. 450) These costs can be contingent upon the relationships developed within that territory. Introducing the firm into this framework as part of the dynamics of a specific territory can not only identify *internal* (to the territory) and *external* (to other territories) forms of relationships but, more importantly, the reasons why certain types of relationships are formed and persist within specific territories (Staber, 2001a).

It follows that a firm can be active in a variety of territorial configurations, each based on a set of organizational factors. Thus territories can contain, at a generic level, tangible resource bases (e.g. labour pool, infrastructure) and intangible elements (e.g. knowledge transfer, co-operation). It can be readily noted that tangible benefits available at a particular location acquire the character of public goods (e.g. access to motorways) available to all organizations in that location. The intangible factors, however, are those of a more specific nature – devised and developed by firms within what might be termed their ‘territorial operating environments’.

Firms are free on the one hand, to develop economic activities and strategies in line with their organizational objectives but constrained, on the other hand, by their economic requirements and the spatial availability of resources. Storper (1997, p. 170) suggests that: “*An activity is fully territorialized when its economic viability is rooted in assets that are not available in many other places and cannot easily or rapidly be created or imitated in places that lack them*”. A mechanism such as ‘economic viability’, whilst stressing the economic imperative of a simple cost/benefit relationship, masks other

issues such as the nature and types of relationships developed as a consequence of the interaction between two individual organizations. A functional territory is a bounded area in which an organization carries out part of its economic activities. These activities are context specific with regard to that firm's industry, markets, customers, suppliers and is mediated by the relationships developed within that function. A functional territory will reflect those internal and external influences and their dynamic evolution over a period of time. Thus those areas or regions deemed 'innovative milieu' may be explained by the fact that they are well functioning, organized and exploiting non-tradable capabilities found within a particular location it does not guarantee that such a mechanism can be reproduced on a sustainable basis (Maskell and Malmberg, 2001).

Where firms have a choice, do they choose to form relationships with geographically close partners following a simple propinquity logic? Even if firms privilege relationships within a particular geographic location, 'propinquity' can be said to be a characteristic of those relationships and not necessarily the reason for it. A relationship will be territorial when its character takes advantage of the benefits streaming from the geographical embeddedness of that relationship. Clusters may enjoy the benefits forged through co-located relationships even when, as this paper has argued, spatial proximity may not be the driver for the formation of relationships. Where organisations choose to use local or geographically dispersed resources, there will be different effects on the types of relationships developed. The focus of the research on which this paper is based is precisely the investigation of territorially based relationships.

Lastly, it is worth echoing the arguments advanced by Dicken and Malmberg (2001, p. 359) regarding the firm-territory nexus. From a relational perspective, firms can be seen as networks embedded in broader, networked industrial systems. Intra and interorganisational relationships weave patterns of exchanges and connections that connect dispersed territories. In this sense, not only can firms be conceptualised as territorial entities but also territories themselves reflect the ways in which they are inserted into the pattern of firm's operations (e.g. location of functions) and interorganisational relationships (i.e. when exchanges and connections are connected within a specific territory).

Empirical Work

The empirical element of this research is based around a specific industrial area on the outskirts of the county town of Bedford, in Hertfordshire (England). In the past twenty years, the area has grown from a former sewage works to a thriving area of approximately one hundred small, medium and large firms providing goods and services for a range of markets and industries. It was for this reason that the location was chosen – to assess the variety of contingent factors that have affected the territorial influences of individual firms and, where possible, assess the aggregate consequences of these influences on the location itself.

A questionnaire was devised to generate information on firms' supplier and customer locations and locally based relationships. The intention was not to survey the firms in the location but to find suitable firms who had a range of close and distant relationships and who would be willing to cooperate with us in the development of in-depth case studies. It is hoped, that between twenty and twenty five case studies can be developed to elicit comparisons across a number of theoretically relevant dimensions.

The objective is to 'map' the territorial relationships of each organisation to analyse the effects of space on the types of relationships developed. This includes relationships with organisations in the same circumscribed industrial area and those external to the territory. A number of questions drive our research agenda:

- What is the territorial extension of the firm in terms of key exchange relationships?
- To what extent is the firm territorially embedded (i.e. conducting key exchange relationships with co-located firms)?
- To what extent is the firm networked locally (i.e. in terms of business and social relationships with co-located firms and institutional actors)?
- What are the specific local, tangible and intangible resources that the firm exploits?

Conclusions

Previous territorial conceptualisations take account of all the economic activity within a bounded area, comprising modes of production, institutional agents and arrangements peculiar to that territory. Clusters are characterised not simply by populations of firms that are co-located within a particular bounded area but are characterised by horizontal and vertical relationships that drive economic growth.

However, within any bounded area there are a multitude of influences that can affect economic development of that area. Territories often include disparate sets of firms who buy variety of inputs from a variety of suppliers and sell a variety of products and services to a variety of customers located both inside and outside that territory. The concept of territory is thus too broad and in need of refinement, if it is to capture the relational dimensions that characterise successful clusters. In the localised cluster, as Dicken and Malmberg (2001, p. 360) remark, the firm is embedded both territorially and functionally.

There is always a problem with the definition of what constitutes a 'bounded area' and how the concept is to be scaled (e.g. from region to nation-state). Spatially described relationships are often arbitrarily drawn or assumed to be significant when analysed on a large scale. This paper has suggested that the concept of territory is refined from the perspective of individual firms and that territorial relations, rather than spatial territories, provide a better grip on the relationship between space and interorganisational relations. If two firms have territorial relations is tantamount to saying that a relationship is contingent upon locality-specific resources and capabilities. If those resources and capabilities are available in various locations then the relationship will develop a specific spatial dimension since, it is assumed, one location will be deemed superior to the others according to some criteria.

Finally, even though the notion of space or territory has rarely penetrated the industrial networks literature (see Cova et al, 1996 for a rare exception), a relational and systemic approach to the firm-territory nexus brings this topic close to the interests and skills of industrial networks researchers. If the point of departure for this type of analysis is the

notion that individual economic activities and their geographical embeddedness can only be analysed in the context of their network of relationships with other activities (Dicken and Malmberg, 2001), then industrial network researchers are in an excellent position not only to add to their repertoire of research topics but also to make useful contributions to this domain of economic geography.

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