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Abstract

Geographical proximity between firms is often believed to favour cooperation, mutual learning, knowledge creation as well as innovation. From Marshall onwards, study after study has demonstrated that both cooperation and successful innovations arise from geographically proximate clusters. Geographers have therefore argued that 'space matters'. However, all too often, a direct line was drawn from geographical proximity to the assumption of cooperation, or from the existence of cooperation to the assumption of innovation without specifying the links between space and innovation. This inevitably led to a series of papers pointing out that proximity was not enough, or as Torre and Rallett put it "what does 'being near' someone mean" (2005: 48). Therefore space may be a necessary condition but it is not sufficient, 'something else' also must play a role (Gilly and Wallet 2001). This was further followed by a series of papers highlighting that it may not be even a necessary condition and other factors count as much as spatial proximity. We seem to have gone full circle, from ignoring the spatial element in economic development, through arguing that it is crucial, to arguing that it is not so important.

A recent issue of *Regional Studies* (January 2005) was devoted to exploring this issue and the role proximity plays in the cooperation between firms and their subsequent innovation performance. Expanding on the French school, which holds that geographical proximity is only one form of proximity, and that organisational and institutional proximity are important, this issue reopens the proximity/innovation debate. Indeed Boschma (2005) argues that both cognitive and social proximity should be added to the analysis of cooperation as well as innovation. We seek to add to this debate by exploring a geographically proximate cluster which does not cooperate. The cluster is the contract cleaning industry in Dublin which not only fails to innovate but acts in ways that are damaging to their individual and collective interests. Following Boschma (2005) we look at five dimensions of proximity: cognitive, organisational, social, institutional and geographical, to understand why a geographical cluster 'does not cluster'.

The paper draws on an EU funded research project 'CRITICAL' and through the IIS.

Introduction

Contract cleaning companies display several features which suggest that they should be focus of more study. First, although it might seem an unusual choice of when trying to analyse how firms interact, since the industry is characterised by the presence of numerous atomised small firms that operate in a highly turbulent market, we would expect them to be cooperative, or at least to be mutually supportive toward each other. Second, since the cleaning industry is commonly acknowledged as being a low knowledge-intensive sector, characterised by low barriers to entry displaying high mobility of workers, high number of start-up firms (often as a result of spin-offs from other firms) where firms tend to establish their expertise mainly through learning-by-doing, we would expect innovation being frictionless. Third, cleaning companies are relatively a new phenomenon, and really only developed because of the waves of privatisation and contracting out from the 1980s onwards – we discuss this further below. In Ireland there is also a fourth reason why contract cleaning companies are particularly interesting – many of the major companies in the contract cleaning business were recently involved in an unsuccessful court action over overtime payments. This paper uses a recent paper in Regional Studies (Boschma 2005b) looking at the variety of ways firms can be proximate to analyse how firms interact in this industry. Boschma’s paper explicitly explored innovation and the proximity preconditions for innovation to occur, in this paper we examine something far more modest – why firms do not cooperate even when it is in their best interest to do so.

In the first part of the paper we discuss the study from which the research arises. Second, we discuss the history of the contract cleaning industry and the court case which the companies were recently involved in. Third, we look at recent assumptions on proximity and finally we use this new stream of reasoning as an analytical framework to discuss how firms interact in the Irish case. Finally, we finish by expanding on this recent debate on proximity to point out how firms can move from a state of hostility and suspicion to mutual cooperation.

Discussion of CRITICAL

The data for this paper is drawn from CRITICAL¹. CRITICAL is an international research project conducted in four European cities: Dublin, Newcastle, Tampere

¹ Critical is funded by the European Commission's 5th Framework Programme for Research and Development. The research covers a three year period and work began in February 2003.

and Dortmund. The project aims to understand the learning processes which take place within cities by examining a range of formal and informal networks within which learning and knowledge development take place. For each of these networks approximately 10 interviews are conducted as well as an examination of any related literature and ethnographic data collected where possible. One of the networks targeted as a main focus of analysis learning among clusters of firms. In Ireland we chose the contract cleaning companies as our cluster because it had recently been involved in an interesting court case. In addition to the interviews with key actors in the industry we were able to use previous research conducted in the area, and we attended a trade fair for the contract cleaning industry.² In the trade fair, which was held over three days, three researchers conducted ethnographic work. The trade fair allowed us to verify the type of relationships that characterise the industry. Before looking at the court case and the relationships within the contract cleaning industry it is worth outlining the trajectory of the industry because we believe this is a causal factor in how the companies interact.

Contract cleaning companies in Dublin

Privatisation of both private and government services in Ireland has accelerated in the last two decades. In this Ireland is duplicating the 'sell-off' of state services in other Anglo-Saxon countries such as the UK and New Zealand. The privatisation of state services has happened in many different ways. This has involved the wholesale selling of state companies (Eircom in Ireland, British Steel in the UK), part-privatisation (the railway system in Italy), public-private partnerships (academy schools in the UK) and contracting out a series of 'non-core' activities. This work focuses on firms which have come into existence because of contracting out - the most widely used method of privatisation. Indeed the contracting out of cleaning has often been at the forefront of this wave of privatisation. This contracting out of core services is a new phenomenon. While organizations have always made some use of external agents in order to, for instance, obtain needed labour, the peeling off of integral (if not core) services and marketing these is new.

The push to outsource cleaning came from two sources. In the public sector contracting out was seen as an application of competition policy and a free-market ideology but was also pursued and advocated as a simple cost-cutting

² Because of sensitivities over the court case a few actors refused an invitation to interview. However, in the other interviews a consistent picture emerged, both of the sequence of events and the relations between the companies.

measure. This application of free-market economics to the state sector was most clearly seen in Britain under Thatcher but was also a factor in Australia, New Zealand and the USA. The history of contracting out of state cleaning services has often had an unimpressive history. It has led to job losses, substantial declines in wages and conditions and, arguably, to deterioration in the quality of service provided. This is partly because of the high transaction costs in specifying a complete contract (Boardman and Hewitt 2004). This is particularly the case in hospitals and the health service where cleaning is often extremely specialised in nature. This renders hospital cleaning inherently difficult to specify for contractual purposes and this problem has led to significant decline in service standards in many instances. Cleaning of hospital theatres, for instance, is exacting work which cannot easily be specified unless within the context of a shared culture of expectations. This has led to problems with cross-infections and hospital 'super bugs'. Indeed there is now a move to employ specialist consultants and nurses on the issues of disease control as hospital bugs are on the increase. In Ireland it has been less of a prominent issue and contracting out has been at a slower pace and with less media attention. Nonetheless it is something that has been ongoing.

The second impetus to contract cleaning was the ideology of concentrating on 'core functions' in the private sector. Increased competition in all sectors of the economy, fuelled in part by globalisation, has led companies to divide their activities into profit centres, so that they are able to analyse the performance of each activity in terms of its contribution to group profits. They then concentrate on the most lucrative 'core' functions or activities, whilst getting rid of those activities that are deemed unnecessary and unprofitable. In between there are activities that are necessary but not profitable, such as cleaning and so companies look for cheaper ways of carrying these out. The solution is often outsourcing.

In both cases (state and private sector changes) the result has been the same: a move to governance by contract and away from other types of governance can be seen (state bureaucracy and company hierarchy respectively). These changes tend to have a self-reinforcing nature. Once services have been outsourced and personnel have been transferred to the new company or lost through redundancy or wastage, the cost of re-establishing in-house provision becomes prohibitive, thereby strengthening the hand of the providers. Also the 'ethos' that was associated with public sector or Fordist provision might be hard to re-establish.

Both these ‘pushes’ to outsource cleaning happened in the 1980s and 1990s meaning that there has been an explosion of contract cleaning and the number of contract cleaning companies.

The contract cleaning sector in Ireland is very heterogeneous and varies from small ‘one man’ operations to multi-service and multi-national companies. Partly this reflects the low-entry costs into the market, with little capital outlay needed to form a company and apply for contracts. Minimum capital may be as small as the costs of some mops and a vacuum cleaner. An impetus to this company formation has been companies contracting out in-house cleaning to the existing cleaning staff, who form small one-site cleaning companies. Thus, the total number of new companies created each year is high. Companies then grow by acquiring more contracts and more staff to fulfil these. However, it was highlighted in several interviews that many companies found it difficult expanding beyond the initial ‘one-man’ sole trader with 20-30 staff and making the leap to a private-limited company with 200 to 300 staff and a professional management with separate sales, HRM and supervisory personal. Thus many companies stay small and in addition many companies go bust each year. Also there is an increasing trend of larger companies buying up the smaller companies to get a foot hold in the Irish market. This means that while many cleaning companies have been created over the last two decades the total number has remained relatively stable.

There are over 300 cleaning companies listed in Ireland. However the CSO figures only report companies with 5 or more employees so is likely to understate the number of companies. Of this 333 listed by FAS most were private limited companies but nearly 4 in 10 were sole traders (table 1).

Table 1: Breakdown of the Irish Contract Cleaning Industry by Type of Ownership.

Private limited companies	60%:
Sole traders	38%:
Public Limited companies	2%:

FAS (2000)

FAS also estimated that the 10 largest companies account for 80% of the entire turnover in the industry. While 298 firms represent 25% of all cleaning workers. This shape of the industry seems to be common across countries but we are limited by the lack of studies on the industry. What probably does differ across

countries are the rates of union membership. It is estimated that 40% of all Irish contract cleaners are union members. However, there seemed to be much variation with some companies we interviewed reporting levels below 5%.

Between 1996 & 2002, there was a 12% growth in the numbers of both male and female cleaners (CSO 2003). This growth reflects the increase in economic growth (more offices and shops to be cleaned) but could also reflect a shifting division of labour between maintenance and cleaning. The CSO figures broke the industry down by gender of employee, it is clear from table two that the feminisation rate has *increased* between 1996 and 2002. The interviewees claimed between 70 and 99% of the workforce where female, which might reflect a further horizontal segregation (for instance between companies which specialised in cleaning offices or building sites).

Table 2: Feminisation rate CSO Code 968 = cleaners

	Female
1996	76%
2002	82%

(Window cleaners are not included under the umbrella term for cleaners, but are subsumed within category of 'car park attendants and window cleaners' (code 955). In 2002, 656 were recorded in relation to both.)

The Contract cleaning industry had a turnover of €152.4 to €190.5 million in 2002 and this is forecast to double by 2005 (ref). However the profit margins are very small on this typically – 1%-2%. This indicates that it is a very competitive market.

The large companies are members of the British Institute of Cleaning Science (BICS)³. In addition to this 22 of the 320 listed in the CSO are affiliated to The Irish Contract Cleaning Association ICCA. 10 of these 22 represent 75-77% of all the contract cleaning workers. Five of these companies belong to The Irish Business and Employers Confederation (IBEC). The ICCA was set up by several contract cleaning companies and IBEC and the administrator of the ICCA is employed by IBEC. However, the ICCA sees itself as independent of IBEC and 17 members of the ICCA do not belong to IBEC. This causes some problems of co-ordination, but one of the reasons companies created, or joined. The ICCA has a feeling that IBEC does not properly represent their interests. ICCA

³ This was claimed by several members and report in Rahalen (2004) however I could find no members listed on the BICS website.

membership requires membership fees, a tax clearance certificate and adherence to a code of practice.

The Contract Cleaning Industry is governed by a Joint Labour Committee (JLC) which is a statutory body that sets the minimum rates of pay, and other conditions of work for the contract cleaning industry. The JLC, a stationary body, has union members, company members and an independent chairman. There is one JLC for inside Dublin and one for outside the capital therefore all contract cleaners in the country are covered by the standards it sets. The wage rate (presently €7.77) sets the lowest rate for the market, and is presently about 10% higher than the minimum wage. The pay and conditions agreed by the JLCs are given the force of law in Employment Regulation Orders made by the Labour Court on foot of proposals made to the Labour Court by the JLCs. When registered with the Court, Registered Employment Agreements are legally binding, not only of the parties to the agreement but also to others who are in the class, type or group to which the agreements are expressed to apply. The JLC presently covers 18,000 cleaners (the cleaners not covered would be directly employed cleaners and cleaners of domestic residences).

A long –running issue between the union and business representatives on the JLC has been the issue of overtime pay. In 2003 the Chairman of the Labour Court asked both the unions and employers to go away and to hold a series of bi-lateral meetings on overtime payments and agree a common position. Both sides agreed to this; however after this whenever the unions tried to contact the employers excuses were made about the difficulty of arranging a meeting. When the next scheduled meeting of the JLC took place the employers told the Chairman that they had changed their minds and they would not cooperate over the issue of overtime payments. The Chairman then asked the unions what they wanted; it was reported that the unions went out of the room and quickly came up with a demand for overtime whenever the cleaner worked more than his or her scheduled hours. The Chairman, frustrated by the actions of the cleaning companies, immediately agreed to this.⁴ As a result of this decision, someone who normally worked two hours would have an overtime premium when they worked three hours. The employers argued that this was disastrous for the industry because contracts had been agreed with companies and they had no possibility of amending these contracts in order to incorporate the new regulation. Therefore if companies were bound by these rules they would run a

⁴ Some of the contract cleaner owner/managers disagreed with this interpretation and argued that the Chairman was not really ‘independent’ and would have sided with the unions regardless of the position the companies took.

loss on the contracts. Also it meant that companies would be reluctant to ask for overtime from a worker (e.g. to cover the sickness of an absent cleaner) because they would have to pay a premium. As a consequence, this meant that cleaners would suffer, as the present common practice in the industry is to give overtime (paid at flat rates) when there are staff shortages. The employers who were represented on the JLC went back and told the other cleaning companies what the regulations were going to be and 'all hell broke loose'. Companies not represented on the JLC claimed that they had no idea that this issue was live nor of the actions of the cleaning companies on the JLC and indeed often claimed that they would have negotiated with the unions.⁵

The employers then got together and decided to challenge the JLC, however on advice of an IBEC barrister they went to the Equality Authority which has no jurisdiction in this area since it only has competence over individual claims. About 20 companies then went to the High Court to challenge the order, but their case was never on arbitrated in the court because the companies were judged to be out of time in making their case, (the court hearing was six months after the original decision). 14 companies then challenged the High Court decision in the Supreme Court but again this latter ruled that they were out of time and there was no adequate justification for the delay. So the companies failed to get their case heard because of a combination in slowness in moving and bad advice. At each turn there were divisions within the contract cleaning companies on the best way forward, with some companies taking independent legal advice and others relying on the services of the main employer body. This delayed action at each turn and contributed to the slowness of getting to court.

This then raises several questions – how come the employers not represented on the JLC were unaware of the issues involved? Why was the grapevine so poor at telling the other companies? When realising the seriousness of the changes for their profitability why could the companies not cooperate in time to challenge the JLC decision?

When talking to the managers and owners of the cleaning companies it became quickly clear that they did not cooperate on any matter: recruitment, training, joint bids, etc. This lack of cooperation was, they argued, due to the precarious nature of contract work and the intense rivalry characterising the industry.

⁵ There was an interesting sub-theme discernable among some owner/managers – while they criticised the cleaning companies representatives on the JLC, they did not believe it was his or her responsibility to sit on this committee.

The companies do interact with each other on an inter-organisational level at the ICCA. So the companies do meet with each other. The inter-personal interaction is less noticeable and while there is interaction by people below top management level it is denied by those at the very top. The interaction at middle management level is due to people having worked in several companies in the area and built up friendships. Against this owner/managers tend to have started their own companies from scratch so have less personal contact with others. Overall, even within the ICCA companies would look upon each other with great suspicion. No company reported joint ventures with another company – occasionally one company sub-contracted to another company but only if they had no geographical presence or technical capacity to do the contract (for instance they often subcontracted to firms who specialised in feminine hygiene). This meant that prior to the founding of the ICCA any information about competitors was gathered indirectly, mostly through visiting the sites where other companies were operating and seeing ‘how things were done’. Now in addition to this ‘indirect learning’ about competitors there was also a more direct connection of the ICCA which holds an annual award ceremony and dinner and hold regular training sessions. However the ICCA does not cover all cleaning companies and it estimates that 25% of cleaners are outside ICCA membership. It was reported that there were many ‘Cowboy operators’ not sticking to the JLC standards and undercutting the legitimate cleaning companies. These companies paid no tax or PRSI contributions and paid their workers cash in hand. In addition these companies operated with very dubious Health & Safety standards (no harnesses for cleaning the windows of high buildings were quoted as an example). This means that the legitimate larger companies always fear being undercut from below.

If these companies, who are almost by definition very small, were the only threat it might not be too bad. However, at the same time as the industry is threatened by this undercutting from below, one large company was argued to drag down the standards for the whole industry by constantly undercutting. Typically this intense competition has led to the erosion of pay and working conditions across the industry in order to preserve firm’s profit margins. Indeed work has highlighted that cleaning firms typically bid for contracts at a very low profit margin or even at a loss and ‘recoup’ profits by lowering service levels (Ryan 2004). This decrease in service levels can be seen in public building and even hospitals which many interviewees said were not as clean as they had been 15 years ago. Why do companies located physically close to each other let their industry be driven downwards? In order to provide an exhaustive answer to this question we must re-examine the proximity literature.

Proximity

The increasing emphasis on 'proximity' follows from a recent theoretical tendency in regional economics which, while situated in the tradition of the industrial district literature (Marshall 1920, 1930; Becattini 2000, 2001; and many others) and the innovation milieu literature (Camagni 1991, Maillat 1996), also lies at the intersection between industrial economics and spatial economics (Gilly and Wallet 2001). More precisely, proximity is part of a continuation of the approaches developed in France by the 'Proximity Dynamics' group (L'industria 1998), whose original contribution lies in its desire to endogenise the spatial variable within economic theory. The economists of the 'Proximity Dynamics' group base their reasoning on four main assumptions. First, they stress the importance of productive phenomena and, particularly, processes of resource creation; second, they suggest that the historical dimension of territorial trajectories should be taken into account; third, they emphasise the role of interactions through collective learning process in the emergence of territories; finally, they stress the importance of institutions – understood as grouping of shared formal and informal representations and constraining the actors to different degrees – in explaining territorial dynamics. Starting from this basis, the work of these economists has isolated three major dimensions of proximity: 1) institutional proximity, which defines the field of representations and frames of reference shared by the actors; 2) organisational proximity, which accounts for the existence of interactions between the actors in the context of solving a production-related problem through collective action; and 3) geographical proximity, which integrates the spatial dimension by relying on Perraux's concept of geonomic space (for an exhaustive discussion of the 'French school' see Gilly & Wallet 2001)

Nowhere is the assumption that spatial proximity supports inter-firm cooperation, collective learning and innovation more prominent than in the literature on industrial clusters and to a greater extent in the literature of industrial districts (Dei Ottati 1987; Storper 1997) Within this strand of literature, a critical theme is the role 'space' and the extent to which it can trigger cooperation and in particular interactive learning as well as innovation between firms. Space is taken as synonymous with geographical proximity, such that physical nearness is taken to be a necessary and often sufficient condition for inter-firm cooperation, such that many studies of successful industrial clusters often 'find' geographical proximity as a main driver for clustering. Within this context, innovation is thought to occur more easily in situation of geographic proximity – innovation activities benefit from a concentration of economic

activities by similar and related firms in a cluster, which facilitate knowledge spillovers and stimulate various forms of adaptation, imitation, learning and innovation (Enright 1998). Malberg and Maskell, for instance point out how 'in such environment, chances are greater than an individual firm will get in touch with actors that have developed or been early adapters of new technology. The flow of industry-related information and knowledge is generally more abundant, to the advantage of all firms involved' (Malberg & Maskell, 2002 p.433). The main argument here is that the localisation of an industry with many firms competing in the same sector or cooperating across related industries tend to trigger dynamism and flexibility as well as learning and innovation.

What is striking and to some extent surprising is that how and why this geographical proximity induces cooperation is often taken for granted. This linkage of cooperation and geographic proximity has been recently questioned and re-examined (Staber, 2001; Lublinski 2003). Gilly and Wallet (2001) tackle this issue by introducing an approach that mobilises a plural definition of proximity – institutional, organisational and geographical – in their attempt to endogenize space in economic analysis. Similarly, Boschma (2005a) argues that geographical proximity cannot be looked at in isolation and there are other dimensions of proximity that may provide different resolutions to the coordination problem. These are cognitive, organisational, social, institutional and geographical proximity. Fusion of these different types of proximity has lead to confusion about the role of space and geography in previous studies (Torre and Rallett 2005).Boschma (2005a) as well as Torre and Rallett (2005) argue that these five individually or in combination can promote cooperation and innovation at the same time avoiding the problem of lock-in. We use these other types of proximity to analyse why the cleaning companies, which are geographically co-located do not cooperate. We start by looking at each of the types of proximity in turn (table 2) we then apply this analytical framework to the contract cleaning companies before finally teasing out the benefits of using the latter to explain clusters' interactional dynamics.

Boschma (2005a) details five different types of proximity: cognitive, organisational, social, institutional and geographical. His definitions of each are outlined in Table 2.

Table 2 - the five types of proximity

<i>Proximity</i>	Boschma's definition
<i>Cognitive</i>	A firm's 'cognitive base should be close enough to the new knowledge in order to communicate, understand and process it successfully' P. 63
<i>Organisational</i>	The extent to which relations are shared in an organizational arrangement, either within or between organizations. To be precise, this involves the rate of autonomy and the degree of control that can be exerted over arrangements. P. 65
<i>Social</i>	Social proximity is defined here in terms of socially embedded relations between agents at the micro-level. Relations between actors are socially embedded when they involve trust based on friendship, kinship and experience. Accordingly, the definition of social proximity does not include situations in which people share sets of values, such as ethnic and religious values. Aspect of cultural proximity at a more macro-level will be associated with the notion of institutional proximity below. P. 66
<i>Institutional</i>	Following the distinction between formal and informal institutions, the notion of institutional proximity includes both the idea of economic between actors sharing the same institutional rules of the game, as well as a set of cultural habits and values A common language, shared habits, a law system securing ownership and intellectual property rights, etc., all provide a basis for economic coordination and interactive learning. P. 68
<i>Geographical</i>	The spatial or physical distance between economic actors, both in its absolute and relative meaning. P. 69

Cognitive Proximity

That actors are subject to bounded rationality has long been known (Simon 1955). Actors have cognitive constraints that make it impossible for them to act in a globally optimal way (Crocco 2000; Möllering 2003). However, to be able to act in this un-computatable world – actors have to *act if* there is relative certainty. This is facilitated by actors following routinized behaviours – *homo oeconomicus* does what he/she has always done. According to mainstream organisational evolutionists, cognitive proximity refers to the importance of organisational routines (Nelson & Winter 1982) and social representations such as market reputations, mental models as well as conceptions of control (Porac & Rosa 1996). Within this context of market uncertainty, cognitive proximity provides the social knowledge that resolves market ambiguities as well as the language for describing, defining and interpreting firms' activities (Porac & Rosa 1996).

The underlying assumption of the advocates of the cognitive approach is that the development of modes of coordination is nothing more than a cognitive phenomenon of a routine-changing type (Gilly & Wallet, 2001). Only when actors encounter a problem do they seek solutions, or different ways of doing things – and for this new knowledge – they look close to their existing knowledge base. Actors with too disparate knowledge bases find it difficult to communicate information to each other. To be effective communicators the firms must be cognitively close (Nooteboom 2003). They must speak the same cognitive language. Therefore, within this context cognitive proximity enables firms to interact, to revisit their mutual knowledge base and to exploit the latter in order to introduce new organisational routines. However, when firms are too close in terms of cognitive proximity, paradoxically their dialogue tends to be impaired. Boschma (2005a) argues that this is for three reasons, first, knowledge building often requires dissimilar, complementary bodies of knowledge, if the firms are too close then the knowledge bases are likely to be too similar. Second, firms which are too close in terms of cognitive proximity may be unable to see new opportunities – this is the well know ‘competency trap’, firms who have done things in a relatively successful way find it difficult to abandon their existing routines and adopt new ones. Third, if firms are too close in terms of cognitive proximity, they might be reluctant to share knowledge because of the risks of unintended spillovers.

Organisational proximity

Organisational proximity is often associated with economic coordination characterised by trust-based relations among actors. This form of proximity is often regarded as necessary to foster coordination and cooperation by lowering transaction costs, to facilitate the transfer of tacit knowledge and thus, learning and innovation.

Previous work on proximity had using conflated organisational proximity with institutional proximity. Kirat and Lung (1995) drawing on the distinction between institutions and organisations, associate the former with ‘the rules of the game’ and the latter with the ‘players’. In this perspective, organisational proximity links actors who are participating in a goal-oriented activity in the context of a particular structure. According to Gilly and Wallet (2001) this form of proximity relies on coherence in the configuration of relations between agents, stemming from a common cognitive framework which is built on institutional proximity. Thus, there is a principle of hierarchy between institutions and organisations, whereas the former lead the latter. Where there is a failure of coordination, organisations are likely to question the collective reference points

that orient the collective action. This retroactive process forms the basis for the mechanism of institutional change.

Other studies have often treated organisational proximity to include a cognitive dimension (Gilly and Torre, 2000). Boschma (2005a) separates the cognitive and organisational for analytical purposes to highlight that organisational form hinders or promotes cooperation and therefore innovation. That is the actors may speak a similar language but their financial or economic independence or dependence may hinder interaction as well as cooperation to foster further innovation. For instance one firm may be contracted exclusively to a third party. From someone from a heterodox economics background this separation of organisational and cognitive proximity may seem a little artificial – but separating the two concepts allows a differentiation between a general background in common and a common specific organisational form. Again Boschma details how too closeness due to organisational proximity can stifle innovation as firms get locked into specific exchange relations and asymmetric relations can lead to hold up problems, the organisation may lack feedback mechanisms or flexibility (2005a). Attempting to break the stranglehold of too tightly coupled organisations can lead to problems with vested interests. Likewise too little organisational proximity between organisations can mean that firms risk opportunism. The optimal combination is a loose coupling that allows flexibility by preserving organisational autonomy, but at the same time avoids red tape by reducing formal obligations.

Social proximity

A related concept is social proximity and it is taken from the ideas of Granovetter (1985) among others on the social embeddedness of economic action and that social ties affect economic outcomes. Social proximity refers to the importance of where an actor comes from, considering the societal background or ‘genetic code’, influencing and shaping the actions of individuals (Hess, 2004). Within this context, space is seen as a socially-constructed object, favouring interactions yet not indispensable to the various forms of coordination, thus ‘the idea of proximity is an integral part of an essentially relational concept of economic reality: it refers to both the separation of individual or collective agents and the relations that bring them closer (and/or distance them) in solving an economic problem’ (Gilly and Wallet, 2001: 555). The basic insight of theory of embeddedness has been that the structure of relations between actors is of crucial importance for the explanation of economic outcomes. Uzzi for instance contends that socially embedded relations have three main components that regulate the expectations and behaviour of exchange partners: trust, fine-grained information

transfer as well as joint-problem solving arrangements (Uzzi, 1997). According to Uzzi, these components are conceptually independent, though related because they are all elements of social interaction. Yet, because of these components, social proximity provides three main economic outcomes. First, social proximity promotes economies of time – contracting times and costs are avoided because firms trust that payoffs will be divided equitably; fine-grained information transfer speeds data exchange and helps firms to understand each other's organisational routines so that collective decision-making can be quickened; joint problem-solving arrangements also increase the speed at which product are brought to the market by resolving problems in real time during production. Second, social proximity assists complex adaptation because actors can better identify and execute coordinated solutions to organisational problems. Third, social proximity generates Pareto improvements by promoting a reallocation of resources that makes at least one actor better off without making anyone worse off (Uzzi, 1997).

As a result, too much social proximity and actors tend to leave themselves open to opportunism – too little and both cooperation and therefore innovation are hindered by a lack of trust. The same process by which social proximity creates several coordination mechanisms – a requisite fit with the current environment – can paradoxically turn itself into a liability. According to Uzzi, three conditions can turn socially embedded relations into a liability. First, the sudden loss of a network's core actor or a deep unexpected structural change in resource flows can increase the vulnerability of networked organisations. Too much social proximity, in this case presents itself as the opposite of the free-rider problem – 'diligent commitment, backed by expectations of reciprocity and social pressure to perform, intensifies an organization's involvement with certain network partners while raising the concomitant costs of keeping ties to extra-network partners that can provide a safety net for unexpected or random fluctuations' (Uzzi, 1997: 57). Second, institutional arrangement that rationalize markets or fracture social ties can also cause instability. If major changes occur and as a result social ties are broken, then the benefits of social proximity can be lost. This obviously place firms that invested heavily in social ties at higher risk of failure than market-oriented firms because the social proximity that created and supported competitive advantage no longer exist (Uzzi, 1997). Third, by the same process by which social proximity facilitates innovation, it can also reduce the flow of new and novel information because redundant ties to the same partners mean that there are a few or no links to outside actors who can potentially contribute by bringing in innovative ideas (Burt, 1992; Uzzi, 1997). In this sense, the relations among the actors become ossified and irresponsive to the demands

of the external environment, ultimately leading to decline. Too much social proximity can also stifle effective economic action if the social aspects of exchange supersede the economic imperatives. Whereas strong assumptions of trust and cooperation are exploited, vendettas can arise. Social proximity turns itself into a liability because it creates intense negative emotions of spite and revenge that trap actors in self-defeating behaviours. Over time these actions can prevail against rational action and reduce the firms ability to meet the requirements of the market (Uzzi, 1996). Following Uzzi's paradox of embeddedness, Boschma (2005a) proposes an inverted-U relationship between social proximity and innovative behaviour at the firm level. More precisely, the social dimension of economic relations has a positive influence on the performance of a firm up to a certain threshold after which this positive influence loses its impact when the embedded relations become too closely tied.

Institutional proximity

Whereas social proximity is generally considered as a form of proximity at the micro-level, institutional proximity is often regarded at macro-level. Within this bulk of work economic activity is organised through institutions with the institutions themselves anchored in wider political arrangements and cultural systems of meaning (Hamilton, 1994). Two streams of work are important here. The first is a set of arguments that is historical, political, and cultural in nature where the organisations assume different organisational arrangements and implement specific routines as the result of imprinting by wider polity arrangements and their impact on conception of industry and market rationalities (Biggart and Orru, 1997). The second stream of work focuses on processes of field structuration, with an emphasis on coordination mechanisms within an arena of institutional life, stratification regimes, social movement processes as well as struggle over identities and resources (DiMaggio and Powell, 1983; Powell, 1996).

Biggart and Orru argue that 'the institutional environment creates background factors that precede and logically shape both comparative and competitive strategic action' (1997: 127). In this sense different institutional frameworks affect the transaction costs of doing business by reducing uncertainty and providing incentive systems for finding solutions to conflict (DiMaggio and Powell, 1983).

More over, some institutional systems are thought to have different levels of adaptive efficiency that permit prompt and effective adjustment to dramatic changes in the market. The theoretical discourse has been developed around two levels of analysis.

At macro-level, debates over whether industrialised societies are converging toward a particular form of capitalism have permeated many branches of social science since the 1960s. Comparative studies of national models of capitalism have emerged across a wide range of disciplines, including geography, sociology, politics and economics. More recently, Michael Albert's 'Capitalism vs. Capitalism' (1991) drawing sketches of 'Anglo-American' and 'Nippo-Rhenish' models, has launched the debate over the societal foundations of economic performance. By linking institutional theory to transaction cost economics, new institutional economics attempts to provide an explanation as to how different institutional frameworks affect the cost of undertaking economic activities. The common intuition underlying the 'varieties of capitalism' literature is that economic performance is a characteristic of firms meant not as autonomous actors but as social creations, highly dependent on external societal resources. Firms in the same sector, with the availability of similar technology and products will differ systematically across societies according to the kinds of resources and institutional frameworks that those societies provide for them. In this perspective, different kind of industrial societies, different institutional configurations or forms of production generate systematically different outcomes to the extent that it is possible to deduce a theory of comparative institutional advantage (Berger & Locke, 2001).

At micro-level, the debate has focused on those aspects of the local economic system which yield enabling factors for business development activity. Issues of local competitiveness have been assessed in terms of the importance of local institutional factors in encouraging or impeding the development of self-boosting 'regional milieu' and related virtuous circles of innovation (Amin & Thrift, 1994; Maillat, 1996). According to this strand of literature, 'institutional thickness' helps to embed firms in specific localities and to reduce their tendencies for relocation (Amin & Thrift, 1994). Strong institutional presence therefore lowers the risk for 'hollowing out' as a result of environmental transformations that globalisation encompasses as well as inducing new firms formation and growth, and it further enhances the competitiveness of existing firms (Yeung, 2000). Furthermore, the greater social cohesion at the basis of the adaptability which fuels the continuous regeneration of industrial clusters' competitiveness is not an entirely spontaneous outcome. On the contrary, social cohesion is typically the result of conscious concerted action among different local institutions (Dei Ottati, 2002).

A strong institutional presence for instance can play a role in supporting industrial growth and innovation (Rabellotti, 1997). The role of public policy in the Italian and other European industrial districts has received great attention in the literature. Particular emphasis has been devoted to the role of regional and local governments in providing a framework in which industrial districts can flourish and being nurtured (Brusco, 1990; Best, 1990). There is some evidence for example that the growth of the Italian districts has benefited from a national regulatory framework which provides financial facilities and exemptions from administrative burdens for artisans (Rabellotti, 1997). Consistently, this literature also accords a key role to a particular set of private institutions such as business associations, trade organisations and chambers of commerce. These private sector institutions have both the potential and the capacity to promote a sense of shared group identity and to strengthen the voice of local firms (Yeung, 2000). In many cases entrepreneurial associations and other institutions such as business service centres also have played a significant role in the provisions of services. Example of services provided are the supply of information, quality control and testing facilities, entrepreneurial and managerial training, translation of tenders, consultancy on fiscal and legal matters, book-keeping and research on foreign markets (Pike et. al., 1990). Most importantly, the institutional presence seemed to have the capacity to upgrade districts' production along the ever-fast pace of innovation and increasing competition, driving the districts forward (Kaplinsky, 2000; Schmitz, 2000). Overall, a tight collaboration between public and private bodies in the definition of firms' needs and in the implementation of the institutional initiatives has been crucial in determining the degree of success of industrial districts (Rabellotti, 1997; Schmitz, 2000).

Conversely too much 'institutional thickness' nonetheless is not necessarily beneficial for localised firms (Yeung, 2000). Scott for instance argues that 'not all forms of institutional thickness provide an automatic guarantee of economic dynamism' (Scott, 1998: 110). Boschma similarly endorses the assumption that by the same process by which institutional proximity facilitates cooperation and trust, yet too much institutional proximity can impede collective learning and interlocking institutions can cause local inertia (Boschma, 2005a). On the other hand, Boschma acknowledges that too little institutional proximity might be harmful to collective action and innovation due to a lack of social cohesion and weak formal institutions (Boschma, 2005a).

Geographical proximity

According to Gilly and Wallet (2001) geographical proximity cannot be reduced to mere physical proximity, measurable in terms of physical distance. Notably it

has a social dimension because it brings time into the analysis. Because of globalisation, distance no longer has an absolute value, but it is a function of the time needed to travel across it. Due to this feature, geographical proximity encompasses elements such as transport or communication infrastructures, which according to both their degree of development and level of utilisation, can modify coordination mechanisms (Torre and Rallet, 2005).

However, there is a huge bulk of work on industrial clusters that claims that actors that are spatially concentrated can benefit from positive externalities. The literature on small firm networks in industrial districts postulates the importance of territorial proximity for cooperation and business innovation, but empirical research to test this proposition is sparse. While there is some research on the extent of inter-firm cooperation, little is known about the performance outcome of cooperation (i.e. innovation).

Locational and spatial factors lead to a trade-off between transport costs, size of the market and trade barriers. These geographical factors lead to a generation of proximity benefits as well as incentives to disperse. The advantages of spatial proximity are extensively investigated by the literature from Weber's 'Theory of the Location of Industries' (1928) to most recent approaches. Space is therefore nested in the definition of clusters and reducing transport and transaction costs are generally regarded as the main benefits that geographical proximity encompasses (Yeung, 2000). This type of evolution appears to be dominant in many localities where the existence of factors such as a natural harbour or a navigable river leads to geographical concentration of firms engaged in activities that require low-cost transport systems. By accident, these firms discover the benefits of locating close to firms engaged in similar types of operations and a process of clustering spontaneously emerges (Krugman, 1996). The existence of favourable geographical conditions that are conducive to good transport system and densely populated areas are however not sufficient to generate industrial clusters. In this respect, geographical factors per se, cannot be regarded as a key feature of clusters' creation and growth (Schmitz, 1990; Rabellotti, 1997). Historical events and institutional factors that are conducive to clustering provide the setting in which it is possible to reach proximity benefits.

Similarly Torre and Rallet (2005) endorse the assumption that geographical proximity cannot alone generate synergies and it cannot create interactions between actors at local level. It facilitates interactions but does not in itself facilitate coordination. Lublinski analyses what type of inter-firm linkages are stronger between geographically proximate firms compared to distant firms

(Lublinski, 2003). The findings suggest that geographical proximity is relevant for inter-firm linkages that may lead to the following outcomes: labour market pooling; knowledge spillovers; demanding local customers and trust-based effects. However the results of this study are not sufficient to prove or disprove the theoretical arguments of agglomeration advantages.

The literature of industrial districts takes a systemic approach and draws attention to the positive externalities stemming from co-location. Following a recent trend in industrial and urban development, some researchers distinguish between two types of externalities: economies of localisation and economies of urbanisation. Staber affirms that in mature industries firms benefit from being close to other in the same industry as geographical proximity brings economies of localisation through shared pool of qualified labour, specialised suppliers, communication infrastructures and so forth (Staber 2001). In emerging industries or industries experiencing rapid change, firms benefit from being close to other operating in different industries because geographical proximity brings urbanisation economies – or so called ‘Jacobs externalities’ through exposure to different ideas and competencies (Jacobs, 1969). According to Staber, most empirical studies of inter-firm relations in industrial districts do not address this distinction and are silent on its implications for assessing industrial district performance (i.e. cooperation or innovation). The implicit assumption that constituent firms benefit although to a different degree from being close one to another needs to be tested. Proximity in fact may not only encourage cooperation, but may also intensify direct competition and push less fit firms out of the market depending on the type of externalities present in any given situation (Staber, 2001).

As for innovation, geographical proximity has been shown to be important because over short distances people get together and exchange information and tacit knowledge – the further apart people are the intensity and frequency of these contacts declines (Grabher 2001; Lawson and Lorenz 1999). Again there is a balance to be struck – is geographical proximity a sufficient condition to produce innovation and not only to diffuse it? As the most recent studies on innovation clusters has shown (Porter 1998), the idea that firms benefit from the spatial concentration of their research and innovation activities, is widely accepted – geographical proximity is seen as an essential condition for technological success, especially in the case of small firms (Gallaud and Rherrad, 2002). However, whereas some researches take for granted that geographic proximity plays part in the process of innovation and the transmission of knowledge, studies on geographical externalities attempt to verify the role of this

proximity in the transmission of knowledge by calculating the maximum distance that a technological externality could potentially cover (Feldman 1999, Wallsten, 2001). All these approaches come to the conclusion that the geographical extension of externalities is limited and this supports the idea that geographic proximity does play a role in the diffusion of knowledge.

Some authors take this argument further, Bathelt et. al. (2004) for instance questions the view that tacit knowledge transfer is confined within geographical proximity whereas codified knowledge may roam the globe almost frictionlessly. To this end, they make a distinction between the learning processes taking place among actors embedded in a community by just being there – ‘dubbed buzz’ – and the knowledge obtained by investing and building channel of communication – ‘pipelines’ – to selected actors located outside the local community. It is argued that the coexistence of high levels of dubbed buzz and many pipelines may provide firms located in outward-looking and dynamic clusters with a string of specific advantages not available to outsiders. ‘The buzz encourages the development of shared values, attitude and interpretative schemes, typical for communities of practice, which enable the local actors to engage in interactive learning and problem-solving, and give meaning to complex information about changes in the market and in technologies’ (Bathelt et. al., 2004: 45). While a well-developed system of pipelines connecting the local cluster to the rest of the world brings two main benefits. First, ‘new and valuable knowledge will always be created in other parts of the world and firms who can build pipelines to such sites of global excellence can gain competitive advantage’ (Bathelt et. al., 2004: 46). Second, ‘it seems reasonable to assume that the information that one cluster firm can acquire through its pipelines will spill over to other firms in the cluster through local buzz’ (Bathelt et. al., 2004: 46).

Boshma takes a further step along this line by questioning the role that geographical proximity can play, taking into consideration possible complementarities/substitutional effects as well as synergies between different types of proximity (Boshma’s 2005a). Within this context, he asserts that geographical proximity combined with some level of cognitive proximity is sufficient for interactive learning to take place. However he also recognises that other forms of proximity may also act as substitute for geographical proximity. Thus, interactive learning may be enhanced by geographical proximity but too much geographical proximity may also be harmful for interactive learning and innovation. Boshma’s however contends that an optimal degree of geographical proximity exists - too close and firms risk a lack of openness to the outside world and too far and firms lose spatial externalities (Boshma’s 2005a), hence the

reference to goldilocks in the title. In the former case, he suggests that spatial lock-in may be solved or prevented by either diversifying the local economy by building so-called Jacobs externalities, or by establishing non-local linkages.

Goldilocks - Adopting Boshma's Taxonomy

Overall, a key criticism of Boshma's paper is that in the desire to carefully delineate the different types of proximity he has over-defined these concepts. So for instance the separation of social and cognitive can seem a little artificial – so can the separation of organisational and institutional. Conversely, he also acknowledges that 'it is often difficult to detangle geographical proximity from other forms of proximity. Geographical proximity may stimulate them, as is the case with social and cognitive proximity. Apart from this complementary relationship, other forms of proximity may also function as substitutes for geographical proximity' (Boshma 2005a: 70). However, by adopting this taxonomy it is possible to use these different concepts to discover why firms cooperate and more importantly for this paper why they do not.

Table 3. Five forms of proximity: some features

	Key dimension	Too little proximity	Too much proximity	Possible solutions
1. Cognitive	Knowledge gap	Misunderstanding	Lack of sources of novelty	Common knowledge base with diverse but complementary capabilities
2. Organizational	Control	Opportunism	Bureaucracy	Loosely coupled system
3. Social	Trust (based on social relations)	Opportunism	No economic rationale	Mixture of embedded and market relations
4. Institutional	Trust (based on common institutions)	Opportunism	Lock-in and inertia	Institutional checks and balances
5. Geographical	Distance	No spatial externalities	Lack of geographical openness	Mix of local 'buzz' and extra-local linkages

*Boschma (ref ***) P. 71*

In conclusion this new stream of reasoning on proximity is that cognitive, organisational, social and institutional proximity all have a role to play in shaping different coordination mechanisms, such as cooperation and innovation between companies. In some circumstances these different types of proximity may be a reasonable substitute for the geographical proximity in different combinations the different types of proximity may promote innovation - physical closeness on its own is neither a sufficient or necessary condition nor for cooperation or innovation. So for instance, geographical proximity in combination with social proximity may be sufficient for innovation, or social and cognitive and institutional and cognitive and so on. But for each type of proximity the actors must not be too close or too far apart.

The three bears - Proximity and the cleaning companies

Using this framework we look at the Irish contract cleaning industry to see if this can provide an explanation of why the firms – though situated close to one another – did not cooperate. We look at each of the proximity criteria in turn.

Cognitive proximity

As mentioned above the management and owners of the cleaning companies shared a common cognitive framework – but in several senses this was too close. First they all shared a vision of competition which was cut throat, based on under-cutting the competition and the belief that they could not do anything about this as smaller firms would come in, under cut and take away their work. Several times it was expressed that it was illegitimate to cooperate and that cooperation was somehow not paying the game. So for example the companies accepted year-on-year decreases in the contract payments by state services because they felt it would be illegitimate to make a stand and say ‘this hospital need x hours cleaning’.

Underlying this notion was that they were atomistic players whose only decision lay in setting the price level and they had no (nor should have) any control over setting quality standards for the industry. There were two internal contradictions in their discourse of free market competition. First many interviewees said they would welcome an outsider setting quality standards for the industry. Second, many interviews could point the existence of market-leadership led by a couple of firms. These firms were in a market leadership position simply based on their large size – they could afford to loss-lead on a contract. The second way in which the cleaning firms were too cognitively close is that they were often competing for the same business. This meant that the

innovations the companies adopted for non-price competition were all the same. They all recognised the importance of clean presentable staff and argued that their staff were best in this regard. They usually had very professional logos (which often referred to a heraldic symbol). Many firms were moving into facilities management and providing integrated packages of mail room services, security and cleaning. Finally many had worked for and won an ISO award though they thought it had brought them no additional business. In addition, with a few exceptions – they all belonged to the employers' body and took advice and information from that body on legal and employment matters. Here then is a classic case of firms which are too close to innovate but fear getting wider apart because they think that position would not be legitimate (Oerlemans and Meeus 2005)

All these factors indicate that the cognitive distance between the companies was too narrow. The firms simply lacked a source of novelty that would allow them to differentiate and advance their sector.

Organizational proximity

There was no organisational proximity, as reported above. There was no form of coordination between companies characterised by trust-based relations among actors - no company reported joint ventures or cooperating on a contract bid with another company. The only inter-firm cooperation was when one company sub-contracted to another company, however this was very rare and only happened if the parent company had no workers in the area or no in-house technical capacity (for instance in cleaning escalators). Even when the severe labour shortages in the early 2000s meant that firms did not tender for work because they thought they would be unable to fulfil the contract the firms did not even consider putting in joint bids with other labour-strapped firms. This meant that firms were inhibited from growing because of their fear that opportunistic behaviours could arise.

Social proximity

The main players in the industry reported never socialising with each other – and even avoiding the main trade fairs that they thought their competitors attended. This avoidance of contact was because of fear of opportunism by the other company (if the company found information on costing then they could use this to undercut the company). This suspicion has been ameliorated with the formation of the ICCA and the introduction of an annual dinner and award ceremony. However, this contact has not yet conquered the fear of opportunism in the minds of owners and managers.

Institutional proximity

We mentioned that Biggart and Orru affirms ‘the institutional environment creates background factors that precede and logically shape both comparative and competitive strategic action’ (1997: 127). In this context different institutional frameworks affect the transaction costs of doing business by reducing uncertainty and providing incentive systems for finding solutions to conflict (DiMaggio and Powell, 1983).

By adopting Boshma’s framework, this failure of coordination among the cleaning companies could be explained by the presence of too little institutional proximity, which in this case was detrimental to collective action and produced a lack of social cohesion and common values. Since we have seen how institutional proximity is strongly linked with other forms of proximity, the lack of social proximity of the cleaning companies prevented also any coherent initiative to be taken.

Discussion

Boshma’s framework has been useful in exploring why cooperation doesn’t happen as much as why innovation does happen. Using this framework it is possible to see that the contract cleaning companies while they are spatial proximate are unlikely to innovate or even to cooperate. This is because on many different dimensions they are either too close or too far apart (see table **). For this group of companies ideas for differentiating themselves from other companies are all drawn from the same well. Because they all shared a strong ideological commitment to free market competition the firms feared opportunism and therefore did not form joint ventures with each other or even socialise with each other. That is the overwhelming close cognitive proximity ‘crowded out’ any other types of proximity.

Proximity	The contract cleaning companies
Cognitive	Too close together
Organizational	Too far apart
Social	Too far part
Institutional	Too far apart
Geographic	Close

Conclusion

Goldilocks was a fussy madam; she didn't want things too big or too small, too hot or too cold, too hard or too soft. Everything had to be 'just right'.

Boshma's framework has proved a useful way to start investigations into proximity and the 'just right' conditions for cooperation and innovation. However while he recognises that different types of proximity can be substitutes for each other – he fails to recognise that there may be a crowding out effect if one type is too strong (or possibly too weak). So for instance the competition among spatially close actors can cause competition for scarce resources (Torre and Rallett 2005). So in the case of the contract cleaners in Dublin – an overwhelmingly claustrophobic cognitive proximity ruled out other types of proximity from developing. This leads us to assume that there might be an evolutionary theory of proximity that invokes the biological metaphor of natural selection. Within this context, a crucial question that needs to be addressed is whether different forms of proximity change/develop over time and to more extent how mechanisms such as variation, selection and retention could be used to explain the 'crowding out' effect mentioned above.

This framework also allows solutions to be explored. For instance in the case reported here – either a breakdown of the cognitive claustrophobia must be achieved by the companies if they are to cooperate effectively in future or there must be a concerted effort to increase organisational and social proximity to overcome the firms fear of opportunism. In this case the creation of the Irish Contract Cleaning Association and the development of awards and an annual social event is a good start. Without a closing of some of these other distances, spatial proximity will not create innovation or even cooperation. Without this the contract cleaning companies in Dublin will be more like the three bears – getting what is left over rather than like goldilocks –having the best pick.

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