INTERFIRM RELATIONSHIPS WITHIN THE CONSTRUCTION INDUSTRY: A COMPARATIVE STUDY BETWEEN FRANCE AND THE UK

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Interfirm relationships in the Construction Industry, studied in France and in the UK, are undergoing major changes. These changes are analysed using a framework based on human ecology/collective-action theory.

A historical overview of the Industry in both countries reveals similarities in their national evolution. The Industry's fragmentation has created vicious circles in the production system that has, in turn, damaged production conditions. The latest organisational form to emerge, partnering, adopted by isolated French construction companies in the 80s and by a few pioneers in the UK since 1994, provides the basis for an overall reassessment of the relationships between clients, designers, engineers, main contractors and subcontractors.

Case studies have been used to explore the determinants of partnering implementation or, in the case of the French study, the reasons for its failure. On the basis of these findings, the collective-action theory is shown to offer a framework for better understanding the UK and French Industry's situation and the reasons for network occurrence in the UK, as an alternative to the merchanting system.

Keywords: co-operation, interfirm relationships, partnering, networks.

INTRODUCTION

In France and in the UK, a number of initiatives have taken place aimed at reducing the drawbacks of the Industry's fragmentation, which go beyond quality and project management techniques, even if, at times, they included these aspects. Within these initiatives, some main contractors chose to re-examine their position in the construction chain and to test other forms of relationships with their subcontractors and their clients. Their endeavours created a distinct trend in the Industry that was defined as "partnering" in the UK or "partenariat" (partnership or network) in France.

Three different cases of partnering implementation have been studied (M. Benhaim, 1997) through longitudinal research methods in the UK (over 18 months during 1995/96, on sites run by Kyle Stewart - a building company and part of the Dutch construction company, HBG - and Balfour Beatty - the civil engineering arm of BICC, formerly a UK cable company) together with historical research methodologies in France to analyse the 1982-1988 partnering experiments of Campenon Bernard Construction (CBC), part of the utility group, Compagnie Générale des Eaux (now Vivendi). The three companies showed similar objectives towards partnering but reached opposing conclusions on its performance in the medium term. The reason for these different evaluations could be rooted in their economic and institutional contexts

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Benhaim, M and Birchall, D W (1998) Interfirm relationships within the construction industry: a comparative study between France and the UK. *In:* Hughes, W (Ed.), *14th Annual ARCOM Conference*, 9-11 September 1998, University of Reading. Association of Researchers in Construction Management, Vol. 2, 407-15.

which, in turn, raises the question of the determinants of partnering in the Construction Industry.

The aim of this paper is to show that, in the light of the human ecology/collective-action theory, the UK experiments in partnering are providing the basis of an alternative to the traditional and conflictual merchanting system, whereas the situation in France does not permit such a conclusion. We will, therefore, examine the major institutional differences between the French and the UK Construction Industries (Part I) in order to contextualise the experiments on partnering collected in France and in the UK (Part II). A discussion on the theoretical interpretation of both national situations will then be presented (Part III), followed by the limits and perspectives of the research (Part IV).

VICIOUS CIRCLES AND IMBALANCES IN THE CONSTRUCTION INDUSTRY

The entire construction process is regulated by mechanisms combining contractual and informal rules, which bear the characteristics of national cultures and an historical balance of power between players and their institutional representatives.

Differences in roles and contracts between France and the UK

The principal functions (i.e. conception, construction and control) are often performed in both countries by different organisations or consultants. It would also appear that, as one of the rare comparative surveys between France and the UK (Winch and Campagnac, 1995) stated, the role of architects is different in the two countries. UK architects expand their working area to include detailed design, a role carried out in France by the main contractor. As a consequence, the specifications produced by the UK architect are far more precise than they are in France, leaving the main contractor with a narrower margin to manoeuvre, after completion of the conception phase, when his input is unlikely to be taken into account.

The pre-eminence of the designer in the UK situation is compounded by the contractual system which - in the traditional contract, still the most accepted of the contractual forms in the UK - establishes him as the leader of the construction team. In contrast, the most frequent contract in France - "contrat en entreprise générale" - allows the main contractor direct contact with the client, assigns the major responsibility to him, together with complete leadership over the subcontractors (decennial liability). As a result, the French main contractors have been able to make technical recommendations to the client which differ from the designer’s brief, allowing them a wider range of initiatives ("variantes" often evaluated by the independent "Bureau de contrôle" in the building sector) and more efficient optimisation of the production process.

In both countries, however, autonomous players are introduced into the conception/-production process at different phases, bringing with them highly differentiated views of the project and none has enough power to integrate the entire process or to prioritise its different aspects (Brousseau and Rallet, 1993, Gobin, 1993).

The regulation mechanisms

Even if they have strengthened their grip on site organisation, main contractors do not assume total co-ordination on site. According to Brousseau and Rallet (1993), centrally-monitored information would delay the whole decision process on a site and the use of contracts cannot anticipate every conceivable event in the production

process nor avoid potential suboptimisation. Other soft co-ordination methods, such as a code of practice, the value of a contractor's and individual site worker's reputation, and the informal, verbal nature of the relationships in the Construction Industry, exist between players and will accommodate a relatively fluid adjustment between them in non-contractual circumstances (GRIF, 1992, Brousseau and Rallet, 1993). The emergence, in the 70s in the UK and in the 80s in France, of starker forms of contractual management, implemented by general contractors, has weakened these integrative tools, whose disappearance may - in turn - explain certain difficulties in the Construction Industry.

The merchanting system

UK main contractors have adopted a merchanting system based, according to Ball (1988), and Campinos-Dubernet (1988), on financial optimisation logic. Contractors' fixed costs are kept at the lowest possible level, with extensive recourse to plant-hire and subcontracting of the workforce. Their contract portfolio, i.e. a set of contracts at different stages of completion, enables them to secure overall, positive cash flow. Tendering for and winning new contracts is therefore seen as vital, in order to retain liquid cash flow, even if it leads to over-commitment (i.e. delays for the clients) in boom times and cut-throat pricing, often at below cost prices, in downturns. The main contractors' search for financial flexibility has an important impact on production, leading to the Industry's fragmentation (a consequence of vertical disintegration and extensive use of independent subcontractors); increasingly complex contracts (contractual management of the subcontractors); and a search by the main contractors for room to manoeuvre, sometimes at the client's expense (i.e. through delays, quality or final price), or at the subcontractors' expense (by renegotiating estimates after winning a contract, claims during completion of the project, delayed payments, etc.).

The overall result of the main contractors' wide recourse to market forces in their business appears to result in negative consequences. Profitability, on average, is weak in the Construction Industry, with detrimental cycles between bleak periods and booms, encouraging widespread short-termism. High costs and low productivity are endemic, as is the clients' dissatisfaction with the quality and price of the final product. Furthermore, clear threats appear for the reproduction of the system itself, as the Industry's damaged image and its lack of operative training could increase the likelihood of staff shortages in the future. In some trades, the subcontractors may disappear or be taken over by individual main contractors, with further damaging influences for the Industry's competitiveness.

One of the reasons for this inflection in results is the fact that the main contractors - through the merchanting system - are dragging the flexible construction process so far that the soft regulation mechanisms, i.e. the professional codes of practice and informal relations, which enable the contracts to be applied in operational situations, have been damaged. As time passes, the UK Industry sees its future **at risk** (Latham, 1994).

PARTNERING AS AN INTEGRATIVE TOOL?

The Construction Industry's fragmentation and its consequences in terms of interfirm conflictual relationships have long been targeted by experts as one of the major difficulties for contractors. Partnering - seen at first as a set of techniques promoting "openness, trust, cooperation, unanimity of decisions, sharing of benefits and a fair allocation of risks" (Loraine, in MPA, 1995) on site - can therefore be primarily

regarded as an integrative tool between the contributors to a construction project. Nevertheless, its experimentation, both in France and in the UK, shows that partnering can provide an alternative to the merchanting system as a structured base for interfirm relationships within the Construction Industry, under certain conditions.

SIMILAR OBJECTIVES BUT A DIFFERENT APPRECIATION OF PERFORMANCE

Both the French and UK main contractors anticipated similar benefits from their partnering agreements, i.e.: to **differentiate themselves** from their competitors and contribute to attracting clients in the long-term, to **reduce the overall costs** of a project, bearing in mind that these techniques are only implemented through a costly change in culture and organisation, and to **continually increase the level of quality and innovation** - and client value - through a longer term, but dynamic, partnering agreement.

Partnering as a differentiation tool

Collaborative relationships, when they succeed, provide a competitive advantage that explain CBC's rapid rise in the French construction market during the 80s. The UK firms under review also realised that their partnering experiments could become a major differentiation tool, as clients now regard partnering as a sign of higher quality and less conflict on site.

Cost management

In the short-term, cost-cutting in construction projects can be achieved through an improved purchasing policy (in this respect partnering targets the same objectives as the partnership sourcing movement), and a contribution from the subcontractors, in terms of technical expertise, in order to improve the combination of inputs, increase the efficiency of the construction process, through improved site co-ordination, and reduce the occurrence of costly claims and litigation. In the longer term, further cost reductions are anticipated from reduced transaction costs at the tender stage (by using fewer subcontractors), and reduced wastage, i.e. improved quality and increased efficiency on site by working together and investing in communications and organisational routines.

In examining the research findings, CBC's results, when evaluated against simple measures such as a project's timetable, its costs and its innovation level, resemble those achieved by UK partnering teams within Kyle Stewart and Balfour Beatty, i.e. a reduction in transaction costs and improved team productivity, based on organisational routines and on the players' early involvement. In total, over a 6 year period, CBC estimated that the gains due to partnering represented 5-10% of the project's turnover during the partnering agreement's lifespan[1].

Partnering: stable or dynamic networks

In the stable network that CBC helped to create, subcontractors were not expected to achieve productivity and quality gains. CBC had difficulty in this area due to the lack of any methodology that might have helped evaluate the subcontractors' contributions in a changing situation, from project to project, compare their performance and share

[1] Kyle Stewart and Balfour Beatty were not experienced enough in partnering to be able to evaluate the reduction in costs involved in this form of interfirm relationship. Nevertheless, they could appreciate that partnering often helped them to control unexpected costs in non-contractual circumstances.

the benefits of improved productivity. After a few years of partnering, CBC suffered from a number of setbacks, as their preferred subcontractors formed a cartel in order to impose their price on the main contractor. It subsequently became easier to risk jeopardising their relationship with the main contractor as the economic climate in construction improved, and actually overheated between 1988 and 1990 in France. Furthermore, the choice of preferred contractors was contrary to CBC's interests as the remaining subcontractors in the market were unwilling to submit a tender that would give CBC a benchmark for their existing subcontractors. As a result of these difficulties, in 1988, CBC abandoned their stable network solution, based on preferred subcontractors, and returned to a looser relationship with their subcontractors which was revised for each project. Limited tenders on a broader subcontractor base reassessed the main contractor's power over the situation and suppressed the opportunistic and cartel-type attitudes of the subcontractors.

To a large extent, UK firms have escaped the dangers of stable networks. They have implemented short-term, step-by-step moves and their collaborative experiments have been referred to as project partnering. Relationships between main and preferred subcontractors are redefined after each project, with new targets for improvement (at technical and communication levels) set for the future. Similar to the French firm CBC, they will be confronted with the difficulty of assessing their subcontractors' non- standard production, but, unlike CBC, they regard their long-term relationships as an integral part of their ongoing negotiations, with short and medium-term objectives (i.e. risk assessment realised project by project and incentives for a permanent cost-cutting exercise).

CBC and the UK firms have achieved contrasting results in implementing networks in the Construction Industry. In a recent article, Desreumaux (1996) pointed out that, despite the current interest in networks being shown by researchers (evidenced by the number of publications dedicated to this theme), it is not reasonable to expect this form of organisation to be the ideal solution for firms in every circumstance. Instead, it is appropriate to look for and define precisely, situations and contexts in which certain forms of organisation are more pertinent than others.

Among the determinants of network emergence in the Construction Industry, many are directly influenced by environmental change and the ways in which the Industry can collectively handle it. Different theoretical frameworks can be used to interpret the Industry's situation, both in France and in the UK: they emphasise a different set of determinants and develop a distinctive approach to networks. Among them, the voluntarist sociological approach of the collective-action theory provides fruitful concepts and analytical tools.

Partnering in the Construction Industry according to the collective-action view

The collective-action theory (Emery and Trist, 1965, Trist, 1983, Astley, 1984, etc.) provides numerous interesting insights into interpreting the present state of the Construction Industry. In particular, it views a social innovation, such as network formation, as a processual, empirical phenomenon, evolving through three principal stages:

- **Enactment**: firms in an industry can modify their environmental situation through its collective reinterpretation, i.e. ***domain formation***;
- **Selection**: the successful ***experiments*** undertaken by pioneering companies will provide their innovators with an improved level of performance; and

- **Retention**: these experiments, currently being diffused through imitation by a growing number of other firms, will create the next stage within the Industry as well as influence the shape of the firms' environment.

This view of networks, operating through a sequential process, will also provide the framework for comparing the French and UK Construction Industries.

Major environmental changes

Major changes in demand (i.e. level of demand, nature of demand, type of clients, etc.) have recently influenced the respective roles and attitudes of the players within the construction chain. These changes have been taken seriously by the main contractors who are now struggling, in the UK as well as in France, to gain control over the other players through new, rapidly expanding, design and build forms of contract. This control over the construction chain, together with the dysfunctions of conflictual relationships on site, when the main contractors withdraw from the production level, have, in turn, encouraged a reflection on alternative forms of interfirm organisation.

An evaluation of the dysfunctional aspects of the merchanting system

As previously mentioned, institutional differences may explain, in part, the higher degree of conflict existing between clients and contractors in the UK, mentioned by many authors (Ball, 1988, Barlow, 1996, Bresnen, 1996), compared with France, where the problem appears to be less acute, albeit present in the last decade. The merchanting system has been fully exploited in the UK, but its adoption has been less extensive and more recent in France. It is now questioned in the UK, where certain firms see their future at stake, but is still in use in France.

The merchanting model has exhausted most of its possibilities for incremental adaptation, in the UK at least, as shown by the criticisms of the clients as well as the emergence of a collective survival theme that is now recurring in the UK. This infers that UK firms are searching for another systemic framework, whereas French firms, who adopted the merchanting system more cautiously are, in general, still interpreting their positions within its mainframe.

The emergence of an Industry referent body

New forms of relationships that are currently being sought by UK firms, are under collective discussion, on the initiative and with the aid of an Industry referent body, (The Construction Industry Board (CIB), established by Sir Michael Latham). The debate launched by this referent body is currently reverberating, diffusing the firms' initiatives on partnering, amplifying them and building a consensus around them.

The collective-action theoretical interpretation (enactment, selection, retention) appears to provide a powerful framework for the current changes in the UK Construction Industry in incorporating the pioneering firms' autonomous strategic decisions within the context of a broader change in the Industry's culture. Given the present turbulence in the Industry’s environment, this framework also assumes that networks (i.e. long-term partnering linking both main and subcontractors) will be increasingly used as a major form of interfirm relationship, and regarded as a voluntaristic response offered by UK Construction firms to environmental change.

The UK's features appear to closely match those cited by Trist (1983) and by the human ecology/collective-action theorists. In contrast, the French situation can still be interpreted - but as a counter-example - under this framework, as it presents different

institutional and historical characteristics. In particular, the referent body has not yet emerged in the French Construction Industry, where overall conditions are not viewed so desperately. As contractual conditions favoured early attempts by the main French contractors to influence the entire construction chain, they remained more involved in the technical aspects of that process and were slow in appreciating the full logic of the merchanting system that they now increasingly apply. Isolated French experiments can be interpreted as being mutations that were not successful enough to be applied to the whole Industry. French innovators experimented with collaborative interfirm relationships as another form of project management, within an Industry context of conflictual traditions and dynamic prospects. The retention mechanisms are not based on a single appraisal of the experiments' results, but on their potential to provide an alternative systemic regulation of interfirm relationships in the Industry. One can assume that this variable is linked to domain formation within the Industry: innovation is accepted as an alternative if, as a pre-condition, the previous patterns of behaviour have been challenged and the Industry recognises that they are no longer adapted to the current situation. The collapse of CBC's implementation after five years is a further indication that an innovation which influences a collective issue (interfirm relationships) cannot be accepted without collective reflection. In other words, subcontractors' opportunism was permitted in France because partnering was not regarded as a collective cause by the Industry.

RESEARCH LIMITATIONS AND FUTURE DIRECTIONS

Due to its exploratory characteristics, this research has not provided data that is extensive enough to draw wide-ranging conclusions and normative recommendations for management of the Construction Industry. In particular, the scarcity of experiments on partnering, in both France and the UK, may well have magnified biased or unusual situations that might be explained by the positioning of the firms that implemented them, at specific times in the construction business cycle. This risk, inherent in the qualitative approach chosen in this work, must be reiterated as well as highlighting the cautious interpretation that a comparative bi-national research design merits. Cases of partnering found in France and in the UK are rooted in different cultural and institutional contexts and their interpretation as broad examples of an Industry showing a long-term trend towards partnering could be misleading.

Further and more wide-ranging experiments are still required to test and expand the meaning of networks within the Construction Industry. Nevertheless, it is interesting to note that former experiences in the US and in Australia (Loraine, 1994, Baden Hellard, 1995) display similar traits to the ones recognised in France a decade ago and in the UK today. In this respect, this research reveals a persistent feature that may be of use to companies willing to initiate future partnering experiments or to deepen existing ones.

Future research programmes could identify three areas. The first belongs to the action research field, aimed at reproducing some of the determining conditions of network creation in France. In particular, it would target the ***Industry's domain formation*** by assisting in the ***creation of a referent body*** or think-tank on interfirm relationships within the French Construction Industry. The second reseach topic would consist of following up the experiments in order to verify the possible creation of ***relational quasi-rents in transient networks***, such as project partnering. Finally, a third research area could be a study of the ***lock-in effects of long-term partnering*** and its potential solutions. This subject is of particular interest to the Construction Industry, as most of

the anticipated benefits of a networking organisation are a consequence of recurring - if not stable - relationships supported by trust, intangible and long-term investment and collective working routines.

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