INTER-ORGANISATIONAL RELATIONSHIPS IN CONSTRUCTION: PRESENT LACK OF CONSENSUS AND INSPIRATION FOR FURTHER RESEARCH

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The construction industry is often portrayed as a traditional industry, segregated, low on integration, innovation and profitability, and plagued by adversarial relationships. There seems to be quite some consensus on the necessity to change 'something' in construction relationships. This is paralleled by studies of business markets that put the inter-organisational relationships into focus; i.e. the supply chain and network perspectives. Recent analyses and publications concerning construction industry frequently acknowledge the scope and benefits of the interaction and interplay between organisations. Various authors have argued that in order to improve the nature of relationships between actors within this industry should be redefined. However, when we look at the way relationships in construction are presented in various publications, there seems to be only little consensus on whether there are relationships or not and, thereby, what constitutes a relationship. To understand this lack of consensus, we may get inspiration from looking at the way in which research into inter-organisational relationships has evolved in various perspectives which, for decades, have tried to capture the nature of such relationships. Furthermore, we may try to understand the diversity by means of a 'feature-inventory' and use this as a point of departure for furthering understanding of relationships in construction.

Keywords: inter-organisational relationship, network, concept diversity, feature inventory.

INTRODUCTION

When reviewing recent (and less recent) literature on inter-organisational relationships, one is struck by the sheer diversity of views on the nature of such relationships in the construction industry. There seems to be only little consensus on the matter. One aspect, however, does draw general applause: the relationships in the industry should be redefined. The diversity of views on of inter-organisational relationships in the construction industry makes discussion somewhat difficult. But we must beware of rushing into definitions to quickly. The diversity implies that, at present, there is no consensus on what an inter-organisational relationship is in the construction industry. The level of conceptual maturity is still low. Instead of seeing this as a problem, it may be viewed as an opportunity to explore the matter. Hasty agreement on the substance of a phenomenon may be counterproductive in the longer run. Such premature agreement may lock-in attempts at defining concepts in less fruitful directions. It seems better to cultivate the diversity for a period - until the

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phenomenon has been investigated in much more depth than it has at present. In this paper we take the latter view as the point of departure.

In the next section of this paper we reason that it is necessary for the CM (Construction Management) forum to look at CIIORs (Construction Industry Inter-Organisational Relationships). CIIORs are often presented as the root of all evil, but are also seen as the lever for change. Since production in the CI takes place in projects and temporary coalition organisations, inter-organisational relations are inescapable. IORs are also central in contemporary views on organisation and market phenomena. These perspectives focus on co-operation between firms. Basically it is argued that the ability to cooperate across firm boundaries is a vital competence for the future performance and profitability of firms. Therefore we claim that understanding, and subsequently, improving CIIORs should be a main objective for the CM academic forum. Understanding and improving CIIORs should start with a divergent debate. 'Relationship' is an opaque term in CM literature. Behind the term 'relationship', a number of different meanings, connotations and interpretations are hidden. As long as we do not acknowledge this broad base, the debate on relationships in CIIORs runs a high risk of running into misunderstanding and confusion – it will resemble a 'babble of tongues'. In order to expand our knowledge, we should work towards a more mature and differentiated conceptualisation of 'relationship' in CI. The best way to start this off may be to build an inventory of the diverse interpretations of the concept of 'relationship', to work out ways to distinguish core-interpretations and variations, to build logical categories, and to find ways of discussing such classifications. The third section presents various views on 'relationships' in the construction industry based on a literature review. In section four, we discuss some of the main differences and possible reasons for them. In section five the findings are related to developments in the discussions of inter-organisational relationships in theoretical approaches such as Relationship Marketing and the IMP Perspective. In section six, we present a stepping stone for further research, discussion and understanding of relationships in construction. In the final section we wrap up our suggestions for structuring the debate and research on CIIORs.

CIIORS MUST BE DEBATED IN CM

Generally speaking, CM research aims at understanding and improving the performance of the construction industry, e.g. management of single projects, single organisations, or industry in general[1]. Usually, CM research is practitioner-oriented and normative. Researchers often use their findings for making instruments, methods and recommendations to improve the performance[2]. Although not widely acknowledged -as a CM topic of interest- yet, we feel that within the CM research chaos there is a growing interest in IORs. For example, in several countries initiatives have been taken towards improving the performance of their respective construction industries. These initiatives try to tackle the segregation in the construction process and the fragmentation in the industry. Furthermore, the initiatives aim at changing the industry culture and co-operation mores.

[1] We are aware of the recent debate on the distinction between CM and CE, and see the danger of this statement. The description given by us is not intended to go into the CM-definition debate. Our broad interpretation of CM is stated in order to explain where we find our base for reasoning about the connection between CM and CIIORs. NB: Not even ARCOM gives a direct description of CM.
[2] Since this drive to improve is typical for engineering sciences, one might interpret this as the heritage of the CE past of CM.

The construction industry is usually characterised as a poorly performing industry with severe problems, associated with low quality standards, project cost overruns, inefficiency, unsafe work-environments, low customer satisfaction, low profitability, and a low degree of innovation. Such problems have been discussed by a large number of authors, e.g. Egan (1998), Latham (1994), Hasselhoff (1988) and Pries (1995), and there seems to be widespread agreement among researchers, practitioners as well as government officials that such problems exist. The ways, in which firms in the construction industry relate to each other within, as well as between projects, is often seen as a primary cause of problems in construction processes and performance. Dorée (1996, in line with Hasselhoff (1988)) characterises this situation in the construction industry as fragmented; especially the strict segregation between design and realisation (construction) is characteristic of construction. If there is co-operation, it is mainly within projects, on an *ad hoc* basis. Each project means a new coalition. The traditional procurement route results in competitive and conflictuous settings. None of the parties has the ability to change this pattern on its own. The pursuit of self-interest is central to working in construction projects and when this is done with guile, "opportunism in action" prevails (Korczynski 1994). Subsequently, suspicion and distrust are cultivated (especially from the client's side). In such a situation, relationships are adversarial and co-operation is difficult. Following this line of reasoning, various authors have argued that in order to get rid of one or more of the problems, the traditional way in which parties within the construction industry relate to each other needs to be redefined (e.g. Egan (1998), Hasselhoff (1988), Holmen *et al.* (2000), Latham (1994), Naylor & Lewis (1997), and Winch (1989)). It has become a matter of 'constructing a team' or 'rethinking construction'. Parallel to that, often based on similar analyses, much work is being done within the field of partnering. Fisher & Green wrote an excellent and balanced overview of partnering in the UK (NAO 2001. app.4). Partnering evolves around co-operation and co-development, it puts the IOR in the centre, but still it is mainly viewed as a means for procurement.

Over the past years, several countries have embarked on initiatives aimed at improving the construction sector[3]. In these initiatives IORs are seen as the core of the problem as well as the main route ahead. Although these initiatives promote integration in the supply chain, highly integrated hierarchically structured firms - that incorporate all specialisms in the construction supply chain - are unlikely. Project based production is a fact of construction life and will remain so[4]. In the future the main production unit will continue to be the temporary coalition organisation. Working together across firm boundaries and the ability and willingness to co-operate are expected to be crucial for success. In the conventional outlook this was understood as co-operation within projects. However, project-independent co-operation is increasingly recognised as an issue of strategic importance. This view is in line with the current advances within general Management Studies and Management Science research and literature. Supply chains, co-operation, networks and IORs have become mainstream topics. The opening up of the European market forces construction firms to (re)consider their market positions, (re)draft their strategies, and purposefully establish IORs on the international arena. With IORs becoming increasingly relevant

[3] See also NAO 2001

[4] Project-based production on geographically dispersed sites 1. creates difficulties for scale gains, 2. makes investment in dedicated production technology problematic, 3. makes production for stock -to balance market fluctuations- impossible. To minimise the cost of idle capacity construction firms will aim for low cost structures, lean organisation and subcontracting.

in the construction industry, and IORs already being relevant in the general management sciences, it seems inevitable that CIIORs will arrive on the CM agenda.

VARIOUS PERSPECTIVES ON CIIORS

If we take the position that IORs should be addressed in the CM-forum, how may we best embark on the endeavour? The best thing may be to make a 'first inventory' of the ways in which the term 'relationships in construction' is used in CM literature, as it would provide us with an overview of similarities and differences among the foci and perspectives on relationships in construction. Therefore, we have reviewed a small number of publications which use the concept 'relationship' when discussing inter-organisational arrangements between firms in the construction industry. In selecting these publications we left out those publications which solely interpreted relationships as 'relationships within single construction projects'.

Eccles (1981) was one of the first academics who discussed the existence of non-market co-ordination across firm boundaries in the construction industry. Having made a study of (a) the number of subcontractors used in each trade by contractors, (b) the length of general contractor-subcontractor relationships, (c) contractors' use of labour-only subcontractors, and (d) the procedures which contractors use for selecting subcontractors for single projects, he claimed the existence of the 'quasi-firm' in the construction industry. He claimed that the co-operation between the two separate economic entities functioned as if it was one hierarchical organisation, although there was no formal hierarchy in place. In such relationships, trust may emerge due to the social relationships inherent in the economic relations. Eccles introduced "quasi-firm" because he felt that certain types of co-operation between construction firms were explained neither by the market paradigm, nor by the hierarchy paradigm[5].

In a similar vein, Dorée (1996) claimed that clients and contractors work within a context of implicit mutual continuity intentions because this offers benefits to both parties. In order to safeguard against contractors' opportunism, public clients choose "to reward the performance of the contractors and their flexibility with new assignments [..] (thereby) the interactions and relationships of clients and contractors becomes more continuous, more stable and more exclusive" (ibid:255)[6]. A somewhat similar view is held by Welling and Kamann (2001) who claim that there are quasi-firms in the construction industry. For example, on the basis of data from the Economic Institute for the Building Industry, they argue that there is "a set of stable relationships between a main contractor and sub-contractors [..] in the construction industry in the Netherlands" (ibid:868). However, although the authors claim that there are relationships between *firms* in the construction industry, they cast doubt on the existence of boundary-crossing relationships between individuals in the construction industry. On the basis of an empirical investigation by Geerink (1998), they conclude that in single construction projects, "a majority of the individuals [..] has no earlier experiences with representatives of the other firms with whom they have to co-operate" (Welling and Kamann 2001: 869). Hence, even if "relationships at the *firm* level in construction are rather stable, this seems not to be a guarantee for a stable pattern of relationships at the *individual* level" (ibid:869). This, however, is related to the size of the firm, since the individual and the firm level coincide in the case of small (one-person) firms. Both Dorée (1996) and Welling and Kamann (2001)

[5] Later this phenomenon would be identified as network or as virtual company.
[6] The behaviour of the client and construction contractor is described in terms of transaction cost economics (see also Dorée 1997)

primarily discuss the issue of frequency/durability/continuity of boundary-crossing interaction over time. In their views trust and familiarity do not necessarily regulate these relationships. Instead, as they claim, it is the contractors' prospect of future business which reduces the contractors opportunism. This prospect ensures some stability in the capacity utilisation of the contractors' employees and capital equipment.

Such stability is of particular importance in the construction industry. Products cannot be produced for stock and contractors face turnover uncertainties. The prospect of future business makes it irrational for contractors to behave opportunistically. This type of explanation is closely related to the argument of Bradach and Eccles (1989) that trust is characterised by "a cognitive leap beyond the expectations that reason and experience alone would warrant: where opportunism might be rationally expected, trust prevails. It should be noted that hostage exchange avoids trust by structuring the transactional context in such a way that opportunism becomes irrational" (ibid:104)[7]. Van der Veen, Voordijk and Dorée (2001) argue for recognition of relationships between firms, as well as social relationships -and various types of trust- between individuals. Geography is one factor which can influence the creation of trust. Small firms primarily work within the one geographical region and therefore, by default, the people involved encounter each other relatively frequently – both in and outside the project context. This kind of familiarity is a stepping stone towards co-operation in projects. Hence, van der Veen, Voordijk and Dorée (2001) argue for the existence of relationships at the organisational as well as the individual level. Furthermore, they argue that both types of relationships, respectively, are connected. Thereby, the structure they depict of the construction industry is that of a (social) network. Dubois and Gadde (2001) discussed the construction industry as a "construction network" with loose and tight couplings (cf. Weick 1976) as well as collective adaptations. They argue that "tight couplings" exist within single projects which are coined "temporary networks", whereas loose couplings exist between firms in the "permanent network". However, even if the term "network" is used, Dubois and Gadde (2001:10) claim that "there are few inter-firm adaptations beyond the scope of individual projects and that the firms rely on short term market based exchange". Therefore, even if Dubois and Gadde (2001) use the term "network" for describing the structure of construction industry, this "network" is characterised by "competitive tendering and market-based exchange among firms" (ibid:12).

Bengtson *et al.* (2001) also discuss the construction industry as a network in which "short-term market-transaction seem to co-exist with more long-term relationships and network dependencies" (ibid:13). Furthermore, they claim that creation of mutually adapted products in one project may explain why particular counterparts are reused for subsequent projects. Thereby there may be relationships between non-human resources. Håkansson *et al.* (1999) identify a kind of IOR between firms in the construction industry. They argue (ibid:449) that "despite the fact that the companies do not have continuous relationships for several projects, there exists a stability in terms of a repetition in their transactions that has created something that is depicted as a relationship by the interviewed companies". Constantino, Pietroforte and Hamill (2001) and Constantino and Pietroforte (2001) also adopt the view of the construction industry as some kind of network. Their conceptualisation of a network is primarily

[7] "Hostage" is a typical transaction cost economics term (Williamson 1985:169-75); In "Can we trust trust" Gambetta would call this a "pre-commitment" (Gambetta 1988:221). In daily market behaviour we see such hostages and pre-commitments in the shape of down payments.

that of "a network of transactions, or contracts in the wide sense of that term" (Constantino and Pietroforte 2001:165). However, they also expect personal ties to be developed among individuals across firm boundaries as a result of the recurrent transactions. Sözen *et al.* (2001:131) also propose that "the firm exists in a network of contractual relationships and in a project context". They argue that relationships in the construction industry vary in strength, strong relationships being characterised by frequent interaction, an extended history, and intimacy or mutual confiding. Gann and Salter (2000: 959) argue that construction "firms have to manage networks with complex interfaces" in single projects. In addition to such project-based networks, Gann and Salter (2000: 960) propose that business relationships in the construction industry often go beyond single projects as "production and operation often involves long-term business to business interactions between customers and suppliers and within the supply chain". Hence, they identify inter-firm co-operation at the project as well as the company level. Geyer and Davies (2000) argue that projects and what they term "the operational system" consist of networks of firms either "managed through complex contract-based transactions or long-term relationships between suppliers and customers" (Geyer and Davies 2000: 992). Voordijk *et al.* (2000) discuss supply chains in the construction industry and argue for the use of hierarchy (direction) across firm boundaries in such chains where one partner takes on the main co-ordination responsibility for a more or less 'fixed' supply network offering design-to-delivery of single projects for varying clients. Relationships, which are established within single projects, are addressed by Huemer (2001) who argues that benefits may be reaped by establishing trust between individuals in single projects – even if the partners have not met in beforehand.

ANALYSIS

Given the views presented above, it seems irrefutable that IOR exist in the construction industry. Researchers identify phenomena which they characterise as relationships. This may not be overly surprising given the increasing attention paid to the development of IORs in the construction industry[8]. However, what may be more surprising is that relationships to some extent are discussed as if they are not 'newly established' phenomena but, on the contrary, form part of the usual way of doing business in the construction industry. They were there all along. We just didn't look closely enough before – or at the 'right factors'. Relationships are identified on the basis of different criteria – i.e. different researchers focus on different types of 'substances' when assessing whether or not an IOR is said to exist. One reason for this may be that the researchers, who use the concept of relationship, have different theoretical backgrounds – for example, in Transaction Cost Economics, Supply Chain Management, Sociology, or the IMP (Industrial Marketing and Purchasing) Perspective, respectively or in combination. After all, different theories often employ the same word to denote (totally) different substances: all ways of looking at the world rely on some kind of theory or connecting principles; all 'facts' exist within a theory (cf. Hayek 1952). However, it should remind us to pay attention to the definition of relationship applied by different researchers when discussing inter-organisational relationships in the construction industry. For example, it seems as if researchers with a background in the IMP Perspective generally characterise the substance of relationships in the construction industry as 'relatively weak', for example, Bengtson

[8] For example, in 2001 a workshop was held at University of Twente with the aim of initiating interaction between CM researchers and researchers from the IMP Perspective.

et al. (2001), Dubois and Gadde (2001) and Holmen *et al.* (2000). Researchers with a background in TCE, on the other hand, stress the continuity or futurity of the identified relationships and the reliance of trust see, for example, Eccles (1981), Bradach and Eccles (1989), Dorée (1996), van der Veen *et al.* (2001). Relationships are identified between different types of entities. For example, relationships refer to either relationships between *firms*, or between *individuals* who represent different organisations. In most of the publications, relationships between firms are discussed; however, in others, relationships between individuals are discussed. Some, for example Welling and Kamann (2001), explicitly discuss the two types of relationships in relation to each other. Furthermore, in Bengtson *et al.* (2001), (3) relationships between *non-human resources* are mentioned. In some contributions, a relationship is seen as an organisational form which can be established for a single project, which may, however, be rather large, complex and run for several years. However, most researchers use the concept primarily in relation to continuous or recurring relationships cutting across single projects. Only few address the difference (and relation) between the two units of analysis. Further differences exist between the various views on relationships, e.g. the type of roles (e.g. client, contractor, subcontractor, supplier) between which relationships exist, the extent to which relationships are formalised (contractual), whether relationships rely on trust or not.

DISCUSSION

Given the importance of understanding CIIORs, since it is seen by many researchers, practitioners and policy makers alike as an ideal, how may we come to terms with the current 'state of confusion' regarding CIIORs and where may we gain inspiration for 'how to' further our insight into this phenomenon? Firstly, we argue that inspiration may be sought by looking at streams of research which have focused on describing and understanding IORs for several decades, and the insights reached in these. Two such streams are Relationship Marketing and the IMP Perspective. Relationship Marketing emerged in the 1980s, but after two decades, the concept of relationship marketing still lacks clarity. As Blois (1998:256) argues, "unless a counter-intuitive definition of "relationship" is used, everybody and all organisations have some relationships" - however, the depth of these relationships will vary – from 'dense' relationships to relationships which resemble discrete exchange. Similarly, the IMP Perspective emerged in the 1970s. In retrospect, central researchers within the IMP argue that the concept of relationship as a 0-1 variable had to be abandoned and, furthermore, that the perspective had over-emphasised the benefits of very close, co-operative relationships. In other words, it has become clear that it is "*not* always sensible for buyer-seller relationships to evolve in the direction of closeness and co-operation" (Ford, 1997:xiii-xiv) and that the existence of a variety of different types of relationships between companies may be most beneficial (Gadde and Håkansson 2001). Secondly, the 'are there relationships or not?' issue has to be taken seriously. That is, the statement 'there are problems due to a complete lack of CIIORs', and the statement 'there are CIIORs' cannot make sense at the same time. This confusion can only be understood when we assume different interpretations of CIIORs. We presume that different authors look at different features of the CIIORs. Their claims in changing CIIORs then transpose to a matter of changing the features of (some) CIIORs. Therefore, we need to come to an understanding of these CIIOR features to build an inventory of the types of CIIORs which exist in the construction industry. This would also give us the opportunity to conceive of CIIORs with new (combinations of) features. So the question 'are there relationships or not in the

construction industry?' is regarded as unproductive. Far more productive are the questions 'what makes up CIIORs, what are the key-features?' 'Which of these features contribute to a beneficial relationship?' 'Which features put a strain on relationships?' We could also look at the features of CIIORs that are seen as problematic or damaging. 'Which features should be preserved and promoted?' 'What features should be removed and disregarded?' Thereby we would fill out the empty cells in table 1, giving us an angle on 'feasible feature combinations of CIIORs'.

Table 1: Assessing CIIORs

		Preserve	Remove
Existing CIIORs	Beneficial		
	Damaging		
		Promote	Disregard
Imaginable CIIORs	Beneficial		
	Damaging		

In order to fill out the empty cells in table 1, we need to go to a 'lower level' – not just 'relationships or not'. For this purpose, a 'feature-inventory' would be useful as it could guide (a) design and carrying out of further empirical studies; (b) discussion of existing empirical studies; (c) discussion of existing theories, (d) development of theories; as well as (e) discussion among CM researchers, practitioners and policy makers. Table 2 shows a first start on a feature-inventory.

Table 2: Inventorying CIIORs

Relationships between?	**Which types of?**		
Individuals			
Firms			
Non-human resources			
Relationships characterised by?			
Frequency	high – low	of what?	types of frequency
History	long – short	of what?	types of history
Continuity	high – low	of what?	types of continuity, e.g. in learning, intentions, work, forward/backward-looking, across projects
Stability	high – low	of what?	types of stability
Direction (authority)	high – low	of what? of whom?	types of direction
Trust/intimacy	high – low	in what/between whom? e.g. among / between people and organisations	types of trust, e.g. resilient, fragile, initial, affect-based, swift, competence
Mutual confiding	high – low	of what/between whom?	types of confiding
Familiarity	high – low	with what?	types of familiarity
Opportunism	high – low	regarding what? when?	types of opportunism
Distance	high – low	between what?, e.g. people, machines	types of distance, e.g. physical, cultural, educational
Reliance on contracts	high – low	on what?	types of contracts, e.g.
Adaptations	high – low	of what?	types of adaptations
Interaction	high – low	on what?	types of interaction
Learning	high – low	of what?	types of learning
Focus on price	high – low	of what?	types of prices
Formalisation	high – low	of what?	types of formality, e.g. JV, company, minority interest,
Conflict	high - low	regarding what?	types of conflict
Particularity	high – low	between whom?	types of particularity
Development	high – low	of what?	types of development
Etc.			

Due to space limitations, we have only given more detailed examples for a few of the features. Furthermore, relationships can be expected to be complex, thereby comprising combinations of (interdependent) features, and only some combinations may be feasible. It should be stressed, however, that in identifying the features of CIIORs, deleting features is just as important as adding features. After all, parsimony is necessary for understanding and theory building. With such a feature-inventory, efforts of a group of CM researchers may become more compatible and, over time, a useful feature-inventory of CIIORs may emerge due to adding and deleting features and discussing feasible combinations of CIIORs.

CONCLUDING COMMENTS

Based on our first analysis and discussion, we argue that it may be beneficial for researchers focusing on understanding CIIORs to take 'a second look' at relationships in the construction industry. Firstly, more discussion is needed of the often stated 'fact' that arms-length transactions is what mainly characterises the construction industry. Some types of relationships may already exist between companies in the construction industry. Towards that end it may also be remembered that some types 'collusion' are actually a kind of co-operation (cf. Richardson 1960). Secondly, and related to the first point, there is a need for acknowledging the possible variety of types of relationships which may exist or be developed as well as a need for trying to gain more insight into what characterises these different types. Hence, more research attempting to capture such diversity is required. Even if the diversity of CIIORs is not yet captured, some building blocks for classifying CIIORs already exist and they may be useful points of departure for furthering our understanding of CIIORs. The proposed feature-inventory may be a point of departure for stimulating further discussion and understanding. We may also remember that if all ways of doing business with other companies are just viewed as 'relationships', the concept looses its significance. We must make CIIORs and types within distinguishable. Thirdly, there is a need for investigating how single firms in the construction industry may be involved in a variety of different types of relationships, how this situation develops over time, and what are the drivers beyond this changes. Then we can use the new insights to improve the performance of construction industry and the organisational forms within it. In conclusion, there is much to gain from understanding inter-organisational relationships in the construction industry. CM-research has a key role in building the foundation and framework for such new developments.

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