DEVELOPING INTERACTIONS, DISENTANGLING CONTRADICTIONS: EXAMINING PARADOXES OF INTER-ORGANISATIONAL RELATIONS IN CONSTRUCTING COLLABORATIONS

ISBN: 9789052693958

PAUL W CHAN

University of Manchester School of Mechanical, Aerospace and Civil Engineering paul.chan@manchester.ac.uk

ERIC JOHANSEN

Northumbria University School of the Built Environment http://www.northumbria.ac.uk/sobe

RACHEL MOOR

Bechtel Corporation Bechtel Australia Pty. Ltd. http://www.bechtel.com

Abstract

The positive nature of partnering to resolve adversarial relationships in the construction industry is well-rehearsed. However, critics have argued that espoused benefits of partnering have not materialised because business-as-usual prevails. Furthermore, some scholars insist that more needs to be done to analyse the practices of partnering by scrutinising more deeply the emergence of inter-organisational collaboration. This study examines a contemporary, emerging collaboration, which initially sought to investigate effective knowledge sharing during the early stages of a real-life collaborative venture between three infrastructure companies. The case study was based on participant observations and interviews with key people involved in forming this collaborative venture. Findings reveal a number of paradoxes that are perplexing on the one hand, yet generative in terms of actions on the other. These paradoxes relate to the three areas of sensemaking, formal methods and time synchronicity.

Keywords: collaboration, paradox, observations, sensemaking, time synchronicity.

INTRODUCTION

Advocates of partnering have often claimed that effective collaboration reaps benefits of improved productivity, waste reduction and better client satisfaction (see e.g. Loraine, 1993; Bennett and Jayes, 1998; Construction Industry Institute, 1998; Black *et al.*, 2000; Proverbs *et al.*, 2000; Naoum, 2003; and Wood and Ellis, 2005). At the same time, partnering promises the possibilities of bridging the age-old gap between the key social actors (i.e. clients, designers and contractors), as well as integrating ever more complex supply chains, in construction (see e.g. Latham, 1994; Egan, 1998; Akintoye *et al.*, 2000; Vrijhoef and Koskela, 2000; and Saad *et al.*, 2002). Despite the somewhat intuitive claims of the wonders of partnering, and repeated exhortations of how partnering can arrest the problems associated with fragmented relations in construction, there are still gaps in understanding how interorganisational collaboration in construction really works (see e.g. Wood and Ellis, 2005;

Bresnen, 2007; Gadde and Dubois, 2010; and Bresnen, 2010). Critical scholars have highlighted how the realities of collaborative working are often detached from rhetorical claims of its positive nature (see e.g. Bresnen and Marshall, 2001; and Nyström, 2008); some question whether benefits can really be delivered to all stakeholders involved (e.g. Green, 1999; and Dainty *et al.*, 2001), whilst others argue that the status quo of adversarial working relationships persists (e.g. Briscoe and Dainty, 2005). There is also greater acknowledgement of the limits of prescriptive notions of partnering (e.g. Beach *et al.*, 2005; Phua, 2006; and Chan *et al.*, 2006), and growing acceptance that partnering in construction is simply elusive (e.g. Bresnen, 2009).

Nonetheless, supporters and critics of partnering in construction share one common feature. That is, the arguments rallied for and against the use of partnering have implicitly focussed on the essence of partnering (i.e. *being*), and rarely examined the process of how partnering comes into being (i.e. *becoming*). So, on the one hand, partnering is treated as a desired concept fiercely defended by its proponents, such that explaining the pre-requisites, components and performative goals (see Nyström, 2005) appears to be their central mission. On the other hand, opponents tended to question the validity of the concept of partnering by emphasising the failure by advocates to demonstrate the existence of partnering arrangements and associated benefits in construction. Both camps have thus taken the concept of 'partnering' for granted, and neglected a deeper understanding of how the concept – incoherent and shifting as it is – comes into being. To put simply, how does partnering practice emerge to become 'partnering' as we know it in these debates?

This article draws on the analysis of participant observations in a single case study. The study sought to make sense of emerging practices (see Bresnen, 2009) entailed in the formation of a new partnership through participant observations. The main objective of the article is to provide a better understanding of the processes of how inter-organisational collaborations come about (see Cousins, 2002; Bresnen, 2007; Bresnen and Marshall, 2010). In this article, perspectives of collaborative working are initially outlined, which traces the key debates of disconnections between the rhetoric and reality of partnering in construction. The review highlights the need to refocus the attention on the process, rather than the essence of, partnering. Thereafter, the background to the case study and details of the participant observations are presented. Finally, findings from the analysis of the observations are discussed, which reveal three main paradoxes that are noteworthy, including the paradox of sensemaking, the paradox of formal methods, and the paradox of time synchronicity.

Perspectives of partnering: two sides of the same coin

Calls for reform of the construction industry have become, certainly in the Western world, a regular feature since the post-WWII era (see Murray and Langford, 2003). Such restructuring consistently points towards the need to move away from adversarial working relationships towards developing more effective forms of collaboration, encapsulated in the contemporary agenda of partnering (e.g. Latham, 1994; and Egan, 1998). In this section, the literature on partnering in construction is reviewed under two main streams. The first deals with the aspirations and mechanics of partnering since it is hailed as a universal panacea to cure the ills of the industry. Critically, the second stream serves as a counterbalance to highlight problems with the desired state of partnering. Through a review of the salient points of the construction partnering literature, an argument is put forward to shift the attention away from essentialist views of partnering to examine the practices of how the partnering process comes into being.

Aspirations and mechanics of partnering

The introduction of the language of partnering seeks to invoke the reshaping of working relationships in the construction industry, primarily in terms of the relationship between the client and contractor (Alderman and Ivory, 2007). Partnering is considered to offer a plausible improvement strategy to mend the adversarial relationships that have long troubled the industry. It promises a paradigm shift towards longer-term commitment between partner organisations, sharing of often-scarce resources, and enhanced cooperation to deliver a set of mutually-agreed objectives (e.g. Construction Industry Institute, 1989; and Bennett and Jayes, 1998). Such aspirations have meant that considerable research effort have gone into explaining the nature, conditions and mechanics associated with partnering, as well as to demonstrate the realisation of the intended benefits.

So, Bennett and Jayes (1998) comprehensively articulated seven fundamentals of partnering. These serve to consider in great detail the strategy for enhancing commitment and improvement, adequate and appropriate membership of partner organisations, equity arrangements, social and structural integration, formal project processes, continuous improvement and feedback. Barlow and Jashapara (1998) suggested a need to distinguish between partnering that happens at a strategic (longer-term) level and more tactical project level. Many have sought to identify critical success factors and benefits of partnering, often through self-perception questionnaire surveys (e.g. Black et al., 2000), or small-scale case studies (e.g. Beach et al., 2005). There are also studies dedicated to examining project processes in great depth (e.g. Cooper et al., 2004) to encourage development of the partnering ethos among stakeholders as early on in the project life cycle as possible (e.g. Matthews et al., 1996). Formal tools and procedures (e.g. Loraine, 1993) are also frequently emphasised, alongside investigations into such social dimensions as trust (e.g. Wood et al., 2002) and chemistry (e.g. Nicolini, 2002), with a view to encourage seamless integration of working practices across partner organisations. The use of information technology is also highlighted to encourage information and knowledge sharing (e.g. Tan et al., 2007). Research into partnering has also evolved to consider the role of suppliers (e.g. Jones and Saad, 1998; and Saad et al., 2002). Partnering in construction has also attracted international interest, even though a majority of studies are rooted in an Anglo-American perspective (see e.g. Cheng and Li, 2002; Cheung et al., 2003; Chan et al., 2004; and Tang et al., 2006).

Problems with the desired state of partnering

Despite much research endeavour to promote the ideals of partnering in construction, difficulties of implementation and problems of unified understanding persist (e.g. Gadde and Dubois, 2010). Several commentators have argued that the empirical basis for claiming benefits of partnering remains weak (e.g. Naoum, 2003; Alderman and Ivory, 2007; and Nyström, 2008), because methods used to highlight performative outcomes of partnering simply fail to consider the contingent and localised nature of construction work (Bresnen, 2007). Furthermore, tracing the causality of better performance to the introduction of partnering practices remains a challenge (e.g. Beach *et al.*, 2005). Others are more critical to suggest that the language of partnering does little to help eradicate adversarial business-as-usual practices that encourage a corporatist agenda, which subverts the possibility of developing genuine, collaborative working relationships (e.g. Green, 1999; and Alderman and Ivory, 2007). One such example often cited in the literature is the absence of material benefits accrued to partner organisations further down the supply chain because of the perpetuation of cost-reduction strategies (e.g. Dainty *et al.*, 2001; Wood and Ellis, 2005; and

Briscoe and Dainty, 2005). Formal methods and procedures aimed at systematically introducing partnering practices have also been charged for being too prescriptive and overengineered, and thus unworkable in reality (e.g. Phua, 2006; and Chan *et al.*, 2006).

Emphasising the 'practice-turn' of partnering: a need to scrutinise paradoxes in the process of forming partnerships

By reviewing the two streams above, it is observed that the essentialist view of partnering in construction predominates in the literature. So, the term 'partnering' is taken at face value by supporters and critics alike. Enthusiasts amass evidence (often uncritically) to demonstrate the existence of 'best practice' approaches and positive outcomes, whereas contenders see the absence of 'partnering' in reality and challenge its orthodoxy. In order to understand how collaboration can be a good thing for all involved, there is a requirement to shift the perspective of partnering in construction away from an essentialist view to one that is based on the *ontology of becoming* (see Chia, 1995). As Cousins (2002) assert, partnerships do not exist, and certainly not as cosy constructs. According to him, it is critical to refocus on the process of partnerships rather than its static, idealised form. Indeed, as Bresnen and Marshall (2001; 2010) argue, there is still a lot of scope to study the emerging practices of partnering in construction to understand how the process of partnering becomes accepted and applied in reality.

In the heat of the battle between proponents and opponents of partnering in construction, one critical dimension that has hitherto been given scant attention is the resolution of paradoxes and contradictions in the early stages of forming partnerships. Whilst studies have been undertaken to explain the general nature of organisational paradoxes (see Smith and Berg, 1987) and tactics for dealing with these (e.g. Poole and van de Ven, 1989; Clegg et al., 2002; Beech et al., 2004; and Smith and Tushman, 2005), the exposition of paradoxes in the construction industry is much rarer (see exceptions on strategy in construction by Langford and Male, 2001; Price and Newson, 2003; Chan and Cooper, 2010). Yet, there are inherent contradictions associated with inter-firm collaborations that need to be scrutinised, so that problems arising from these paradoxes can be dealt with when constructing partnerships in construction. For example, London and Kenley (2001) highlighted the tensions created by simultaneously maintaining competition and cooperation in integrating supply chains. Bresnen (2007) also deconstructed seven paradoxical effects of partnering vis-à-vis Bennett and Jayes' (1998) recommendations, including wishful strategic thinking and unrealistic targets, the dangers of fostering exclusive relationships, exploitation, reinforcing a false sense of control and over-engineering of processes, and failure to encourage organisational learning.

Notwithstanding the identification of these paradoxes in partnering, the dynamics of how these paradoxes emerge, and how these might usefully be tackled when developing the process of partnering in construction, remain relatively under-explored. Thus, the present article seeks to contribute in two main areas. Firstly, the study reported in this article adopts a practice-based approach to explain the process of early formation of partnering in a single ethnographic case study. In so doing, a number of paradoxes have been identified, and their manifestations observed. And so, the second contribution of this article is an analysis of the dynamics these paradoxes, which would help shed light on how tackling these paradoxes might go some way in affording better collaborations in practice. The next section will describe the observational context and method.

Case Study Observations: Context and method

This case study arose out of the involvement of one of us – the last author – who was working as a project management support officer to a railway company known as RailCo1. RailCo1 is a local client organisation, governed as a quasi-public sector organisation, with a long history of providing railway infrastructure in London. As a client organisation, it is responsible for providing capacity enhancement to the railway infrastructure managed under its authority, which includes upgrading of existing stations. At the time of the research (between March and November 2009), an opportunity emerged that permitted her to engage in ethnographic research. She was involved in a project to build a new station facility (named as the 'Project'). This facility was to be constructed by RailCo3, a newly set-up railway client, also governed as a quasi-public sector organisation, charged with building new railway infrastructure in London. However, the 'Project' meant that infrastructure owned by RailCo2, a national railway client wholly owned and regulated by the government that is responsible for the ownership of the national railway infrastructure, had to be relocated to another part of the station. The relocated part of the station is to be built and owned by RailCo2 and operated by RailCo3.To complicate matters further, the relocated facility would then become adjacent to infrastructure owned by RailCo1, which in turn restricted RailCo1's ability to implement its strategy to enhance capacity. Concomitantly, RailCo1 had within the previous 12 months of the commencement of this research completed a long process of subsuming a loss-making public-private-partnership responsible for upgrading stations within its network boundary.

To coordinate the project across the three companies, it was decided that an integrated project team (named here as RailPro) involving members from each company was set up. This decision was also driven by senior officials at the governing authority of Greater London as a way to rationalise resources. One senior representative from each of the three companies – each were accountable to the board of directors of their respective companies – also formed a Liaison Group (named here as RailLG) to facilitate strategic discussions around the formation of RailPro. As discussed above, it is critical to study how the process of partnering comes into being. Moreover, it is important to understand this in the context of the early phase of a project (Kolltveit and Grønhaug, 2004). Hence, this case study presented a unique opportunity to get rich and deep insights into the formation of a new partnership that happened during the early stage (i.e. concept design stage) of the 'Project'. Data sources used for this research included interviews with key participants involved in the 'Project' and 'RailPro' (see Table 1 below), observational data, and documentary evidence.

Table 1. Profile of project participants interviewed for the research.

Interviewee	Role	Organisation
А	Senior project manager (operational)	RailCo1
В	Sponsor and representative on RailLG (strategic)	RailCo1
С	Project management support (operational)	RailCo1
D	Sponsor and representative on RailLG (strategic)	RailCo2
Е	Project engineer (operational)	RailCo2
F	Sponsor and representative on RailLG (strategic)	RailCo3
G	Building services engineer (operational)	These were design consultants
Н	Design lead for architecture (operational)	involved in delivering the
J	Design lead for engineering (operational)	concept design for the 'project'.

The research questions informing the data collection were initially concerned with identifying critical issues, enablers and barriers that contribute to effective knowledge sharing at the outset of the 'Project'. So interview questions included the role of the participant and their perspectives of notable events encountered in the 'Project'. Observations were recorded in the researcher's diary to make sense of the (visible and audible) social dynamics of participants during meetings and review workshops at the concept design stage of the 'Project'. Where appropriate, cross-references were made to minutes of meetings. The interviews were recorded and transcribed for analysis. The findings will be discussed in the next section, including the detour made during the research to focus on emerging paradoxes that surfaced in the formation of the partnership RailPro.

Discussion of Findings

As mentioned in the preceding section, the initial inquiry sought to explain knowledge sharing behaviours of participants in this case study. The motivation came from previous "show stopping" experiences between the three RailCos when undertaking site acquisitions and negotiations on land use. There was then an observable absence of effective knowledge sharing within and across each of the three companies, which led to the pursuit of this research project in the first instance. At the start of this research, high-level meetings that occurred at the RailLG level and 'Project' review meetings were concerned with two key issues, namely geographic and systematic integration of operations across the three RailCos into the formation of RailPro. Questions were raised about the possibility of co-location of staff and setting up of operating procedures for RailPro. Put simply, the procedural form and scope of the partnership were being developed (Loraine, 1993). It was also clear to the participant observer and interviewees that the formation of RailPro meant that resources were not only being shared, but rationalised as well since there were clearly duplicity in terms of roles and responsibilities. It is worth noting that there were redundancies that actually took place soon after the research. Given this backdrop and the chequered past of difficult working relations in the past, participants had expected that the sharing of information would not be forthcoming. Surprisingly, this was not what the researcher observed at the initial stages of the formation of RailPro. Participants exceeded expectations in that they appeared to be very keen about sharing the information they had about the 'Project'. The observations also yielded another interesting finding; that is, as procedures were increasingly formalised, the openness observed at the outset of the research started to dwindle. This led us to take a detour to explore the dynamics of this paradox, explained in terms of sensemaking, formal methods, and time synchronicity.

Paradox of sensemaking

It is widely known that as projects progress in time, participants travel from a phase of relative uncertainty towards producing outcomes that are more certain. Therefore, sensemaking (Weick, 1995) plays a significant role in this process. The need for participants across the three companies to make sense of what this 'Project' was about and what setting up RailPro means for their work accounted for the relative openness observed in the initial stage of the research. Yet, this was not so straightforward. Rather, the keenness shown in terms of sharing information about their thoughts of the 'Project' was a means for participants to assert one's authority in framing the scope of what the 'Project' was seeking to do. As Participant A suggests, when people were introduced to RailPro from each of the three companies, some still needed persuading as to why RailPro was necessary. He added that they clearly "had their own objectives and goals" to articulate. In some respects, the sharing

of their perspectives of what the foundations of the cooperation should look like is more of a sensegiving (see Gioia and Chittipeddi, 1991), rather than a simple, emergent sensemaking, process. Thus, as Cousins (2002) aptly pointed out, the process of forming partnerships is often rooted in a hard-nosed reality than many enthusiasts would concede. As the shape of the collaboration takes a more structured form, participants tend to shift their positions to make statements like "this is not how we would do things in [our respective companies]", indicating dissatisfaction with how the partnership arrangements are being articulated, and creating an impression of sense-hiding (see Maitlis and Lawrence, 2007) instead.

Paradox of formal methods

Proponents of partnering in construction place much emphasis on formal tools and procedures. Yet, when RailPro was first conceived, participants at both strategic and operational levels were 'doing' collaboration designing the 'Project'. Formal contracts were only signed and agreed between the design consultants (Participants G, H and J) and RailCo1. Yet, discussions were observed to continue fairly openly between the consultants and members of RailCo2 and RailCo3 as well. It would seem that delivering the 'Project' mattered more than the formal rights and responsibilities articulated in the contract document, even though the 'Project' - at least for RailPro - was still being reified (see Hodgson and Cicmil, 2006). Contracts have been known to invoke communicative acts and social interactions in projects (e.g. Marshall, 2006; and Bresnen and Harty, 2010). It would seem that the absence of contracts also have the power to stimulate, in this case, information sharing between participants. As a typical comment suggests, the "lack of contractual arrangements did make for more openness." Paradoxically, for Participant E, the finalising of contracts did prohibit him from "getting pally" with some of the other participants, and he stressed that "informal arrangements definitely broke down the barriers normally found in communications between the two organisations."

Paradox of time synchronicity

Time is an important dimension in projects. Yet, the partnering literature has ignored this critical aspect. In prescribing often-linear stages of the partnering life cycle, time is often treated as synchronous, and that partners necessarily know where and when they fit in within such a framework. Moreover, partnering in project-based environments normally downplays the idea that members have shared histories and futures. This is certainly not the case here. In the formation of RailPro, members have had past experiences of working with each other, and so they have entered this collaborative arrangement with some sense of a shared history. Despite sharing a past, the expectations of members about the future of the new collaboration were nevertheless far from uniform and synchronised at the outset. As discussed above, members had to make sense of the complex realities of how collaboration could be fostered effectively between the three RailCos. This required members to go through, in their own time, the processes of sensemaking, sense giving and sensehiding, which are often messy and difficult to delineate into neat categories of a life cycle. Put another way, whereas it is relatively easy to recognise the need for participants to develop a common future in principle, the reality is such that the participants were constantly trying to understand where their contribution to RailPro's future lies. As Participant E puts it, members were reflecting on "their experiences and know whether they hold knowledge that is of use", as they struggled to formalise the collaborative arrangements in RailPro. As illustrated in the paradox of sensemaking, this resulted in some members becoming winners and others becoming losers in this collaborative venture. As Participant A pointed out, not all the members are willing and able to go along with the shared future concretised in RailPro. Participant A remarked, "it was tricky to do what was best for the 'Project' and still protect the interests of respective companies." This would suggest that not everyone abided by the 'programme' of this partnership formation. Bresnen (2009) coined the phrase "living the dream" to stress the lived realities of partnering in construction. Perhaps the participants in this case study are chasing the dream, burdened with past histories and passing through time, however asynchronously, into a possible shared future? Indeed, the notion of time and how it shapes partnering practices, and the paradox of time synchronicity, deserves more research attention.

Conclusions

"Personalities played a key role in the [partnering] success (Participant A)." At a very basic level, human relations do matter in achieving effective collaborations. But this is not the full picture. This case study research contributes to a more holistic view of how the process of partnering could potentially (and simultaneously) be driven and hampered by a range of paradoxical issues. Yet, paradoxes are rarely examined in detail in the construction management literature. Here, sensemaking, formality and time synchronity have been exposed as paradoxical constructs in the start of a new collaboration, albeit with 'old' partners. These paradoxes raise a perplexing, if interesting, question to advocates of formal and prescriptive tools used in partnering (and in project-based working more generally). How did the absence of formal mechanisms lead to the observation that members were actually 'doing' the collaboration and the 'Project'? Clearly, the station facility was still being designed and planned for construction, despite members being clear where they stood with the relationship between their respective organisations and newly-formed one. Of course, human agency still prevails in this situation, afforded no less by the emergence of these paradoxes. Whilst the contradictions may have disrupted the idea of formal, prescriptive methods, they were also found to be generative in terms of social interactions and dialogue. What is clear from the case study is that conversations and arguments happen as individual agendas become articulated and legitimised. The only certain conclusion is that the members involved have, by living through these paradoxes and chasing the dream of more effective coordination between partners, legitimated the form of partnering that eventually makes sense (see Oliver, 1997; and Vaara and Monin, 2009). Such insights gained through ethnographic research are therefore required to explore fully the process of how partnering comes into being. Whether the outcomes are positive or negative (or even coherent with the intended strategy) does not matter so much!

References

- Akintoye, A., McIntosh, G. and Fitzgerald, E. (2000) A survey of supply chain collaboration and management in the UK construction industry. *European journal of purchasing and supply management*, **6**, 159 168.
- Alderman, N. and Ivory, C. (2007 Partnering in major contracts: paradox and metaphor. *International journal of project management*, **25**(4), 386 393.
- Barlow, J. and Jashapara, A. (1998) Organisational learning and inter-firm "partnering" in the UK construction industry. *The learning organisation*, 5(2), 86-98.
- Beach, R., Webster, M. and Campbell, K. M. (2005) An evaluation of partnership development in the construction industry. *International journal of project management*, **23**(8), 611 621.
- Beech, N., Burns, H. de Caestecker, L., MacIntosh, R. and MacLean, D. (2004) Paradox as invitation to act in problematic change situations. *Human relations*, **57**(1), 1313 1332.

- Bennett, J. and Jayes, S. (1998) *The seven pillars of partnering*. Reading construction forum.
- Black, C., Akintoye, A. and Fitzgerald, E. (2000) An analysis of success factor and benefits of partnering in construction. *International journal of project management*, **18**(6), 423 434.
- Bresnen, M. (2007) Deconstructing partnering in project-based organisations: seven pillars, seven paradoxes and seven deadly sins. *International journal of project management*, 25(4), 365 374.
- Bresnen, M. (2009) Living the dream? Understanding partnering as emergent practice. *Construction management and economics*, **27**(10), 923 933.
- Bresnen, M. and Harty, C. (2010) Objects, knowledge sharing and knowledge transformation in projects. *Construction management and economics*, **28**(6), 615 628.
- Bresnen, M. and Marshall, N. (2001) Understanding the diffusion and application of new management ideas in construction. *Engineering*, construction and architectural management, **8**(5/6), 335 345.
- Bresnen, M. and Marshall, N. (2010) Projects and partnerships: institutional processes and emergent practices. *In*: P. Morris, J. Pinto and J. Söderlund (Eds.) *OUP Handbook of project management*. Oxford: Oxford University Press. pp. 154 174.
- Briscoe, G. and Dainty, A. (2005) Construction supply chain integration: an elusive goal? Supply chain management: an international journal, 10(4), 319 326.
- Chan, A. P. C., Chan, D. W. M., Chiang, Y. H., Tang, B. S., Chan, E. H. W. and Ho, K. S. K. (2004) Exploring critical success factors for partnering in construction projects. *Journal of construction engineering and management*, **130**(2), 188 198.
- Chan, A. P. C., Chan, D. W. M., Fan, L. C. N., Lam, P. T. I. and Yeung, J. F. Y. (2006) Partnering for construction excellence: a reality or myth? *Building and environment*, **41**(12), 1924 1933.
- Chan, P. and Cooper, R. (2010) *Constructing futures: industry leaders and futures thinking in construction*. Oxford: Wiley Blackwell.
- Cheng, E. W. L. and Li, H. (2002) Construction partnering process and associated critical success factors: quantitative investigation. *Journal of management in engineering*, 18(4), 194 202.
- Cheung, S-O., Ng, T. S. T., Wong, S. P. and Suen, H. C. H. (2003) Behavioral aspects in construction partnering. *International journal of project management*, **21**(5), 333 343.
- Chia, R. (1995) From modern to postmodern organizational analysis. *Organization studies*, 16(4), 579 604.
- Clegg, S., Cunha, J. V. and Cunha, M. P. (2002) Management paradoxes: a relational view. *Human relations*, 483 503.
- Construction Industry Institute (1989) *Partnering: meeting the challenges of the future*. CII Special Publication.
- Cooper, R., Aouad, G., Lee, A., Wu, S., Fleming, A. and Kagioglou, M. (2004) *Process management in design and construction*. Oxford: Blackwell.
- Cousins, P. D. (2002) A conceptual model for managing long-term inter-organisational relationships. European journal of purchasing and supply management, 8(2), 71 82.
- Dainty, A. R. J., Millett, S. J. and Briscoe, G. H. (2001) New perspectives on construction supply chain integration. *Supply chain management: an international journal*, **6**(4), 163 173.
- Egan, J. (1998) *Rethinking construction*. Report from the construction task force, UK: DETR. Gadde, L. and Dubois, A. (2010) Partnering in the construction industry: problems and opportunities. *Journal of purchasing and supply management*, **16**(4), 254 263.

- Gioia, D. A. and Chittipeddi, K. (1991) Sensemaking and sensegiving in strategic change initiation. *Strategic management journal*, **12**, 433 448.
- Green, S. D. (1999) Partnering: the propaganda of corporatism? *In*: Ogunlana, S. (Ed.) *Profitable partnering in construction procurement*. London: Spon. pp. 3 14.
- Hodgson, D. and Cicmil, S. (2006) *Making projects critical*. Basingstoke: Palgrave Macmillan.
- Jones, M. and Saad, M. (1998) *Unlocking specialist potential: a more participative role for specialist contractors*. London: Thomas Telford Publishing.
- Kolltveit, B. J. and Grønhaug, K. (2004) The importance of the early phase: the case of construction and building projects. *International journal of project management*, **22**(7) 545 551.
- Langford, D. A. and Male, S. (2001) *Strategic management in construction*. 2 Ed. Oxford: Blackwell.
- Latham, M. (1994) Constructing the team. London: HMSO.
- London, K. and Kenley, R. (2001) An industrial organisation economic supply chain approach for the construction industry: a review. *Construction management and economics*, **19**(8), 777 788.
- Loraine, R. K. (1993) Partnering in the public sector. London: Business Roundtable.
- Maitlis, S. and Lawrence, T. B. (2007) Triggers and enablers of sense giving in organizations. *Academy of management journal*, 50(1), 57 84.
- Marshall, N. (2006) Understanding power in project settings. *In*: Hodgson, D. and Cicmil, S. (Eds.) *Making projects critical*. Basingstoke: Palgrave. pp. 207 231.
- Matthews, J., Tyler, A. and Thorpe, A. (1996) Pre-construction project partnering: developing the process. *Engineering, construction and architectural management*, 3(1/2), 117-131.
- Murray, M. and Langford, D. (2003) Construction reports 1944-98. Oxford: Blackwell.
- Naoum, S. (2003) An overview into the concept of partnering. *International journal of project management*, 21(1), 71-76.
- Nicolini, D. (2002) In search of 'project chemistry'. *Construction management and economics*, **20**(2), 167 177.
- Nyström, J. (2005) The definition of partnering as a Wittgenstein family-resemblance concept. *Construction management and economics*, **23**(5), 473 481.
- Nyström, J. (2008) A quasi-experimental evaluation of partnering. *Construction management and economics*, **26**(5), 531 541.
- Oliver, C. (1997) The influence of institutional and task environment relationships on organizational performance: the Canadian construction industry. *Journal of management studies*, 34(1), 99 124.
- Phua, F. T. (2006) When is construction partnering likely to happen? An empirical examination of the role of institutional norms. *Construction management and economics*, 24(6), 615-624.
- Poole, M. S. and van de Ven, A. H. (1989) Using paradox to build management and organization theories. Academy of management review, 14(4), 562 578.
- Price, A. D. F. and Newson, E. (2003) Strategic management: consideration of paradoxes, processes, and associated concepts as applied to construction. *Journal of management in engineering*, **19**(4), 183 192.
- Proverbs, D. G. and Holt, G. D. (2000) Reducing construction costs: European best practice supply chain implications. *European journal of purchasing and supply management*, **6** 149 158.

- Saad, M., Jones, M. and James, P. (2002) A review of the progress towards the adoption of supply chain management (SCM) relationships in construction. *European journal of purchasing and supply management*, **8**, 173 183.
- Smith, K. and Berg, D. (1987) *Paradoxes of group life*. San Francisco: Josey-Bass Publishers.
- Smith, W. K. and Tushman, M. L. (2005) Managing strategic contradictions: a top management model for managing innovation streams. *Organization science*, **16**(5), 522 536
- Tan, H. C., Carrillo, P. M., Anumba, C. J., Bouchlaghem, D., Kamara, J. M. and Udeaja, C. E. (2007) Development of a methodology for live capture and reuse of project knowledge in construction. *Journal of management in engineering*, **23**(1), 18 26.
- Tang, W., Duffield, C. F. and Young, D. M. (2006) Partnering mechanism in construction: an empirical study on the Chinese construction industry. *Journal of construction engineering and management*, **132**(3), 217 229.
- Vaara, E. and Monin, P. (2009) A recursive perspective on discursive legitimation and organizational action in mergers and acquisitions. *Organization science*, 21(1), 3-22.
- Vrijhoef, R. and Koskela, L. (2000) The four roles of supply chain management in construction. *European journal of purchasing and supply management*, **6**, 169 178.
- Weick, K. E. (1995) Sensemaking in organizations. Thousand Oaks: Sage.
- Wood, G. and Ellis, R. (2005) Main contractor experiences of partnering relationships on UK construction projects. *Construction management and economics*, **23**(3), 317 325.
- Wood, G., McDermott, P. and Swan, W. (2002) The ethical benefits of trust-based partnering: the example of the construction industry. *Business ethics: a European review*, 11(1), 4-13.