

Relational Contracting and Lean Construction

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This special issue of the Lean Construction Journal is devoted to relational contracting and its relationship to lean construction, the subject of a Symposium held by the Lean Construction Institute in Atlanta, November 18-19, 2004. This is an introduction to this special issue, which otherwise consists of papers presented at the Symposium³. It explains the relationship between relational contracting and lean construction, and provides a summary description of the papers presented and the discussion provoked at the Symposium.

Connecting lean construction and relational contracting

In the business meeting of the International Group for Lean Construction's 1996 (fourth) annual conference at the University of Birmingham, UK, Glenn Ballard was moved to draw a precursor of Figure 1, which has since become a mainstay in the Lean Construction Institute's understanding of the research and deployment agenda for lean construction.

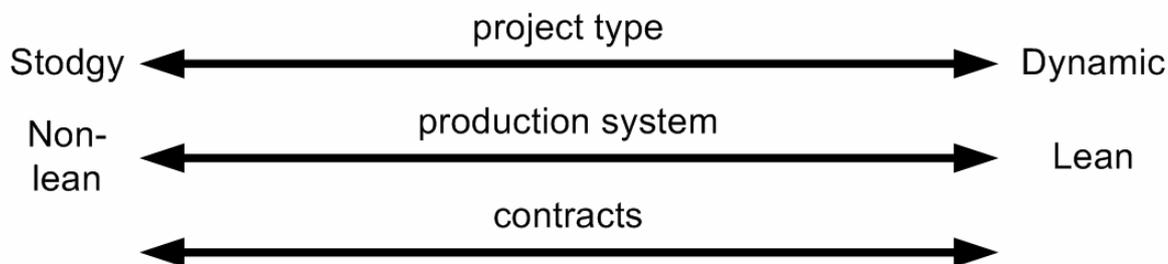


Figure 1: project types and forms of production system

That launched the authors' efforts to better understand the relationship between types of project and forms of production system, and led to the belief that lean forms of production system are adequate to the challenges posed by dynamic (quick, uncertain, complex) projects, while traditional forms of designing and making things progressively reveal their inadequacy as projects become more dynamic.

We were aware that industry efforts to improve performance tended to start not from thinking how to better design and make things in dynamic conditions, but rather from contract and organization. Partnering, for one example, at that time proposed to change project performance by changing the relationships between the players, but without changing how work was done. Design-build forms of contract, to take another example, too often changed only the contractual structure, but left intact traditional practices and processes of designing and making. As a result, we deliberately chose to subordinate consideration of organization and contract to what we considered the prior issues of understanding the challenges posed by dynamic projects and developing a lean project delivery system adequate to those challenges.⁴

We remain convinced that construction industry performance will not substantially and radically improve without the implementation of lean concepts and techniques. However,

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³ The papers in this special issue are the written versions of the Symposium presentations, with the exception of David Campbell's, which is republished here with the permission of Blackwell.

⁴ We have been involved in a few papers on the topics of contracts and organizational relationships. See Howell *et al* 1996 and Miles & Ballard 1997.

through the efforts of many people, lean project delivery has been sufficiently developed that it is time to turn to the task of forming project teams able to operate lean production systems, and that inevitably directs our attention to contracts as the tool for structuring relationships and forming teams.

Relational versus discrete contracts

Some time in the late '90s, Greg Howell became aware of the writings of Ian MacNeil, the leading theorist and prime advocate of the concept of relational contracting. Very much in the way we have located projects on a spectrum running from stodgy to dynamic, MacNeil locates contracts on a spectrum running from discrete to relational. He argues that the classic theory of contract is based on the idea of discrete transactions and ignores the agreements needed to enable and sustain relationships in more complex contracting situations.

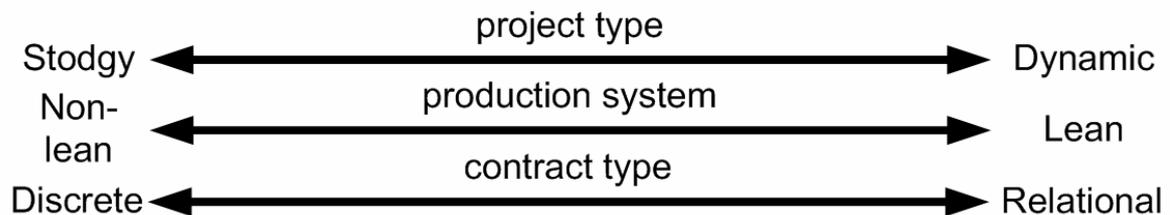


Figure 2: The spectrum of contracts correlated with types of production systems and projects

The parallel with our own thinking about production systems is shown in the modified figure above.

To develop and exploit the relationship between lean construction and relational contracting, we sponsored a symposium on the topic, inviting the best available people from around the world to share their experience and thinking and to help us tackle the difficult and important questions presented below.

Overview of the symposium

Glenn Ballard's opening presentation, "Traditional Business Structures and the Lean Ideal" proposed a number of key hypotheses and questions:

Hypothesis 1: Pursuit of the lean ideals is in everyone's interest except those who live off the waste.

Hypothesis 2: Traditional forms of contract and the associated business structures do not facilitate pursuit of the lean ideals.

Hypothesis 3: Substantial and enduring improvements in project delivery, value generation, or waste reduction cannot be achieved without changing how work is done; i.e., it is not sufficient to change contracts and incentives. However, doing so can facilitate pursuit of the lean ideals.

Question 2: What forms of contract/business structures facilitate that pursuit?

Question 3: How can 'lean' forms of contract/business structures be further developed and deployed?

The Papers

The remainder of the Symposium was devoted to eight presentations and the discussion of the above hypotheses and questions. The presentations included⁵:

⁵ All presentations can be downloaded from www.leanconstruction.org/files (April 2005)

- **Presentation and the Lawyer's Role in Contract Planning** – David Campbell, Professor of Law, University of Durham. David Campbell and co-author Donald Harris masterfully explained MacNeil's theory of relational contracting⁶ and provided the theoretical framework for the entire symposium. Campbell and Harris argue forcefully that cooperation is the means for maximizing self-interest in long-term contracts. "Long-term" contracts are those in which the contracting parties having made an unrecoverable investment should the relationship be abandoned, and no readily available substitute relationship is available. (In our opinion this may apply both to a single project as well as to an indefinite alliance extending over multiple projects.)
- **Relational Contracts-NEC in Perspective** – Robert Gerrard, Chairman, NEC Users Group. Rob explained the history of the New Engineering Contract, its various standard forms, and its advantages. To the editor's knowledge, NEC was the pioneer in reforming and rethinking construction contracts, and its contract forms are in wide use in the industry today.
- **PPC2000 – the Key to Partnering and Alliancing** – Katie Saunders, Trowers & Hamlin Solicitors. Katie presented the Project Partnering Contract2000, noteworthy for bringing the partnering agreement into the contract proper, in distinction from earlier efforts to keep them separate.
- **Relational Contracting and Lean Principles – an Aerospace Construction Comparison** – Penny-Anne Cullen, School of Law, University of Warwick. Ms Cullen's presentation was a combined effort, involving also Bob Butcher, Richard Hickman and John Keast, all from the Warwick Manufacturing Group. The contrast between the industrial settings and how client interests are linked to contractor performance is striking. In Aerospace we can foresee a future where the contractors become responsible for long-term performance of facilities. The wider acceptance of green and total life cycle cost consideration by clients should lead the construction industry to develop forms of agreement more like Aerospace.
- **Relational Contracting-Creating Value Beyond the Project** – Barbara Colledge, Deputy Dean Faculty of Information and Engineering Systems, Leeds Metropolitan University, links the development of relational contracting in projects to the wider development of trust and community in society. Carried out, this raises the provocative thought that construction, contentious and adversarial as it is today, could become the source of renewed trust and community,
- **Integrated Project Delivery-a case study in relational contracting** – Owen Matthews, Westbrook Mechanical. IPD is a unique form of organization, consisting of a number of different organizations, including an architect, consulting engineering firms, specialty contractors, and a general contractor. These firms pursue and execute work as a team, sharing pains and gains. This allows them to take advantage of opportunities for generating value and eliminating waste that are not available in traditional contractual structures.
- **Project Alliancing** – Captain Matthew Sakal, U.S. Air Force. Matt reports an initiative that began with BP's Project Andrews in the North Sea, but has since flourished in Australia. All members of a project, including the client, become members of an alliance, with pre-agreed methods for allocating pains and gains.
- **Sutter Health-Developing a Contract Model to Support Lean Project Delivery** – William Lichtig, McDonough Holland & Allen, Sutter Health Outside Counsel. Managers in Sutter Health, the largest health care company in Northern California, recognized that Lean Project Delivery was, "The right thing to do" and that the ability to create value and reduce waste was limited by traditional contracting practice. Informed by efforts of other relational contract models and the work of Ian MacNeil, they have developed and put in action a contract that serves as test bed and model for others to follow.

Symposium outcomes

The outcomes of the LCI Relational Contracting Symposium were

- Agreement on the three hypotheses:

⁶ For a complete account, see Campbell (2001).

1. Pursuit of the lean ideals is in everyone's interest except those who live off the waste.
 2. Traditional forms of contract and the associated business structures do not facilitate pursuit of the lean ideals.
 3. Substantial and enduring improvements in project delivery, value generation, or waste reduction cannot be achieved without changing how work is done; i.e. it is not sufficient to change contracts and incentives. However, doing so can facilitate pursuit of the lean ideals.
- In answer to **Question 2** (*What forms of contract/business structures facilitate that pursuit?*), participants agreed that relational contracts were those best suited to facilitate pursuit of the lean ideals, and agreed that the forms of relational contract presented at the Symposium had demonstrated that fact.
 - In response to **Question 3** (*How can 'lean' forms of contract/business structures be further developed and deployed?*), participants agreed to contribute to this special issue of the *Lean Construction Journal* and to serve on an Advisory Committee to LCI as the Institute develops and publishes standard forms of relational contracting for the United States. The following people have thus far agreed to take on the task of developing those standards forms: Glenn Ballard, Jeff Beard, Greg Howell and Will Lichtig. We intend to lean heavily on both the relational contracts presented at the Symposium and on those who so graciously agreed to participate in this initiative, which we consider to be vital for the construction industry.

References

- Campbell, David (2001). *The Relational Theory of Contract: Selected Works of Ian MacNeil*. Sweet & Maxwell, London. 412 p.
- Howell, Gregory, Robert Miles, Charlie Fehlig and Glenn Ballard (1996). "Beyond Partnering: Toward A New Approach to Project Management?" *Conference on Alternative Dispute Resolution Techniques*, sponsored by the Construction Industry Institute and the University of Texas Law School, San Antonio, TX. April, 1996.
- Miles, Robert and Glenn Ballard (1997). "Contracting for Lean Performance." *5th Annual Conference of the International Group for Lean Construction*. Griffith University, Gold Coast, Australia. July 1997.