

CONSTRUCTION PROJECTS AS TEAMS OR SITUATIONS: CRITICIZING THE “TECHNIQUES OF COMMUNICATION” APPROACH

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A discourse of teams has pervaded construction since the Latham Report(1994). This article reviews Dainty and Moore's (2000a,b and 1999) critique of that discourse by treating their articles as evidence for a re-interpretation. It is argued that their work has significant tacit assumptions and residual categories around: integration, interfaces, teambuilding and communications. These reflect a particular paradigm of the manageability of construction resulting from the post-war reports on construction and the research efforts these have instigated. Manageability has assumed the same significance in construction management research as equilibrium and rationality in economics. Problems of methodology are treated as those of 're-interpretation' of evidence from the research comparable to Goldthorpe's (1980) development of the residual categories of economists into alternative explanations.

Keywords: communities, management, practice, Latham report, teams.

INTRODUCTION: THREE ARTICLES BY DAINTY AND MOORE

Dainty and Moore report research on the functioning of and processes within a D&B project, which was completed to time, cost and quality and it's team. The project was an automated warehouse valued at £40m for a nominally experienced client who chose D&B, a procurement method which, theoretically, assists the post-Latham objectives of project teams well aligned to client needs through allegedly better integrated project organization. Methodologically the articles are qualitative seeking to appreciate the responses of team members to various "...unexpected change events..." that is crises. These are not a new concern. Crichton (1966) refers to construction's "...prevalent habit of crisis management - perhaps a vested interest in preserving chaos and uncertainty..."

The research is a variant of the analysis of critical incidents but undertaken near to real time through the use of diaries and interviews. Boyd and Wild (1996) employ a similar method, but with retrospective exploration into incidents. Both articles reveal the diversity of personal constructs (Boyd and Wild 1996) and the continuity of professional and functional values and practices despite the climate created by Latham(1994) for collaborative and less fragmented approaches to construction such as D&B. This procurement approach seeks hierarchical rather than market coordination(Winch 1989) of the design stage and single point responsibility for the construction process itself.

Coherence of the team proved difficult to attain. There was instability of membership and concurrent membership of multiple teams. The extent to which latent role

conflicts due to this and the D&B organization's functional matrix structure became real is not discussed. There was reversion to professional roles in the team and frequent by-passing of a design change protocol intended to attain functional integration. Explicit team building processes consisted of co-location of specialists and the team process reflected "...reactive management necessitated by a lack of team integration and a subsequent deficit of problem-avoidance thinking." It remained "... as a group rather than a true team." (1999). The interfaces of the project system re-emerged from professional and functional socialization preventing the attainment of integration. The evidence is of continuing institutional fragmentation. However the project met the conventional 'holy trinity' of time, cost and quality.

METHODOLOGY AND RE-INTERPRETATION

The qualitative methodology employed by Dainty and Moore is similar to that of Boyd and Wild (1996) used to clarify the implications of diverse personal constructs and professional values for construction. Interpretation is distinct from methodology and depends here on the view adopted of the functioning of construction project teams. Advocates of integrated teams treat them instrumentally as means to ends (Latham 1994) or normatively as ends in themselves. It is a more realistic interpretation of the evidence that team integration is fortuitous. This relates to Morgan's (1980) argument that the pluralism of social science creates a problem of "...the appropriateness of rival explanations of the total situation being researched."

Here concern focusses on: the pre-assumptions (Gummesson 1991) or tacit assumptions (Keynes 1937) and residual categories (Goldthorpe 1980) of Dainty and Moore's papers. These link to Connaughton's (2000) argument: "...there is not the consistency and coherence in the development and accumulation of knowledge necessary for the development of a useful, coherent theory of construction management..." Is it somehow 'natural' that we appear to find the challenge of solving new problems (or of finding apparently fresh solutions) more seductive than plugging away at the old. "The problem of for whom a coherent theory of construction is a public and/or private benefit is left to one side. The important tacit assumptions are those concerned with boundaries and interfaces; integration, groups and teams in projects. These will not bear the interpretive significance set upon them. Rather they constitute a terminal value (Fox 1975), a desirable state of affairs and a closed loop argument in which effective teams span interfaces (or boundaries) and hence attain integration; becoming what they were at the commencement of the process: effective teams. This is the fallacy of assuming the consequent.

Boundaries and interfaces are used interchangeably whereas Dainty and Moore make a sharp distinction between group and team: "...work groups are argued as being capable of existing at any point in the procurement process, and can be seen to be parties to that process who have failed to coalesce into a team." The state of being or becoming a team is aspirational: "...in as much as a group of individuals may aspire to function as a team ..." The group however may be differentiated as participants "... on the basis of professional attitudes, as one example." (1999 b) However two different order of phenomena are conflated here: individual motives inside the project and institutionally derived professional constructs from outside.

This distinction relates prescriptively to boundaries and interfaces. Here I treat interfaces as characterized by clarity and stability. Boundaries, as the activities of a system which relate it to the wider organizational and social context, are unclear and

ambiguous. Crossing them involves uncertainty and an emotionally charged potential (Rice 1969). Professional 'attitudes' are seen by Dainty and Moore to result from professional socialization external to the project and D&B organization but carried into them by the social actors concerned (Silverman 1970) and a source of potential disturbances. Presumably individuals in teams should leave their professional values at the portakabin door (as clear an interface as you can get) so the client can get the building (s)he truly deserves.

Dainty and Moore offer no definition of team building so the following is suggested: "TEAM-BUILDING ACTIVITIES... a general category of organizational interventions ... intended to enhance the effective operation of organizational sub-groups or teams. These interventions aim ... to improve the ways in which individuals work together as a cohesive team, particularly but not exclusively with regard to interpersonal relationships. These activities may relate to task issues, that is to the way that things are done, and the skills needed to accomplish the tasks or they may relate to the nature and quality of the relationships between team members and the team leader." (Huczinski 1987) Given the success of the project in spite of the "... nature and quality of the relationships..." there was a sufficient focus on the task for the project manager to steer the project to completion without teambuilding.

The key tacit assumption is that construction is manageable. This relates to the political context of reports on construction (Wild 2001). These incite a research effort to bring about the future prescribed by the reports and a 'garbage can' (March and Olsen 1976) process of solutions seeking problems. 'Constructing the Team' (Latham 1994) triggers the demand for a supply of team building consultants to trundle their wares into the market as solutions, pre-packaged by economic necessity (Mumford 1980), from internal projects. Beyond this the assumption of manageability has a significance in construction management research equivalent to the assumption of equilibrium in economics (Keynes 1937). This is reflected in the finding of "... reactive management necessitated by a lack of team integration and a subsequent deficit of problem-avoidance thinking." Hence the team remained "... as a group rather than a true team." (Dainty and Moore 1999); a false coherence derived from the emphasis on team-building. Given the conditions reactivity seems normal rather than problematic.

Goldthorpe (1980) demonstrates the limits of economist's causal analyses of inflation by referring to the residual categories mobilized to account for the part played in inflation by organized workers and politicians. Such categories of people 'cause' inflation by their lack of 'economic rationality'. This interferes with the bias of the market to equilibrium especially when power strategies and tactics are used. He demonstrates, that such actions of parties within the economy are quite rational in terms of their definitions of reality. The economists are carriers of a competing rather than a formal rationality. Their formal rationality expresses their value premises.

Keynes describes the economist as "... being unable to state all his premises and his definitions are not clear cut." (McCormick 1992). Dainty and Moore are in exactly this boat. Arguments from Team Performance Management (2000) show a bias towards 'Team Integration' which is equivalent to the value premises of market economists 'Equilibrium'. Teams as a source of 'Integration' play a comparable role in the thinking behind the research. Yet a 'shadow interpretation' is available: it must have been the case during the era of the 'QS-ing Game of Claims' (a concept owed to Dr John Findlay of Stent Foundations) that an 'effective team of QSs' orientated to

exploiting uncertainty in the client helped to return construction from nominal competitive market tendering to cost-plus contracting via the back door (of the portakabin that is).

Many questions emerge from Dainty and Moore's analysis. Is integration an unproblematic condition which if brought into existence by unspecified method(s) will solve construction's problems? Is teambuilding appropriate? Is it relevant to juxtapose reactive management to integration? Is this a false dichotomy? Is integration normal or normative? Given that the project met conventional criteria of time, cost and quality does it matter? If the holy trinity is satisfied does that not indicate that a coherent "theory in use" (Argyris and Schön 1974) of construction was present on the project? What is the nature of that putative "theory-in-use"? Would teambuilding as a concept allow us to elicit the character of this apparently coherent theory? If no team building or team integration was undertaken does this not indicate that such activities are neither necessary nor sufficient conditions of project success?

Higgin and Jessop(1965) stated: "...very early in our contact with the building industry...one of our difficulties was to get people to discuss techniques of communication with us. Such discussion inevitably led straight into considerations of the divisions of responsibility and of relationships in the building team." Team Building is a 'Technique of Communication'. A question which still arises from this previous research is: can such communication techniques overcome the consequences of the fragmented institutional origins of construction's role systems? Dainty and Moore refer to 'communications' returning their work to the 'The Building Industry Communications Research Project' but not explicitly.

CONSTRUCTION PROJECTS AS SITUATIONS

The approach taken from hence forward reinterprets Dainty and Moore's research evidence in terms of Schön's (1983) concept of the 'situation' and draws on the distinction between hierarchical and market co-ordination Winch (1989). This states clearly five assumptions about construction projects to demonstrate an equivalence previously asserted (Boyd and Wild 1993 and 1999) using as evidence the research of Ballard (1996) and Lait (1993). Dainty and Moore force their argument into a mould set by teams, interfaces and crises. But their material yields more straightforward insights and interpretations: construction projects are 'normally unmanageable' especially in terms of a definition of management derived from technical rationality(Boyd and Wild 1999). How then are they completed? There is no evidence team building can contribute significantly. In treating projects as situations a commonsense meaning is attributed bolstered by an application to construction.

Ballard(1994) demonstrates how particular procurement methods, that is project organizational arrangements, reveal the accrued functional complexity of construction organized around a core model of design, construction and quantity surveying. Construction Management, Management Contracting, Design and Build and Turnkey all evolve from this as variations on the theme of coping with fragmentation hence the contract is a poor representation of the project. Unexplored but relevant implications include: whether contracts can be managed as Banwell(1964) argues; a conflation of contracts into solutions to problems of coordination and attribution of false coherence to procurement methods as part of a search for certainty(Boyd and Wild 1993 and 1999). By developing Schon's concept of the 'situation' Ballard shows that there is: Complexity: of contracts, the terms of appointment of team members and the project

team structure. Instability: individuals leave at any stage of the project fragmenting team membership. Uncertainty: new team members meeting for the first time; the extent/nature of implicit relationships not stated; poor understanding of roles and responsibilities between members; unforeseen problems not covered in the original terms of appointment. Uniqueness: each project team is different in the extent of the services required and terms of appointment. The building is unique. Value Conflict: between the requirements vs. expectations of different members; contractual vs. implicit relationships; serving the client vs. serving the project; fee paid for service vs. service required. The impact on communication processes is significant. This indicates the interdependence of the contract, the procurement model and social relations in construction. Contracts are part of the envelope of accountability (Danks 1996) but only one reflexive influence on behaviour and performance.

Dainty and Moore's evidence can be reclassified similarly: Complexity: the project is described as such. The 150 significant design alterations induced instability in team relationships. Instability: in the turnover of staff in a range of positions including the project manager role. The construction team entered the project after the design and commercial team had become well aligned. This organizational marginality explains breaches of the change management protocol indicating: the importance of tacit coordination in TMOs (Stringer 1967) and Atkins and Wild (2000) statement: "European D and B contractors were general contractors buying design. Interactions of teams with clients had not changed and the (previous) cultural coalition resurfaced with variations." Value conflict: in the submerged professional and functional norms and their replication of construction's historical fragmentation in the project despite the formal integration of D & B. Uncertainty induced by: the large economic cost of the project which relates to Keynes theory of investment behaviour and the impossibility of rational expectations (Freeman and Perez 1988); the proliferation of design changes, and the instability of the team itself. The characteristics of situations are reflexive, inducing each other within the project's dynamics.

Establishing the project as 'a Situation' permits exploration of its interpenetrating problems. The client's complex, coexisting economic interests and political processes are undiscussed. The psycho-social complexity of the client in terms of personal and professional constructs (Boyd and Wild 1996) lowers the threshold of instability and value conflict in the team. Internal uncertainty in the client is reflected in the number of design changes. This replicates the effect of the world class manufacturing revolution on procurement of car plants. Japanese competition reduced product life cycles and prices, increasing client uncertainty over project definition, due to frequent product changes (Atkins and Wild 2000).

Lait's (1993) discussion of a project for test beds for Rolls Royce aero-engines shows how client familiarity with project management incited the formation of a strong team and the use of teambuilding. This influenced successful execution of the project leading to a follow on contract reflecting the client's familiarity with supply chain methods as a world class manufacturer and a pre-Latham instance of partnering. Teambuilding was a response to the integration of the client confirming Atkins and Wild (2000) argument about the demand led reform of construction. However the study revealed an exacerbation of problems due to the loss of supervisors. In a setting less well structured by the client, absence of such key role takers (Huczinski 1983; Hutton, Bazalgete and Reed 1997) as strong supervisors could readily vitiate teambuilding efforts. The third project manager in Dainty and Moore's research was able to find, take and make his role (Huczinski 1983; Hutton, Bazalgete and Reed

1997) aligning (Harrison 1995) the project through tacit competence and without explicit teambuilding activities. It was the effectiveness of the conduct of his role by the third project manager which was a critical success factor in project completion.

Overall the evidence is that the integration of D and B is nominal. It reverts readily to the condition argued by Boyd and Wild(1999): "...the presence of a great number of organizational interests creates a pull towards underboundedness within construction projects whose teams rarely attain stability and this must be recognized as their normal condition." The fact that professionals work inside a procurement approach which seeks hierarchical rather than market coordination (Winch 1989) does not inhibit them from acting as carriers of diverse and potentially conflicting views as proponents of 'Action Analysis' (Silverman 1970) argue. This works against palliative techniques which seek to integrate the team against the grain of construction's institutionalized fragmentation; in itself not a barrier to successful completion of a given project. Hierarchical integration of the managerial and professional sectors of the project and the design phase implies nothing about the effectiveness of the construction phase which was procured through sub-contracts and subject to market co-ordination. The isolation of the construction team from the design and commercial teams could be interpreted as a split between two types of co-ordination within the project and a further source of fragmentation or market co-ordination could interpenetrate into hierarchical co-ordination and destabilize it.

COMMUNICATIONS, SYSTEMS, CULTURE AND POWER

All of these are referred to by Dainty and Moore. They discuss the interfaces between cultures again relating to the institutional problems of construction and the question of what effects Team Building could have on institutional domains. Their consideration of communications permits a return to the BICRP (Crichton 1966; Higgin and Jessop 1965). It is striking how little change is revealed to have occurred since the mid 1960s in construction processes. Figure 1: A Systems Approach to Culture (Dainty and Moore 2000) reveals the worsening of fragmentation over a thirty year period. Higgin and Jessop (1965) described the effects of this in terms of roles and their effects on communications processes: external and internal confusion and variability between and within industry and project role systems existed. Project context was critical to the clarification and stabilization of roles and expectations and hence the viability of teams and communications processes. Individuals experience the absence of a "...settled and stable definition of what his job actually is, and ...nobody ...can be clear about exactly what he does and what he is responsible for without finding out a lot more about the sort of building team he is in." Conventionally titled participants in the building process typically experienced a wide range of unstable roles inducing "...a general anxiety among all concerned." Ensuing tensions and strains created "...an understandable defensiveness on the part of everybody particularly when entering a new relationship. In the absence of generally agreed rules for the relationship game, every man wants to ensure he is not a losing party. Natural developments of this are, on the one hand, the offensive/defensive stance that the corporate bodies representing the different roles tend to take up with each other, and on the other the other a formal amiability that denies the underlying tensions."

A language of teambuilding is not necessary to explain anything. It is a rational response to uncertainty to hold power in the sense that Goldthorpe(1980) argues worker and governmental power strategies and tactics under inflationary conditions are rational. Given the interdependence and uncertainty of construction decisions and

the way that the actors involved construct their setting it is hardly surprising that Crichton (1966) states: "It has been shown that part of this uncertainty results from actions which, in themselves, seem reasonable. An additional stabilizing factor is the set of expectations (built by experience all round) about time required, rising costs and the inevitability of conflict." Crichton (1966). Dainty and Moore confirm this argument. This is the reality that team building has to engage with. The evolution of construction from 1945 is towards 'reciprocal interdependence' Feed forward and feedback undermine the validity of previous decisions and involve the most costly problems of co-ordination (Thompson 1967). It is difficult to see how team building can begin to address these problems. Higgin and Jessop (1965) comment: "As the social aspects of ... communications ... embody the fabric of the building team structure it would be necessary ... to learn something of the way in which the teams get built up from among interdependent, autonomous units. Is team, with it's overtones of esprit de corps and a shared goal, the correct term?"

Team building is a technique of communication intended to assist organizational stability. It cannot escape the conflicted character of role systems in construction and cannot offer, whatever it's theoretical logic, an explanation for a phenomena of a different order such as unstable role systems. Dainty and Moore demonstrate that D & B does not abolish, as it's proponents hope, the conflicts of construction. The fact that the project met key criteria of cost, time and quality in the absence of what are asserted to be it's most favourable characteristics suggests that calibration of project success with procurement method is elusive. The construction project is an unstable situation independent of procurement route and techniques of communication. The real focus of their articles is construction's continuing fragmentation. Team building lacks the virtue of a new solution. It is an old one and it seems not to work.

THE MANAGEABILITY OF CONSTRUCTION

Construction projects are streams of disturbances punctuated by crises and occasional episodes of calm. They are non-recurrent since buildings are unique and 80% of clients are one-off. Typically construction managers operate across a range of projects at different stages of their life-cycle with project team membership evolving through time; important sources of self-induced uncertainty (Stringer 1967). The role systems and expectations of each project are different and subject to a wide range of disturbances including the client. Intermittently construction is subjected to a set of reports and ensuing research which prescribe as 'solutions to it's problems' managerial methods which are usually a variant of technical rationality(Boyd and Wild 1999) combined with an invocation to communicate. Construction does not yield to such prescriptions which involve clarity of means and ends within serial interdependence: that is one thing follows another (Thompson 1967).

Reed (1997) refers to the 'Rationalism Triumphant' of organizational theorizing until the 1970s noting that Simon's 'Bounded Rationality' a critique "... of the excessive formalism of classical management and organization theory...reduces the vital interpretive work done by individual and organizational actors to a purely cognitive process dominated by standardized rules and operating programmes." This paradigm marginalizes politics, culture, morality and history. In contrast Reed(1989) develops an inclusive model of managers as creators of "...communities of practice..." Technical rationality is contested by alternative power and values forcing managers to develop a negotiated order within the work organization through the 'social assembly' of recalcitrant configurations of resources including people: a process intrinsically

contradictory and conflict laden. Hierarchical continuity supports these communities. Construction, a world of non-recurrence, requires the re-assembly of communities of practice through the lifecycle of projects. Teamwork is emergent as tacit co-ordination (Stringer 1967) within this process.

Most post-war reports recommend from the technical paradigm. Egan's 'Technocratic Totalitarianism' (Green 1998) of re-engineering updates Phillips' (1950) focus on Scientific Management. Official prescriptions have resisted a more complex model of managing setting the scene for an insufficiently critical research effort:

"...commoditized and simply opportunistic, taking advantage of the funding available and providing the necessary comfort for funders in terms of descriptions that (at least superficially) fit the policy vernacular..." for an industry unable to clarify its own research agenda and weak at implementation (Connaughton 2000).

CONCLUSION

Practically the technicistic reductionism of most post-war reports has led to: the espousal of limited, recalcitrant concepts of management which counter the experience of practitioners; the appearance of construction as unmanageable and a recycling of research agendas. Around this limited technicism float methodologies such as team building intended to adjust the behaviour of the parties to one another. Dainty and Moore reveal this aspiration as a lost cause when it stands unaided by institutional features such as the coherence of a particular client. However they *drift* into a consensual view of teams which becomes an unstated, tacit assumption driving their work. This is as much a product of the context in which they inquire as anything else but the unstated unitarism of team building concepts is a reflexive influence in this process and their research.

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