

ALIGNING THE PRACTICES OF THE PERMANENT WITH THOSE OF THE TEMPORARY

Pernilla Gluch¹ and Christine Räisänen²

Construction Management, Chalmers University of Technology, S-41296 Göteborg, Sweden

Aligning the permanent structures of the organisation with the temporary organising of practices and operational activities in projects is a challenge for the construction industry. A prevalent lack of fit between the organisation and its projects causes tensions which negatively affect the way in which long-term environmental strategies and goals are understood and implemented in the project settings. Using the results from a qualitative interview study as an illustrative example, this paper highlights discrepancies between the organisational and social mechanisms that influence the interplay between environmental management and project management practices. Findings show that both research and practice amplify existing in-built tensions between environmental management and project management rather than mitigating them. As a result different units within organisations strive toward diverging goals and foci. Informed by recent reviews of the literature within the two areas of study, it is argued that top management needs to join forces with project management to create arenas where members from the two units can align and join forces.

Keywords: project management, project-based organising, sustainable development, organisational structure, social practices.

INTRODUCTION

Within the construction industry, a common mode of organising projects is by decoupling activities from the main organisation and delegating responsibilities (Lundin and Söderholm 1995, Dubois and Gadde, 2002, Engwall, 2003). Projectification nurtures a decentralised decision-making culture characterised by operational interdependence and organisational independence. A challenge for project-based organisations is to align organisational structures such as management systems, with the temporary organisation and operational activities carried out in the projects. Many researchers have highlighted tensions between permanent and temporary organising in companies, e.g. concerning knowledge management (Styhre et al., 2004), organisational change processes (Bresnen et al., 2005), management practices (Labuschagne and Brent, 2005) and adoption of innovation (Dubois and Gadde, 2002). All these tensions negatively affect how the permanent organisation's long-term environmental strategies and goals are understood, managed and implemented in the project settings.

To handle increasing societal environmental demands, many project-based organisations adopt environmental management systems (EMS) and tools that were originally developed for organisations with stable organisational structures (Gluch *et al.*, 2009). This often results in systems that are not suited to the local contexts of the

¹ pernilla.gluch@chalmers.se

² christine.raisanen@chalmers.se

projects, which in turn may account for resistance among practitioners in project-based organisations to fully adapt, use or apply the established system in their day-to-day work (e.g. Styhre *et al.*, 2004, Dainty *et al.* 2006). This means that a majority of today's construction projects are still carried out in accordance with traditional methods, norms and practices, where short-term solutions are favoured over long-term ones. Thus, material and technical solutions as well as managerial approaches can seldom be classed as innovative or green, nor does there seem to be a debate among researchers and practitioners to improve the situation (Demaid and Quintas, 2006). This paper is an attempt to (re)kindle such a debate by referring to studies in two recent reviews of the literature on project and environmental managements and by discussing results from a case study aimed at examining how environmental management and project management practices were played out on site.

LITERATURE OVERVIEW

Much of the current research and industry efforts addressing environmental management in projects seem to have applied a normative theoretical perspective on projects. This perspective views projects as instrumental for goal achievement and as entities that can be controlled and governed through a prescriptive and normative set of methods and techniques. The underlying assumptions of such a perspective stem from the prevalent mainstream definition of project as a unique, goal-oriented endeavour generating measurable outputs (e.g. Maylor, 1996). The methods and techniques developed based on this perspective, therefore, pay little attention to the contradictions that prevail between the company and the varied local contexts of the different projects.

Recognising this lack, an alternative theoretical perspective considering projects as “temporary organisations”, emerged in the 90s (c.f. Engwall, 2003). Besides the focus on temporality, this perspective also stresses complexity and contextuality as important characteristics of projects. While the normative project management approach views the project as a universal tool that make things happen, this perspective on projects focuses instead on understanding what happens inside the project, i.e. emphasis is on studying different phenomena and characteristics of projects.

However, few articles in two leading journals of project management address environmental management issues (c.f. Crawford *et al.* 2006 and Themistocleous and Waerne, 2000); those that do, fail to address organisational aspects and instead advocate monitoring or controlling tools as solutions to environmental problems. One of the few exceptions is Labuschagne and Brent's (2005) conceptual article which criticises the current project management practice for its rigid adherence to time-frames that are often inconsistent with core principles of sustainable development. Admittedly, this criticism is based on reviews of only two project-management journals, but it does nevertheless reflect a certain lack of interest in the greening of project-based organisations.

Have researchers of corporate environmental management, then, paid more attention to greening issues? It is well acknowledged that organisational features influence corporations and professional organisations, and much research has been carried out on how different organisations manage the environmental challenges they face. Most organisational studies concern strategic environmental actions and processes on a corporate organisational level (e.g. Atkinson *et al.*, 2000). Although Atkinson *et al.* have explored how different organisational structures affect the way environmental

aspects are perceived and managed in corporations, their conceptual discussion raises more questions than it answers. Research has also focused on inter-organisational activities, such as environmental networks (eg. Clarke and Roome, 1999, Boons and Berends, 2004), cooperation between corporations and authorities (von Malmborg, 2004), cooperation between corporations and non-profit organisations (Starik and Heuer, 2002), or temporary green reform projects (Füssel and Georg, 2000; Bergström and Dobers, 2000).

The brief overview above shows that there is a need for further research into the complex relations between the logics of project-based organisations and corporate environmental performance and how to enhance their alignment.

METHOD

A case study was conducted over a one-year period (2003-2004) of a large international project-based construction company (IntCon). The rationale for the choice of company was that it had a strategically pro-active commitment towards greening; it was often seen as a trend setter for the Swedish construction industry. The object of interest in the study was an inner-city tunnel project, where IntCon was the contractor and the Swedish Road Administration (SRA) the client. IntCon was certified according to ISO14001 and the company group supported the United Nations Global Compact. Moreover, it had been listed on the Dow Jones Sustainability Index since 1999. Although ratings in sustainability indexes have been questioned as a suitable value standard for environmental performance (Cerin and Dobers, 2001), they nevertheless indicate that the top management of IntCon had adopted an active environmental strategy.

The study comprised on-site observations, text analyses and semi-structured interviews with persons in the project organisation as well as with persons belonging to IntCon's corporate environmental organisation. These interviews, 14 altogether, lasted between one and two hours, and were recorded and transcribed in full. Four weeks were spent on the construction site to become familiarised with the context, the practices and the discourses of the project community. During this time, internal and external paper documents, the company intranet and the management control systems were scrutinised. Over 500 written and digital documents were screened for environmental information. In addition, over the year, 11 of the weekly environmental site inspections were monitored and photo-documented. The use of multiple sources, interviews, field observations, photo documentation, and text analyses enabled triangulation and provided a unique view on the project members' physical workspace and their social interaction. The following is based on an analysis of all the above mentioned empirical data.

ORGANISING THE ENVIRONMENT: ILLUSTRATIONS FROM A TUNNEL PROJECT

The construction part of the Tunnel Project started in the autumn of 2001 and was completed in 2006. The task of the Tunnel Project was to construct a four-lane car tunnel that met societal demands, those of the client, the contractor, the project organisation, the project members as well as the environment. The project was organised as a design-build contract.

The environmental management organisation

During the time of the study, the environmental unit, consisting of a handful of staff headed by an environmental manager, were rather isolated and decoupled from the projects. These environmental officials and specialists were torn between necessary societal changes and organisational needs and the limited time-resources of the projects. They had difficulties navigating the interdependency and independency dimensions of the company. They felt they had to be both generalist and specialist; on one hand they had to manage the difficulty of combining a strategic, policy-based, all-embracing and long-term perspective relevant for IntCon's whole business, and on the other hand they had to gain profound expertise within a targeted field of knowledge. To add to their difficulties, the members of the environmental staff were in different locations, which not only decoupled them from the project organisations, but also decoupled them from each other.

Due to their limited number, it became increasingly difficult for them to maintain the company's environmental management system, which demanded extensive administrative capacity. To deal with the increasing administration, some environmental officials with solely a supporting role were appointed to projects, which created a satellite network of environmental administrators working rather independently of each other. The administrative environmental task was on this level often combined with other administrative tasks, for example quality, safety and purchasing. To simplify routines, IntCon had a management system that integrated quality, safety and environmental aspects, which to a high degree determined how these administrative tasks were distributed at an operational level. Furthermore, the officials in these administrative positions had no authoritative influence nor formal responsibilities, which undermined their role and possibility to take action. This way of loosely coupling these environmental officials to both the environmental unit and the production-focused project organisation resulted in their feeling marginalised.

The organisational manoeuvre of having a centralised environmental staff with a distributed satellite network of administrative environmental officials was perceived by the environmental unit as a demotion. In turn, this change of status was seen in the organisation as a shifting of environmental issues from being strategically important to becoming a bureaucratic administration of formalities.

The project organisation

The project team at the IntCon's Tunnel Project consisted of approximately 120 persons, of which approximately 40 were managers and foremen. IntCon was a decentralised organisation where each project was an autonomous unit with a project manager(s) that was held accountable for actions and decisions taken within the project, for example financial results and environmental performance. The Tunnel Project was a complex construction, comprising many project-specific technical and environmental difficulties and a multitude of unanticipated complications. Being a complex project, it also required a variety of technical experts coordinated in specialised task groups, each led by a task manager. Although these possessed no formal responsibility they nevertheless wielded the authority to act due to their technical specialisation and/or expertise.

While the project members were employed in the project they were also temporarily decoupled from the permanent organisation, which they rejoined in between projects. The project members' perceived that the project had such tight time-frames that it did not leave room for networking activities outside the scope of the project. They

experienced difficulties maintaining their contact nets. Additionally, there was no systematic or controlled exchange of environmental information between different projects within IntCon. Apart from information included in internal audits, there were no routines for the project organisation to communicate environmental experiences from the Tunnel Project to the rest of IntCon. Experience from the project thus remained within the project group.

Whether the members of the project organisation got information from other on-going construction projects depended to a high degree on their personal network and on what kind of group they belonged to. The members' personal networks seemed to be a result of coincidences rather than a conscious effort to incorporate people with different knowledge and competences. Consequently most networks seemed to be homogenous groupings, i.e. a group of people that share profession, educational background, gender and age. Another consequence from the organisational distance between the permanent organisation and the project organisation was that it created mistrust towards the environmental staff's ability to understand the project members' reality and work situation. This in turn nurtured a defensive attitude and a resistance towards suggestions of change in environmental routines.

Different practices

By concentrating environmental expertise to a few persons on the corporate staff level and distributing the administrative environmental work to officials with predominantly a building technology background, much reliance was placed on the internal web-based environmental management system to guide the project members to act pro-environmentally. Relying on a web-based EMS required that environmental routines and procedures were standardised. This standardisation of the environmental work, however, meant that environmental issues were controlled top-down with little flexibility. Since one of the pillars of the ISO14001 is continuous improvements, it was important to find ways to measure and communicate environmental performance within the company. This required well-developed routines for two-way communication. The communication between the strategic level and the operative level was mainly bottom-up, based on a mandatory yearly report, and top-down either through optional searches on the intranet or through company-wide e-mails.

Being distanced from the environmental unit, members of the project organisation addressed their inquiries within their own established networks, which did not necessarily possess the relevant or updated knowledge. The use of ISO14001 as a governing instrument also demanded extensive reporting, which ran counter to the oral face-to-face communication culture that prevailed in the Tunnel Project. The reporting routines were therefore perceived as "foreign" and bureaucratic.

Due to the Tunnel Project's environmental vulnerability, the client maintained strict control over the project. Environmental concerns were highlighted, but what issues were prioritised was regulated by the client's stipulated environmental demands. For example, detailed restrictions on levels of environmental impact on water, land, vegetation and air, levels of noise and vibrations, and handling of chemicals, material and waste were specified in a specific environmental plan. This plan, however, was a flexible document that could be frequently revised in accordance with regulatory or other changes. This flexibility meant project members had to continuously re-interpret the text, which gave the contractual document a symbolic role in the project in addition to its role of governing document.

IntCon's internal environmental policies, however, were embedded in the general project plan, a much more rigid plan that did not tolerate changes since these were considered to negatively affect the project practice and project result. In addition, the organisational distance between the environmental staff, which had developed and formulated many of the environmental policies and instructive texts, created mistrust among the project members towards the staff's ability to understand their reality and work situation. This nurtured a defensive attitude towards suggestions of changes in the environmental routines.

DISCUSSION: TENSIONS IN PROJECT-BASED ORGANISING

In accordance with Arvidsson (2009), this case study has revealed that there are several inherent tensions between the permanent and the project organisation, i.e. how the project is organised and how environmental issues are managed. Being autonomous entities, the project organisations easily become decoupled from each other, which together with the decentralised organising has the consequence that the projects are separated from the processes of the permanent organisation (Lindkvist, 2004). Thus, having a decentralised and autonomous organisational culture has the disadvantage that much experience gained in the organisation is also unavailable since it is difficult to make it common goods for the organisation. Similarly to what Dubois and Gadde (2002) suggested, the present study found that the loose coupling between the project and the permanent organisation resulted in important units being external to the project, for example the environmental unit was an anonymous entity to the project members.

Because of the decentralised nature of construction companies, business relations have by tradition been built on personal contacts (Eccles, 1981). An anonymous centralised environmental unit and EMS governance, therefore, suffered from the "not invented here" syndrome, which was strengthened by the geographical distance.

To comply with stated project goals, project organisations tend to isolate themselves from outside interference. Temporary bracketing of the project decreases the risk of interventions and unwanted disturbances (Kreiner, 1995). However, bracketing of temporary organisations is detrimental to learning and information dissemination as found in this study. Even though environmental impacts caused by the construction process may exceed the project closure, the environmental boundaries were mentally restricted to the time span of the project. That is, in the project the environmental problems were regarded as 'momentary' and 'unique', i.e. they occurred during this project, were resolved for this project, and thus were considered a closed chapter at the end of the project. As a consequence, the project members' commitment to environmental issues is largely constrained by the project's time and space boundaries. As also recognised by Labuschagne and Brent (2005) this blinkers them from taking on a holistic and long-term perspective, which is imperative for a sustainable development of a business. It can also be noted here that many practitioners within the industry possess limited environmental knowledge and show limited interest in acquiring environmental information other than that which is necessary for and/or available in situ (Gluch and Räsänen, 2009). The perspective is not only limited but also risks stagnation.

A way to force the project to pay active and continuous attention to environmental impacts, including those that occur outside the project's time boundaries is to embed the triggers in project plans and contractual documents, as was done in the Tunnel Project. However, project plans are designed with respect to a set of assumptions

based on a number of actors' ideas about the world at the time of the document inscription. Moreover, project plans simplify the world by making the future explicit so that precise definitions of boundaries, tasks, resources and their allocation are enabled, while neither the future nor the natural environment remain static. Contextual uncertainty is created outside the project span and authority, which makes it impossible to predict in advance (Kreiner, 1995). For the project, these uncertainties cause problems since the assumptions made in the design phase may not be accurate at the time of delivery or at any time in between. For example the conception of needs, desires and requirements that the project is meant to meet may change in response to incidents that happen under the project time. In addition, generating too much trust that environmental aspects will be included in project plans and other specifications will result in green truths based on past experiences that have been sedimented and institutionalised in the organisation.

CONCLUSIONS

From this study it can be concluded that environmental work governed by a top-down controlled environmental management approach does not fit the decentralised and autonomous decision-making culture of the project organisation. It created two "isolated" organisational units that used different 'languages' and partly strove towards different goals. This way of organising was found to create a distance between the persons that make strategic environmental decisions and those that realise them within the operative units of the projects. The project creates its own self-regulating environmental organisation with the consequence that the project member's motives for behaving pro-environmentally are biased towards short-term performance. Flexibility and innovativeness in such an environment are more likely to be constrained. Moreover, the temporary bracketing of the project restricts the project member's ability and motivation to perceive and handle long-term environmental impacts. The embedded environmental policies in predefined project plans, foremost based on the client's needs and interest, diminishes the scope for the project organisation to react to societal and environmental changes.

A commonly suggested solution to deal with this situation is that the clients need to enhance their environmental knowledge (e.g. Bröchner *et al.*, 1999). Another is to avoid institutionalising and dead-locking predefined assumptions into normative plans (Christensen and Kreiner, 1997). In the Tunnel Project the client had extensive environmental knowledge and resources to specify and authorise demands, which was done through an environmental plan that was a flexible document that required active interpretation. However, despite these measures, there were still problems in the management of environmental issues in the project setting.

To sum up the, the bracketing of projects is a dilemma that requires further research. Bracketing provides projects with an identity and isolates their members, allowing them to focus on their tasks by minimising any disturbance to plans or other threats to achieving their pre-defined tasks (Lundin and Söderholm, 1995). However, as has also been pointed out by (Christensen and Kreiner, 1997), bracketing means that the project manager can only be held responsible for the project's efficiency and not for its relevance since the effects from the project appear after the project's 'closure'. Striving to be as efficient as possible, requirements other than the minimum requirements are considered by the project members as an obstruction. Consequently, changes in environmental routines, irrespective of their influence on efficiency, may be regarded as a 'burden'. So, on the one hand the de-coupling of a project provides a

good foundation for creating a project that meets its pre-set goals. On the other hand, the bracketing in time and scope jeopardises its possibilities to cope with contextual changes (Kreiner, 1995).

A possible solution lies in breaking the “isolation” between the organisational units within project-based organisations by finding ways where environmental management and project management professionals can join forces. Top management can encourage project organisation members to participate in a variety of networking activities. Top management can also nurture the creation of communicative arenas where people can meet and exchange information and knowledge. However, to make these methods work two things have to be considered. Firstly, it is important to consider the communicative culture of the organisation so that fruitful and equal discussions may be held. Secondly, for equality to reign vis-à-vis management, the members of the environmental unit need to be invested with the authority to act so that environmental issues may gain their rightful legitimacy within the organisation.

REFERENCES

- Arvidsson N. (2009) Exploring tensions in projectified matrix organisations. *Scandinavian Journal of Management* **25**, 97-107.
- Atkinson S., Schaefer A., Viney H. (2000) Organisational structure and effective environmental management. *Business Strategy and the Environment* **9**(2):108-121.
- Bergström O., Dobers P. (2000) Organising Sustainable Development: From diffusion to translation. *Sustainable Development* **8**, 167-179.
- Boons F., Berends M. (2001) Stretching the boundary: the possibilities of flexibility as an organisational capability in industrial ecology. *Business Strategy and the Environment* **10**(2), 115-124.
- Bresnen M., Goussevskaia A., Swan J. (2005) Implementing change in construction project organisations: exploring the interplay between structure and agency. *Building Research and Information* **33**(6), 547-560.
- Bröchner J., Ang G., Fredriksson G. (1999) Sustainability and the performance concept: encouraging environmental technology in construction. *Building Research and Information* **27**(6), 368-373.
- Cerin P., Dobers P. (2001) What does the performance of Dow Jones sustainability group index tell us? *Eco-management and Auditing* **8**(3), 123-133.
- Christensen S., Kreiner K. (1997) *Projektledning - att leda och lära i en ofullkomlig värld* Academia Adacta: Köpenhamn, Denmark.
- Clarke S., Roome N. (1999) Sustainable Business: learning-action networks as organisational assets. *Business Strategy and the Environment* **8**(5), 296-310.
- Crawford L., Pollack J., England D. (2006) Uncovering the trends in project management: Journal emphases over the last 10 years. *International Journal of Project Management* **24**, 175-184.
- Dainty, A R J., Moore, D., Murray, M. (2006) *Communication in Construction - theory and practice*. Taylor and Francis, NY.
- Dubois A., Gadde L.E. (2002) The construction industry as a loosely coupled system: implications for productivity and innovation. *Construction Management and Economics* **20**, 621-631.
- Demaid A., Quintas P. (2006) Knowledge across cultures in the construction industry: sustainability, innovation and design. *Technovation*, **26**, 603-610.

- Eccles R.G. (1981) The quasifirm in the construction industry. *Journal of Economic behaviour and Organisation* **2**, 335-357.
- Engwall M. (2003) No project is an island: linking projects to history and context. *Research Policy* **32**, 789-808.
- Füssel L., Georg S. (2000) The institutionalisation of environmental concerns. *International Studies of Management and Organisation* **30**(3), 41-58.
- Gluch P., Brunklaus B., Johansson K., Lundberg Ö., Stenberg A-C., Thuvander L. (2009) Environmental attitudes, Management and Performance. In *Performance Improvement in Construction Management* (Eds. Atkin B. and Borgbrant J.), Taylor and Francis, London.
- Gluch P., Räisänen C. (2009) Interactional perspective on environmental communication in construction projects. *Building Research and Information*, **37**(2), 164-175.
- Kreiner K. (1995) In search of relevance: Project management in drifting environments. *Scandinavian Journal of Management* **11**(4), 335-346.
- Labuschagne C., Brent A.C. (2005) Sustainable project life cycle management: the need to integrate life cycles in the manufacturing sector. *International Journal of Project Management* **23**: 159-168.
- Lindkvist L. (2004) Governing project-based firms: Promoting market-like processes with hierarchies. *Journal of Management and Governance* **8**, 3-25.
- Lundin R.A., Söderholm A. (1995) A theory of the temporary organisation. *Scandinavian Journal of Management* **11**(4), 437-455.
- Malmberg F. von. (2004) Networking for knowledge transfer: Towards an understanding of local authority roles in regional industrial ecosystem management. *Business Strategy and the Environment* **13**(5), 334-346.
- Maylor H. (1996) *Project Management* Pitman: London, UK.
- Starik M., Heuer M. (2002) Strategic inter-organisational environmentalism in the US: A multi-sectoral perspective of alternating eco-policy roles. *Business Strategy and the Environment* **11**(4), 221-235.
- Styhre A., Josephson P-E., Knauseder I. (2004) Learning capabilities in organisational networks: case studies of six construction projects. *Construction Management and Economics* **22**, 957-966.
- Themistocleous G., Wearne S.H. (2000) Project management topic coverage in journals. *International Journal of Project Management* **18**, 7-11.