

LIMINALITY ROLES IN CONSTRUCTION PROJECT PRACTICE: OPPORTUNITIES AND CHALLENGES

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Project management handbooks and courses teach structured and standardized ways of organizing and managing projects, including clearly defined project roles. However, projects are no isolated islands and projects in practice continuously develop and change. This is the case in, for example, the project based construction industry, and in which new inter organizational and collaborative work practices have become increasingly common. This paper is based on two case studies and explores developments and changes in construction project practice, in particular the development of new roles. The concept of liminality is used as analytical lens to better understand these new roles. Findings show new and challenging multi liminal roles that origin from other knowledge domains and professional communities of practice, than what is traditional in construction project management. This development poses both opportunities and challenges for the individual project worker and the development of construction industry practices.

Keywords: projects, construction project work, roles, liminality

INTRODUCTION

There has been a standardization and professionalization process going on within project management during the last decades (Hodgson and Cicmil, 2006, Karrbom Gustavsson and Hallin, 2014). The process includes, for example, certification of project managers and definitions of standardized project processes and roles.

However, no project is an island (Engwall, 2003), and processes and roles continuously develop and change in day-to-day-project practice. This is the case in, for example, the construction industry; an industry that has a reputation of being in efficient, conservative and reluctant to changes (Styhre, 2010, 2012), but which is currently undergoing changes related to, for example, collaborative approaches (Bygballe *et al.*, 2010; Eriksson 2010), supply chain integration (Eriksson, 2015a), and digitalisation, in particular on Building Information Modelling (BIM) (Fox, 2014; Gilkingson *et al.*, 2015; Jacobsson and Linderoth, 2012; Karrbom Gustavsson *et al.*, 2012).

What standardized project roles include is thus clearly defined in handbooks, but how roles develop and change over time, and from where they origin is less known. The research question is thus twofold: What new roles have developed in construction project practice, and from which knowledge domains and professional communities do they origin? The findings are based on two case studies from contemporary

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construction practice in Sweden: a collaborative construction project and a process innovation development project performed within an urban development project. The concept of liminality is used as analytical lens to interpret the development and associated opportunities and challenges in relation to the new roles. Liminality, meaning “betwixed and between” (Turner, 1967, in Beech, 2011), is commonly taken to mean a position of ambiguity and uncertainty (Beech, 2011).

The findings contribute to the growing literature on projects as continuously changing processes and practices (Blomqvist *et al.*, 2010; Cicmil *et al.*, 2006) and have implications for construction project management literature (Gould and Joyce, 2011; Winch, 2010). The findings provide better understanding of how project practices and roles continuously change and develop and what opportunities and challenges that follows. The findings show, for example, that the development of new multi liminal roles poses challenges to the already complex work situation of the individual project worker (Zika-Viktorsson *et al.*, 2006; Karrbom Gustavsson, 2016). The findings also provide insights into the opportunities and challenges of challenging construction industry practice, norms and heuristics (Eriksson, 2016; Styhre, 2010).

Before presenting the method and data, projects, and in particular construction projects and associated roles are presented. Then follows a description of the concept of liminality, including how it may serve as analytical lens. The paper ends with findings and discussion.

PROJECTS

Projects are temporary organizational constructs that are continuously developing and embedded in multiple contexts (Engwall, 2003; Lundin and Söderholm, 1995). A project can therefore be understood and studied as a contextual process of change (Maaninen-Olsson and Müllern, 2009); a process that includes for example transitions between phases/stages (van den Ende and van Marrewijk, 2014), coordination and communication within and between actors (Dainty *et al.*, 2006), establishing relationships and routines (Eriksson, 2015b), and the change of roles and responsibilities (Karrbom Gustavsson, 2015). Project work is challenging as it includes making sense of one’s own work as well as the work of others while working in turbulent and constantly changing work contexts (Weick, 1995).

Construction project practice

There has been an increased interest in collaborative and innovative approaches in construction project practice during the last decades (Bygballe *et al.*, 2010; Eriksson, 2010; Walker and Jacobsson, 2014). These approaches include, for example, the development and implementation of new procurement strategies for integrating supply chains (Eriksson, 2015a) and the development of new process innovations (Eriksson and Karrbom Gustavsson, 2016). These approaches challenge traditional relationships (Kadefors, 2004), heuristics (Eriksson, 2016), and industry norms (Styhre, 2010). Collaborative approaches, integrated supply chains and digitalisation are three examples of contextual factors that drive change and challenge traditional work practices and roles in construction projects (Karrbom Gustavsson, 2015).

This development has made construction projects become increasingly complex (Chan *et al.*, 2004, Walker and Jacobsson, 2014). The complexity includes not only technical issues but also the reciprocal interdependencies between processes, phases and/or stages and actors (Marshall and Bresnen, 2013) and put pressure on, for example, coordinating, integrating and managing the large number of actors that are

involved (Walker and Jacobsson, 2014). At the same time, this development challenge traditional knowledge domains and professional communities of practice (Wenger, 1998).

Construction project roles

Roles in construction project management literature are often defined from a stakeholder perspective. For example: clients, designers, contractors and specialist suppliers (Winch, 2010, 22), or owners, design professionals, construction professionals, material suppliers and equipment suppliers (Gould and Joyce, 2011, 25-41). Previous studies of specific project roles in construction have focused on, for example, the “overworked site manager” (Styhre, 2011) that is “stuck in the middle” (Styhre and Josephson, 2006) and their daily work and use of BIM (Mäki and Kerosuo, 2015). The construction project managers, and their “leadership competences” (Tabassi *et al.*, 2016), “key social competences” (Zhang *et al.*, 2013), and other characteristics, have also gained much attention.

There is less literature on, for example, partnering managers or BIM managers, except for a few recent practical handbooks. This is despite the fact that partnering projects have been popular for more than a decade and still is becoming increasingly more common (Eriksson, 2010). The implementation of BIM has also increased in construction project practice and is now on top of the agenda for many construction companies (Karrbom Gustavsson, *et al.*, 2012).

LIMINALITY

The word liminal originates from limen, which is the Latin word for threshold. “The word denotes rituals of transition – of passage between one social status to another” (Czarniawska and Mazza, 2003, 269). Turner (1982) notes that it is the blurring and merging of distinctions that characterize liminality. He claims that persons who find themselves in a liminal phase, for example when changing roles or developing practices, are “temporarily undefined, beyond the normative social structure. This weakens them, since they have no rights over others. But it also liberates them from structural obligations” (Turner, 1982, 27 in Czarniawska and Mazza, 2003, 271).

Liminality as process, position or space

The concept of liminality has traditionally been used in three ways in management and organization studies: as process, position or space (Borg, 2014).

Liminality as a process refers to a change process for individuals and organizations, for example during development and training programs (Eriksson-Zetterquist, 2002) and organizational change periods (Czarniawska and Mazza, 2003).

Liminality as a position focus on the individual and certain positions that are liminal and cause individuals to be betwixt and between, i.e. of belonging and of being different at work. This liminality originates from the individual’s experiences of professional belonging and identities, which puts individuals between different professional communities. Holding liminal positions with liminal professional identities provides the individual with freedom to move between professional communities (Zabusky and Barley, 1997, in Borg 2014) and to act as negotiator between communities (Jeraraj, 2004, in Borg 2014).

Individuals who temporarily work in an organisation to which they have no formal belonging can also hold liminal positions. They are betwixt and between traditional structures of work and face structural ambiguity (Borg, 2014). These positions

include, for example, temporary workers (Garsten, 1999), consultants (Czarniawska and Mazza, 2003) and project workers (Sturdy *et al.*, 2009). Liminal positions offer both positive and negative implications for the liminars (Borg, 2014). For example: on the positive site it has offered more mobility and freedom from obligations, which can trigger innovative thinking and the access and assembly of different disciplinary knowledge. On the negative site, people that hold liminal positions can experience a weakening of power and exclusion from organizational resources, privileges and information.

Liminality as space emphasizes geographical places created as liminal scenes where different logics meet and create ambiguity. It can be, for example, routines, norms, and activities that meet and are renegotiated (Borg, 2014).

METHOD

The approach is qualitative and based on two longitudinal cases (Yin, 2009). The purpose is to contribute to existing literature. The first case study was conducted between 2011 and 2013 and includes observations, meetings and workshops, document analysis, and 14 semi-structured interviews with project members. The project was comprised of a large office building, including an assembly hall and restaurants, with innovative and complex structure and design and a tight construction site putting pressure on, for example, the coordination of suppliers. The project was a high profile collaborative construction project and the building was going to serve as a landmark for the area.

The second case study was conducted between 2015 and 2016 (the study is still partly on-going) and includes observations, seminars and workshops, document analysis and 17 semi-structured interviews with project members. The project is comprised of an urban development project, including several housing and infrastructure projects that will be performed in sequences. Integrated in the urban development projects is also the development of a process innovation, a logistic centre, which will serve all contractors and subcontractors during construction. The ambitions are that the urban development project will serve as role model for future sustainable urban development.

Literature and data have challenged each other during the interpretation process in what Dubois and Gadde (2002) would call an “abductive” process. The interpretation process began with the first case and resulted in tentative findings that were presented at a conference (Karrbom Gustavsson, 2015). Later followed the second case, including an inductive-based search for similar patterns and themes. The whole process was based on thematic content analysis (Bryman, 2008), where inter organizational challenges and boundary spanning actions and roles are examples of themes that developed already during the analysis of the first case. Interpretative case studies are recommended when the aim is to understand processes and practices (Linderoth and Jacobsson, 2008), and they are especially appropriate to develop a deeper understanding of how and why processes develop and evolve over time (Langley, 1999). The selection of cases was based on expert sampling, in combination with possibilities to gain access to sites, project managers and project members.

This method has its limitations. It is only two cases, they are different in size and scope, and the focus has been on new roles, origin from other professional communities of practice. There were of course developments and changes also in

other project roles. The new roles are however of special interest since they challenge traditional construction practices and roles.

FINDINGS

Construction projects are performed under multiple constraints. For example time and cost, as well as technical, contextual and organizational complexity, which the project members continuously strive to make sense of in their daily work practices. While project handbooks argue for standardized roles, the cases studied show that clients have added new roles and new competence to the projects. Here, the new roles will be presented.

New roles in construction projects

When construction project work is performed, individuals perceive and encounter various challenges and opportunities. This is displayed, for example, by the three liminal roles that were developed in the two studied cases: “The partnering manager”, “the logistics specialist” and “the BIM manager”.

“Partnering manager”

The client in the office building-project contracted a consultant during the design phase to serve as “a third independent party” between the client and the main contractor. This consultant, who was called “partnering manager”, had some previous experience of working in construction projects, in particular with focus on installation works. The consultant had also been educated in social sciences, and had a special interest and competence in group-processes. The partnering manager’s work included, for example, interviewing and recommending new project members to the client’s project manager, managing the collaboration process by selecting, presenting and following up various collaboration tools (for example a mutual goal agreement and a repetitive collaboration satisfaction survey), and by designing, facilitating and following up collaboration activities (for example collaborative workshops and social events). The partnering manager described the work as “helping the project meeting its goals”.

“Logistics specialist”

The urban development project has a strong environmental profile and in order to minimize transports in the tight urban area and meet the goals of, for example, reduction of green-house-gases, a logistic centre, which is mandatory to use by all contractors and subcontractors, has been contracted and established in the area. The logistic centre’s activities are designed, promoted and enacted by the “logistics specialist” who have experience and education in logistics and IT from the automotive industry. The logistics specialist’s work includes, for example, introducing the idea and practices of the logistic centre, support project members with expertise in logistics and to help coordinating, for example, project actors, material transports, production and delivery plans, as well as waste, equipment, and machinery. The logistics specialist described the work as “support to the projects” integrating their construction work with the supply chain to enable a more efficient construction process. The project actors, on the other hand, had mixed perceptions of the daily work of the logistics specialist; some viewed the work as contributing to a more efficient project process, while others viewed the work a hinder from doing their work according to common ways of working.

“BIM manager”

In the office building-project, with innovative and challenging structure and design, 3D-object based modelling, or BIM, was implemented for visualisation, calculations, simulations, clash detection etc. The client contracted a consultant with experience in digital modelling and of being a specialist in BIM (Building Information Modelling). The consultant was contracted already during early design phase to act as “BIM manager” throughout the project. The work was comprised of supporting, or “helping and combining the actors”, as the BIM manager described it, by coordinating the different designer’s design work and integrate their respective design models into one joint 3D project model. The BIM manager thus performed the integrative work, combining all the design professions and design practices and their performances before handing the project model over to the contractor at the start of construction work.

DISCUSSION

The three roles: “Partnering manager”, “logistical specialist” and “BIM manager”, are examples of roles that have become increasingly common in construction projects due to the increased focus on collaborative, innovative, inter organizational and digital approaches. All new roles are client initiatives to handle challenges and take advantage of opportunities in collaboration, supply chain and information technology. The client initiatives can also be seen as a trend that to include new competences and challenge traditional practices.

Intermediators

The new roles can be interpreted as, for example, change agents, boundary brokers or spanners that are contracted to drive change in construction project practice and as intermediators, filling professional and organizational gaps, or “in-betweens” in project practice. As intermediators, the “partnering manager” performs intermediation between client and contractor when facilitating interactive workshops, the “logistics specialist” performs intermediation between the construction project’s ways of working and the supply chain’s ways of working, and the “BIM manager” performs intermediation between both the different design professions and the contractor when integrating their respective models into one project model and between different phases when developing a model that can be used in both design, production and operation.

However, the intermediators do more than that in their daily work: They also challenge traditional work practices and professional communities of practice by their existence. They also challenge heuristics and norms by performing their work based on knowledge, language and experience from other professional communities (other scientific fields and other industry contexts). Thus, while performing daily work, they pose both opportunities and threats to the traditional roles, routines and structures within construction project practice.

Liminality and new project roles

There are several studies focusing on the temporary worker, often working “in-between” or as Turner (1982, 27) puts it: being “betwixed and between”. For the individual project worker, this means to work in a position of ambiguity and uncertainty (Beecht, 2011). The conceptual lens of liminality is helpful for increasing our understanding of the new project roles in construction projects. It is also of value for taking the individual project worker’s working conditions as an intermediary

seriously. Being an intermediary, as described above, means the combination of liminality as a process, a position and space.

Liminality as a process means that the new roles have to adjust and handle a constantly changing industry context due to, for example, global market trends, digitalisation of society and sustainability demands.

Liminality as a position means that the new roles are consultancy roles, which includes specific competence that pose a threat to traditional work practices.

Liminality as space means that the new roles share geographical spaces such as collaborative workshops, logistic centres, and virtual integration with integrated models.

Thus, project practice for “partnering managers”, “logistics specialists” and “BIM managers” does not only mean being “in-between” actors, heuristics or professions, or being in liminality as a process, a position or a space. The new roles that are developing in construction project practice become even more complex: when they perform work in project practice, they are practicing all three liminality dimensions at the same time – they practice multiple “in-betweenness”, or multiple liminality (Borg, 2014; Czarniawska and Mazza, 2003).

There is a risk of individuals perceiving project overload (Zika-Viktorsson, 2006; Karrbom Gustavsson, 2016), and/or being in “limbo” (Turner, 1982, 24) when practicing multiple liminality. This risk does, however, also pose opportunities for project practice to evolve outside the heartlands of traditional construction project heuristics. This calls for more longitudinal studies of developing and changing roles and practices to determine how they actually change and how the incorporation process can be facilitated.

CONCLUSIONS

Practices and roles develop and change in construction project practice. This development is taking place through new ways of interacting and organizing project work and by contracting competences from other professional communities of practice. The partnering manager had specialised in social sciences, the logistical specialists had specialised in logistics and the BIM manager had specialised in information technology. These roles – and competences – pose challenges for the individual project worker and also opportunities for the development of construction industry. Previous organisation and management studies on liminality stress that liminality is either a process, or position, or space. This study shows that new roles perform a combination of all three of these: liminality as a process, liminality as a position and liminality as space. This finding contributes with new knowledge on project organising: organising as enacting multiple liminalities, and despite its limitations, this study show that there is need for more in-depth-studies taking processual perspectives on project organising in order to better understand the dynamic, challenging and evolving nature of project as practice.

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