Improvisation in project management: A praxeology

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Abstract

Project management is complex and therefore a fruitful ground for creative, spontaneous and intuitive applications of particular theories to meet the stated objectives in a constantly changing environment. This form of work is defined as improvisation, which describes a pragmatic approach of applying existing theories in novel ways to deliver a successful project. The combination of a solid theoretical knowledge base and improvisational practices is our approach to conceptualise a praxeology of resilient project management. A praxeological mindset is well suited to improve our current understanding of project management towards a more resilient meta-theory of project management that is able to address complexity. This paper contributes to the current debates in project management, as it develops a foundation for bridging theory and practice. Providing sound, practice-related theories stimulates fruitful debate between the various professions of the project-management community, which will help the field to further mature and grow.

1. Introduction

Complexity is an acknowledged issue and projects have become a prominent means of addressing it (Maylor et al., 2008). Over the years, the project-based environment has become more complex, as have project-management theories and their underlying tools, in the form of processes, procedures and techniques (e.g. Flyvbjerg, 2007; Klein, 2013). The increased complexity often renders the proposed tools impractical, which means they are consequently not used in practice, reinforcing a separation between theory and practice. However, complex tools may not be necessary to solve complex problems (Whitty and Maylor, 2009). Rather, a better understanding is needed of what project managers actually do to transcend the prescriptive and universal nature of current project-management theories towards an improved theo-retical understanding of project-management practices, towards a praxeology of resilient project management.

To improve our current understanding of project-management practices we aim to develop a praxeological meta-theory that allows us to use and to benefit from all existing project-management knowledge and apply it in a contextual way (Bredillet, 2010b). Our approach combines multiple schools and improvisational practices to conceptualise a praxeology of project management that is more resilient overall and more suited to addressing complexity (Hollnagel and Woods, 2006). We propose an evaluation grid that combines the number of schools a project manager masters and the degree of improvisation the project manager skilfully applies. This ranges from a rigid application of a single school of project management to a more freely applied set of different schools to the most extreme scenario of all schools applied in a very improvisational fashion (Weick, 1998). Our advances toward a praxeology of resilient project management underlies a pragmatic mindset that argues for more flexibility and smarter ways of achieving objectives (Chelariu et al., 2002).

Our praxeological framework is the foundation for resilience in project management and is particularly characterised by the

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number of schools known and the improvisational ability of the project manager. In other words, the more theoretical knowledge a project manager has (e.g. schools of project-management thought) and the more a project manager is able to use and apply this knowledge in different situations, at times improvising, the more prepared and resilient his project-management practices will be. The theories and including practices serve as a starting point and can either be applied in a strict or linear fashion, or if necessary altered and modified through the project manager's improvisational ability. This consequently increases the number of applications of any particular project-management tool, and thus increases the internal complexity without actually making the tools more complex per se, and thus impractical. According to Ashby's law of requisite variety (Ashby, 1958) the alignment of internal and external complexity is the main aspect for solving complex problems and achieving resilience. Our version of praxeology thus combines theoretical knowledge and improvisational practice to create greater internal complexity towards resilient project management.

To develop a praxeological model of project-management resilience, we begin by introducing projects as complex social systems that are situated and operate within a complex environment. We then proceed to briefly outline the evolution of project management as a field of knowledge, and demonstrate the multiplicity of current project-management theories. Next, we introduce improvisation as a theory based on which we can assess the practicality of existing project-management theories. We then elaborate on the topic of praxeology that highlights the importance of practical knowledge as a means of making sense of projects. This is followed by a discussion about resilience, which allows us to combine the aforementioned ideas. We will conclude by highlighting the importance of practice-oriented knowledge creation, and discuss the implications for theory and practice.

2. Complexity

Complexity is an omnipresent component of most project-management debates, and describes the underlying problem of not-knowing or being able to uncover universal truth (Dehlin, 2008; Joas, 1996). Projects have been described as social complex systems formed out of many components, the behaviour of which is emergent (Whitty and Maylor, 2009). Put simply, the behaviour of complex systems is not simply the addition of the behaviour or its components; rather, complex systems consist of social actors and processes of social interaction often mediated by (technological) artefacts, or tools (Lundin and Söderholm, 1995). When talking about projects and complexity, it is therefore important to include social and technical dynamics (Maylor et al., 2008). For Cicmil and Marshall (2005), "projects involve complex communicative and power relations among actors, ambiguity, and equivocality of performance criteria, and change over time" (in Maylor et al., 2008, p. S17).

Projects are social constructs and must therefore be addressed accordingly. Conventional project management as well as project complexity are approached in a rational (Lundin and Söderholm, 1995), normative (Melgrati and Damiani, 2002) and positivist manner (Smyth and Morris, 2007) so that

complexity is addressed through more thorough and detailed planning (Whitty and Maylor, 2009). The underlying principles that constitute the conventional project-management approach are mechanistic, absolute and universal, and thus not suited to address modern-day complexity (Cooke-Davies et al., 2007). Social complexity cannot be addressed in such a way. Nevertheless, as Whitty and Maylor (2009) argue, we do not need complex tools to solve complex environments. We have a multiplicity of existing project-management theories, all of which provide valuable tools for managing projects successfully. Hence, following Whitty and Maylor's (2009) research question, we would like to investigate how we can use and apply existing toolsets to address modern complexity.

This paper has a focus on the 'social' calls for stepping out of the linear patterns of traditional project management (Klein, 2012). This means working with the existing tools and applying them contextually to solve problematic situations in projects. Social practices perceive human action as the "process of perpetual reproduction of identity […] with the potential for transformation" (Cooke-Davies et al., 2007, p. 57). This transformation is achieved through spontaneous, context-dependent and novel utilisation of tools; put simply, improvisation with tools being artefacts and symbols, technology, software or project plans. Improvisation does not represent a lack of knowledge, rather it stands for expertise, which allows project managers "to step out of the matrix of the known and to seek solution innovation, to take up new perspectives and go new ways" (Klein, 2012, p. 5).

This ability to address complexity is congruent with the concept of resilience, which describes an organisational ability to recover from a shock, insult or disturbance (Klein, 2012). Hence, resilience becomes the answer to the problem of complexity, with improvisation being the means to this end by 'bending' the existing structure and processes. Being resilient means to be aware of complexity, and to incorporate and tackle its impact to deliver a successful project (cf. Cunha and Cunha, 2006). Resilience is a fundamental cornerstone of a social system, as one naturally reacts to outside forces in order to achieve a goal. More often than not, one moves outside and beyond the initially developed plan to deal with the unexpected, even though one may not be aware of it.

We argue that modern projects are becoming increasingly complex, and to be resilient in such an environment means being able to deal with the unknown through transforming and adjusting existing processes. Ashby (1965) therefore proposes the law of requisite variety, which clearly outlines that only complexity can absorb complexity. Hence, the internal project management system must have enough complexity (and variety) to address the complexity (and variety) of the external environment. As Klein states, "the entire paradigmatic set of [project management] models, methods and instruments of management science basically does nothing more than significantly increase the internal complexity of management" (2012, p. 6). Hence, we argue that the multiplicity of existing project-management knowledge, in the form of schools of thought and their underlying processes, provide enough complexity – when applied contextually – to address the external complexity of the system in which we operate.