Rethinking dichotomization: A critical perspective on the use of "hard" and "soft" in project management research

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Abstract

This paper elaborates on the categorization – dichotomization – between "hard" and "soft" in project management research. This categorization is becoming more increasingly used in project management research for example by stating that some projects are "hard", while other projects are "soft", that some project skills are "hard", while other project skills are "soft" etc. The aim is to discuss this dichotomization as an example of hierarchization – a power struggle between opposites – within project management research and literature and acknowledge the effects for project management research and practice of unreflective upholding of this dichotomy. We provide a critical review and discussion of stage-gate models as an example of "hard" project management approaches, and agile methods as an example of "soft" approaches to project management and acknowledge that in project management practice, it seems as if "hard" and "soft" approaches are most often combined. Hence, this dichotomy seems to be upheld by the research community while practitioners show a more holistic perspective to project management.
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1. Introduction

The terms "hard" and "soft" are commonly used in project management research today. Some projects are for example perceived as "hard" while other projects are "soft" (Atkinson et al., 2006); there are closed systems approaches that are described as "hard" and systems thinking such as SSE that is "soft" (Morris, 2002); the generic stage-gate model, based on scientific methods and engineering, has been interpreted as a "hard" approach (Morris, 2002) whereas the agile method has been interpreted as a "soft" approach (Howell et al., 2010). And while "management" generally is perceived as "hard" and "leadership" is perceived as "soft" (Söderlund and Maylor, 2012), some dimensions of project management are perceived as "hard" while others are "soft" (Crawford and Pollack, 2004;

Frame, 2002; Howell et al., 2010). The "human-side" of project management is for example characterized as "the 'soft' factor" by Liu et al. (2011). In summary, "hard" and "soft" are used to distinguish between various dimensions and features of projects and programs, such as approaches, methodologies, systems, goals, outcomes, aspects, criteria, measures, costs, situations, issues, knowledge, ideas, logic, values and skills and the dichotomy has even been used to create a framework through which projects can be described (Crawford and Pollack, 2004).

However, as previously discussed by Crawford and Pollack (2004) there is no distinct line between "hard" and "soft" when it comes to projects, project management, project management skills, etc. Even though "hard" and "soft" are treated as a dichotomy in everyday speech, it is not a true dichotomy, but two opposites on a continuum. In reality, the two approaches should thus be understood as a mix of aspects (Crawford and Pollack, 2004). Hence, the conceptualization of projects and project management practice as "hard" or "soft" needs to be used with care. The increased use does not seem to indicate that this is the case though.

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In fact, new methodologies regarding project management such as agile methodology, are also described according to this categorization; agile methodologies have for example been called "soft" — whereas the more traditional stage-gate models have been said to be "hard" (Howell et al., 2010; Morris, 2002). And regardless how fruitful an analytical tool in project research the dichotomy may be, the dichotomy of "hard" and "soft" is — just like other dichotomies used to describe various dimensions and features of projects, such as masculine–feminine (Buckle and Thomas, 2002; Lindgren and Packendorff, 2006) and private–professional (Packendorff, 2002) — a binary that not only makes a separation between two opposites, but also forms a hierarchy where one is given primacy over the other (cf Knight and Kerfoot, 2004; Smith et al., 2000). Two opposites will never stay on the same level and remain void of attributed values (cf Gramsci, 1988). This means that the unreflexive upholding of a dichotomy endangers an insightful analysis of project practice and the development of project management theory, and that the hard–soft dichotomy thus may function as a thought-stopper (cf Faulkner, 2001; Nubiola, 2008; Truss et al., 1997). In addition, since theory is always a child of its time and in need of reconsideration and reconstruction (Lundin and Söderholm, 2013) there is a constant need for critical reflection of research practice, including the dichotomies that are used.

The purpose of this paper is thus to explore and problematize (Sandberg and Alvesson, 2011) the dichotomy hard–soft in order to provide new insights into the development of project management research. By doing so we take a critical perspective (Cicmil and Hodgson, 2006; Hodgson and Cicmil, 2006b), adding to the knowledge regarding hegemony in project contexts (cf Hallin and Karrbom Gustavsson, 2010).

We do so by first elaborating on the concept of dichotomies in social science research, and then more specifically on the hard–soft dichotomy as used in project management research. Then we illustrate our argument by analytically comparing two different generic methods/models for managing projects, the stage-gate-model and agile methodology. Through the comparison we answer the question of what can be interpreted as "hard" and "soft" in stage-gate versus agile approaches. The comparison illustrates the blurredness of the concepts when applied to the two generic models and highlights that which is in between the two poles. Finally, we discuss the consequences of an unreflexive upholding of the hard–soft dichotomy, and the possible reasons for why this is done.

2. Dichotomies in social science research

A dichotomy may be understood as any splitting of the whole into two non-overlapping parts, i.e. into two mutually exclusive parts or categories. The two parts are not only complements, but also opposites from a logical perspective. In social sciences, a dichotomy may however also denote something that is perceived as paradoxical or ambivalent, even though the pair is not a dichotomy according to traditional logics (Oxford English Dictionary). A dichotomy can hence be performed in daily practice, even though it is not a dichotomy logically speaking (cf Rich, 1971/2001).

Even though there are no dichotomies in the real world – the dichotomy is made through logical reasoning (Nubiola, 2008) – the tendency to dichotomize is deeply embedded in our way of thinking (Jenks, 1998), and in social science noun-dichotomies such as "life" and "death"; "theory" and "practice"; "public" and "private" as well as adjective-dichotomies such as "male" and "female"; "real" and "fictional"; "hard" and "soft" are abundant. This is not strange, since we construct meaning by observing what distinguishes categories and thus, it is the differences between them and not the similarities that carry meaning (Bateson, 1972). The dichotomy enables us to establish arguments from two opposite positions (Jenks, 1998). When doing research, for example when analyzing project structure, practice or performance, researchers adopt this way of sense making; they categorize by separating and comparing.

2.1. "Hard" and "soft" in project management research

A dichotomy that has become increasingly more common in project management research is "hard" and "soft", judging from the publications in this journal. Crawford and Pollack reported in 2004 that between 1988 and 2003 there were more than 25 separate articles making references to the terms "hard" or "soft" in the International Journal of Project Management (IJPM). Our count shows that during the last years the use of the terms "hard" and "soft" (excluding "software") has increased steadily. In 2009 there were 29 references to these adjectives in IJPM; in 2010 there were 23; in 2011 there were 36 and in 2012 there were 38. Even though the focus here is not to do a thorough analysis of these references, but to acknowledge the increased use of the terms "hard" and "soft", a quick look through the articles indicates some tentative trends: the dichotomy of "hard" and "soft" is used for example when searching for project success factors (for example Stevenson and Starkweather, 2010), when introducing new approaches to implement project management (for example Shi, 2011) and when arguing for the value of project management research and education (for example Söderlund and Maylor, 2012).

According to Crawford and Pollack (2004) and their analysis of the use of the concepts "hard" and "soft", the concepts are commonly used in a loose and ambiguous way in practice as well as in research. This includes references to "hard" or "soft" projects, programs, approaches, methodologies, systems, goals, outcomes, aspects, criteria, measures, costs, situations, issues, knowledge, ideas, logic, values and skills. Whereas "soft" issues have been identified as key factors for success in projects, what constitutes a "soft" issue is not clear. Generally, "hard" methods are rooted in positivist and realist perspectives though, and the search for objective knowledge; while "soft" approaches steam from interpretivist and constructivist perspectives, emphasizing the intersubjective creation of knowledge (Crawford and Pollack, 2004). The "hard" methods focusing on closed systems approaches including Systems Engineering, System Analysis and early Systems Dynamics, have influenced the development of project management by adapting "hard" assumptions about the world (cf Morris, 2002), while interpretivism is central for the "soft"