Chapter 7
Agile Project Management: Is Motivation Theory the Missing Link?

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ABSTRACT

Agile project methods are said to encourage flexibility and efficiency in Information Systems Development projects. The questions of how, why, and in what contexts agile practices work remain to a large extent unanswered by research. The authors argue that contemporary theory on human motivation and creative work, such as the Self-Determination framework (Deci & Ryan, 1985) and the Progress Principle (Amabile & Kramer, 2011), should be applied in such research. Using the Progress Principle as the primary theoretical lens, the authors present an evaluation of one of the popular agile methods, namely Scrum (Schwaber, 2004). Findings from an ongoing research project on agile praxis indicate that the implementation of agile practices may be instrumental in fostering a motivational culture conducive to a heuristic as well as creative performance. This analytical approach contributes to a better understanding of the aspects of the agile practices that are critical to a useful implementation.

INTRODUCTION

Agile practices for project management aim at combining flexibility and efficiency for Information Systems Development (ISD) projects. Agility in ISD projects is a response to the well-known shortcomings of the traditional plan-driven waterfall approach in projects where requirements are often changed and the product itself is too complex for detailed specification of its development in advance. (Boehm & Turner, 2004; Cockburn, 2002; Larman & Basili, 2003; Ågerfalk & Fitzgerald, 2006)

In the 1990s, several agile methods for ISD “evolved from the personal experiences and collective wisdom of the consultants and thought leaders of the software community” (Dingsøyr, Nerur, Balijepally, & Moe, 2012, p. 1217). Some

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of the most well-known of these methods are Scrum (Schwaber, 2004), Extreme Programming (XP) (Beck, 2000; Beck & Andres, 2005), DSDM (Stapleton, 1997), FDD (Coad, Luca, & Lefebvre, 1999) and Crystal (Cockburn, 2002). The term “agile” was introduced through the Agile Manifesto (Beck et al., 2001), which was published in 2001 as an attempt to capture the common grounds for several of the ISD project management methods and programming practices in this movement (Larman & Basili, 2003).

The ISD community at large is enthusiastic and the positive effects of agile practices are often more or less taken for granted. In the last decade, agility has become the hype of ISD. (Cockburn & Highsmith, 2001; Conboy, 2009; Highsmith & Cockburn, 2001)

However, the questions of how, why, and in what contexts agile practices work, remain to a large extent unanswered by research (Ågerfalk & Fitzgerald, 2006). This presents an implementation problem to the practicing manager. Agile practices are based on a small set of general attitudinal and behavioral values (See Beck et al., 2001). Agile methods are designed to suggest the ideal practical arrangements and procedures (such as specific daily meeting procedures and office space layout) that are believed to realize the underlying values and thus assumed to influence project participants to be more flexible and efficient. One of the major guiding principles for agile practices is that of self-management; the suggested ideal practical arrangements should continuously be adapted to local needs and experiences, even during the course of a single project. The consequence is that all applications of agile practices – agile praxis – are local adaptations: to the organization, to the single project, and even to a particular phase of a particular project (“Practices” and “praxis”: see Whittington, 2006). Without sufficient understanding of how, why, and in what contexts agile practices work, the practicing manager (or the IS developer) can only influence such adaptations based on intuitive and anecdotal knowledge.

The Rationale for Applying Motivation Theory in Agile Research

In this paper we suggest and argue for the use of contemporary theory on human motivation and creativity in developing the necessary understanding. The rationale for this suggestion can be outlined as follows:

The challenges in ISD projects are closely related to finding solutions to complex problems and this requires the developers’ creativity; creativity is usually referred to as “the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints)” (Sternberg & Lubart, 1999, p. 3).

Individual creative performance can conceptually be described as a process divided into consecutive steps, from the identification of the problem or task to be solved, through preparation by building up and/or reactivating stores of relevant information and response algorithms, response generation, to the testing of responses against factual criteria. This sequence is repeated partly or completely until a suitable solution is arrived at or the process is abandoned. (Amabile, 1983; 1996)

The performance in each step is determined mainly by the individual’s domain-relevant skills, access to creativity-relevant processes, and his or her task motivation. Task motivation is the most influential factor in the process, determining “the difference between what a person can do and what he or she will do.” (Amabile, 1983, p. 366. Italics added) “Motivation concerns energy, direction, persistence and equifinality – all aspects of activation and intention” (Ryan & Deci, 2000, p. 69). Without motivation, an individual does nothing or acts unintentionally (See e.g. Deci & Ryan, 1985, pp. 63ff, on the “amotivation” state).

Motivation is in turn influenced by social and environmental factors (Amabile, 1983; 1996; 1997; Woodman, Sawyer, & Griffin, 1993). Agile practices can be described as sets of social and environmental arrangements that are believed