“Standard Bibles” and Mediators as a Way of Software Development Organizations to Cope with the Multiplicity and Plurality of Standards

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ABSTRACT

This paper focuses on the appearance and implementation of process standards in software development organizations. In particular, it shows interest in the way organizations handle the plurality and multitude of process standards they are faced with in a modern working environment. The process how organizations respond to environmental challenges like the increasing demand for process standards we call metastructuring. Based on the metastructuring approach by Orlikowski et al. (1995) it explores the process of internal standard-use mediation by an in-depth single case study. The case company develops step by step a dedicated institutional entity reacting to standard complexity and customer pressure. As a result, mediators shape extensively the standard use of the employees in the case company. They develop a process library which integrates different standards. This work sheds light on how this metastructuring process is accomplished, which areas of metastructuring regarding process standards can be found and explore different types of metastructuring activities by the involved standard-use mediators.

1. INTRODUCTION

The multiplicity and plurality of standards is one of the challenging issues modern working organizations are facing nowadays. In the light of the recent economic developments and the imposed dependency of economic decisions on standards it is important to elaborate on these challenges, changes and risks which confront organizations within an audit society of organized uncertainty (Power, 1997). In this context, the article will contribute to the question of how organizations and other actors respond to and cope with the consequences evolving from the multiplicity and plurality of process standards. We chose an exploratory study on the micro

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level within a single software development organization.

Research on standards has many facets. On the one hand, we distinguish research on standards focusing on the design mode and, on the other hand, the use mode of standards (Orlikowski, 1992). This distinction emphasizes the occurrence of social construction, both, before and after a standard is enacted in an organization. It refers to processes of setting and following standards. The design mode describes the process of standardization on the standard setting bodies, before and after a standard is enacted in an organization. It refers to processes of setting and following standards. The design mode describes the process of standardization on the standard setting bodies, before and after a standard is enacted in an organization. It refers to processes on how these bodies determine the content of standards, as well as, how they convince potential stakeholders to certify their organizations (Egyedi, 2008; Furusten, 2000; Marimon et al., 2009; Tamm Hallstr09, 2004).

For this paper, the use mode of standards is of special interest. The use mode literature on process standards is chiefly shaped by the research on the ISO 9000s and ISO 14000s process quality norms, culminating in the following two topics in the early 2000s: Firstly, there is an extensive amount of literature about the motivation and barriers of the implementation of standards (Boiral, 2003; Niazi et al., 2005; Zeng et al., 2007). This literature focuses on the influence of the implementation of process standards on product quality, on the organizational performance and the obstacles and limitations while putting a standard into effect. Secondly, there is a discussion around process standards that reflects on the requirements for a ‘good’ organization. According to different authors, this could be measured through customer satisfaction, defined responsibilities, the reduction of production and management mistakes, quality assurance, documentation of all processes, decisions and related audits (Lawrence and Phillips, 1998). Finally, little research has been done on the social construction of standards, in particular, on standards as a form of regulation or as a code of corporate governance and on the functioning of these code regimes (Jakobs, 2006; Power, 1997; Seidl, 2007; Wieland, 2005). Thereby, code regimes are specific types of standards which regulate corporate behavior based on a ‘comply-or-explain rule’. With it, organizations declare publicly to what extent they follow or deviate from a specific capital market mechanism. Seidl (2007) investigates code regimes in view of parameters that influence the effectiveness of a code regime. Important for our understanding of standards is here the conclusion that the de-facto content of a standard is determined to a significant extent by standard followers and not by standardization bodies.

Besides these studies, we can resume that the social construction of standards by organizations plays a minor role on the use mode of standards in the existing research. Thus, we deem it as important to elaborate on this subject since we do not sufficiently know how organizations themselves adopt multiple standards in reaction to a number of institutional pressures. With this article we intend to provide empirically insights on a micro level addressing internal issues of standard multiplicity and plurality.

The contribution of this article is threefold. Firstly, as mentioned above, we elaborate on the institutional answers how organizations deal internally with the plurality and multiplicity of standards. In contrast to standardization by organizations and standardization as organization, we are dealing with the standardization of organizations. Standardization of organizations relates to the question of “how standards are adopted, diffused, implemented, avoided, and altered in the course of their implementations” (Brunsson et al., 2012, p. 614).

Secondly, in particular, we focus on an empirical phenomenon that was not described in the standard literature before. We direct the reader to standards are adopted, diffused, implemented, mediators and their metastructuring activities (Orlikowski et al., 1995). In consequence of the development of a so called “standard bible” by the software organizations, standard-use mediators occur in organizations as a response to a multi-facet standardization pressure in the institutional environment of organizations. We consider this phenomenon as important since
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