Chapter XI
Recontextualising Technology in Appropriation Processes

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ABSTRACT

For a technology use to be successful, the circumstance of its introduction into a use context—or recontextualization—is crucial. The users of a technical artifact play an active role in this process: They appropriate the technology, that is, they explore a new technology and choose how to integrate (or not integrate) it into their practices and (work) routines. This chapter discusses a variety of factors that influence technology artifact appropriation. It illustrates the process of recontextualizing technological artifacts, and common pitfalls associated with it, as well as the protagonists doing the appropriation. For empirical illustration, case studies from different use contexts are presented, including some "lessons learned" drawn from them. Concluding, further research perspectives and challenges are discussed.

Life is what happens to you while you're busy making other plans.

—John Lennon

INTRODUCTION

Imagine the following scenario: *XNET is a virtual organization consisting of several individual and small-to-medium-sized enterprises in the consulting business. To strengthen their market position, the business partners venture for joint acquisition of customers and projects. Since the individual partners reside and work distributed geographically, they decide to establish a knowledge management system and intranet to enhance communication and information flow. After examining several options, a widely used off-the-shelf software product is chosen, which nevertheless allows for customization. A task force is installed that produces checklists, guidelines, and proposals for use. They also offer*

individual support and regularly monitor use. As the intranet turns out to be barely used, another software product is chosen and installed with quite some effort but equally low success, causing quite a bit of frustration. Finally, as part of a research project, a third groupware system is developed according to the network's needs, but, usage reports remain disappointing. There are almost no contributions besides those posted by a few active network members, trying to foster use. The other members seem to mostly ignore the system, preferring communication via e-mail or face-to-face—just like they did before the new software was introduced.

This scenario has not been made up; it was adapted from a research project on technology development and use for virtual organizations (Janneck & Finck 2006a, b, Janneck, Finck & Obendorf 2006, Finck & Janneck 2008). It is a common experience that new technology—especially information technology—is not used as expected, less than expected, or even not used at all (cf. Huysman et al. 2003, Ciborra 1996, Orlikowski 1996, Bossen & Dalsgaard 2005). This is often a frustrating experience: Apart from not achieving the intended benefits, possibly pricy investments are lost.

To ensure usability and suitability for the use context, state-of-the-art software engineering approaches stress the importance of involving users in the design process, e.g. participatory design (PD) or prototyping methods. Nevertheless, software engineering methods and research focus mostly on the phase before new information technology is put to regular use, which has been termed *decontextualization* phase (Krause, Rolf, Christ & Simon 2006, Simon, Janneck & Gumm 2006, Sesink 2003). However, for successful software support, the circumstances of its introduction into a use context and the development of use practices are equally crucial—a process analogously understood as *recontextualization* (Krause et al. 2006, Simon et al. 2006, Sesink 2003).

The recontextualization phase is accompanied by user activities known as *technology appropriation* (cf. Orlikowski, Yates, Okamura & Fujimoto 1995): Appropriation is "the process by which people adopt and adapt technology, fitting them into their working practices" (Dourish 2003). Thus, technology appropriation is an active endeavor of users who explore new technologies and choose how to integrate them into their lives. Appropriation might change technology (use): People might decide to use it differently than intended by the developers (maybe inventing highly creative ways of "misuse"), or not to use it at all. They might also decide to alter the technology itself, for example by changing the preset configuration of functions or modes of display—an activity known as *tailoring* (cf. Pipek 2005).

Appropriation can be an individual as well as a cooperative activity, with groups of users discussing and negotiating terms of usage. For groupware use in cooperative working and learning scenarios, collaborative appropriation has been described as an important success factor (cf. Huysman et al. 2003, Pipek 2005).

Appropriation is closely tied to organizational change (cf. Wulf & Rohde 1995, Orlikowski & Hofman 1997, Balka & Wagner 2006): Introducing new technology to organizations always brings about changes in work practices, and often also in organizational structures and roles. Mastering such changes is often mediated by appropriation activities: On the one hand, implications of technology use might not become apparent until people actually start using it. On the other hand, providing support for the use of new technology can help to increase acceptance for changes accompanied with it.

In the following sections, several theoretical perspectives on appropriation will be explored, illustrating the *process* of *recontextualizing* technological artifacts as well as the *protagonists* doing appropriation work.

For empirical grounding, two case studies will be presented to illustrate the process and protagonists of technology appropriation in two different settings.

A further section discusses some 'lessons learned' that can be drawn from the case studies and implications for sociotechnical systems design.

Concluding, further research perspectives and challenges are discussed.