

## Chapter 7.2

# Tracing the Many Translations of a Web-Based IT Artefact

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### ABSTRACT

This chapter adopts an interpretive, case based research strategy to discuss the centrality of meaning in implementing an Internet-based self-service technology. Actor-Network theory (ANT) is used to describe the complex evolution of a Web-based service at a healthcare insurance firm. Using processes of inscribing, translating and framing, this chapter explores the emergence of the technology from 1999–2005 using three technological frames, ‘channel of choice’, ‘dazzle the customer’, and ‘complementary channel’ as episodes of translation. ANT demonstrates that the Internet-based self-service technology at this particular healthcare context emerged out of many unplanned negotiations and mediations with both human and non human actors. Finally, this chapter argues that ANT’s socio-technical lens provides a richer understanding of the meaning of Internet-based self-service technology within a multi-channel context.

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### INTRODUCTION

The rational and conventional view of e-commerce suggests that Internet-based self-service technologies are poised to provide potential added value to a healthcare firm’s business goals as well as service delivery to customers (Dabholkar, 1996; Dabholkar and Bagozzi, 2002). After all, such technologies enable healthcare firms to reach beyond traditional boundaries, thus providing myriad administrative and commercial opportunities. However some research suggests that potentially valuable customers may perceive barriers to interaction with technology-enabled service systems (Uzzi, 1999). Advocates of this view argue that the electronic service delivery process often does not address the various needs, capabilities and concerns of the user, as they are designed mainly with the aim of achieving operating efficiencies for the firm. Furthermore, organisations appear to be paying little attention to existing relationships which the technology wishes to replace. In addition, a num-

ber of investigations reveal that customers are unwilling to replace face-to-face contact with electronic alternatives. It is not surprising that another stream of research indicates that face-to-face relationships may be more cost effective than virtual relationships (Granovetter, 1985). Clearly, recent studies show that rational and economic models of e-commerce are an oversimplification of what actually happens in the socio-technical environment. It appears that firms tend to ignore important contextual dynamics which may provide a deeper understanding of self-service technology implementation. Therefore the main premise underlying this chapter is to emphasise that the subjective insights of designers and users are crucial if we are to understand human conduct in the use of Web-based IT artefacts.

This chapter presents results from an interpretive case study investigation at a major South African healthcare insurance organisation, focusing on 1999-2005 as the years most crucial to its SST implementation. The chapter is organized as follows: The section on the conceptual framework explores various concepts and theoretical elements from Actor-Network theory (ANT) that suit the exploration of complex IT artefacts. The next section describes the case study approach for understanding the emergent nature of SST implementation. The results lead to an analysis of the SST implementation phenomenon. Finally, the last section discusses the implications of these findings for the study of Web-based IT artefacts and assesses the utility of the ANT approach for understanding the implementation of innovative Web-based self-service technologies.

## **CONCEPTUAL FRAMEWORK**

A conceptual framework can be defined as the structure, the scaffolding, or the frame of a study (Merriam, 1998). Some researchers refer to it as the lens through which we view the world (Walsham, 1995; Orlikowski and Baroudi, 1991) or the terri-

tory to be explored (Carroll and Swatman, 2000). As already alluded to, an SST implementation has both technical and social merits and it might be more appropriate to try to overcome the distinction between technical and social to improve our understanding of this phenomenon. Drawing on key concepts and assumptions from the social shaping of technology this chapter draws on the actor-network (ANT) approach to understand the heterogeneous and interrelated character of social and technological components (Callon and Law, 1982). ANT contends that both social and technical determinism are flawed and advocates a socio-technical account in which neither the social nor the technical are privileged. According to ANT, what appears to be social is partly technical and what appears to be technical is partly social (Law, 1992).

In this way, ANT differs sharply with views purporting purely technical or purely social relations. Structuration, another popular social theory used to understand IT artefacts is unable to unpack how technology regulates society and society's reaction to technology with the same level of precision as ANT (Schultze and Orlikowski, 2004). ANT assumes that when humans interact with other humans, these interactions are mediated through non human artefacts of various kinds, and asserts that such interactions are mediated through additional networks of non human artefacts and humans. Hence, if material artefacts in these networks disappear, so to would "social order". ANT also investigates how actors enlist other actors into their world and how they bestow qualities, desires, visions and motivations on these actors (Latour, 1996). Thus ANT offers a unique approach to theorising innovations such as self-service technologies and their implementation; an approach that resists essentialist notions inherent in the conventional treatment of self-service technologies.

Recently, Faraj, Kwon and Watts (2004) built on actor-network theory a basis for studying the complex evolutionary processes of modern

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