

## Chapter 8

# Grounded Theory in Practice: A Discussion of Cases in Information Systems Research

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### ABSTRACT

*A growing number of Information Systems (IS) research is drawing upon Grounded Theory (GT), as an inductive research methodology particularly suited to the development of theory that is grounded in rich socio-technical contexts that are understood through the analysis of data collected directly from those specific environments. Studies in IS are eminently applied research projects; therefore, GT seems the ideal approach to enable rich understandings and inductive explanatory theories on the socio-technical human activity systems studied by the discipline. Nevertheless, GT is still an underutilised methodology in IS and several scholars critique the scarcity of theories developed specifically to account for IS phenomena. This chapter makes a contribution to IS research through providing a discussion of GT's application in the field by presenting an outline of the method's modus operandi and a case-based overview of its use in three different IS research projects in the fields of patient knowledge sharing in healthcare environments, IS strategic planning in academic libraries, and E-Learning adoption. As the potential of GT for IS research remains to be maximized, the objective of this chapter is to counter the lack of explicit and well-informed views of GT use in this discipline, whilst sharing lessons learned from the use of the method in context-dependent interpretive studies.*

## INTRODUCTION

*If complex organizational behaviors are modeled as if they are simple, well understood, deterministic systems, or even as stochastic systems, then the resulting models will tend to be insignificant* (Daft & Wiginton, 1979, p. 187).

The opening quotation of this chapter establishes the rationale for theory development as a response to emergent IS phenomena. Existing theories may be partly applicable or hold an explanatory capacity of some degree. However, because emergent IS phenomena are essentially ever-evolving novel socio-technical topics (Fernandez, et al., 2002), prior theoretical studies may not fully account in scope and richness of meaning for what is going on in the field. Consequently, deductively extending existing frameworks may seem like a parsimonious application of cumulative scientific knowledge, but it can be equally frustrating if, as Daft and Wiginton (1979) suggest, established models prove to be insignificant when applied to a context alien to the one they originally respond to. It can also happen, as Lehmann (2010) argues, that the available “body of literature is narrow, mostly conjectural [or] often weak in terms of detailed predictive power” (p. 23), therefore limiting its use for the formulation and verification of hypotheses. Nonetheless, this would be true for any social science and, in particular, to any discipline concerned with socio-technical phenomena. This would also be true even if the research were of a more quantitative and positivist nature due to the continuously changing and unpredictable nature of human-activity systems.

In IS, “what is going on” is usually a composite social entity, as information systems are hybrids of human, social and technical research objects (Kroenke, 1992). In other words, the development of information systems is a human-oriented process that involves multiple stakeholders, hence the two-layered position advocated in this chap-

ter. Firstly, we concur with Hansen and Kautz’s (2005) argument that “it is impossible to separate the action itself from the organizational or social context in which it takes place,” which invites the IS researcher to ground the inquiry at the heart of the social context where the interaction of actors builds up a given social reality. Secondly, the previous assertion leads us to propose that IS research should seek to “generate empirically valid theory by systematically exploring the new phenomena and its players in non-simulated environments” (Fernandez, et al., 2002, p. 111).

Therefore, in IS theory building usually means the systematic extraction of the factors that explain and characterise an empirical phenomenon. The data that accounts for that phenomenon should be grouped in clusters of meaning, aggregated into categories that form the basis of a descriptive and explanatory framework that is fit to context. According to Dey (1999), this implies focusing on “how individuals interact in relation to the phenomenon under study” (pp. 1-2), because a theory should assert “a plausible relation between concepts and sets of concepts,” whilst being derived from data acquired through data collection strategies such as interviews, observations or document analysis.

The GT method, initially proposed by Glaser and Strauss (1967), incorporates iterative interaction with the social-technical environment under study, through direct contact with either human informants or other resources. This interaction results in a closely linked process of data collection and analysis, and is operated through coding, memoing, and constant comparison at each stage of the analysis. The theory construction in the methodology is based on the construction of analytical codes and concepts from data (not from logically deducted hypotheses). These procedures are well explained and defined and offer the IS researcher a sense of assurance by means of a concrete set of methods that promise validity (theoretical saturation) and lead to the

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