Chapter I
Conducting Research in Information Systems:
An Epistemological Journey

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ABSTRACT

This chapter offers a journey through the spectrum of epistemological and ontological perspectives in IS (IS), offering the necessary background to the researcher who has to explore diligently the research methods toolkit available and then make a choice. It does not attempt to solve any problems in existing paradigms or present any new ones, but systematically examines and clarifies the underlying set of ontological and epistemological assumptions that underpin every research activity. After a brief discussion on ontology and epistemology, the IS field and its underlying paradigms are discussed and what follow is an analysis of positivism, interpretivism, and a presentation of selected interpretive approaches. Hence, this chapter serves as a guide to be followed by researchers who would like to clarify and evaluate their views regarding epistemological and ontological assumptions, initiating a philosophical enquiry of their own. Consequently, it contributes in aiding the researcher in building a solid background upon which valid and rigorous research in the IS field should be anchored.

INTRODUCTION

Any research activity seeks valid knowledge. This validity stems from community acceptance, that is, an agreement on a set of values which have produced knowledge claims that have withstood the test of time. This set of values is referred to as a "research paradigm." Paradigms do mutate, evolve, or get discarded completely. However, this does not happen overnight due to the already existing cumulative tradition, which sets a pace in their evolution (Kuhn, 1970).

In the IS field, research paradigms and research, although already established through the last 10 years (e.g., Benbasat & Weber, 1996; Klein & Myers, 1999; Wade & Hulland, 2004), are still being under scrutiny and dispute, continuing to be haunted by feelings of inadequacy, and even leading many IS researchers to the lament that the IS field lacks a theoretic core, and thereby to the so-called "crisis" (Benbasat & Weber, 1996; Benbasat & Zmud, 2003; Ciborra, 1998a; Markus & Lee, 1999; Stowell & Mingers, 1997). Numerous research methodologies and approaches for analysing, summarizing, and presenting sets of empirical data and conclusions have been proposed within these paradigms (Becker & Niehaves, 2007; Chen & Hirschheim, 2004; Orlikowski & Baroudi, 1991). However established these may be, the lack of systematic analysis regarding their epistemological assumptions is apparent (e.g., Becker& Niehaves, 2007; Fitzgerald, Hirschheim, Mumford, & Wood-Harper, 1985; Mingers, 2001a), leading the researcher to question, at least, their applicability in the context of his own research purpose and context.

Should we, then, as seekers of valid knowledge and parts of fast changing organizational realities embrace teleology and strive to seek for "written-in-stone" cause-effect relationships and universal truths that underpin positivism's deterministic notions? Or should we not, instead, be looking for epistemological frameworks (or applied epistemologies) which in a given context through the acquisition and systematisation of knowledge, induce awareness to those very changing realities and enable us to make connected statements that are valid and might act as stimulants for corrective action?

The purpose of this chapter is to offer a sound epistemological base to the research methods toolset available to IS researchers, addressing the largest possible spectrum of epistemological issues relevant to the field. This is important for any research endeavour, whether it is placed within a social or applied science domain; even so in the case of IS due to the multidisciplinary nature of the field. The plethora of methodological choices and tools that the new researcher will have to choose from may at times result to confusion and make an otherwise interesting and challenging task, rather daunting and dull. In this vein, this chapter does not attempt to solve any "problems" in existing research paradigms, or to offer a "new" paradigm simply because there are not any "old" ones; rather, it takes the reader to an epistemological journey, systematically examining and clarifying the underlying set of ontological and epistemological assumptions which underpin every IS research paradigm. It touches areas and unearths these paradigms, by critiquing their already existing assumptions. Moreover, it supports a move away from the conventional positivist notions, which seem to dominate the IS field. It does so by considering the ever-changing nature of IS and holding the assumption that as a successful business is constantly adapting to change, so should its IS.

The proposed epistemological journey has a twofold goal: it is useful as an example to any aspiring IS researcher who is faced with the task of having to clarify and form conclusions and views as to what constitutes valid knowledge. Additionally, it offers the opportunity to the researcher to compare and evaluate existing research paradigms, initiating a dialectic process, or in other words a philosophical inquiry. Hence, the contribution of this chapter lies in drawing