

Chapter IV

Critical Realism

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ABSTRACT

Different strands of non-positivistic research approaches and theories, for example, constructivism, grounded theory, and structuration theory, have gained popularity in the information systems (IS) field. Although, they are managing to overcome some problems with positivism and structural theories they are not completely without problems. This chapter puts critical realism forward as an alternative philosophical underpinning for IS research. Critical realism starts from an ontology that identifies structures and mechanisms, through which events and discourses are generated, as being fundamental to the constitution of our natural and social reality. The chapter presents critical realism and how it can be used in IS research. Examples of how critical realism have been used and can be used in research aiming at generating new IS theory, IS evaluation research, and IS design science research are provided.

INTRODUCTION AND BACKGROUND

Positivism seems to be dead in contemporary philosophy of sciences, but it is still very influential in the Information Systems (IS) field. Scholars have investigated the IS field and found that the field is dominated by research approaches and

theories based in positivism (Arnott & Pervan, 2005; Chen & Hirschheim, 2004; Schultze & Leidner, 2003). Several IS scholars have pointed out weaknesses in these approaches and theories and in response different strands of post-modern theories and research approaches have gained popularity. The approaches and theories argued for include interpretivism, ethnography, grounded

theory, and theories like Giddens' (1984) structuration theory and Latour's (1987) actor-network theory. For simplicity, in this chapter we refer to these different approaches and theories as "post-approaches" and "post-theories" when distinction is not required. Although these approaches and theories overcome some of the problems noted with positivistic approaches and theories, they have some major weaknesses and limitations—these weaknesses and limitations are discussed in the next section. For elaborate critiques of post-approaches and post-theories, see López and Potter (2001) and Archer, Bhaskar, Collier, Lawson, and Norrie (1998).

An alternative to traditional positivistic models of social science as well as an alternative to post-approaches and post-theories is critical realism (CR). Critical realism argues that social reality is not simply composed of agents' meanings, but that there exist structural factors influencing agents' lived experiences. CR starts from an ontology that identifies structures and mechanisms, through which events and discourses are generated, as being fundamental to the constitution of our natural and social reality.

Critical realism was primarily developed as an answer to the positivist crisis. In 1975 Roy Bhaskar's work "A Realist Theory of Science", with "transcendental realism", was published. In "Possibility of Naturalism" (1979) Bhaskar focused the social sciences and developed his "critical naturalism". These two major works present a thorough philosophy of science project and later "critical realism" and "critical naturalism" were merged to "critical realism". A concept also used by Bhaskar. Through the 80's Bhaskar primarily developed his position through sharpening arguments, etc. The late 70's and early 80's also saw a number of other CR scholars publishing influential works, for example, Margaret Archer's "Social origins of educational systems" (1979) and Andrew Sayer's "Method in social science" (1984). Most of CR's early critique was targeting positivism, but later critique is targeting alterna-

tives to positivism, for example, postmodernism and structuration theory. CR is a consistent and all-embracing alternative to positivism and different postmodernistic strands.

This chapter presents critical realism and shows how it can be used in IS research. We will show how it can be used in behavioral IS research as well as how it can be used in IS design science research.

WHY CRITICAL REALISM?

In response to the cry for the use of post-approaches and post-theories in IS research, researchers have used, for example, research approaches like constructivism, qualitative and intensive approaches, and grounded theory as well as theories like Anthony Giddens' structuration theory—for different IS-examples, see, Lee et al. (1997), Trauth (2001), Whitman and Woszczynski (2004), and Myers (2009).

We will not do an exhaustive review of different post-approaches and post-theories, but will point out limitations and weaknesses in: 1) one approach for generating theories, grounded theory, 2) one "theory" (description) of human action and social organization, structuration theory, and 3) the suggestions to integrate and combine different approaches in IS research, for example combining positivist and interpretive approaches. The choice of the examples is based on that grounded theory is increasingly used by IS-researchers and is a good example of a post-approach. Structuration theory is also gaining increased presence in the IS-literature and is a good example of a post-theory.

Several IS-scholars have suggested the use of grounded theory (Gasson, 2004) and a number of IS studies using grounded theory have been published—for a good example, see Urquhart (2001). Generally, grounded theory (GT) is an approach to the analysis of qualitative data aiming at generating theory out of research data by achiev-

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