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Constructive Synergy in Design Science Research: A Comparative Analysis of Design Science Research and the Constructive Research Approach

which are applicable and relevant to practice as well. Within the last ten years the ISR field has seen a proliferation of Design Science Research (DSR) that aims to solve significant practical problems through purposeful synthesizing or construction of IT and other artifacts based on existing scientific knowledge.

However, the need to contribute to the body of knowledge while solving practical problems was recognized already before the emergence of a coherent DSR framework in the field of social science in the mid 20th century through the development of the action research approach and later through the proliferation of other “interventionist” research approaches, such as the Constructive Research Approach (CRA) in 1990s

Accordingly, this raises the question of whether the different approaches can learn from each other. This paper contributes to answering this question by comparing design science research with the constructive research approach. To accomplish this, we analyze the literature on CRA as well as DSR critically to uncover the common features and position the methodologies with respect to each other, and to discuss whether the approaches have lessons to teach each other. Methodologically we follow the approach followed by others in the ISR field, that is an analysis, reading or interpretation, of the published research guidelines, followed by a structured comparison of the research missions/application areas; the methodological frameworks, including guidelines and processes; as well as underlying philosophical issues including epistemology, mode of reasoning and justification of knowledge claims.

The conclusion is that the two approaches are similar and compatible, save for details in practical requirements and partly underlying

Scholars in management science and information systems remind us every once in a while that rigorous research is a worthwhile effort, but that it should be able to deliver results

philosophical assumptions. The main finding that arises from the comparison is, however, that there is a potential problem in claiming knowledge contributions from evaluation of the utility of an artifact. Utility-based evaluation often builds the argument on adoption of the artifact, assuming that adoption and utility in general validates also underlying novel knowledge claims. We show that this mode of evaluation has philosophical and practical problems that need to be addressed in further research. In our view, it seems that acceptance and perceived utility of an artifact are only soft indications of the validity of a design theory, as the artifact may be very weakly linked to its conceptual underpinnings. We will argue further, based on our analysis, that this loose coupling creates a rarely recognized challenge for DSR, as design-oriented research often measures success based on acceptance of artifacts, and the loose coupling may limit the theoretical contribution of DSR significantly. ■