

Eight Principles for Creating Useful Knowledge

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Abstract

This paper addresses the issue of knowledge building in Information Technology (IT) disciplines and Information Systems in particular. IT is identified as a practical science, as opposed to a natural or human science, building on Simon's arguments in the 'Sciences of the Artificial'. Unlike some representations in the design science movement, however, the paper argues that the study of artifacts once constructed should not be passed back uncritically to traditional science; rather, the special features of the study of artifactual phenomena should be recognized. The underlying perspective argued for is that two linked modes of theorizing should be distinguished: an **interior mode** with the **how** of artifact construction studied and an **exterior mode** with the **what** of existing artifacts studied. In total, eight principles for creating knowledge in IT disciplines are advanced: (i) artifact centrality; (ii) artifact purposefulness; (iii) artifacts as systems; (iv) interior and exterior modes for theorizing; (v) types of knowledge/theory; (vi) differing logics; (vii) design research variants; and (viii) mid-range theorizing. The implicit claim is that consideration of these principles will improve knowledge creation and theorizing in design disciplines, for both design researchers and also for researchers using more traditional methods. Further, attention to these principles should lead to the creation of more useful and relevant knowledge. Examples in support of these claims are provided.