Theoretical Approaches to IS Research

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Theory is generally considered to be the bedrock of academic research. It is the foundation upon which scientific research is organized and built. In particular, IS research draws heavily on theory from a variety of disciplines—over 85 theories have been widely used in IS research. IS research has developed or appropriated theories to examine central disciplinary themes such as IS development, adoption, implementation, training, application, as well as strategic, social and political factors. Some theories have originated within the IS field, while others have been drawn from complementary disciplines such as psychology, sociology, management, economics, and mathematics.

Despite its ubiquity, there are very few frameworks to organize theories used in IS research. There has not been extensive work on the categorization of the conceptual variables used in IS research, or work that establishes theoretical ties between IS research and research in other disciplines. We believe that it is possible to advance the IS field by studying the theories it has developed and uses.

This minitrack seeks to thoroughly examine, inform, and extend theoretical approaches used in IS research. We believe this minitrack targets an important niche in IS research, and can gain interest from IS researchers at all levels. We are presenting three papers in one session this year.

The first paper proposes a theory for better understanding and predicting the emergence and evolution of information systems. To do so, the authors see an information system as a Complex Adaptive System and use the fields of memetics and evolutionary biology to explain how information systems are adopted and evolve within social institutions and communities of practice. In essence, they purport, information systems emerge as a result of adopting memes and then evolve.

The second paper addresses the research question “What factors affect adoption of Internet banking at the pre-usage stage?” Using the theory of diffusion of innovation, the authors propose a model of factors and then test the model with over 7,049 cases reported in 23 primary empirical studies. They find confirmation for seven factors affecting consumer initial use.

The third paper takes a high level, holistic approach to IS theories. The authors present a meta-theoretical analysis using nomological nets to identify pathways for theory integration and multi-level theory development—with hopes to reduce “theory clutter” in IS and related social sciences. The authors pose their work as a proof-of-concept, using almost 20 years of constructs from published, quantitative research.

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1 AISWorldNet “Theories Used In IS Research” (http://istheory.byu.edu/wiki/Main_Page)