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Editors

Information Systems Theory

Explaining and Predicting
Our Digital Society, Vol. 1

Preface

To advance our understanding of information systems (IS), it is necessary to conduct relevant and rigorous IS research. IS research, in turn, is built on a foundation of strong and robust theory. Indeed, the IS field has a long and rich tradition of developing and appropriating theories to examine central disciplinary themes, such as the IS life cycle and IS business value, along with a host of social and political factors. The ISWorld wiki “Theories Used in IS Research” (TUISR) lists 87 such theories and models. While this site is a valuable resource for the field, much more could be assembled to aid IS researchers in using theories to explain and predict how information systems can be used within today’s digital society.

In our own careers, we have found it to be a major challenge to identify appropriate theories for our work, and even harder to fully understand the theories that we encounter. We would encounter theories we find interesting, but the papers where we found them provide an incomplete account or a superficial explanation of what the theory was about, or how it could be used. It was this problem of theory identification and comprehension that led us to create this book. We wanted to produce a collection of papers about theories that could be used by IS researchers as a starting point for their work. This collection would act like a one-stop-shop for IS theory. We already had the TUISR wiki that provided basic information on theory; but with this book, we wanted to provide more depth and insight into the theories that populated our field.

We believe the lack of a comprehensive source of information on theory poses special problems for researchers. Due to a deficiency of experience within a new area, it may not be easy to fully comprehend and use a new theory in an appropriate manner. Furthermore, it is sometimes difficult for researchers to determine which particular theory, out of the vast number available, may be appropriate in a research context.

We felt a literary and meta-analytic collection of IS theories would not only provide a significant contribution to IS knowledge, but would also be a valuable aid to IS researchers, practitioners and students.

The overall mission of this book is to provide a comprehensive understanding and coverage of the various theories and models used in IS research. Specifically, it aims to focus on the following key objectives:

- To describe the various theories and models applicable to studying IS/IT management issues
- To outline and describe, for each of the various theories and models, independent and dependent constructs, reference discipline/originating area, originating author(s), seminal articles, level of analysis (i.e. firm, individual, industry) and links with other theories
- To provide a critical review/meta-analysis of IS/IT management articles that have used a particular theory/model
- To discuss how a theory can be used to better understand how information systems can be effectively deployed in today’s digital world

This book contributes to our understanding of a number of theories and models. The theoretical contribution of this book is that it analyzes and synthesizes the relevant literature in order to enhance knowledge of IS theories and models from various perspectives. To cater to the information needs of a diverse spectrum of readers, this book is structured into two volumes, with each volume further broken down into two sections.

The first section of Volume 1 presents detailed descriptions of a set of theories centred around the IS life cycle, including:

- ∅ ∅ DeLone and McLean's Success Model
- ∅ ∅ Technology Acceptance Model
- ∅ ∅ Unified Theory of Acceptance and Use of Technology
- ∅ ∅ User Resistance Theories
- ∅ ∅ Task-Technology Fit Theory
- ∅ ∅ Process Virtualization Theory
- ∅ ∅ Theory of Deferred Action

The second section of Volume 1 contains strategic and economic theories, including:

- ∅ ∅ Resource-Based View
- ∅ ∅ Theory of Slack Resources
- ∅ ∅ Portfolio Theory
- ∅ ∅ Theory of the Lemon Markets
- ∅ ∅ Technology–Organization–Environment Framework
- ∅ ∅ Contingency Theory
- ∅ ∅ Porter's Competitive Forces Model
- ∅ ∅ Business Value of IT
- ∅ ∅ Diffusion of Innovations
- ∅ ∅ Punctuated Equilibrium Theory
- ∅ ∅ Discrepancy Theory Models
- ∅ ∅ Institutional Theory
- ∅ ∅ A Multilevel Social Network Perspective
- ∅ ∅ Expectation Confirmation Theory
- ∅ ∅ Stakeholder Theory

The first section of Volume II concerns socio-psychological theories. These include:

- ∅ ∅ Personal Construct Theory
- ∅ ∅ Psychological Ownership and the Individual Appropriation of Technology
- ∅ ∅ Transactive Memory
- ∅ ∅ Language-Action Approach
- ∅ ∅ Organizational Information Processing Theory
- ∅ ∅ Organizational Learning, Absorptive Capacity and the Power of Knowledge
- ∅ ∅ Actor-Network Theory
- ∅ ∅ Structuration Theory
- ∅ ∅ Social Shaping of Technology Theory
- ∅ ∅ An IT-Innovation Framework
- ∅ ∅ Yield Shift Theory of Satisfaction
- ∅ ∅ Theory of Planned Behavior
- ∅ ∅ An Interpretation of Key IS Theoretical Frameworks Using Social Cognitive Theory

The second section of Volume II deals with methodological theories. These include:

- ∅ ∅ Critical Realism
- ∅ ∅ Grounded Theory and Information Systems: Are We Missing the Point?
- ∅ ∅ Developing Theories in Information Systems Research: The Grounded Theory Method Applied
- ∅ ∅ Narrative Inquiry
- ∅ ∅ Mikropolis Model
- ∅ ∅ Inquiring Systems
- ∅ ∅ Information Systems Deployment as an Activity System

ø ø Work System Method

Together, these theories provide a rich tapestry of knowledge around the use of theory in IS research. Since most of these theories are from contributing disciplines, they provide a window into the world of external thought leadership.

Considering the breadth and depth of the content, we hope this book will become a trusted resource for readers wishing to learn more about the various theories and models applicable to IS research, as well as those interested in finding out when and how to apply these theories and models to investigate diverse research issues.

We sincerely hope this book will provide a positive contribution to the area of Information Systems. To make further research progress and improvement in the understanding of theories and models, we welcome all feedback and comments about this book from readers. Comments and constructive suggestions can be sent to the Editors care of Springer, USA, at the address provided at the beginning of the book.

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