

A Research Path Taken

E. Burton Swanson
UCLA Anderson School
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Explaining use

- Why are some individuals active users of an MIS, while others with the same access are not? (~1970)
 - Many systems intended to support managers were going largely unused
 - Conjecture: managers who involved themselves in the system's design and implementation would understand and use it
 - In hindsight: implementation and use take place in some innovation context, e.g. the introduction of terminals and online inquiry into managers' offices

Explaining maintenance

- Why do information systems require so much maintenance? (~1980)
 - Maintenance is of three types: corrective, adaptive, and perfective
 - Perfective maintenance, which incorporates certain enhancements wanted by users, accounts for about half of maintenance
 - Retrospective insights: maintenance includes surreptitious incremental innovation. Too, systems are subject to radical innovation and replacement. Broadly, maintenance takes place in some innovation context.

Understanding IS innovation

- What is IS innovation and how is it related to organizational innovation more broadly? (~1990)
 - *Tri-core model* posits IS core linking firm's traditional administrative and technical cores
 - IS innovations can be classified into several basic types, with different effects on each other, and with different implications for adoption and diffusion
 - An IS innovation is likely to evolve over time such that it is increasingly tailored to the concurrent adoption of other related innovations

Explaining diffusion

- Why do some IS innovations diffuse successfully among firms, while others don't?
 - Successful diffusion depends upon an *organizing vision* promulgated in community discourse
 - Different organizing visions take different career paths, according to how they are received as interpretable, plausible, discontinuous, and important
 - *Institutional entrepreneurship* is needed to both launch and sustain an organizing vision. Key players include market researchers, consultancies, business and trade press, advertisers, writers, and conference organizers

Explaining mindfulness

- Why is some IS innovation mindful, while other is apparently mindless?
 - An organization is *mindful* in innovating with IT when it attends to an innovation (in its comprehension, adoption, implementation, and assimilation) with reasoning grounded in its own facts and specifics
 - Bubble hypothesis: mindlessness in innovating with IT will be observed more widely the more fashionable the organizing vision.
 - Gap hypothesis: mindlessness in innovating with IT will tend to be displaced by mindfulness the larger the implementation and assimilation gaps that arise with the innovation.

Understanding assimilation

- How are IT innovations *assimilated in use*, such that new organizational capabilities are achieved?
 - Learning model based on work-situated *focal and subsidiary attention* to an innovation as a concept (in communication) and in practice (task performance)
 - With assimilation, focal interpretation and experimentation is gradually displaced by subsidiary sublimation and routinization
 - Different firms may take different assimilative paths with the same innovation, achieving different innovative outcomes
 - All assimilative learning is ultimately local. A new perspective for studying individual use. Coming full circle on the research path.

Conclusions

- Innovation provides a powerful lens with which to view the information systems field
 - It gives one needed historical perspective
 - It provides a stable theoretical frame with which to understand new technologies and changing practices
 - It demands multiple, complementary levels of analysis: individual, organizational, and institutional

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