Information Technology and Organizational Transformation: Research Problems in the Eye of the Hurricane

John King
University of California, Irvine

Follow this and additional works at: http://aisel.aisnet.org/icis1994

Recommended Citation
http://aisel.aisnet.org/icis1994/36

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 1994 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
TUTORIAL 4

INFORMATION TECHNOLOGY AND ORGANIZATIONAL TRANSFORMATION: RESEARCH PROBLEMS IN THE EYE OF THE HURRICANE

John Leslie King
Center for Research on Information Technology and Organizations
University of California, Irvine

There is a great deal of discussion about the transformation of organizations enabled by or caused by new information technologies. The most amusing recent example of this discussion emerges in the "productivity paradox." The business magazines that first launched the claim that investments in information technology fail to yield measurable benefits now claim that what looked like a paradox was simply a failure of outmoded measurement systems to capture the changes underway. Whether recognized or not, these are arguments of revolutionary transformation so powerful that it renders most long-established and vital systems of measurement, legitimation, and meaning.

Is IT effecting revolutionary transformation in organizations? If so, how exactly is it doing so? Surprisingly little systematic work has been done to show how, when, and why specific IT-related transformations occur. Indeed, too much of what we "know" about such transformation is either balled up in "drunk under the lamp post" squabbles about measurement or is rooted in anecdotal and sketchy evidence strung together with a few cobwebs of conceptual binding. This state of affairs is not due to the stupidity or laziness of researchers. It is a consequence of the essential difficulty of ascertaining the scope and direction of revolutionary change from within the revolution itself.

This tutorial is intended to unpack a set of organizational transformation arguments relevant to IT and to sort them by their logic and morphology of explanation. The objective of the tutorial will be to identify the fundamental intellectual questions regarding the relationship between organization and information from which the secondary questions about information technology and organizational change arise. In essence, the tutorial addresses this: What is it in the nature of organizations that makes the concept of their transformation through effects of information technology intellectually feasible?

The tutorial will use as a base transformational arguments drawn from historical analyses of the role of communications and information technology in changing the economic and institutional contexts of organizational form and function. These arguments will be deconstructed using both actional and evolutionary explanations of social change.
A major shift away from centralized data processing to distributed systems and an increasing emphasis on the use of IS technology to link individuals and entities inside and outside the organization has created an imperative to integrate the study of telecommunications networks into the IS curriculum. The subject of this tutorial is to explore the appropriate domain of telecommunications subjects to be included in the IS curriculum and to discuss various approaches to developing and teaching courses in telecommunications.

We will begin with a discussion of the introductory or overview course in telecommunications or data communications. This will include a comparison of various sample course outlines that reflect different teaching styles and differences in a technical versus managerial emphasis in the course.

This will be followed by a description of several options for sequences of telecommunications elective courses, including a discussion of the content domain of each type of course and suggested combinations of electives that would constitute a coherent specialization in telecommunications. Information for this segment of the tutorial will be drawn from existing telecommunications programs and majors at various universities. We will develop an elective course sequence for a technically-oriented track in telecom, a managerial-oriented track in telecom, and a telecom policy track. The tutorial will also provide the participants with a list of model programs and courses, as well as contact names at various universities. We will also address the use of different pedagogical approaches to teaching the various telecommunications elective courses (i.e., hands-on laboratory approach, case studies, lecture/discussion) and discuss appropriate criteria for each.

Finally, the last segment of the tutorial will discuss various types of telecommunications jobs and careers available to graduates. We will also examine ways to develop relationships with and utilize local telecommunications professionals to support the courses and programs at the university. Telecom professionals from the user and vendor community are excellent resources for adjunct faculty, advisory groups on course content, guest speakers on particular technologies, donors of used equipment for university laboratories, and sources of job openings and internships for students.

The tutorial is expected to be interactive in nature and will attempt to focus on particular areas of interest to the audience. It will utilize available participant experience and expertise.