



## **Chapter 11**

# **Expanding Our View of Information Systems Success**

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## **INTRODUCTION**

The deployment of technology has had a profound impact on the quality of work life of individuals in organizations. Consider, for example, that computer-based applications are expected to empower workers in both a functional and democratic sense. In other words, systems are intended to aid workers in the completion of tasks, as support devices to complete organizational transactions (functional empowerment) and as devices which both support and give rise to new forms of organizational communication, interaction and, subsequently, new forms of organizational structure (democratic empowerment). The specific technical and social contexts in which computer systems are deployed significantly influence the characteristics of the systems and their implications for the workers. In particular, the tradition of socio-technical research in information systems considers these issues important.

A central question in systems development is “When does theoretical knowledge become practical knowledge” (Klein & Hirschheim, 1996). The principal objective of the socio-technical design ideal is to optimize the interrelationships between the social and human aspects of the organization and technology used to achieve organizational goals. Quality of work life represents the satisfaction of human needs at work. A high degree of fit between job (task) characteristics and

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a limited set of human needs (including both social and health profiles) can improve both the quality of work life as well as the profitability and system efficiency. Klein (1981) and Klein and Hirschheim (1996) identify a list of 10 criteria for social and ethical acceptability of new information system technology. Two of these design ideals for information systems (numbers 6 and 9 from the original table) are directly relevant to the justification of this research:

- “Its production and use should present no undue health hazards or risk.”
- “It should permit those elements of work which are recognized as being related to high job satisfaction to be improved (for example development of new skills, task variety, challenging tasks, and the like).”

A substantial body of research has identified a range of potentially deleterious effects from computerization, including but not limited to stress, health and safety, social isolation and alienation, occupational immobility and pay inequity. What happens to office workers who experience computerization is of considerable importance, not only to themselves, but also to their organizations, the clientele they serve and society as a whole. This implies a complex set of responsibilities and challenges for systems analysts and integrators who implement and deploy information systems (Clement, 1994).

Another extensive body of research has looked at the measurement of information systems success. In 1992, DeLone and McLean proposed a model of Information Systems Success (ISS) based on a review of the existing IS success and satisfaction literature. They consolidated the various success variables previously used into six success factors: System Quality, Information Quality, Use, User Satisfaction, Individual Impact and Organizational Impact. User satisfaction (also referred to as user information satisfaction) is probably the most widely used measure of IS success because: (1) it has a high degree of face validity; (2) a stream of research starting with Bailey and Pearson (1983) has provided a tradition of studies using reliable and comparable tools for measurement; and (3) most of the other measures are so poor by comparison (DeLone & McLean, 1992). This very important contribution to the success literature has stimulated research (cf. Seddon & Kiew, 1994; Hwang & Windsor, 1996; Seddon, 1997).

It is interesting, and relevant to this discussion, to note that the traditional IS success research stream has had little intersection with the socio-technical research stream. Existing IS satisfaction models and corresponding measurement instruments largely ignore the quality of work-life dimension. A theoretical framework and a potential set of dimensions that addressed this gap between the two traditions was proposed by Garrity and Sanders (1998a). That model (see Figure 1) includes the following four dimensions to retrospectively structure prior empirical research: task support satisfaction, decision-making satisfaction, interface satisfaction and quality of work-life satisfaction. A distinctive part of their

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