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Suprateek Sarker
University of Cincinnati

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Understanding & Managing I/S Implementation In "Socially Constructed" Organizations

Suprateek Sarker
Department of Accounting and Information Systems
University of Cincinnati

Introduction

For over two decades, implementation has been studied by scholars adopting various perspectives. For example, implementation has been framed as *an effective relationship* (Churchman and Schainblatt, 1965), as an *outcome* that is determined by *individual, organizational and situational factors* (Lucas, 1975; Schultz et al., 1984; DeSanctis, 1984), and as a *process of organizational change* (Ginzberg, 1978). This process view has been further developed by scholars influenced by *the sociotechnical school* of thought (Bostrom and Heinen, 1977; Markus, 1983; Robey, 1987), and this synthesized approach arguably represents the dominant approach for understanding IS implementation today. Within this perspective, an organization is implicitly conceptualized as a "diamond" consisting of interacting components: *people, tasks, technology and structure*. Introduction of an IS involves changing the technology component of the organization, which automatically triggers a change in the other components.

Implementation essentially refers to *anticipating and strategically managing these impacts of the change in technology* (Robey, 1987) such that the IS becomes "organizationally valid" (Schultz and Slevin, 1975; Markus and Robey, 1983) as the organization attains a post-implementation steady-state. Scholars usually focus on interactions of different components of the "diamond" and recommend organizational impact management strategies such as *job redesign, training or education, and changing the reward systems*. While this "interactionist" approach represents considerable progress, it is argued that the underlying "diamond model" fails to reflect the *political underpinnings* (Keen, 1981; Markus, 1983) and *institutional realities such as symbols* (Hirschheim and Newman, 1991) and *frames* (Orlikowski, 1992) sufficiently.

This paper attempts to enrich the existing organizational model based on insights from Berger and Luckmann's work in the arena of sociology of knowledge, and through the application of this enriched model, contribute to the stream of sociotechnical literature on IS implementation. The **basic thesis** of the paper is as follows: *Prior conceptualizations of organizations have recognized only "objective realities" which has led to an incomplete understanding of implementation; by including the analysis of "subjective realities" in the organization, a better understanding of political and institutional forces and of resistance arising from them may be gained*.

The following section develops the model. The next section provides guidelines for managing implementation that are derived from the model. The final section concludes with the limitations of the model and future research directions.

Reconceptualizing Organizations

Leavitt's "diamond model" of organizations has gained significant acceptance in organization theory (Scott, 1992) as well as in information systems (Keen, 1981). This model provides the foundation for the model presented in this paper. Another fundamental source of ideas for the model proposed is the vigorous ontological debate between the functionalist and interpretive scholars (Burrell and Morgan, 1979). While functionalist scholars see every aspect of organizations as objective reality, the interpretive scholars argue that any reality is fundamentally "socially constructed". The proposed model is based on the position that organizations are entirely socially-constructed, some aspects being "objectively real" and others being "subjectively real".

According to Berger and Luckmann (1966), "institution-alization occurs whenever there is a reciprocal typification of habitualized action" (p. 54). Over time, these humanly produced institutions are experienced as taken-for-granted *objective realities*, that are external to but persistently confronting an individual, similar to the realities of the natural world. Within an organization, all **institutionalized entities** such as tasks, technologies, and individuals **are experienced as objective realities** by organizational members in their every-day life. *Subjective reality* refers to the reality "**as apprehended in the individual consciousness rather than on reality as institutionally defined**" (p. 147). Subjective reality is of utmost importance in organizational analysis because self-determined human action is believed to follow a stage of examination and deliberation of this reality (Thomas, 1923). Individuals often experience "subjective realities" that are different from "objective realities". This happens primarily because members of the complex modern organizations are required to acquire role specific knowledge through secondary socialization which involves the "internalization of semantic fields structuring routine interpretations and conduct within an institutional area" (Berger and Luckmann, 1966, p. 138). Differences in assigned roles and responsibilities or differences in sub-cultures encountered by organizational members may also contribute to their experiencing different "subjective realities".

The two realities discussed above form the basis of the two domains in an organization: **the domain of objective reality** and **the domain of subjective reality**. *Culture (or sub-culture)* occupies a pivotal position in the organization, *mediating between the two domains*. Culture may be seen as a sociallyconstructed objective reality that provides organizational members with ideas and beliefs as well as value-orientations and significations through which situations are interpreted, and a common sense of social reality is experienced, articulated, objectified and reproduced (Berger and Luckmann, 1966; Coombs et al., 1992; Powell and DiMaggio, 1991).

Corresponding to each organizational component in the domain of objective reality, there exists a subjectively real component that an organizational member sees as a

superimposition of images through two lenses that continuously interact with each other: the **first lens** depending on the roles and responsibilities of the member in the organization and the nature of role-specific knowledge acquired through secondary socialization; and the **second lens**, provided by the sub-culture to which the member belongs. It is important to note that the *first lens is a cognitive structure or a mental model* that is held by individuals, and sometimes shared among them. In contrast, the *second lensrefers to the objectified product of historical actions that has assumed a life of its own* independent of the members of the sub-group (Orlikowski and Gash, 1994). Several organizational members go through similar secondary socialization, occupy positions with similar roles and responsibilities and also belong to similar "subcultures". In such a case, it is likely that *they will experience similar subjective realities for a given objective reality*. It follows that other members who differ significantly with respect to secondary socialization or assigned roles or sub-cultures can be expected to experience different subjective realities for a given objective reality. Assuming that organizational members act *so as to maximize their utilities* as defined by their organizational roles, subcultures and socialization experiences (Parsons, 1951), and that *their actions follow an examination and evaluation of their subjective realities* (Thomas, 1923), it is clear that a negative evaluation of their "subjective realities" may result in the concerned organizational members rejecting the existing state of "objective reality". This *rejection* of the "objective reality" is often manifested as behavior that is referred to as "*resistance* ".

The previously described notions of "objective" and "subjective" realities in organizations may be briefly illustrated through the following example. Assume that the management of an organization decides to implement a sophisticated "code generator" which in the domain of objective reality is a "state-of-the-art software technology". The managers subjectively view the technology through their "lenses" as a "productivity tool for programmers" that will make the programmers more "economically valuable", and thus help "upgrade their status" in the organization. Thus, they see no rational reasons for programmers to resist the implementation. Yet, the programmers see the technology as "threatening" to change their tasks: from "intellectual" programming to "mindless" data or specifications entry. Their subjective reality, in sharp contrast to that of the managers, equates co-degenerator implementation as *deskilling* their tasks, resulting in a *loss of their importance and power* in the organization, and contributing to a *negative impact on their conception of self*. Resistance to codegenerator implementation, then, *could be* a perfectly rational response of the programmers.

Implications for Managing Implementation

A number of broad guidelines for the implementation manager emerge by framing implementation within the context of the organizational model previously described:

1. The **first** step for an implementation manager is to understand herself. She must appreciate that *her view of the organization is her subjective reality*, and that her view may not be shared by other organizational members. Through a process of selfreflection, she must attempt to discover why she experiences her "subjective reality" the way she

does by unstacking her assumptions, biases and self-interests that are embedded in her "lens".

2. The **second** step is to identify and understand all important stakeholders of the technology. Understanding stakeholders requires the implementation manager to *assume the role of an organizational ethnographer* whose goal is to obtain a hermeneutic reconstruction of the "lenses" through which stakeholders see their images of reality.

3. The implementation manager is advised to proceed with the assumption that the *stakeholders know what they are doing* (Lee, 1991). The **third** step involves the identification of the stakeholders who see themselves as "losing out" on evaluating their own "subjective realities". This negative evaluation is likely to result in resistance to the changes.

4. There are two conceptually separable strategies for "reality modification" available to the implementation manager at this stage. The first is *to modify one or more organizational components in the domain of objective reality* such that the implementation goals are achieved from the manager's point of view and no group sees itself as a "loser". Through an iterative process, a manager may attempt to reach this type of solution. The other approach is *to make changes to the "lenses" that the stakeholders use to experience reality* . This calls for resocialization of the group to new symbolic media, values and roles, which get enacted, objectified and over time, incorporated into the group's "lenses". Such resocialization may be attempted through indoctrination conducted in long-term educational and training programs, by rewarding certain behaviors and symbolisms, and by top management involvement in the legitimation of certain beliefs, values and symbols. However, it must be recognized that internalization of symbolic media, values and roles is often difficult and may take more time than what an organization has available.

The **fourth step** in implementation *involves combining the two strategies* described above. Sometimes, it is impossible to implement a system without having at least one group of dissatisfied stakeholders. Under such circumstances, the manager should choose "to offend" the least powerful stakeholders. Plausible tactics include forcibly "defining reality", disbanding the groups, reorganizing them or proactively protecting the organization from any moves of resistance.

Conclusion

The proposed organization model based on Leavitt's "diamond model" and Berger and Luckmann's notion of "the social construction of reality" represents a preliminary effort that contributes to *a richer and more integrative comprehension* of IS implementation. However, like most other papers, this paper too makes assumptions that may be questioned. The proposed approach takes for granted: first, the utility maximization behavior of stakeholders that has been criticized in the literature; and second, the mastery of IS implementation managers over the disciplined practice of self-reflection, hermeneutics or other ethnographic techniques. Without these two assumptions, the entire

paper may seem to have little value. In response, the author would argue that the first assumption of "bounded rationality" is quite realistic; the second assumption may be satisfied *if organizations realize how important these interpretive capabilities are in implementation, and select implementation managers accordingly.* Future research, addressing other potential criticisms regarding the lack of empirical support, may involve creating an exemplar for the purposes of illustration, and conducting laboratory experiments or deductive casestudies for validation of the approach presented.

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