1986

# POWER OVER USERS: ITS EXERCISE BY SYSTEM PROFESSIONALS

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## ABSTRACT

This paper develops the propositions that information system professionals exert considerable power over system users and that technological advances in system development will not significantly change this situation. The paper explores the ways system professionals can exercise power over users and examines the consequences of various technological trends allegedly able to alter the balance of power between users and system professionals.

The notion that the developers of information technology have power that they can use in their dealings with users is intuitively appealing. Information technology is a resource many people value. It seems likely that gatekeepers of information technology would be able, if they chose, to extract rewards from those individuals or groups who depend upon it. This reasoning reflects a theory of power known as "resource dependence."

Another theory explains the power of organizational subunits (i.e. departments, like the information system department) in terms of "strategic contingencies." In this theory, departmental power results from the combination of three attributes: the ability to cope with environmental or task uncertainty faced by other departments or the organization as a whole, nonsubstitutability (being indispensible) in this coping, and criticality in the subunit's or organization's workflow. Given the high involvement of information system units in other departments' workflows and the dependence of many departments on computing operations, the theory of strategic contingencies suggests the likelihood of powerful system departments. Research appears to find otherwise. Clients of system departments do not generally perceive these units as powerful.

We believe it would be unfortunate if the negative findings of these studies discouraged further research on the power of system professionals. The potential consequences of this power for users are simply too significant to remain unexplored. In addition, we believe it a mistake to conclude from these negative findings that system professionals *do not* exert power over users. First, these studies measure sources of power, not uses of power; there

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This paper is forthcoming in *Communications of the ACM*

is reason to believe that sources and uses of power are imperfectly related. Second, these studies measure users' perceptions of power; yet the exercise of power may occur without users being aware of it. In fact, lack of awareness may indicate an especially effective exercise of power.

Consequently, building on the work of European sociologists, we propose conceptualizing the power of system professionals in a way that does not depend on either sources of power or awareness of power use. It differs from much prior research on power in its emphasis on the *exercise* of power and its definition of power exercise in terms of behavioral *consequences,* rather than on the legitimacy or acceptance of the behavior. In our perspective, to say that one actor has exercised power over another means that the second behaved differently from the way he/she would have done if not for the first actor. This is a broad and somewhat controversial definition of power.

In our framework, information system professionals include all those individuals and groups, either inside or outside the users' firm, who consult with users, that is, assess their needs, propose solutions and/or advocate a course of action. Our admittedly broad definition includes: system analysts, designers, managers, vendor marketing and product development personnel, etc.

Our framework of **types of power exercise** recognizes two contexts in which system professionals can exercise power over users: *a specific development project,* such as a marketing decision support system, and *the environment of specific projects,* which can include system management policy in an organizational setting and/or vendor product development and marketing efforts. In addition, the framework identifies two targets of power exercise: *issues of fact,* such as system features or I/S budget, and *issues of values,* such as system objectives or computing benefits.

These two dimensions of context and target demarcate four types of power exercise. In the *technical* exercise of power, system professionals exercise power over users when they adopt system design features to which users explicitly object. In the *structural* exercise of power, system professionals develop organizational structures and routine operating procedures which give them formal authority over users or create user dependence on them for important resources. In the *conceptual* exercise of power, system professionals select or shape the objectives a system will serve. In the *symbolic* exercise of power, system professionals mold users' desires and values, for example, through vendor advertising.

This framework does not presume that either the system professionals or the users are aware of the power exercise. We identify and discuss four awareness conditions which we label: *mutual negotiation, user resistance, professional manipulation,* and *unintended influence.*

Observers of information technological trends have identified a number of developments with the alleged potential to alter profoundly the relationships among system professionals and users. These include: standard software packages, advanced system development tools, end-user programming and desktop computing. We examine these trends and argue that, while they may change the degree or type of power exercise, they will probably not change the fact of it. Furthermore, they may make it more difficult for users to become aware that power is being exercised, thus diminishing users' ability to prevent it or to mitigate its consequences.

We hope that our frameworks of power exercise and awareness of power exercise will provide a solid foundation for further research on IS power. More importantly, we hope they will provide a foundation for the development of intervention strategies designed to increase awareness of power exercise and hence to improve the chances for outcomes acceptable to both users and system professionals.