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INTRODUCING THE CONCEPT OF LEGITIMACY OF PARTICIPATION

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So far, the management information systems (MIS) literature on user participation has not examined how legitimacy of participation affects user attitudes. Hence, this research paper describes a study that proposed and tested a general model of participation efficacy in the context of developing a computer application for employee appraisals. The study introduces the concept of legitimacy of participation, and determines the relative importance of personal characteristics and task factors in affecting the attitudes of supervisors and subordinates toward user participation. An MIS innovation in the performance appraisal area—specifically, the development of Behavioral Anchored Rating Scales (BARS) forms—provided the context for this study.

The study provides statistical evidence to conclude that legitimacy of participation is determined by personal characteristics and task conditions, but yet, at the same time, it has a significant influence on user attitudes. The research findings also have several implications for managerial practice.

1. INTRODUCTION

It is widely assumed that user participation in the development and implementation of MIS applications increases the likelihood that they will become managerial successes. While this idea is intuitively appealing, research on the question has produced mixed results and MIS project managers and functional area managers continue to report difficulties in applying user participation effectively. The problem is thought to be associated with under-utilization of MIS applications (e.g., Ginzberg, 1979).

The present study begins with the proposition that MIS developers would benefit from adopting the selective approach to participation associated with personnel management practice rather than the universal participation suggested by general behavioral theory. It is argued that potential end-user candidates for participation in MIS development tasks will vary in the extent to which they regard their participation in such tasks as appropriate and fair (i.e., legitimate). Several propositions pertaining to the concept of participation legitimacy are tested in the context of a specific MIS development initiative — generation of a computer-based performance appraisal instrument.

In this paper, the theoretical basis of the study, research methodology and some statistical results are discussed.

2. THEORETICAL FRAMEWORK

In MIS, participation is commonly referred to as "involvement." Involvement is usually defined in terms similar to those used by Ives and Olson (1984): "participation in the application development process by representatives of the target user group." This is a somewhat narrower concept than the definition typically used in behavioral theory -- "joint decision-making" (Vroom, 1960). Recently, Barki and Hartwick (1989) have suggested that the term "participation" be used to describe "behaviors or activities performed by users in the application development process." They suggest that the term "involvement" be reserved for descriptions of "a subjective psychological state reflecting the importance and personal relevance of a system to the user." As Barki and Hartwick point out, these definitions are more consistent with long-standing usage in theory of industrial behavior and are adopted in the present work. Seen this way, user psychological involvement is a desirable outcome of behavioral participation. Aspects of user involvement are captured by existing attitudinal measures of MIS development success (e.g., desire to use the new application).

3. RESEARCH ON USER PARTICIPATION IN MIS DEVELOPMENT

At least thirty studies of MIS development and implementation conducted between 1972 (Guthrie) and 1989 (Saleem) have assessed the effects of user participation. A majority have, in fact, found that user participation has a positive effect on attitudinal measures of system success such as user satisfaction with and acceptance of the system and perceptions of information quality (e.g., Guthrie, 1972; Gallagher, 1974; Swanson, 1974; Igersheim, 1976; Franz, 1979; Kaiser and Srinivasan, 1980; Kirs, 1987; Baronas and Louis, 1988; Saleem, 1989). However, other studies have found no significant relationships (Dickson and Powers, 1973; Lucas, 1976; Schewe, 1976; Maish, 1979; Robey and Farrow, 1979; Tait and Vessey, 1988). A few studies actually indicate the presence of negative relationships (Vanlommel and DeBrabander, 1975; Sartore, 1976).

Studies which have addressed measures of actual application usage (perhaps a developer's single most important success measure) have generally produced either non-significant results (Lucas, 1976; Schewe, 1976; Maish,

1979) or mixed results (Lucas, 1975; King and Rodriguez, 1978 and 1981). Only the studies of Swanson (1974) and Alter (1978) indicate a positive relationship between user participation and subsequent system usage.

As Ives and Olson (1984) note, methodological problems may contribute to the inconsistency of these results but there remains a need for better conceptualization and modeling of participation's effects on perceptions of MIS development success. As a starting point, it is important to place MIS usage of the participation concept in the broader context of behavioral and organization theory (OB-OT) and personnel management theory.

3.1 MIS Perspective on User Participation

In the context of MIS development and implementation, participation has two purposes, both of which are very pragmatic. Participation is expected to improve the quality of the applications put in place through improved response to user needs. It is also expected to have a general motivational effect, via perceptions of psychological "ownership" of the change. The first consideration suggests the utility of selective participation focusing on users of high expertise. The second suggests the efficacy of fairly universal participation among end-users. Since available expertise will certainly be captured through universal participation, we would expect MIS developers to approach this issue somewhat uncritically, with the scope of participation being constrained largely by associated costs (e.g., Ives and Olson, 1984; Davis, 1989; Davis, Bagozzi, and Warshaw, 1989).

3.2 Behavioral and Organization Theory Perspective

Participation is viewed by most theorists of industrial behavior and organization as a broad moral imperative (Blumberg, 1968; Foy and Glendon, 1976; Lischeron and Wall, 1974; Shaskin, 1982 and 1986). From this perspective, participation may be only weakly related to the success of specific managerial initiatives. The utility of participation is usually thought to be more general and related to the production of broadly-based perceptions of trust and attendant commitment to managerial objectives. Even then, the effects of participation on personal satisfaction or performance have been disappointing (Locke and Schweiger, 1979; Locke, Schweiger, and Latham, 1986). Thus, while behavioral theory inspires most MIS use of participation in development tasks, anticipated linkages with the success of a given application are not strong.

As Tjosvold (1987) has pointed out, surprisingly little behavioral or organizational research has been devoted to the study of factors influencing successful use of participation. With respect to individual attributes, both industrial and organizational experience have been found to be positively related to successful participation outcomes

(Locke and Schweiger, 1979; Daft, 1989). With respect to task and organizational factors, research indicates that participation is more often used in the context of less routine tasks (Edstrom, 1977). Presumably, the ambiguous conditions suggested by such tasks make participation more important to the success of given initiative. Since it may be commonly perceived that externally-generated solutions are difficult to impose successfully under such conditions, perceptions of the appropriateness of participation may tend to be relatively high.

3.3 Personnel Management Theory

While personnel management theory appears not to have informed the MIS perspective on participation, this field shares a concern with immediate utility in its use. In personnel practice, participation tends to be used quite selectively in relation to the development of specific employment management techniques (e.g., job analysis protocols, performance appraisal instruments, and compensation system design) (Ivancevich and Glueck, 1989; Milkovich and Boudreau, 1991). For example, job content is determined through job analysis techniques that may involve the participation of job-holders, supervisors and/or professional analysts (developers). Prescriptions for the scope of participation, in terms of the range of users involved, are based on such contingencies as existing trust relations, employee characteristics, and the nature of the work to be analyzed (e.g., professional versus trade work)¹. In a highly pragmatic manner, then, personnel theory draws on behavioral theory of participation by considering both individual differences [e.g., work experience and role in the division of labor (supervisory versus non-supervisory status)] and job characteristics in assessing the likely effectiveness of participation.

In addition to being generally more selective in the use of participation, personnel applications appear to draw on lay wisdom concerning the relative appropriateness of participation for specific employees. Individuals are likely to vary in terms of their objective capacities to play constructive roles in the design and implementation of new employment management techniques and, by association, their beliefs that personal participation will improve outcomes associated with the managerial initiative involved. Provisionally, this factor may be thought of as perceived legitimacy of participation.

¹ Personnel managers are perhaps decreasingly likely to pursue the differentiated participation prescriptions found to be effective in the past. As Guest (1987) notes, the human resources school (Beer et al., 1985) places great emphasis on uniformity of practice. To the extent that this school of employment management becomes ascendant in a given firm, task-differentiated approaches to participation may be replaced by the more general prescriptions of behavioral theory.

3.4 Participation legitimacy

The concept of legitimacy has a long history in sociology (Parsons, 1960) and, through industrial sociology, has had some influence on organization theory. At the organization-environment level, Dowling and Pfeffer (1975) define "organizational legitimacy" as the degree to which the values associated with an organization and its societal environment are congruent. At the nexus between organization and individual, Muchinsky (1987) defines legitimacy as the extent to which the employee believes that the organization's power over her is consistent with her personal values and principles of social action.

Managerial instructions (or even requests) to engage in participatory behavior (such as MIS applications development) cannot be abstracted from the broader employment relationship, the division of labor, and the individual's sense of her position in same. For example, seminal work by Berkowitz (1953) demonstrated that established role differentiation between work unit supervisors and employees may create conditions in which employees do not regard their participation in decision-making as being legitimate, with the result that general participation did not facilitate subsequent performance. As several theorists have since argued, participation cannot be expected to improve performance if the act has no perceived instrumentality or the individuals in question do not perceive themselves as appropriate agents for change (French, Israel, and As, 1960; Nurick, 1982; Strauss, 1982). Provisionally, we would define the concept of participation legitimacy as the extent to which the individual employee perceives her involvement in a particular decision to be appropriate and consistent with personal values and beliefs pertaining to the employment relationship, including role in the division of labor.

By way of illustration, many behavioral theorists have argued in favor of universal participation in the (traditionally) managerial task of performance appraisal. "Peer" appraisal, subordinate appraisal of supervisors, and "360 degree" appraisals involving various actors in the employment relationship are all variants on this theme. Despite the fact that scholarly support for these techniques is substantial and long-standing (Cederblom and Loundsbury, 1980; Kane, 1978; Schmidt and Johnson, 1973), successful U.S. implementations of such techniques appear to have been modest. Again, personnel practice prescribes a fairly traditional maintenance of manager-employee roles in performance appraisal and considers task characteristics carefully. Specifically, participation may be encouraged for decisions pertaining to the content of performance appraisal (criteria) but not normative decisions pertaining to evaluation of individual performance in relation to these criteria. Implicitly, generalized perceptions of appropriate role differentiation and the legitimacy of specific attendant tasks underlies the endurance of such personnel principles.

Perceived legitimacy of participation may play a role in models of the effects of participation on managerial innovations in general, as well as MIS innovations in specific. Conceivably, the absence of measures of legitimacy may help account for mixed results concerning participation in MIS (Rebne and Lau, 1991). As is shown in Figure One, this concept is likely to be associated with the individual and task conditions of successful use participation and should improve modeling efforts (Lau, 1993).

If so, there would be a basis for improved "targeting" of participation schemes beyond the proxy value of individual characteristics and task conditions, per se.

Specific hypotheses suggested by the concept of participation legitimacy include the following:

- H1: Industrial and organizational experience is positively related to participation legitimacy;
- H2: Participation legitimacy is higher among supervisors than subordinates;
- H3: In the context of computer-based MIS innovation, computer experience is positively related to participation legitimacy; and
- H4: Normative task conditions are negatively related to participation legitimacy among non-supervisory employees.

Participation legitimacy may help explain the positive effects of industrial and organizational experience in previous research. It seems plausible to expect that experience would not only confer more information to contribute to participation processes but also higher perceptions of legitimacy of participation through awareness of these differences (H1). By extension, we would expect similar positive effects on legitimacy for hierarchical status in the division of labor (supervisory positions—H2) and (in the context of computer-based MIS innovation) computer experience (H3).

With respect to task conditions, we would anticipate that participation in normative tasks historically associated with managerial responsibilities would be negatively related to legitimacy. For example, we would expect employee participation in the activities of a firm's board of directors to be perceived as less legitimate than membership in floor decision-making groups (assuming the latter are not merely consultative institutions).

To summarize, there appears to be a need to test a multi-disciplinary model of participation, with particular reference to MIS applications. To do so, the individual difference and task condition factors identified by behavioral and organization theorists, respectively, should be supplemented by measures of legitimacy of participation, a concept which appears to implicitly underlie the more selective approach to participation found in personnel management theory. The questions to be addressed are as follows:

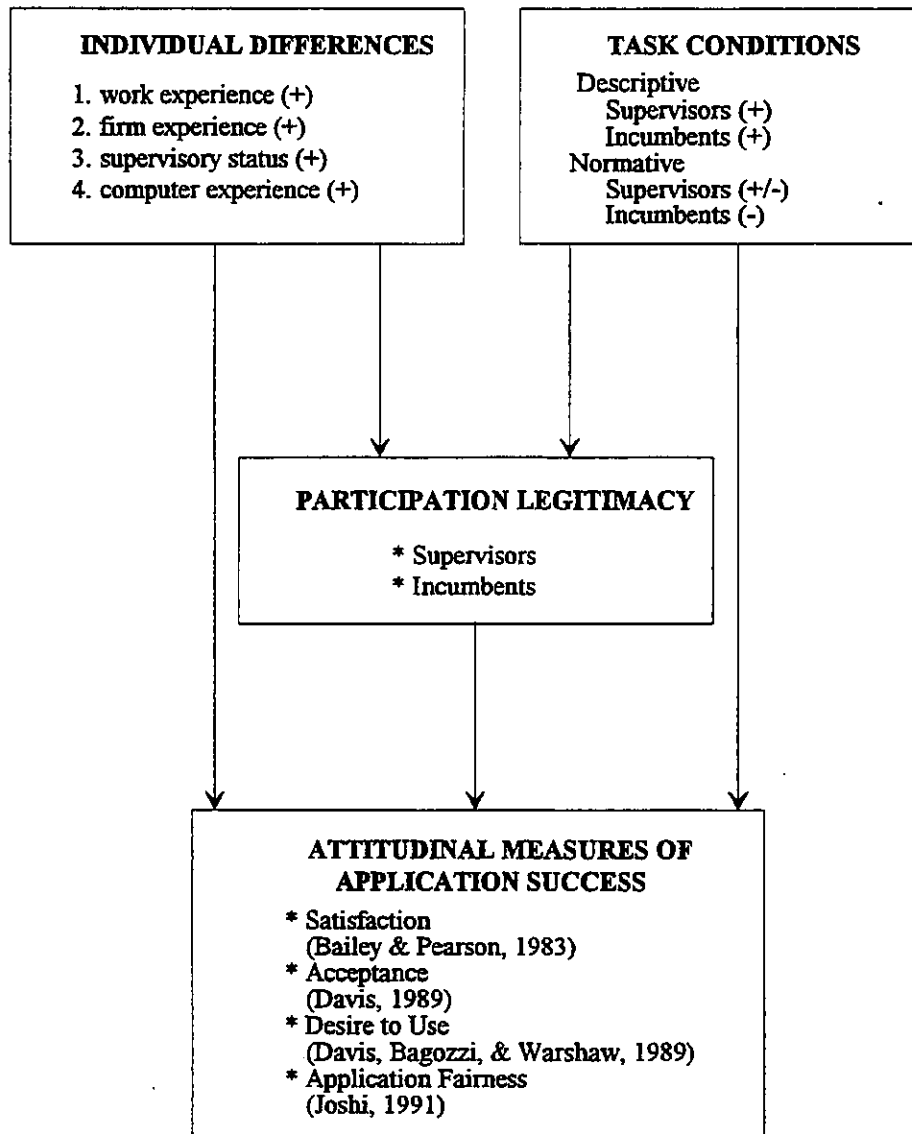


Figure One Provisional Model of Individual Differences, Task Conditions, and Legitimacy as Influences on Attitudinal Measures of Application Success

1. Do perceptions of participation legitimacy vary across individuals participating in the development of an MIS application?
2. If so, to what extent is such variance consistent with what is known about individual difference and task factors as predictors of participating end-users' attitudes towards an MIS application?
3. Does the concept of participation legitimacy add value to models of participating end-users' attitudes towards an MIS application?

4. RESEARCH METHODOLOGY

The research methodology section of the paper addresses the setting and context in which the research was tested, and discusses the sample, quasi-experimental design, and variables of the research.

4.1 Field Setting and MIS Context

Study questions and hypotheses are addressed in the context of a single MIS initiative undertaken in 1990-1991 — development of a Prolog computer program to facilitate performance appraisal using the behaviorally-anchored ratings scale (BARS) technique. The setting was a major health care organization situated in a northeastern U. S. metropolitan area.

BARS is a well-regarded personnel management technique which focuses on the identification and evaluation of specific performance-related behaviors (Eichel and Bender, 1984). Valid BARS evaluation items must be tailored to specific jobs. Relative to measures of common performance-related attitudes and traits, BARS development tends to be labor-intensive and expensive. Two distinctive developmental tasks are involved. First, hundreds of behavioral statements must be generated by individuals familiar with the work in question (incumbents or immediate supervisors). Second, salient items must be selected and evaluated normatively (i. e., as examples of "unacceptable" through "outstanding" behavior). MIS-based development facilitates the BARS application by reducing the costs of data collection and management and making it feasible to integrate performance appraisal outcomes with other human resources data (e.g., individual salary and promotion patterns). Also, MIS-based BARS data can be used for general decision support purposes (e.g., determining aggregate training needs in relation to specific skill deficiencies).

For the purposes of the study, this context has several advantages. As a MIS consultant to this initiative, I was able to negotiate intervention conditions facilitative of the present study. Due to this, it was possible to manipulate participation in a quasi-experimental manner. Second, the BARS development process involves two discrete tasks which vary in terms of levels of task non-routiness — item generation (relatively high) and item evaluation (relatively low). Also, these tasks vary in terms of the extent to which

they are likely to be regarded as legitimate participation tasks for supervisors and incumbent workers, respectively. Personnel management theory suggests that descriptive information concerning job content (item generation) is likely to be perceived as a legitimate task for incumbent workers. Normative information (item evaluation) is historically the province of the supervisors who would typically be responsible for performance appraisal, *per se*.

From a supervisory/managerial perspective, moral hazard problems abound. Given an opportunity to participate in item evaluation, it is in the interests of subordinate workers to rate easily obtainable behaviors as indicators of "excellent" performance. Supervisors have somewhat poorer information about the actual behavioral demands of a given job. However, given an opportunity to participate in item generation, supervisors have an incentive to use this uncertainty to exaggerate the salience of those subordinate behaviors upon which they themselves are most likely to be evaluated.

4.2 The Sample and Quasi-Experimental Design

The MIS-BARS development was conducted in the context of a single job classification — receptionists — and the supervisory positions directly associated with the work of receptionists ($n=42$ and $n=32$, respectively). Reception work was chosen as it accounts for the single largest group of employees in the firm and, therefore, the broadest scope for the BARS initiative. Quasi-experimental design is mixed (between-subjects and within-subjects). Twenty-seven receptionists and fifteen supervisors were assigned to the descriptive task of generating performance-related behavioral items. Fifteen receptionists and seventeen supervisors were assigned to the normative task of evaluating items as indicators of specific levels of performance. Within the item generation task, the participation medium was also manipulated. Subjects were assigned to perform their task either manually with pen and paper ($n=12$) or using computer-based data entry ($n=30$). Assignment to tasks was random.

4.3 Observation: Variables and Measures

All subjects completed a questionnaire comprised of closed-ended questions concerning individual characteristics and attitudes towards their participation. Included were self-reports of number of years of (1) full-time work, (2) work in the study organization, and (3) computer experience. As noted above, task conditions are measured as a dichotomous variable which distinguished between participation in the descriptive task of behavioral item generation (0) versus the normative task of item evaluation (1). Assignment to supervisory status (1,0) was based on managerial reports of status, with questionnaire reports of job title used as a check. Seven point Likert-type scales were used to measure legitimacy on the basis of the extent to which individuals regarded their participation in

the MIS-BARS development as (a) appropriate or inappropriate and (b) fair or unfair.

Based on prior behavioral research on MIS development, four validated attitudinal instruments designed to assess the success of the MIS-BARS development were included in the survey. Adapted from existing instruments, multiple Likert scale items were used to measure each of the following attitudinal outcomes: (1) satisfaction with the application/BARS outputs (Bailey and Pearson, 1983); (2) acceptance of the application (Davis, 1989); (3) desire to use the application (Davis, Bagozzi, and Warshaw, 1989); and (4) fairness of the application, in terms of perceived reliability and relevance of outputs (Joshi, 1991). Outputs refers to the behavioral item content of the BARS instrument as well as the normative evaluation of each item as an indicator of performance levels (i.e., not satisfaction with individual performance appraisals produced under the application). As each of these measures is well-established in the literature, they will not be discussed further. The reader is encouraged to consult the original references or refer to the authors for details concerning these scales.

5. DATA ANALYSIS

OLS regression techniques were used to test the study's specific hypotheses and the model shown in Figure One. Indeed, a number of constructive results were obtained. Table One reports zero-order correlations between independent and dependent variables in the study. The signs are generally in keeping with expectations and suggest that legitimacy is likely to contribute to the modeling of attitudes toward the MIS-BARS application.

Also, exploratory regression analyses indicate that legitimacy itself can be predicted on the basis of individual-difference and task condition factors considered in the model. For example,

$$\text{LegPart} = 5.56 + 0.08 * \text{Org. Exper.} + 0.05 * \text{Comp. Exper.} \\ - 0.40 * \text{NormativeTask} + \text{Error} \\ (\text{R-square} = 0.18)$$

As illustrated by the above regression model, participant's perceived legitimacy of participation (LegPart) increases with the number of years that an individual has been working with the participating organization (OrgExp) as well as his/her level of computer experience (CompExp), but decreases as the participatory task becomes more structured (i.e., normative task). Simply put, as the structure of the participatory tasks (1=Normative Task) increases from less structured to more structured, the participant's perceived legitimacy of participation (LegPart) decreases accordingly. This phenomenon occurs because while less structured tasks typically require more idiosyncratic knowledge (direct effect), participants who engaged in such tasks are more likely to regard their participation as important and even essential (indirect legitimacy effects). Less structured tasks

involved in performance management (e.g., review of job responsibilities and the development of improvement plans) would, therefore, require higher participation levels than the more structured tasks. Less participation is needed for structured tasks because users "should" have more influence in less-structured conditions (Edstrom, 1977; Mumford, 1979). Further, highly structured tasks do not allow the employees to participate extensively in making decisions and setting standards (Edstrom, 1977; Mumford, 1979). Even so, employees who engage in less structured work should tend to regard PDM as essential, and therefore legitimate, because they perceive that they know their jobs better than anyone else.

These three variables together explained eighteen percent of the variability in the legitimacy of participation (LegPart) model. The mean legitimacy of participation (LegPart) perceived by supervisors was 6.16 (with the highest possible score of 7 and the lowest of 1), by subordinates 6.02, and by the overall sample 6.08. These overwhelmingly high figures indicate that participants, in general, tended to consider their participation as meaningful. As a result, it is possible to infer that they perceived their involvement in the technological change as legitimate, and believed their involvement in the participation process appropriate, proper, fair, or consistent with their work and not existing merely for the sake of existing.

The model of participation legitimacy is improved substantially by solving multicollinearity problems (e.g., supervisory status and organizational experience). In addition, several interaction terms suggested by the model are examined. After a satisfactory model of legitimacy is obtained, path analysis was used to assess its role in the more general model of attitudes towards the MIS development (Figure One).

5.1 Industrial Experience

- H1: Industrial and organizational experience is positively related to participation legitimacy.

The positive relationship between legitimacy of participation (LegPart) and work experience (WorkExp) indicates that participants with more working experience will tend to regard their participation as more necessary and, consequently, more "legitimate" (Daft, 1989; Locke and Schweiger, 1979; Rausch, 1985). In fact, the more experienced the employees are, the more they are likely to participate in decision making. Many researchers strongly believe that individuals' expertise are related to their work knowledge, which in turn lead to higher quality decisions (Mulder and Wilke, 1970; Vroom, 1969) and a perceived likelihood of implementation success (Dickson and Powers, 1973; House, 1988). Based on the statistical analysis, there is sufficient evidence to support this hypothesis.

Table One: Zero-Order Correlations: Independent and Dependent Variables

Independent Variables	Dependent Variables (MIS-BARS Attitudes)				
	Participation Legitimacy	output Acceptance	output Satisfaction	output Desire to Use	output Fairness
Supervisor ¹	[0.07]	[0.17]	[0.18]	[0.11]	[-0.06]
Work Experience	0.32	0.36	0.35	0.36	0.32
Org. Experience	0.34	0.35	0.38	0.34	0.28
Comp. Experience	0.22	[0.14]	0.34	0.29	0.24
Normative Task ¹	[-0.15]	-0.27	[-0.13]	[-0.11]	[-0.19]
Leg. of Part.	—	0.68	0.68	0.78	0.81

Notes:

1 : dummy variable (1,0)

[] : Brackets indicate bivariate relationship not significant at the 10% level or better (one-tailed test)

Table Two: Regressions for Legitimacy of Participation on Level of Responsibility and Task Structure

Independent Variables	Dependent Variable Legitimacy of Participation	
	Model 1	Model 2
Supervisor ¹	[0.20] (0.10) ²	0.60 (0.30)
Normative Task ¹	[-0.35] (-0.17)	[0.07] (0.40)
Supervisor*Norm.Task ¹		-0.91 (-0.38)
Intercept	6.14	6.00
R-square	0.03	0.08

	Less Structured	More Structured
Subordinate	6.00	6.07
Supervisor	6.60	5.77

Notes:

1 : Dummy variable (1,0)

2 : The standardized regression coefficients are in parentheses

[] : The coefficient was not significant

Model 1: LegPart = f(Supervisor, Normative Task)

Model 2: LegPart = f(Supervisor, Normative Task, Supervisor*Normative Task).

5.2 Level of Responsibility

- H2: Participation legitimacy is higher among supervisors than subordinates.

This hypothesis is rejected based on the regression model presented, which indicates that level of responsibility (1=Supervisor) is not statistically significant for participant's perceived legitimacy. In other words, there is no clear pattern of differential effect by level of responsibility (1=Supervisor) for legitimacy of participation (LegPart). Since there is no difference in the perceived legitimacy of participation (LegPart) between supervisors and subordinates, we can conclude that both supervisors and subordinates felt that they are equally legitimate and qualified to participate in the development process. The lack of consensus among supervisors and subordinates for the measures of success criteria may be largely explained in terms of their differences in their PDM experiences.

5.3 Computer Experience

- H3: In the context of computer-based MIS innovation, computer experience is positively related to participation legitimacy.

When level of computer experience is analyzed as a separate and individual predictor, the regression analysis suggests that participants with high computer experience (CompExp) are more likely to perceive a higher degree of legitimacy than their counterparts with low computer experience. It is apparent that computer experience (CompExp) plays an important role in defining user attitudes toward the development and implementation of new technological change in organizations.

5.4 Task Structure

- H4: Normative task conditions are negatively related to participation legitimacy among non-supervisory employees.

Although a reasonable amount of research has been devoted to the effects of task structure on user attitudes (Culnan, 1983; Edstrom, 1977; Mumford, 1979; Richetts, 1982), there is little information that describes this relationship as mediated by the participant's level of responsibility (supervisors versus subordinates). Level of responsibility (1=Supervisor) was found to be not statistically related to participation legitimacy, while task structure was found to be significantly and negatively correlated with legitimacy of participation (LegPart). Although the main manipulation for level of responsibility (1=Supervisor) and task structure (1=Normative Task) produced mixed effects for legitimacy, this hypothesis attempted to prove that the combination of these two predictors would produce significant interaction effects on legitimacy. In other words, this hypothesis attempted to uncover specific tasks of development (i.e., less structured versus more structured) that are considered socially

legitimate by the supervisors and subordinates (i.e., consider appropriate by the various prospective "users" of the information application and its outputs) and that will result in employees' higher level of legitimacy.

Regression model:

$$6.00 + 0.60 * \text{Supe} + [0.07] * \text{Norm. Task} - 0.91 * \text{Supe} * \text{Norm. Task}$$

The regression model in Table Two attest to the findings that there are significant, symmetric, disordinal interaction effects between level of responsibility (1=Supervisor) and task structure (1=Normative task). With such significant interactions, it is useless to interpret the main effects, because the presence of an interaction indicates that the effects of a given treatment of one factor vary according to the type of treatment of the other factor with which it is combined. Figures Two and Three illustrate that the effects of participants' level of responsibility (1=Supervisor) on participation legitimacy reverse themselves as the structure of the participatory tasks changed from less structured to more structured. Simply put, task structure is related to participation legitimacy, but the kind of relations is dependent on the participants' level of responsibility (1=Supervisor). In other words, supervisors who performed the less structured tasks tended to perceive higher legitimacy of participation than their peers who performed the more structured tasks. Similarly, subordinates who performed the more structured tasks tended to perceive higher legitimacy of participation than their peers who performed the less structured tasks.

A possible explanation for this significant finding could be that supervisors believed that they are more "suited" to perform the less structured tasks so that their time can be more effectively reserved for more important tasks. Further, the less structured tasks required intuitive skills and judgmental abilities that the supervisors possessed. Incidentally, subordinates are qualified to perform the more structured tasks which do not require too much of expertise and can easily be monitored. This is because subordinates lack the skills and abilities needed to perform the less structured tasks, which is usually acquired overtime from their various work and PDM experiences. Specifically, supervisors are more suitable for performing the less structured tasks while subordinates are more suitable for performing the more structured tasks. In conclusion, there is sufficient evidence to support this hypothesis.

6. CONCLUSIONS

The model presented in Figure One permits us to make recommendations concerning universal versus selective use of participation in MIS development. At present, there is every indication that the lessons of personnel management theory (selective participation) will prove superior to those of behavioral theory, per se (universal participation). This study concludes that legitimacy of participation is an

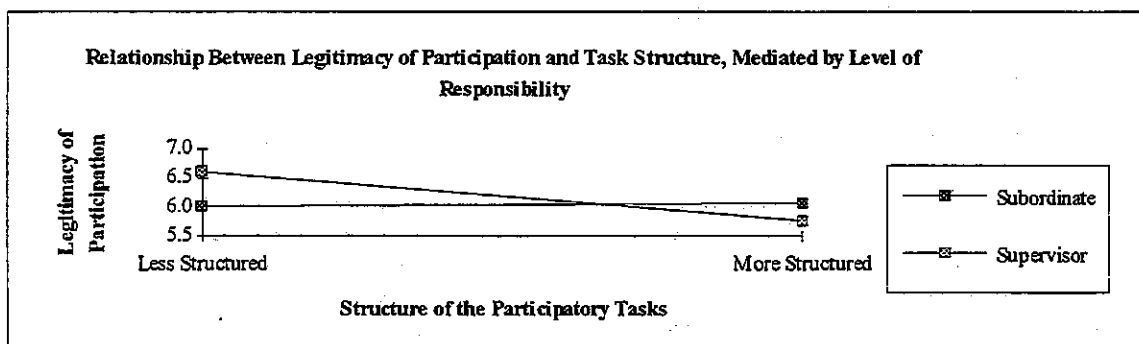


Figure Two: Relationship Between Legitimacy of Participation and Task Structure, Mediated by Level of Responsibility

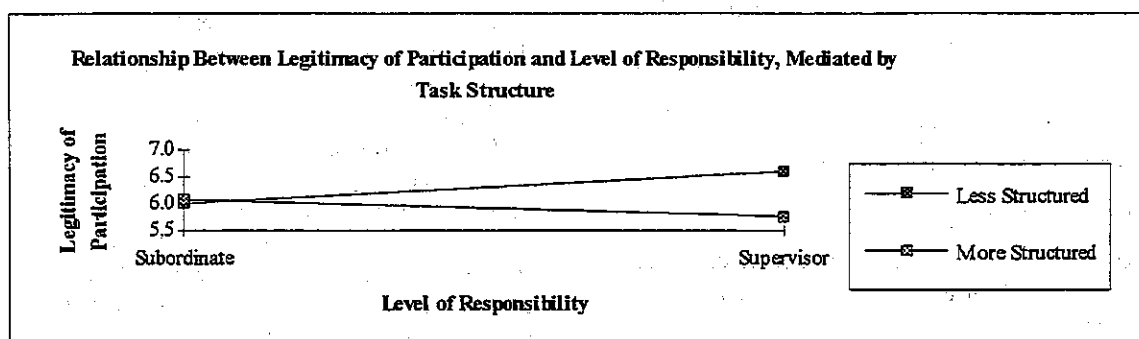


Figure Three: Relationship Between Legitimacy of Participation and Level of Responsibility, Mediated by Task Structure

important concept in the theory of user participation, and there are several implications for managerial practice. For example, managers may help to increase employees' perceived participation legitimacy, which will in turn affect the success of system development and implementation, by assigning participatory tasks appropriate to a user's skills, abilities, and experiences. Similarly, individuals may be able to increase their participation legitimacy by modifying their own behavior to conform to their perception of prevailing norms of legitimacy. If these measures fail, individuals who are dissatisfied with the existing norms of participation legitimacy may seek to influence and/or alter the organizational norms and social values to conform to their own needs through means such as lobbying, negotiation, and union involvement.

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