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ABSTRACT

Measures of influence in organizations often fail to converge or to discriminate between influence and other organizational properties. One reason for this may be that influence over some activities is relatively independent of influence over others. Three subsystems or domains of activities are hypothesized: (1) work activities, (2) coordination activities, and (3) resource-allocation activities. Measures of influence over each of these domains are developed and applied in two organizations, one employing a long-linked technology and another employing an intensive technology. The data unambiguously support the hypothesis that influence over work or coordination activities is relatively independent of influence over the allocation of resources. It appears that work and coordination influence are distinct, but this is unambiguous only for the organization employing long-linked technology. Differential associations between influence domains and two outcome variables--having perception of "general" influence and intrinsic (job) satisfaction--are hypothesized and observed. It is argued that the subsystem approach can increase the precision of influence measures and thereby strengthen empirical results. In addition, the approach may contribute to our theoretical understanding of organizational behavior by encouraging theorists to view organizations as sets of interacting subsystems.

Measures of organizational attributes often demonstrate marginal or poor levels of convergent or discriminate validity. In particular, measures of the distribution of influence sometimes fail to converge among themselves or to diverge from measures of other constructs considered to be distinctly different organizational properties (Azumi and McMillan, 1973; Dewar, Whetten & Boje, 1976; Pennings, 1973). One reason for these shortcomings may be the failure to properly specify the organizational construct involved. The distribution of influence is generally assumed to vary between rather than within organizations; yet, in fact, it may vary as much among subsystems within organizations as it does among the organizations themselves. This type of variation is suggested by Lawrence and Lorsch (1967) who point out that units responsible for different sorts of activities within organizations may exhibit distinctive decision making structures. Further evidence is provided by Duncan's (1971) conclusion that effective organizational subunits operating under high uncertainty employ different levels of participation and hierarchy for dealing with routine versus non-routine decisions. To the extent that this sort of variation occurs, measures which aggregate across subsystems will contain error attributable to subsystem differences, with obvious deleterious effects on measurement precision and on the interpretability of results. In this paper we attempt to deal with this problem by (1) distinguishing among different decision subsystems or domains, (2) developing measures of influence which do not imply aggregation across subsystems, (3) testing these measures for convergence and discrimination and, (4) exploring the importance of distinguishing

among subsystems when conducting empirical research on influence processes. Should a subsystem approach to the measurement of influence prove to be useful, it could be applied to measure other constructs as well. In addition, empirical validation of this approach would constitute evidence in favor of viewing organizations as sets of interacting subsystems. The subsystem approach, therefore, is potentially significant theoretically as well as methodologically.

Subsystems and the Distribution of Influence in Organizations

Different processes and personnel may be employed to make decisions in different organizational domains or spheres of action. Being centralized in one decisional area or domain need not imply centralization in others. Likewise, even if all decisions are centralized, they may be made by incumbents of different top-level positions. Factor analyses of self-report influence measures, for example, illustrate that those who influence work-related decisions are not necessarily influential when it comes to allocating resources (Beck, 1969; Macy, 1975; Mohrman, Cooke, and Duncan, 1975). The different personnel and processes underlying decision-making in these domains may be a reflection of distinctly different organizational subsystems. An inquiry into the distribution of influence in organizations, therefore, ought to identify these subsystems and construct influence measures appropriate for each.

Theoretical discussions in the work of Becker and Gordon (1966), Parsons (1960), and Katz and Kahn (1966) may be employed to identify

at least four distinct domains of organizational activities. Becker and Gordon argue that work activities, resource-allocation, and coordination are relatively independent areas of responsibility in organizations. Parsons makes an analogous distinction between technical and managerial activities. Technical activities correspond to Becker and Gordon's work activities and managerial activities are similar to their coordination and resource-allocation activities. Elsewhere Parsons (1956) distinguishes between allocation and coordination activities. Similarly, Katz and Kahn (1966) place coordination and at least some resource-allocation activities within two different subsystems--the managerial and maintenance substructures respectively.

While it is reasonable to expect that the work activities and coordination domains are each unidimensional, it is likely that the resource allocation domain includes independent subareas. Becker and Gordon distinguish between personnel (volitional) and material (non-volitional) resources. Similarly, Parsons (1960) suggests that funds are employed either to acquire physical facilities or to employ personnel. These two activity domains may constitute distinct subdomains within the general resource-allocation category.

In summary, several potentially distinct organizational subsystems can be identified. These include work activities, coordination activities, and resource-allocation activities. It also may be essential to distinguish between activities related to the allocation of personnel and material resources.

The Method

Two general procedures were employed to test the proposed four factor model of influence. First, the goodness-of-fit between observed influence and the expected influence model was assessed using confirmatory factor analysis (Alwin, 1974; Werts et al., 1974; Kalleberg and Kleugel, 1975). This procedure allows for specification of the expected factor structure in advance of the analysis. It provides estimates of the path (epistemic) coefficients between the latent constructs (e.g., work influence) and their measures and estimates of the correlations among latent constructs. Relatively large epistemic coefficients provide evidence that the measures tap appropriate latent constructs, and correlations less than 1.0 provide evidence that these constructs are distinct variables. In estimating these correlations, confirmatory factor analysis (CFA) implicitly corrects for attenuation due to measurement error. Correlations approaching ± 1.0 are therefore required as strong evidence that the measures fail to discriminate among different latent variables. CFA also provides an overall goodness-of-fit criterion: the similarity between item correlations expected from the pre-specified factor structure and those actually observed. In this respect, CFA is identical to path-analytic techniques.

The second procedure used to assess the utility of the influence domain classification scheme involved testing for differential association between scales constructed from measures reflecting the various influence domains on the one hand and two criterion variables on the other: feelings of being "influential in general" and intrinsic (job) satisfaction.[1] It was felt that employees would respond

to questionnaire items designed to measure these criterion variables in terms of what was most salient to them day-to-day. Specifically, the influence employees exercised over their own work activities was expected to be the most potent predictor of feelings of general influence and of job satisfaction.

The Data

Measures of the extent to which employees felt they exercised influence within each of the four domains were obtained from respondents in two organizations.[2] One is a relatively small capital intensive manufacturing firm in which work is organized around an assembly line system of production. In Thompson's (1967) terms, this organization utilizes a "long-linked" technology. The second organization, a labor intensive engineering firm, employs many technical personnel to produce complex designs and drawings. These tasks require almost continuous feedback among personnel and the activities of the members of the organization are highly interdependent. Again applying Thompson's terminology, the technology employed in this organization could be described as "intensive."

Eighty employees in the manufacturing firm and two hundred seventeen in the engineering organization filled out a set of questionnaires designed to measure a variety of organizational properties. Respondents represented many types of workers from several levels in both organizations. The employees in the manufacturing firm were asked to respond to twelve questions regarding their influence over the four domains of organizational decision-making. To measure the amount of

influence they felt they exercised over their own work activities, they were asked about how much influence they had over decisions concerning (1) how they do their work, (2) changing how they do their work, and (3) the scheduling of their work activities. The survey included six items to measure influence over the allocation of personnel and material resources. In the area of personnel resources, the employees were asked about their influence over (1) firing decisions, (2) promotion decisions, and (3) decisions about pay raises. In the area of material resources they were asked about their influence over (1) decisions involving equipment, (2) decisions about getting supplies, and (3) the expenditure of cash. Finally, to assess the respondents' influence over coordination decisions, each was asked to report on their influence over decisions concerning (1) how to settle disagreements among people in their work group, (2) what to do when someone they depend on doesn't do their job, and (3) how work tasks are divided up among people. Respondents answered each question using a five point Likert scale ranging from very little to a great deal of influence.

The measures of work, coordination, and personnel resource influence utilized in the engineering organization were identical to those used in the manufacturing firm, with two exceptions. First, two items were replaced to increase face validity. The measure of work influence which focused on scheduling work activities was replaced with an item asking employees about their influence over decisions concerning what they do day-to-day. The measure of coordination influence which asked employees to report on their influence over how work gets divided up

among people was replaced by one which focused upon the influence employees had over decisions about what to do when they don't get what they need to do their work. Coordination implies interdependence, and this new question seemed to reflect more accurately the dynamics underlying actual coordination activities. Second, the measures of material resource influence were not used in the engineering division because, as will be noted below, they failed to converge when applied in the manufacturing firm.

In addition to measuring influence within the activity or decisional domains, the survey instrument also measured two types of influence--actual and desired. Respondents were asked, for each of the domains, how much influence they actually exercised and how much they felt they ought to exercise. If the subsystem approach to influence is appropriate, measures should distinguish among domains within both of these influence types. The implied model of influence specifying differences among domains, within and between types, is presented in Figure 1.[3]

Insert Figure 1 about here

The scale of "general influence," created in order to test for the discriminant validity of the domain-specific measures, was composed of a linear combination of employee responses to items assessing (1) the amount of "say" respondents felt they had over how decisions were made, (2) the extent to which they felt that decisions were seldom forced on them, and (3) the extent to which they believed they could modify

decisions that had been made by others. The satisfaction scale, also created as a criterion measure for assessing discriminant validity, combined items assessing the extent to which the respondents' jobs enable them (1) to feel good about themselves as persons, (2) to do things they considered worthwhile and (3) to do the things they do best.

Analysis and Results

Zero-order correlations among the measures of employee influence over the allocation of material resources failed to attain even marginally acceptable levels in the small firm. While such a subdomain may exist, the measures did not appear to tap it. It is possible that this subdomain is itself multifaceted, e.g., there may be differences between influence over financial resources and influence over the allocation of physical resources such as hardware. However, since influence over material resources could not be established as a distinct domain, subsequent analyses were conducted on the model specified in Figure 1 with the material resources category (AMR and DMR) omitted.

Influence Domains: Goodness-of-fit to observed relationships. The model diagrammed in Figure 1 (excluding material resources) was estimated for both organizations. The magnitudes of the epistemic path coefficients, analogous to factor loadings, were taken as indicators of the extent to which the measures tapped the domain they were designed to measure. Then the correlations among the influence domains themselves were observed to assess the extent to which the domains

represented distinctly different constructs. Finally, correlations among measures of influence domains generated by the model were compared to those actually observed in order to assess the overall goodness-of-fit between the model and the data.

The epistemic coefficients generated by the three-domain model for both organizations and for both influence types are presented in Table 1. The magnitudes of the coefficients presented in this table provide considerable evidence that the measures tap the appropriate latent constructs. The coefficients range from .362 which is marginally acceptable to .999 which indicates that the survey item is practically identical to the domain it was intended to measure. Moreover, there is a good deal of similarity between measures across influence types. The measures which show high validity coefficients when applied to actual influence generally have high coefficients when applied to desired influence.

Insert Table 1 about here

Correlations among influence domains within types (e.g., rAW.AC, rDPR.DC in Figure 2) and among influence types within domains (e.g., rDC.AC, rDPR.APR in Figure 2) are presented in Table 2. In interpreting these estimates it is important to recall that the CFA procedures employed implicitly correct for attenuation due to measurement error. Consequently, the parameters are estimates of the <u>true</u> correlations among unmeasured constructs. Estimates approaching 1.0 are therefore required as evidence that the measures fail to empirically distinguish

among influence domains/types. The correlations generated from each dataset are juxtaposed, with those obtained from the engineering organizations underlined.

Insert Table 2 about here

Inspection of Table 2 suggests that the distinction between influence over personnel resources is distinctly different from influence over either work or coordination activities. It seems, however, to be more highly associated with coordination than with work influence. The maximum amount of covariance it has with work influence for either organization involves desired influence and is only 38% ($r = .62$). Actual personnel resources influence and actual work influence have only 12% of their variance in common ($r = .35$). The situation is somewhat different for the distinction between personnel resource influence and coordination influence. The amount of influence respondents reported they actually had over personnel resources covaries significantly with the amount they reported exercizing over coordination activities. Nevertheless, these measures had only 55% overlapping variance in the manufacturing firm ($r = .74$) and 38% in the engineering organization ($r = .62$). Considering that the procedures employed implicitly correct for attentuation, these figures, while substantial, are not large enough to provide strong evidence that the measures employed failed to distinguish between the constructs involved. The measures of desired influence, however do not appear to discriminate among domains. The amount of covariance between desired influence over personnel resources and

desired coordination influence reaches 76% ($r = .87$) for the manufacturing firm. The figure for the engineering organization is somewhat smaller, 62% ($r = .79$); however, this is still too high to provide definitive evidence for discrimination.

The data presented in Table 2 also provide evidence for the distinction between work and coordination influence. In the manufacturing firm, the maximum amount of covariance between these constructs for either influence type is 25% ($r = .50$). The overlap between desired work influence and desired coordination influence in this organization is only 19% ($r = .44$). The situation is somewhat different, however, for the engineering organization. Here, actual work influence has 61% of its variance in common with actual coordination influence ($r = .78$). Desired work influence in this organization is practically identical with desired coordination influence ($r = .90$).

It appears that, overall, Table 2 provides mixed support for the proposed measurement model. Influence over personnel resources seems to be clearly distinct from work influence--for both organizations and both influence types. Actual personnel influence also appears to be distinct from actual coordination influence; although respondents did not clearly distinguish between these domains when they were asked how much of each they wanted to have. It is possible, of course, that people's aspirations are general but that the realities they face force a degree of discrimination. Influence over work activities also appears to be distinct from influence over coordination activities; however, this distinction was clear only for the respondents in the manufacturing firm. When desired influence was analyzed, respondents

in the engineering organization sought both work and coordination influence indiscriminately.

A final note involves the distinction between actual and desired influence (correlations presented in the main diagonal of Table 2). While this is a secondary distinction for our purposes, Table 2 presents an interesting pattern of associations. Respondents in the manufacturing firm appear to be considerably less able to distinguish between actual and desired influence over personnel resources and between actual and desired influence over coordination activities than their counterparts in the engineering organization. There is nearly 100% overlapping variance between actual and desired coordination influence in the manufacturing firm ($r = .98$). The degree of association across influence types, however, is significantly smaller for those in the engineering organization than for those in the manufacturing firm (e.g., .48 and .58). The apparent ability of employees in the engineering organization to distinguish between actual and desired influence and the corresponding inability of the respondents in the manufacturing firm is particularly interesting, since the reverse pattern occurred when respondents were distinguishing between work and coordination domains. Only the manufacturing firm employees were able to discriminate between work and coordination influence.

So far, the magnitude of the epistemic paths and the correlations among unmeasured influence constructs provide qualified support for the proposed measurement model. The results, however, must be viewed in the light of the extent to which these coefficients accurately

reproduce the observed correlations among the measures used. The proposed measurement model and the estimated coefficient presented in Tables 1 and 2 were used to generate estimates of the observed correlations. As a final test of the model's adequacy, the observed correlations were subtracted from these estimates; their differences are arrayed in Table 3. The extent to which the model provides a "fit" for the data is reflected in the degree to which the differences displayed in this table approach zero.

Inspection of Table 3 reveals that this criteria is largely met. Of 144 comparisons between expected and observed correlations, only 6% (8) are different by more than $\pm$.15, and only 14% (21) are different by more than $\pm$.10. The only measure which tends to reproduce relatively poor estimates is the first measure of coordination influence, the amount of say respondents reported having over settling disputes. For the manufacturing firm, this measure seems to be more highly correlated with measures of work influence than would be expected from the model. The corresponding expected correlations from the engineering organization, however, appear to fit the observed correlations quite well. The other exceptions to the overall good fit involve particular measures, rather than entire domains, and therefore are likely to have been due to correlated measurement error rather than to the problems of discriminating among domains. The most notable exception involves the third measure of coordination influence and the third measure of personnel resource influence in the manufacturing firm. While this correlation was underestimated for both actual and desired influence, the problem did not recur when this measure of

coordination influence (how much "say" people have over how work gets divided up among people) was replaced with the new measure applied in the engineering organization.

Insert Table 3 about here

Influence Domains: Differential associations with criterion variables. Consistent variation in the relationships between subsystem measures and criterion variables provide additional evidence that the influence domain measures tap distinct latent constructs. Zero-order correlations between the influence domain measures and the measures of general influence and intrinsic satisfaction are presented in Table 4.[4]

Insert Table 4 about here

In both organizations work influence is more highly correlated with general influence than are either personnel resource or coordination influence. These differences are statistically significant ($p < .05$) except for the one involving coordination and work influence in the manufacturing firm (.49 vs .35). Work influence also is more highly correlated with job satisfaction than is influence over personnel resource allocation. This is true for both organizations and these differences are also statistically significant. The only exception to the expected pattern involves the correlations between work and coordination influence and job satisfaction. Work influence in the

manufacturing firm is more highly correlated with satisfaction than is coordination influence, but this difference is not statistically significant. In the engineering division the relative magnitude of the correlations is reversed; however, the difference is very small.

Discussion

The data reported provide some support and some degree of disconfirmation for the proposed four domain model of influence. Measures of influence over material resources failed to converge sufficiently to warrant further testing, and this domain was excluded from the model. The data then provided qualified support for the remaining three domains. First, epistemic coefficients relating measures to their appropriate constructs were of more than adequate magnitude. Second, the proposed measurement model generated accurate estimates of the observed correlations. Third, estimates of the correlations among unmeasured constructs provided fairly conclusive evidence that influence over work activities is distinctly different from influence over personnel resources. Personnel resource influence also appeared to be distinct from coordination influence. Work influence was clearly distinguished from coordination influence, however, only by respondents in the manufacturing firm.

The failure to provide clear-cut evidence in support of the distinction between work and coordination influence in the engineering organization warrants further discussion, since this difference was clearly evident in the manufacturing firm. Differences in patterns of associations across sites were also evident in the relationships between actual and

desired influence. While engineering personnel seemed less able to distinguish between work and coordination influence, employees in the manufacturing firm were less able to distinguish actual from desired personnel resource and coordination influence. The data suggest that the factor structure of perceived influence is unstable across organizations.

One reason for this might lie in the different technologies employed by each organization. As was noted earlier, the manufacturing firm used an assembly line system of production, what Thompson has called a "long-linked" technology. The engineering organization was engaged in developing complex construction designs. Since the activities of most members of this organization had to be coordinated simultaneously with those of most other members, the technology employed resembled Thompson's "intensive" technology. The outputs of some members were the inputs for others and vice-versa. In other words, the interdependencies among employees were reciprocal. Under these conditions, coordination tends to be managed by a process of mutual adjustment (Thompson, 1967, p. 56; Van de Ven, Delbecq & Koenig, 1976). Activities are coordinated by the people who actually do the work rather than by pre-established plans and procedures as is often the case with long-linked technology (Thompson, 1967, p. 56; Van de Ven, Delbecq & Koenig, 1976).

The relative inability of personnel in the engineering organization to distinguish work from coordination influence might have been due to inseparability of work and coordination activities under conditions of reciprocal interdependence. Under these conditions, work activities determine coordination activities and vice-versa. Moreover, they are

likely to be conducted by the same individuals. On the other hand, work and coordination activities may be more distinct when interdependencies are not reciprocal (e.g., in organizations employing a long-linked technology). Coordination decisions are made considerably in advance of the work activities they serve to integrate, and they are likely to be conducted by different types of people--planners, rather than workers. The greater ability of employees in the manufacturing firm to distinguish between work and coordination influence may well have been due to the different technologies employed in the two sites under investigation.

The relatively greater ability of the employees in the engineering organization to distinguish between actual and desired coordination and personnel resource influence also may be traceable to differences in technology. When an intensive technology is employed, the coordination of diverse activities is problematic--it is a constant and often unpredictable issue. Since under these conditions employees tend to coordinate their own activities with those of others through a process of mutual adjustment, frustrations can be a frequent occurrence. In the case of the engineers being studied, each employee had to design parts on the basis of specifications describing parts being designed simultaneously by others. Any errors and changes made by one employee forced adaptations to be made by other employees. The gap between the amount of coordination influence engineers actually had and the amount they wanted was, at least at these times, painfully evident. Their relative ability to discriminate between these influence types, then,

may have been due to the reciprocal nature of the interdependencies they faced. Employees in the manufacturing firm, on the other hand, generally were not responsible for coordinating their own work. Their activities were pre-specified and coordinated in advance. Since coordination was relatively unproblematic for them, their inability to distinguish between the amount of influence they had and the amount they wanted perhaps should not be too surprising. Some of these individuals may have sought greater influence in order to satisfy personal needs; however, they did not need to exercise coordination or personnel resource influence in order to do their work.

Finally, inter-site differences in the patterns of association between influence domains and the criterion variables (general influence and job satisfaction) may have been due to differences in technology. As noted above, different degrees of association between influence domains and these variables were observed except for those between work and coordination influence and satisfaction in the engineering organization (Table 4). Here, work influence and coordination influence showed almost identical correlations with job satisfaction (.43 and .45 respectively). This may well have been due to the greater salience of coordination influence for employees who are engaged in reciprocally interdependent activities. In this case, coordination influence may be as important--and therefore as satisfying--as work influence. In addition, the relative inability of respondents in the engineering organization to distinguish between work and coordination influence may be the cause of the the similar association between these domains and job satisfaction. This

already has been traced to differences in the technology used in this organization relative to that employed in the manufacturing firm.

The suggestion that patterns of associations among measures of similar constructs might vary depending upon technology or some other organizational attribute has significant implications for organizational measurement. It implies that the utility of various schemes for dimensionalizing organizational constructs may vary depending upon the characteristics of the organizations being studied. In essence, this raises the possibility of a contingency approach to organizational measurement. In the case of influence, it might be essential to distinguish between work and coordination influence for organizations using long-linked technology. This distinction, however, may be relatively unimportant to the extent that intensive technology is employed. Similarly, distinguishing between actual and desired influence may be critical under conditions of intensive technology but be less important when the technology is long-linked. Influence, however, is only one attribute--or set of attributes--characterizing organizations, and technology is only one of many possible contingencies. The quality of organizational measures might be significantly improved if researchers devote additional energy to searching for other contingencies and applying those which are discovered to other organizational constructs.

Some Methodological and Theoretical Implications

The present study expands upon several earlier efforts which were designed to identify stable dimensions of organizational attributes. Whisler et al. (1968), for example, found that three measures previously

thought to tap centralization--individual compensation, perceptions of interpersonal influence, and the span of control--varied differently depending upon the programmed or unprogrammed nature of the tasks being performed. The data presented in this paper suggest that the second of these measures, perceived influence, may itself by multidimensional. No pretense is made that all of the dimensions of influence have been identified, or that all of the conditions under which different dimensions might be distinguishable have been discovered. The distinction between having influence over the domains discussed, however, may go a long way toward increasing the quality of influence measures developed to date. Blau and Schoenherr, for example, report a mean correlation of +.11 among their centralization measures (1971, p. 112). Dewar, Whetten, and Boje (1976) report that influence measures used by Hage and Aiken (1967) and by Hall (1962) show questionable convergent and discriminant validity. Azumi and Macmillan (1973) and Pennings (1973) have reported similar problems.

One of the most ambitious measures of the distribution of influence in organizations, that developed by Pugh et al. (1968), has been criticized by Mansfield (1973) for failing to display properties of a vector scale. These and similar limitations may, in part, be attributable to a failure to distinguish among influence domains. Blau and Schoenherr (1971) and Pugh et al. (1968) built their measures by combining items which spanned different domains. Measures developed by Hall (1963) and by Hage and Aiken (1967) also fail to distinguish among decision domains. One implication of the present findings is that these problems might be reduced to the extent that influence domains are distinguished in scale construction.

Differentiating among influence domains promises to increase the magnitude and stability of findings relating the distribution of influence to other organizational attributes. Adopting an approach similar to the one discussed here, Mohrman, Mohrman, and Cooke (1976) found that teacher participation in decisions about how they do their work was associated with both intrinsic and extrinsic satisfaction. Participation on making managerial decisions, however, was not associated with satisfaction. Similarly, Feather and Moch (1976) found that influence over work activities and influence over coordination decisions were differentially associated with the extent to which supervisors and co-workers responded to employees' needs and interests. Presumably, had either study failed to distinguish between these influence domains, their findings would have been weaker. More importantly, the interpretation of their results would probably have been a function of the items selected for inclusion in the measures. The relative number of work as opposed to coordination items would have had significant impact on the results.

The distinction between organizational subsystems, particularly in the area of the distribution of influence, may have theoretical as well as methodological implications. By viewing organizations as sets of interacting subsystems, theorists may be able to untangle at least some difficult conceptual issues. For example, insight might be gained into whether bureaucracy can or cannot be considered to be a unitary concept. Several authors have argued that bureaucracies tend to be simultaneously formalized, standardized, specialized, and centralized. Pugh et al. (1968) suggest that centralization (or the

concentration of authority) varies independently of the other attributes of bureaucracy. Data presented by Child (1972), however, suggest that organizations with the other characteristics of a bureaucracy are decentralized. Reviewing these findings, Mansfield (1973) concluded that there was evidence for a weak but negative association between centralization and "bureaucracy." Is it not possible, however, that some decisions are centralized while others are decentralized in organizations which in all respects are "bureaucratic"? It would seem that work-related decisions are made primarily by the people who perform work. Their behaviors are specified in detailed manuals and rules; however, the employee is the one who implements and applies the rules and specified procedures. Coordination influence in a bureaucracy may present quite a different picture. Presumably, coordination decisions are made by those who write the rules and specify others' activities. These people tend to occupy staff positions located in middle levels in the bureaucracy. Coordination influence in bureaucracies, therefore, may be moderately centralized. Personnel-resource influence, on the other hand--decisions about hiring, firing and promotions--may be reserved more for management. Even supervisors who have significant input into whom among their subordinates is promoted are likely to have to make a case to their superiors. Whether this form of influence is or is not centralized in bureaucracies, however, is considerably less important at this point than the possibility that <u>it might be</u>. Having demonstrated the existence of distinct influence domains, at least under some conditions, it is possible that applying these distinctions to theoretical problems involving "bureaucracy" will prove to be fruitful.

Finally, the presence of influence subsystems may have significant implications for practice. Schemes for employee participation have tended to treat influence as a global concept, seldom distinguishing among alternative influence domains (Lowin, 1968). Supervisors, however, might do well to encourage participation primarily in those areas of critical importance to employees. The findings reported here, for example, suggest that the relative salience of different domains may vary with technology. Similarly, employees seeking to advance their position in the organization might employ strategies which discriminate among influence domains. Feather and Moch (1976) suggest, for example, that, under certain conditions, only some domains provide a basis for power. Influence domains also may help to sort out some of the problems associated with "industrial democracy." As Jenkins (1973), Tannenbaum (1974) and other observers have noted, there is a wide variety of schemes designed to involve employees in directing their organizations. Some, such as in Yugoslavia and West Germany, involve workers at the board level. Others, such as in Norway, involve employees in making day-to-day decisions about how they should do their own work. These differences parallel the distinction between work and the other influence domains. Research which distinguishes among these domains, therefore, might provide some insight into the implications or consequences of alternative involvement schemes.

While the results reported above suggest that the distribution of influence in organizations is a multidimensional phenomenon, the subsystem approach must be applied in many different settings by other

researchers (e.g., Feezor, 1975) before its utility can be confirmed. These efforts, however, might usefully be directed toward expanding as well as testing the perspective. For example, we need to know whether the approach applies to the influence employees actually have as well as to that which they think they have. Future efforts might also apply the subsystem approach to the distribution of decision-making discretion vertically (e.g., Blau, 1968; Blau and Schoenherr, 1971; Pugh et al., 1968; Child, 1972) and horizontally (e.g., Perrow, 1970; Hickson et al., 1971; Hinings et al., 1974; Pfeffer and Salancik, 1974; Salancik and Pfeffer, 1974). The current perspective has considered only general participation in decision-making (e.g., Tannenbaum, 1968).

A final extention of the subsystem approach would involve other organizational attributes. If the theoretical perspective underlying this approach is correct, several variables should vary differently across subsystems. The formalization of work activities, for example, may be relatively independent of the formalization of coordination or personnel resource-allocation activities. The same might hold true for standardization. The subsystem approach, therefore, may prove to be useful for several familiar organizational constructs. Eventually, it may be possible to identify and quantify organizational variables in ways which allow for highly reliable and stable measurement. Building upon past efforts in this respect, the proposed subsystem approach may take us a bit further toward this goal.

Footnotes

[1]Several authors have argued that satisfaction is a function of the influence employees feel they can exercise over their work. The relationship between the total amount of control exercised in organizations and the satisfaction of members has been documented (Tannenbaum and Cooke, 1974). The association between the control of individuals over different areas of activities and their satisfaction with those areas has been observed (Bachman and Tannenbaum, 1966); individual attributes moderating the influence-satisfaction relationship have been identified (Tannenbaum and Allport, 1956; Vroom, 1960); and the impact of formal systems for participation on workers' satisfaction has been reviewed (Lammers, 1967; Obradovic, 1970).

[2]The data were gathered by the staff of the Organizational Behavior Program at the Institute of Social Research. The authors are indebted to the Program staff for their assistance and advice.

[3]Correlations might have been included among domains across types or among types across domains; however, analyses were restricted to the within domain or within type relationships, and there was no need to include these additional parameters.

[4]It was felt that, for theoretical reasons, the relationships between "general influence," job satisfaction, and the influence domains would vary as a function of the position the respondent held in the organization. This analysis therefore was restricted to non-supervisory,

non-professional personnel in the manufacturing firm (n = 58) and in the engineering organization (n = 76). For a detailed discussion of the theoretical issues involved, see Cammann, Cooke and Moch (1976).

Table 1

Epistemic (Path) Coefficients for Measures of Influence Domains

Data Source and Influence Type	Work Influence			Personnel Resource Influence			Coordination Influence		
	Measure Number			Measure Number			Measure Number		
	1	2	3	1	2	3	1	2	3
1. Manufacturing Firm									
a. Actual	.826	.835	.866	.866	.999	.754	.635	.728	.760
b. Desired	.856	.790	.795	.832	.933	.705	.492	.695	.844
2. Engineering Organization									
a. Actual	.687	.741	.802	.445	.798	.362	.751	.682	.639
b. Desired	.658	.569	.791	.645	.898	.482	.625	.629	.458

Table 2

Correlations among Influence Types and Domains
for Both Organizations
(Manufacturing Firm/Engineering Organization)

Influence Domain	Influence Type	Work		Personnel Resources		Coordination
		Actual	Desired	Actual	Desired	Actual
Work	Actual					
	Desired	.77/.78				
Personnel Resources	Actual	.35/.42				
	Desired		.42/.62	.86/.48		
Coordination	Actual	.50/.78		.74/.62		
	Desired		.44/.90		.87/.79	.98/.58

Table 3

Goodness of Fit Between Influence Model & Observed Relationships:
Expected Minus Observed Correlations

Type of Influence	Influence Domain	Measure								
			Manufacturing Firm							
Actual	Work	1		.01	.00	.03	-.06	-.08	-.15	.02	.07
		2	.08		.00	.03	.01	-.02	-.10	-.06	.04
		3	-.02	-.03		.01	.01	-.02	-.17	-.01	.17
	Personnel Resource	1	-.09	.01	.00		.00	.06	-.01	-.01	-.05
		2	.03	-.01	.05	-.03		.00	.02	.04	-.05
		3	-.12	-.06	-.11	.06	.03		-.10	-.04	-.20
	Coordination	1	.02	.01	.02	.09	-.03	.01		-.01	.04
		2	-.04	.04	-.10	.14	-.03	-.01	.01		-.03
		3	-.05	.12	.06	.08	.00	-.05	-.03	.05	
			Engineering Organization								
			Manufacturing Firm							
Desired	Work	1		-.01	-.01	-.01	.04	.12	-.16	-.08	.12
		2	.03		.02	-.08	.00	.10	-.16	-.15	.00
		3	-.02	.01		-.12	-.06	.08	-.13	-.09	.10
	Personnel Resource	1	.00	-.01	.00		-.02	.08	.16	-.07	.02
		2	-.03	.03	.01	.00		.00	.11	.03	-.01
		3	.00	-.03	-.02	.16	-.03		-.07	-.04	-.16
	Coordination	1	-.02	.02	-.07	.10	-.02	-.02		-.06	-.05
		2	.05	.00	.01	.05	.02	.15	-.02		.04
		3	.05	-.07	.06	-.03	-.09	-.01	-.02	.05	
			Engineering Organization								

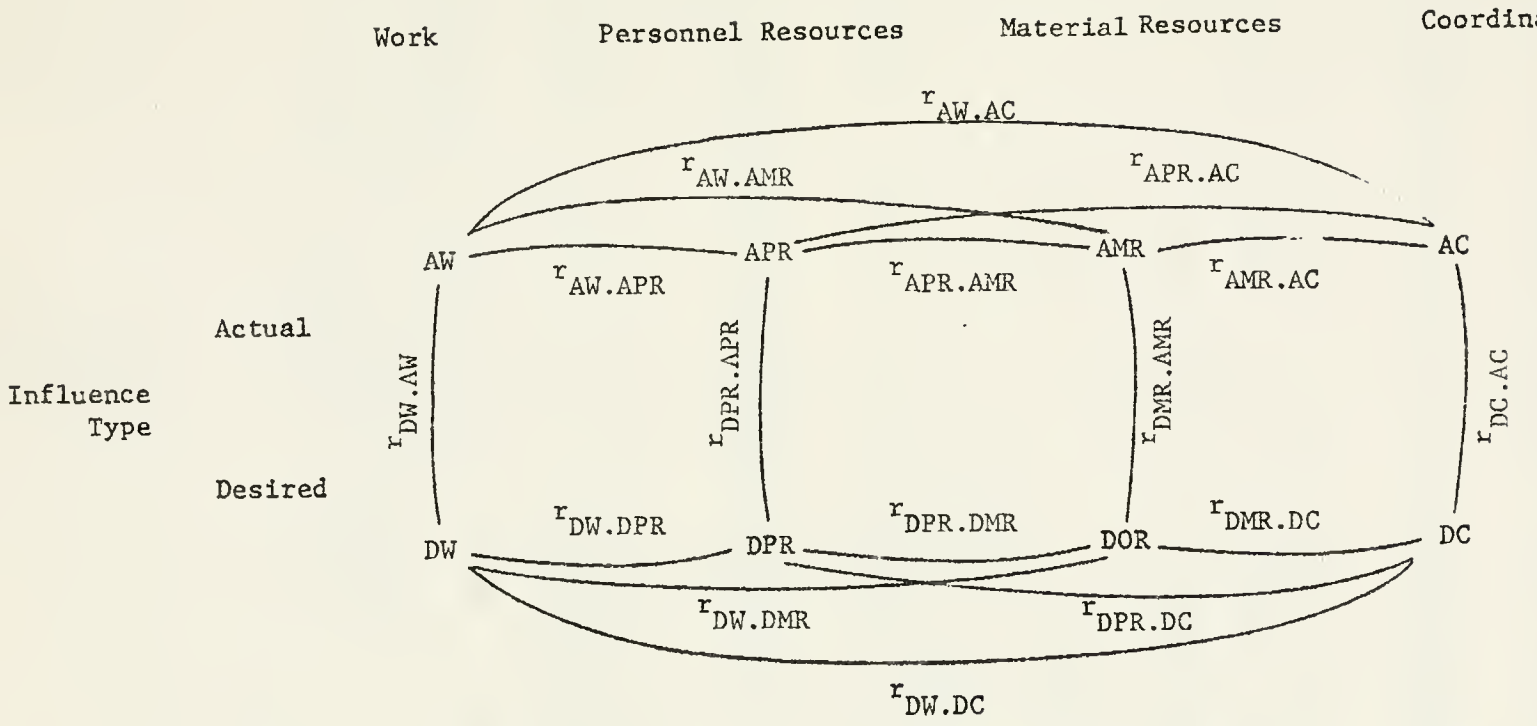
Table 4

Influence Domains, General Influence,
and Intrinsic (Job) Satisfaction
(Manufacturing Firm/Engineering Organization)

Actual Influence	General Influence	Intrinsic (Job) Satisfaction
Coordination	.35/.42	.33/.45
Personnel Resource	.04/.06	.16/.15
Work	.49/.63	.40/.43

Figure 1

General Model Specifying Influence Domains & Types



AW = Actual Work Influence

DW = Desired Work Influence

APR = Actual Personnel Resource Influence

DPR = Desired Personnel Resource Influence

AMR = Actual Material Resource Influence

DC = Desired Coordination Influence

DMR = Desired Material Resource Influence

AC = Actual Coordination Influence

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