Dimensions of Organizational Influence and Their Effectiveness Correlates

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In this study participativeness, centralization, and organizational autonomy were analyzed conceptually and operationally and subsequently related to five indicators of organizational effectiveness. The criteria of effectiveness included total production, decline in production, financial loss due to errors, morale and anxiety. The individual and joint effects of the influence variables on organizational effectiveness were very strong. Participative, decentralized, and autonomous organizations are more effective. The implications of these results are discussed.

This paper examines the relationship between influence and effectiveness in organizations. More specifically, it investigates whether it is the overall design — the *Gestalt* of the influence structure—or whether it is the design at different organizational levels that makes it possible to predict organizational effectiveness.

Organizational influence is related both to the structure and the processes to obtain compliance, conformity, and commitment to organizational goals.

Likert (1966), Argyris (1972), and others believe that a decentralized, participative form of organization is most conducive to effectiveness—both from the perspective of the organization and the employee. Presumably a decentralized participative structure promotes satisfaction, feelings of security and self control, and leads to increased effort when it encourages employees to commit themselves to higher production goals. Chandler (1962) extended the notion of autonomy to branches, divisions, and subsidiaries. His historical analysis revealed that local autonomy granting corporations were also more effective.

However, Perrow (1972) in a recent exchange with Argyris (1972) espoused a form of contingency theory in which technology was viewed as the most important source of interorganizational variations in patterns of influence; that is, the appropriate influence structure was contingent on the routiness of technology. Argyris (1972) in contrast believes that a dispersed influence distribution is always superior, and therefore management should attempt to design a decentralized, participative decision structure regardless of technological and environmental variables. Their disagreement could not be resolved because of the lack of empirical evidence. The difference in point of view can also be attributed to the concepts being multifaceted. This study of the relationship between influence and effectiveness has some bearing on the debate.

Influence

Three influence concepts are distinguished: participativeness, centralization, and organizational autonomy.

Participativeness can be viewed as social causation in which one person is modifying or constraining the behavior of another person or set of persons. Participativeness includes not only joint decision making by a supervisor and his or her subordinate but also joint decision making by peers in common concern over their tasks. If decisions are made consensually by supervisors consulting their subordinates, the or-

ganization is participative. If decisions are made without such consultation, the organization is not participative. Participativeness may also involve work autonomy, although this concept is not being measured and used in this study.

Centralization is the distribution of influence among various organizational units such as hierarchical levels or subunits. It reflects the degree to which these units contribute to organizational decisions such as resource allocation, coordination, and determination of policies and strategies. In a system theoretical or cybernetic sense, these components vary with respect to their decisional inputs in such matters (Luhmann, 1969). Organizations differ widely in the distribution of influence across organizational levels.

If nearly all influence is concentrated in the top of the hierarchy, an organization is said to be centralized. However, centralization is also pertinent to differentiation of influence horizontally. Subunits do not have equal involvement in organizational decisions, both overall and with respect to specific decision areas (Hinings *et al.,* 1974).

Tannenbaum (1968) argued that centralization had at least two distinct features: the distribution of control among different hierarchical levels, and the total amount of control. Research outcomes based on his control graph technique showed that the control distribution may not only vary with respect to its slope but also with respect to the area underneath. Graphically, the slope indicates the inequality in control among hierarchical levels, while the area under the slope represents the amount of total control shared by all levels. Since the elevation of the slope varies empirically (Tannenbaum, 1968), it is inferred that influence is a variable quantity and not a zero-sum concept. Increasing the control of the more influential level does not necessarily result in the reciprocal decrease of those having less control.[1] A distinct feature of this approach is its depersonalized conceptualization of centralization. Indeed, while participativeness reflects decision making within the context of an employee's role set, centralization as illustrated by Tannenbaum's conceptualization takes the total organization as the explicit referent.

However, the total amount of control may be a function of the conceptual or operational definition. Other approaches may yield results that are consistent with the assumption about control as a zero-sum concept. For example Hofshi and Korsch (1972) developed a mathematical model of an individual's power in the group. Briefly stated, the model yields an eigenvector which values indicate each person's power in a group. This eigenvector is derived from a matrix of transitive probabilities of group members winning an argument from each other. Their model could be readily applied to organizational units. For example, the participation in budget negotiations and their outcomes could readily be used to measure the relative influence of different units on overall organizational decision making (Pfeffer and Salancik, 1975). Budget allocation could be a measure of influence where influence implied a zero-sum notion. Altogether the disagreement on the issue of power as a zero-sum concept does not seem to be solvable yet; nevertheless, Tannenbaum's reasoning in favor of control as a variable entity is felt to be intuitively the most convincing.

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Tannenbaum (1968: 12–18) suggests several reasons to account for organizational influence as a variable entity. As applied to organizational behavior the theory of social exchange implies for him that the greater the quantity of social commodities involved (for example, approval, status) the more likely the amount of compliance will increase. Compliance can become a relevant social commodity. Members of organizations differ also in their "partial inclusion"; that is, they differ regarding their repertory of behaviors or central needs fulfillment which are encompassed or satisfied by organizational membership. The greater the average partial inclusion, the higher the total amount of control. Finally, Tannenbaum involves the analogy of general systems theory with his reference to negative entropy. In their proneness to stop the tendency to disorganization (that is, entropy) organizations must rely on mechanisms which negate this process. Presumably the greater the total amount of control, the smaller the degree of random behavior and therefore the higher the negative entropy.

While participativeness and centralization pertain to intraorganizational processes and structure, organizational autonomy can be defined as the discretionary power of an organization with respect to elements of its environment, such as, the board of directors, parent organization, suppliers, buyers, regulatory agencies, and competitors. While the influence relationship with the parent organization or board of directors is the most obvious constraint, it should be stressed that other agents in the environment can also constrain the organizational decision making. For example, an organization may be highly dependent on its single customer or on a regulatory agency which can greatly alter the personnel, safety, or marketing policies of the organization. Unfortunately, organizational autonomy has been little studied, except for the research by the Aston group (Pugh *et al.,* 1969) which investigated organizational autonomy by determining whether an organization was allowed to make certain decisions without having to obtain consent from the parent organization or board of directors. Mindlin and Aldrich (1975) further speculated on a related aspect of the research of the Aston group; that is, the horizontal dependence, including the dependence on suppliers and customers.

Organizational autonomy may be orthogonal to aspects of intraorganizational influence. Pennings (1973) in an exploratory study found that organizational autonomy as measured by the Aston scale correlated negatively with participativeness. Mulder (1971) showed that participativeness of less influential persons did not always result in a reduction of the differences in influence between the more powerful and the less powerful ones. In fact, under certain conditions of participativeness, power differences were enlarged. Tannenbaum (1968) found that the total amount of control was often unrelated to the distribution of control among hierarchical levels, but was often related to measures of participativeness.

Such findings are important for the debate on whether autonomous organizations with dispersed influence are more conducive to high effectiveness. If organizational influence can manifest itself differentially at various hierarchical levels, it is necessary to determine its possibly differential effects on organizational effectiveness. The possible orthogonality of influence on different levels is even more critical if one realizes effectiveness to be multi-dimensional (Campbell *et al.,* 1974). Organizations or their units may be effective according to some criteria and ineffective according to others. Some effectiveness criteria reflect the degree to which an organization accomplishes its intended impact on its environment; for example, market share, sales, prestige. Other criteria have an internal referent and are oriented towards the integration and survival of the organization; for instance, turnover, satisfaction, or the balance between "inducements" and "contributions" (March and Simon, 1958). There are additional problems such as the construction of composite versus multiple or static versus dynamic criteria as well as the aggregation and disaggregation of criteria. Such issues necessitate a more refined analysis in order to arrive at unequivocal conclusions about the superiority of participative, decentralized, and autonomous organizations.

OBJECTIVES AND METHOD

Objectives

This is a study of organizational influence as an antecedent to organizational effectiveness. It takes data from other investigators and analyzes several indices of influence and effectiveness. It then explores whether variance in criteria of organizational effectiveness can be explained by participativeness, centralization, and organizational autonomy—both individually and jointly.

Method

The data were collected in 40 widely dispersed offices of a large brokerage firm in the United States which, in recent years, had diversified its operations to include underwriting, investment banking, and principal transactions. The head office formulated policies, enforced the rules of the Securities and Exchange Commission (SEC), and provided various support facilities, such as research and marketing.

Each of the branch offices studied had a sales territory. Mutual funds and bonds were important for some offices while securities and commodities were more important for others. The income came from commissions, and the productivity of the firm was expressed by commission earned for the organization.

Branch offices were similar in formal authority structure. The office manager supervised the salesmen or brokers who served a roster of clients. The size of the branch offices varied from 31 to 141 employees, plus a number of clerical and operations personnel, most of whom were supervised by an operations manager. Branch offices that differed maximally in size and office performance were selected. An earlier paper (Pennings, 1975) provides a more complete description of the brokerage firm, the administration of the questionnaire, and the sampling procedure followed to select the 40 branches used in this study. Objective data were derived from company records; the subjective data were derived from questionnaires.

Measures of Influence

Two questionnaires were needed to include the information desired by the sponsor of the research project. A random sample of 50 percent of all brokers in each branch office received the A version while the other half received the B version. Nine hundred and one questionnaires were returned to investigators of the Institute for Social Research at the University of Michigan—a response rate of approximately 88 percent. Participativeness and organizational autonomy were measured by the A version while centralization was included in both versions.

Participativeness (reliability=.83)[2] was measured by the four items shown in Appendix A. All items were followed by the three or five response categories. For each individual the ratings were averaged and aggregated to obtain participativeness scores for each office.

Centralization was measured by the so-called control-graph technique (Tannenbaum, 1968). The items derived from these

[2] The reliability coefficients were computed according to the Spearman-Brown procedure.

techniques that were used in the present study are shown in Appendix A. While both questionnaire versions included four hierarchical levels there were some differences between them. As Appendix A shows, the A and B versions had three categories in common, that is, the office manager, the operations manager and the brokers. The D category of the A version ''The Operations People and Sales Assistants (if any)'' was replaced by ''Top Managers and Division Heads'' in version B. The score for the total amount of control was obtained by taking the mean rating of the three categories in the centralization measure that the respondents of the A and B version had in common. The slope of the control distribution was measured by the difference in control attributed to the office manager and brokers. These two indices can be treated as separate but complementary indices of control. The greater the total amount of control the greater the control shared. The smaller the tangent of the control distribution the higher the decentralization.

Since the number of intraoffice levels was not identical for the two versions, perceptual distortion was inevitable. For example, it is likely that the greater the number of levels to be rated, the smaller the perceived differences in control. Given the restricted range of a five-point scale, it is more difficult to discriminate between four hierarchical levels than between three levels, as the results demonstrated. The difference in control between office managers and brokers was 1.84 for the A version and 2.02 for the B version ($t=1.75$, $p=.08$). In contrast it could also be anticipated that respondents to the B version would adapt their attribution of control to incumbents of intraoffice levels against the background of the highly influential top managers and division heads. Indeed, as expected, the scores for total amount of control were 3.73 for the A version respondents and 3.40 for the B version respondents ($t=6.44$, $p<.001$). The outside category in this latter questionnaire has affected the adaptation level for intraoffice ratings downwardly.

However, these distortions did not strongly affect the test-test or replication coefficients. These are quasi-interjudge reliability estimates derived from the two subsets of respondents. By computing product-moment correlations between the aggregate ratings of the A and B respondents one can determine the degree to which the A and B respondents replicate each other. These correlations were .35 ($p<.05$) for the total amount of control score and .34 ($p<.05$) for the slope score. Therefore, it can be concluded that even though the magnitude of the ratings varied with the questionnaire version, the relative magnitude of ratings was equivalent. The merger of the two sets of responses contributes further to the cancellation of random errors of judgment among the two subsets. The replication coefficients corroborate the significant F-ratios as obtained by a one-way analysis of variance of the 40 offices. While the F-ratios for each of the two sets of respondents were significant, their merger did enhance the consistency of the aggregate scores as shown by resultant larger and more significant F-ratios ($F_{39,861}$ slope=2.17, $p>.01$; $F_{39,861}$ total amount=1.91, $p<.01$).

Although such outcomes point to the validity and reliability of the control-graph technique, they also show some of its

short-comings. For example, depending on the number of authority levels in the organization, the technique would yield an estimate of influence differentials which was a function of the number of levels to be rated in a questionnaire, regardless of whether the differentiation of the authority structure was related to centralization and could be used as a substitute for centralization. Furthermore, such outcomes suggest that part of the argument about influence as a nonzero-sum concept may be dependent upon the measurement instrument used.

Organizational autonomy was measured by taking the difference between the rating of an office manager's active and passive control. Active control referred to the influence exercised on outside agents and passive control to the influence of such agents on the manager. The two items used are shown in the Appendix. For organizational autonomy the ratings were also aggregated after the difference of the mean response to the active and passive influence items had been computed. The assumption behind this scale was that an office had more autonomy with respect to its corporate environment if the office manager had high upward influence within the organization and was not being constrained by corporate management, compared with an office whose manager faced a balance of active and passive control or who had only little or no active control. Unfortunately, the present analysis was based on secondary data collected with different objectives. The questionnaires did not have items that could have been used for the construction of a more valid scale for organizational autonomy.

Measurement of Effectiveness

Two questionnaire indices, morale and anxiety, were subjective measures of effectiveness and three objective indices derived from accounting records measured economic effectiveness.

Morale (reliability=.73) was measured by items shown in the Appendix. The term "morale" was used to differentiate this scale from disaggregate satisfaction scales. The four measures were summed, which seemed a reasonable procedure, since unweighted composite satisfaction indices correlate very strongly with general satisfaction measures (Quinn and Mangione, 1973).

Anxiety (reliability=.62) was measured by the two items shown in the Appendix.

The three objective indices were standardized with respect to the size of the office in 1969 volume in dollars. Total production (reliability=.97), the most important criterion by which the head office evaluated the effectiveness of the offices, combined total commission earned, number of new customers, and number of active customers. A hierarchical clustering analysis (Johnson, 1967) showed that these indicators clustered very closely together and could be legitimately combined into a single index, thereby improving its measurement quality.

Decline in production (reliability=.62) included decreases in total commission earned, number of new customers, and number of active customers over the three year period 1967 to 1969. This index was called "decline in production" instead

Table 1

Product-Moment Correlations between 4 Indicators of Organizational Influence (N=38–40)

	1	2	3	4
1. Organizational autonomy	1.0			
2. Participativeness	.27	1.0		
3. Slope of control distribution	.47•	−.32	1.0	
4. Total amount of control	.28	.42•	−.15	1.0

• $p<.01$

of "change of production" as most offices witnessed a deterioration on those criteria during the three years preceding the administration of the questionnaire. The reliability of this index was somewhat low considering that it was based on accounting data. Difference scores tended to be more unreliable compared with the original scores which suggested some measurement error. On the other hand such longitudinally derived patterns of effectiveness provide additional information and expand the notion of organizational effectiveness to include nonstatic criteria.

Finally financial loss due to errors in transaction was chosen to measure quality of services. This variable represented compensation to customers for errors made during transactions.

None of these indicators were correlated except for financial loss and anxiety ($r=.34, p<.05$). All questionnaire data were aggregated to yield office scores. As reported elsewhere (Pennings, 1975) the intraoffice variation among respondents was relatively low, so that the aggregate questionnaire indicators could legitimately be treated as descriptive of the offices.

RESULTS

With the exception of the relationship between financial loss and anxiety there were no significant correlations among the indicators of organizational effectiveness. The pattern of correlation coefficients among the indicators of influence (Table 1) shows that the control distribution was not related to the total amount of control ($r=-.15$), only weakly related to participativeness ($r=-.32$), but rather strongly related to organizational autonomy, suggesting that the members of an office perceive the difference of influence to be large if their supervisor has a good deal of influence with the head office. This is consistent with an earlier finding (Pennings, 1973). Finally Table 1 shows that total amount of control is related to participativeness ($r=.42$), which suggests that when employees describe the relationship with their superior as participative, they are also likely to rate all organizational hierarchical levels as relatively high on the control graph. Overall, the results of Table 1 suggest treating the indices separately in examining their relationship to criteria of organizational effectiveness.

The results of Table 2 support the position of Likert (1966), Argyris (1972), and Chandler (1962) in suggesting that a par-

Table 2

Product-Moment Correlations and Standardized Regression Coefficients of Influence Indicators and Criteria of Organizational Effectiveness.•

Influence Indicators	Criteria of Organizational Effectiveness									
	Total production		Decline in total production		Loss due to transactional errors		Morale		Anxiety	
Organizational Autonomy	.45•••	.76••	−.19	−.20	−.28	−.62••	.45•••	.36	.16	−.17
Participativeness	.23	−.25	−.50•••	−.30	−.11	.35	.38••	.07	.09	.50••
Slope of control Distribution	−.22	−.63••	.31••	.28••	.27	.64••	−.02	.10	.46••	.65••
Total amount of control	.39••	−.17	−.37••	−.14	−.32••	.19	.57••	.46••	−.31••	−.37••
R		.706••		.568••		.609••		.657••		.566••

•
In the column for each criterion, the first number is the product-moment correlation; the second, the standardized regression coefficient.

•• $p<.05$

••• $p<.01$

ticipative, autonomous, and decentralized organization is more effective. The table shows that if the influence is dispersed, the office will be superior on the five indicators of organizational effectiveness. The total amount of control appears to be the best predictor of all influence indicators as shown by the higher total production ($r=.39$), the smaller decline in production ($r=-.37$), the smaller loss due to transactional errors ($r=-.32$), and the higher morale ($r=.57$). The total amount of control is evidently conducive to organizational effectiveness and corroborates Tannenbaum's (1968) results on control in organizations. However, the results do not substantiate his de-emphasis of influence differences in complex organizations. If the influence difference is large, the employees do express anxiety ($r=.46$) and productivity tends to decline disproportionately ($r=.31$).

Participativeness shows a strikingly high negative correlation with decline in total production ($r=-.50$). Finally organizational autonomy is related to morale, consistent with the well-known finding of Pelz (1951) that supervisors with upward influence had satisfied employees more than superiors without such influence.

The correlation of some of the influence variables makes it desirable to supplement this analysis with a multivariate analysis. The existence of multiple independent and dependent variables would suggest a canonical correlational analysis, which extracts sets of weights from the sets of independent and dependent variables, such that one or more pairs of linear combinations are maximally correlated. These pairs are created in such a way that their pre- and postmultiplication with the variance-covariance matrix results in an identity matrix (van de Geer, 1971). The data of this study were subjected to a canonical analysis, but its outcomes were rather unstable, perhaps because of the small number of observations and the near-orthogonality of the dependent variables. The small number of observations prevents any at-

tempt to cross-validate the canonical correlations which is necessary because such an analysis depends heavily on chance. Also, the technique resembles a multiple regression analysis if the independent and dependent variables are orthogonal.

The multiple regression technique was employed to supplement the bivariate correlational analysis. This made it possible to determine the explanatory power of each influence variable while holding the remaining variables constant. Table 2 also shows the beta weights for the four influence variables as well as the multiple correlation coefficients.

The pattern of coefficients is similar to the product-moment correlations, although there are fewer significant values because of redundancy among some of the influence variables. Table 2 shows that even those coefficients that failed to reach a significance level (5 percent) pointed in the predicted direction.

Participativeness, however, seems to be related to anxiety (β=.50), a result that is difficult to explain. It may be due to chance or to participativeness fostering anxiety in a competitive organization. A positive relationship between participativeness and anxiety was first found by Burns and Stalker (1961) who noted that participants in so-called "organic," that is, participative organizations often showed more anxiety. Greater responsibility for one's behavior, higher levels of challenge and accountability may very well result in psychological strain. Even though participativeness and total amount of control are positively associated, the latter variable is inversely related to anxiety (β=–.37). Perhaps by controlling for total amount of control, the effect of participativeness can be viewed in terms of role overload.

Earlier, the concept of partial inclusion was mentioned for justifying the assumption of control as a nonzero-sum concept. If members participate significantly in the organization, the total amount of control will be high. They are not apt to be alienated and are likely to experience the organization as congruent with their own needs, thus reducing anxiety. Significant participation also fosters the exchange of feelings and ideas, thereby alleviating anxiety provoking conditions such as discrepancies in cognitions and conflict in loyalities. The slope of the influence distribution like participativeness had a strong effect (β=.65).

The multiple correlation coefficients of Table 2 show that the influence variables explain approximately 30–50 percent of the variance in organizational effectiveness. Since the members of the two different samples provided either information on the influence variables or on morale and anxiety, the high coefficients of determination cannot be discarded as merely reflecting the presence of specific method variance, that is, the correlations are high in spite of the use of two different questionnaires. This statement applies even more to the relationship between the subjective influence ratings and the objective indicators of organizational effectiveness. Thus these coefficients do not have the inflationary effect resulting from the specific method factor. This factor is due to different indices showing covariance because they are obtained through the same medium of data collection. In spite of the

use of different media in this study, there is a strong relationship between the variables studied.

The reliance on cross-sectional data is an important limitation of the present study. The correlational and regression techniques using cross-sectional data do not allow for strict testing of causal assumptions. Causality unfolds over time and the relationships found between influence and effectiveness longitudinally may be at variance with relationships found cross-sectionally. Furthermore, the causal relationships may be asymmetrical or bidirectional. For example, while participativeness promotes effectiveness, effectiveness may reinforce the willingness of the office manager to maintain or to augment the level of participation. Such recursive or nonrecursive hypotheses cannot be adequately tested with the present data, in which all independent and dependent variables were measured in 1969—except the weighted average for decline in total production, which unfortunately preceded the measurement of the independent variables. Therefore, one could even conjecture that offices showing disproportionately larger declines in productivity became subject to stronger management controls, while offices that controlled the decline did not.

CONCLUSION

The present study has shown that autonomous, decentralized, and participative organizations are more effective. Although effectiveness is multifaceted, the use of different indicators has made it possible to allow examination of some of the influence correlates of organizational effectiveness. Thus the outcomes of this study strengthen the position of writings such as Likert (1966) Argyris (1972) and they do not support the position of Perrow (1972). Such a conclusion can be worded in even stronger terms by treating the outcomes of the present study as a complement of the outcomes of a previously published study (Pennings, 1975). In this paper (Pennings, 1975) the effectiveness criteria were examined in a factorial design, the independent variables of which included both organizational and environmental variables. Such complex designs modeled after the so-called structural contingency theory yielded rather meager results compared with the outcomes of this paper.

There is obviously a need to conduct studies using other types of organizations with different environments. The use of brokerage offices in this study put serious limits on the generalizability of its results. Furthermore there is a need for research on organizational effectiveness that will include personality and other variables, as well as influence variables. And in more heterogeneous samples, it will be necessary to integrate influence variables with variables of technology and capital to explain variance in economic indicators of effectiveness (Pennings, 1975). It is likely that in capital-intensive organizations the influence variables of this study would have less predictive power since their capital requirements for equipment and other nonhuman resources represent more important components of the production function. It is desirable to collect data to test theories incorporating all such kinds of variables to arrive at the antecedents of organizational effectiveness.

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REFERENCES

Argyris, Chris
1972 The Applicability of Organizational Sociology. New York: The Free Press.

Burns, Tom, and G. M. Stalker
1961 The Management of Innovation. London: Tavistock.

Campbell, John P., D. A. Bownas, M. G. Peterson, and Marvin D. Dunette
1974 The Measurement of Organizational Effectiveness: A Review of Relevant Research and Opinion. San Diego: Navy Personnel Research and Development Center.

Chandler, Alfred D., Jr.
1962 Strategy and Structure. Cambridge, Mass.: The M.I.T. Press. Hinings, C.R., D. J. Hickson, J. M. Pennings, and R. E. Schneck.

1974 "Structural conditions of intraorganizational power." Administrative Science Quarterly, 19: 22–44.

Hofshi, Rami, and James F. Korsch
1972 "A measure of an individual's power in a group." Management Science, 19: 52–61.

Johnson, S. C.
1967 "Hierarchical clustering schemes." Psychometrika, 32: 241–254.

Likert, Rensis
1966 The Human Organization. New York: McGraw-Hill.

Luhmann, Niklas
1969 *"Klassische Theorie der Macht: Kritik ihrer Prämissen."* *Zeitschrift für Politik,* 16: 149–170.

March, James G., and Herbert A. Simon
1958 Organizations, New York: Wiley.

Mindlin, Sergio E., and Howard Aldrich
1975 "Interorganizational dependence: a review of the concept and a reexamination of the findings of the Aston Group." Administrative Science Quarterly, 20: 382–392.

Mulder, Mauk
1972 "Power equalization through participation." Administrative Science Quarterly, 16: 31–39.

Pelz, Donald C.
1951 "Leadership within an hierarchical organization." Journal of Social Issues, 7: 49–55.

Pennings, Johannes M.
1973 "Measures of organizational structure: a methodological note." American Journal of Sociology, 79: 686–704.

1975 "The structural contingency theory and its relevance for organizational effectiveness." Administrative Science Quarterly, 20: 393–410.

Perrow, Charles
1972 Complex Organizations: A Critical Essay. Glennview, Illinois: Scott Foresmann.

Pfeffer, Jeffrey, and Gerald R. Salancik
1974 "Organizational decision making as a political process: The case of a university budget." Administrative Science Quarterly, 19: 135–151.

Pugh, Derk S., David J. Hickson, C. Robin Hinings, and Chris Turner
1969 "The context of organizational structure." Administrative Science Quarterly, 14: 91–114.

Quinn, Robert P., and Thomas W. Mangione
1973 "Evaluating weighted models of measuring job satisfaction: A Cinderella story." Organizational Behavior and Human Performance, 10: 1–23.

Tannenbaum, Arnold S.
1968 Control in Organizations. New York: McGraw-Hill. van de Geer, John P.

1971 Introduction to Multi-variate Statistics in the Social Sciences. San Francisco: Freeman.

APPENDIX

A Description of the Questionnaire Measures Used in This Study

Participativeness (reliability=.83)

1. "How does your Office Manager usually go about making a decision when it is one that is of particular concern to you, personally? (1) he asks for any ideas and accepts them if he can; (2) we talk it over and decide together; (3) he gets my idea first and then makes up his mind; (4) he decides for himself and then explains the reasons to me; (5) he decides for himself and then tells me the decision."
2. "How does your Office Manager go about making a decision when it is one that concerns several of all of the brokers in the office? (1) he usually takes up such questions separately with each person involved; (2) he usually takes up such questions with the brokers involved as a group; (3) he usually makes the decision himself without discussing it first with either brokers individually or the brokers as a group."
3. "To what extent do you feel that you, personally, can influence the activities and decisions of your Office Manager on matters that are of concern to you? (1) to a great extent; (2) to a considerable extent; (3) to a moderate extent; (4) to some extent; (5) can't influence him at all."

4. "When your Office Manager makes a decision affecting you or your work that you feel is unjustified or based on inaccurate or inadequate information, what do you think the chances are of getting it reconsidered? (1) very good; (2) good; (3) fair; (4) poor; (5) no chance at all."

Centralization

Slope of the control distribution and total amount of control are indicators developed by Tannenbaum (1968). The respondents of the A version received the following items: "In general, how much say or influence do you feel each of the following has on how your office is run? A. The Office Manager. B. The Operations Manager. C. The Brokers as a group. D. The operations people and sales assistants (if any)." All four categories were followed by five response alternatives: "(1) little or no influence; (2) some influence; (3) moderate influence; (4) considerable influence; (5) a great deal of influence."

The respondents of the B version were given the following items: "In general, how much say or influence does each of the following groups of people have on what goes on in this office? A. Top Managers and Division Heads. B. Office Manager. C. Operations Manager. D. Brokers in this office."

These four categories were also followed by five response alternatives: "Little or no influence; some; quite a bit; a great deal; a very great deal of influence."

Organizational autonomy

"How much say or influence does your office manager have with each of the following when it comes to activities and divisions that affect the performance of your office? Use the code which follows. Before each phrase in the list, write the code number 1, 2, 3, 4 or 5 to show how much influence managers have with each. Code: (1) great deal of influence; (2) considerable; (3) moderate; (4) some; (5) no influence at all. (A) Top Corporate management. (B) Group via Presidents. (C) Divisional directors. (D) Regional liaison officers."

"Now thinking in the other direction, how much say or influence does each of the following have on your office manager when it comes to his activities and decisions that affect the performance of your office?" This question was then followed by the same instructions and categories as those of the first question.

Morale (reliability=.73)

"Read these answer categories over carefully: Very dissatisfied, somewhat dissatisfied; Neither satisfied nor dissatisfied; Fairly satisfied; Very satisfied. Then answer each of the following questions by blackening in the numbered circle under the answer you want to give."

1. "All in all, how satisfied are you with the persons in your office?"
2. "All in all, how satisfied are you with your supervisor?"
3. "All in all, how satisfied are you with your job?"
4. "All in all, how satisfied are you with this company, compared to most others?"

Anxiety (reliability=.62)

1. "To what extent do you find it difficult to sleep at night because you keep thinking of what happened at work during the day?"
2. "To what extent does your job make you feel nervous and 'jumpy'?" Both items were followed by "(1) to a very little extent; (2) to a little extent; (3) to some extent; (4) to a great extent; (5) to a very great extent."