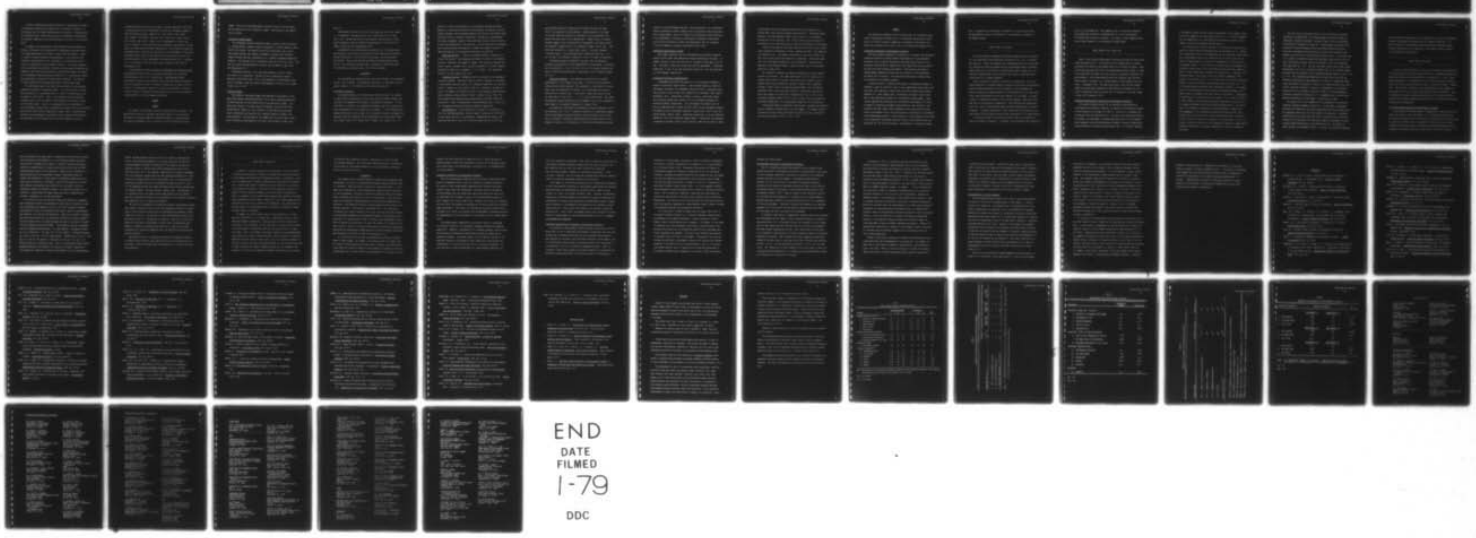
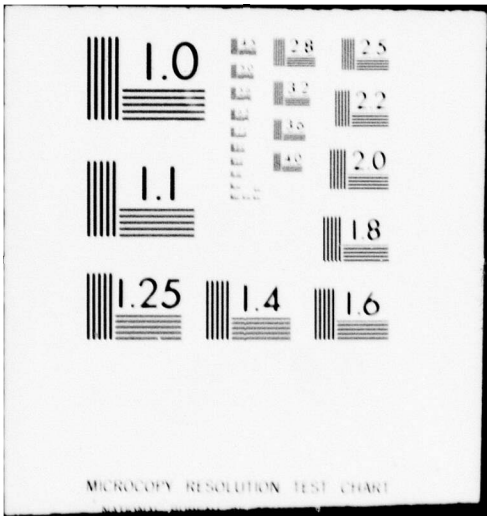
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Correlates of subordinates' perceptions of their psychological influence on supervisors' decisions were examined for 126 subordinates in high technology jobs and 205 subordinates in low technology, production line jobs. Based on the psychological climate perspective of work environment perceptions, it was predicted that perceptions of psychological influence would be related significantly to (a) situational attributes, including supervisor behaviors, (b) individual characteristics, and (c) person by situation

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interactions. Results supported these assumptions and suggested that a cognitive information processing model assists in explaining environmental perceptions.

Correlates of Psychological Influence: An Illustration of the Psychological Climate Approach to Work Environment Perceptions

Participative decision-making has been a central issue in leadership theory and research. From the perspective of subordinates, a key factor in participative decision-making is believed to be the amount of influence that subordinates perceive themselves as having on decisions made by their supervisors (Vroom 1959, 1960). The emphasis on "perceive" is important; Vroom (1960) noted that (a) subordinates' perceptions of influence reflected "psychological interpretations" of participative decision-making events, and (b) the amount of objective participation might frequently differ from the amount of perceived influence because of "the effects of such things as needs on perception" (p. 10). Vroom demonstrated that subordinates perceptions of influence were related meaningfully to dependent variables (e.g., satisfaction). However, because he did not specify what provided the perceptions in the first place, the explanatory power of the study was weakened. For example, if one wished to apply the results of the study to increase the amount of influence perceived, one would not know whether to attempt (a) to increase the frequency of participation events, (b) to effect changes in needs, or (c) to address some form of interaction between participation events and needs.

As reviewed later, several studies have shown that perceptions of influence were related significantly to situational variables, including participative decision-making events (Bass, Valenzi, Farrow, & Solomon, 1975; Dansereau, Graen, & Haga, 1975; Graen, 1976; Graen & Schiemann, 1978). However, the amount of variance accounted for in influence perceptions by situational variables has not been large. Attempts to account for additional

variance in influence perceptions by including person variables and interactions between person variables and situational variables are extremely rare. This is a curious state of affairs inasmuch as the salient role that person variables and person by situation (P X S) interactions may play in environmental perceptions, in general, were discussed over 50 years ago (Kantor, 1924, 1926; Koffka, 1935; Lewin, 1938; Murray, 1938). These points have been reiterated continuously in the psychological literature, including recent discussions of social learning and cognitive social learning theory (Bandura, 1977, 1978; Mahoney, 1977; Mischel, 1973, 1976; Stotland & Canon, 1972), interactional psychology (Bowers, 1973; Endler & Magnusson, 1976; Ekehammar, 1974), and psychological climate (James, Hater, Gent, & Bruni, in press; James & Jones, 1974, 1976; James, Hartman, Stebbins, & Jones, 1977; Jones & James, Note 1). Unless one wishes to assume that person variables and P X S interactions have no unique contributions to perceptions of influence, which is unlikely, and that situational events account for all the reliable variance in such perceptions, which has yet to be shown, then it would appear to be prudent, in both a theoretical and applied sense, to explore the bases for influence perceptions.

The objective of the present study was to identify correlates of subordinates' perceptions of their influence on their supervisors, hereafter referred to as psychological influence.[1] Perceptions of psychological influence were related to situational attributes, including participative decision-making events, person variables, and P X S interactions. As discussed below, theoretical perspectives from the psychological climate approach to work environment perceptions furnished the basic assumptions for study (James et al., in press). The psychological climate approach was developed specifically to examine the bases of work environment perceptions such as psychological influence, and focuses directly on the cognitive processes underlying perception.

Of initial importance is the rationale that perceptions of psychological influence are a product of cognitive information processing. This processing involves various cognitive operations that provide individuals with a basis for sensing and interpreting situational events. Of particular salience is the belief that interpretations are not limited simply to descriptions of situational events. Rather, it is assumed that individuals, through additional cognitive operations, also interpret situational events in terms that have psychological meaning and significance to them (Endler & Magnusson, 1976; Magnusson & Ekehammar, 1975; Stotland & Canon, 1972). Thus, while subordinates might be able to recall and to describe participative decision-making events, psychological influence is considered to be a product of additional cognitive processing, the result of which is the psychological meaning and significance that the participative events had for the subordinates. Based on this rationale, psychological influence was considered a psychological climate variable. That is, psychological climate refers to the psychological significance and meaning of situational events for individuals, and is defined as "cognitive representations of situations, expressed in psychologically meaningful terms" (James et al., in press).

It is informative to take a closer look at the cognitive operations that presumably provide the psychologically meaningful perception (cognition) of psychological influence. Each adult in the work force has a history of experiences in which he/she acquired information regarding subordinance to higher levels of authority. Included here are parent-child, teacher-student, and leader-member group relationships; military and other full or part-time job experiences; and communications from others, the media, and so forth. Such experiences provide the individual with a basis for learning what authority is and how one might interact with those in authority. Furthermore,

the individual abstracts from the considerable amount of information available to arrive at general beliefs, or "cognitive schemas," about authority relationships (cf. Stotland & Canon, 1972). In particular, one or more cognitive schemas will focus directly on beliefs about the ability to influence those in positions of authority. It is these cognitive schemas (i.e., influence schemas) that provide the primary sources for interpreting incoming situational stimuli as psychological influence.

In short, one must have learned cognitive schemas for influence to recognize situational stimuli related to influence and to interpret such stimuli as influence. (Different individuals might not use the term influence; however, influence is a pervasive concept in our society and the use of different synonyms for influence may represent semantic rather than substantive differences.) Of further significance is the belief that cognitive schemas have salient properties of their own (cf. James et al., in press). For example, because cognitive schemas are learned, individuals with different learning experiences may develop different cognitive schemas for interpreting their environments. Moreover, once cognitive schemas are learned, they tend to be relatively impervious to change because (a) they are abstract -- they are not necessarily tied to immediate situational stimuli, (b) they are familiar -- they are a product of learning, and (c) they are valued -- cognitive schemas do not develop independently of the rest of the cognitive system, rather they are related to important individual attributes such as needs for self-enhancement and cognitive consistency.

The implications of the above properties of cognitive schemas for perceptions of psychological influence are straightforward. Individuals with different learning experiences may have different influence schemas and thus perceive the same participative decision-making events as reflecting

different levels of psychological influence. Furthermore, it is possible that the cognitive basis for the perceptions (i.e., the influence schemas) may not change greatly as a result of experiences in a particular work environment. As discussed above, influence schemas are relatively impervious to change, and experiences in one particular job situation might only partially affect existing influence schemas. This again connotes that different individuals might have different psychological influence perceptions even though situational events are the same or very similar.

It is further evident that differences in perceptions of psychological influence are psychologically important (i.e., the differences in perceptions reflect distinctive influence schemas resulting from different learning experiences). It is difficult, however, to trace backward and identify the particular history that provided each individual's influence schemas, if for no other reason than individuals might have forgotten many of these experiences. On the other hand, indirect indicators of such experiences do exist and can be measured. For example, individual characteristics (person variables) such as personality attributes, needs, and value systems are also believed to be based, at least partially, on learning experiences. It is assumed that cognitive schemas are intrinsically related to personality attributes, needs, and values in the sense that cognitive schemas are predisposed toward the construction of a subjective reality that is compatible with existing attributions, defense mechanisms, need states, and self-regulatory systems (Jones & Gerard, 1967; Mischel, 1973; Stagner, 1976, 1977; Stotland & Canon, 1972). This suggests that individuals with different personalities, needs, and values will develop different influence schemas, and consequently will be cognitively predisposed to construct different perceptions of psychological influence. Thus, it is predicted that individuals

with different personalities, needs, and values will have different perceptions of psychological influence.

To illustrate and test this assumption in the present study, subordinates' perceptions of psychological influence were correlated with selected individual characteristics. The basis for selection was the a priori hypotheses that each individual characteristic would serve as a learned cognitive predisposition for perceptions of psychological influence. For example, individuals with an historical inability to affect their environments may develop an external locus of control, namely feelings of powerlessness and alienation (Duffy, Shiflett, & Downey, 1977; Rotter, 1966; Ruble, 1976). It was predicted, therefore, that externals would have learned cognitive predispositions toward perceiving themselves as having low psychological influence (i.e., a negative relationship between externality and psychological influence). Negative relationships between psychological influence and anxiety and education were also predicted. Comparatively high levels of anxiety suggest a learned tendency to be tense, nervous, and worried, which could be reinforced by a predisposition toward perceiving that one has little influence on decisions affecting one's job (James et al., in press; Stotland & Canon, 1972). More highly educated individuals might feel that their degree of influence is not congruent with their available knowledge, especially on relatively routine, non-complex jobs.

In contrast to the above, individuals with high achievement motivation tend to have high needs for feedback, clear goals, responsibility, and influence (Mowday, 1978; Steers & Spencer, 1977; Stotland & Canon, 1972). All of these needs could serve as learned cognitive predispositions for perceiving high levels of psychological influence. Thus, positive relationships between

achievement motivation and psychological influence were predicted. The same is true for job involvement. Involved individuals should regard influence as a source for obtaining important intrinsic rewards, especially if perceptions of psychological influence are viewed as a way of increasing discretionary power over the rewards provided by one's job (Rabinowitz & Hall, 1977).

The discussion above suggests that externality, anxiety, education, achievement motivation, and job involvement are direct predictors of perceptions of psychological influence in the sense that they serve as learned cognitive predispositions for perceptions. Individual characteristics may, however, serve another salient role in perceptions of psychological influence. That is, rather than directly predicting psychological influence, some individual characteristics might moderate relationships between situational events and perceptions of psychological influence. This rationale connotes that perceptions of psychological influence involve P X S interaction (James & Jones, 1974, 1976; Endler & Magnusson, 1976; Mahoney, 1977). It is further assumed that the forms the P X S interactions might take are a function of both the individual characteristic of interest and the situation of interest (Endler & Magnusson, 1976; James et al., in press). To illustrate and test this assumption in the present study, relationships between participation opportunities (i.e., subordinates' opportunities to participate in or affect supervisors' decisions) and subordinates' perceptions of psychological influence were moderated by (a) subordinates' rigidity, and (b) the degree of stability, structure, and job complexity in the work environment. The participation opportunities were measured by supervisors' descriptions of such opportunities, and decision-making latitudes, that the supervisors

provided to each of their subordinates, and hereafter are referred to as supervisor behaviors.

The predicted P X S interactions were as follows. Subordinates with a high level of rigidity (i.e., high need for certainty) were expected to be attentive to opportunities to influence their supervisor's decisions in work environments characterized by comparatively complex jobs and low stability and structure. This is because "high rigids" were expected (a) to have manifest needs for certainty in situations that were relatively uncertain (e.g., low stability and structure), and consequently (b) to be attentive to opportunities to influence their supervisor's decisions because such opportunities provided a basis to clarify and to control the environment personally and thereby to increase certainty. Thus, positive relationships between the supervisor behaviors and subordinate perceptions of psychological influence were predicted for (a) rigid subordinates in (b) comparatively complex jobs and less stable and structured work environments.[2]

In contrast, high rigids in work environments characterized by comparatively routine jobs and high stability and structure were not expected to be attentive to opportunities to influence their supervisor's decisions. The rationale here was that high rigids were not expected to manifest needs for certainty in environments that were already rather certain (e.g., routine, stable, and structured). Consequently, there would be little need to attempt to increase the clarification or control brought about by participation and influence. Thus, low relationships between the supervisor behaviors and subordinate perceptions of psychological influence were predicted for (a) rigid subordinates in (b) comparatively routine jobs and stable and structured work environments.

Positive relationships between perceptions of psychological influence and supervisor behaviors were predicted for "low rigids" in general. It was expected that low rigids would generally be attentive to opportunities for nonauthoritarian, human relations styles of leadership, participation, and autonomy, regardless of the characteristics of the job or work environment.[3]

In summary, the psychological climate approach has been employed to develop a rationale for why perceptions of psychological influence should vary among subordinates in the same or similar work environments. Based on a model of learned cognitive predispositions, it was predicted that individual characteristics (e.g., externality, job involvement) will be related to perceptions of psychological influence. It was also predicted that an individual characteristic (rigidity) and situational attributes (job complexity and stability and structure of the work environment) will moderate relationships between supervisor behaviors (i.e., participation events) and subordinates' perceptions of psychological influence. The viability of these predictions was assessed empirically in the present study.

The predictions above do not imply that perceptions of psychological influence are devoid of situational inputs. It is only logical to assume that perceptions of a situational event, or class of related events, will be related to the event(s). Thus, it was postulated that psychological influence would in fact be related to the following two important sources of situational inputs. First, it was hypothesized that subordinates in work environments characterized by comparatively complex jobs and low stability and structure would perceive significantly higher levels of psychological influence than subordinates in situations with the obverse characteristics. The rationale for this proposal was that the more complex the job and

uncertain and unstructured the environment, the more supervisors would have to participate with their subordinates to attain the information needed to make job-related decisions (Bass et al., 1975; Heller & Yukl, 1969; Hill & Hughes, 1974; House & Mitchell, 1974; Vroom, 1976; Vroom & Yetton, 1973; Vroom & Jago, 1978). Second, prior to moderation by rigidity and type of situation, it was predicted that subordinates' perceptions of psychological influence would be related significantly to the supervisor behaviors. The examination of the prediction was based on the development of "supervisor-subordinate dyads", where it was expected that a supervisor would not use the same behaviors for all subordinates in his/her workgroup (cf. Dansereau et al., 1975; Graen, 1976; Hill, 1973; House & Mitchell, 1974; Kerr & Schriesheim, 1974).

In conclusion, the study proceeded by determining relationships between psychological influence and (a) situational attributes, (b) individual characteristics, and (c) P X S interactions. Relationships between psychological influence and situational attributes and individual characteristics are reported initially. Attention is then given to tests of the predicted P X S interactions. Results of the study are discussed in relation to prior studies of influence and participation as well as the psychological climate approach to work environment perceptions.

METHOD

Sample

Two samples of subordinates, and their supervisors, were employed. The samples were selected to represent high and low levels of job technology. The high job technology sample was comprised primarily by systems analysts and computer programmers, and is referred to as the "Information Systems"

sample. The low job technology sample included production line personnel, and is referred to as the "Production" sample. Descriptions of the samples are as follows.

Information Systems Sample

The Information Systems subordinate sample included technical personnel in a systems design, computer software department of a large, Western, private health care program. This sample included 126 individuals, most of whom were systems analysts and computer programmers, although other technical, computer-related jobs were represented (e.g., computer programs documentation, graphics). The mean age for the subordinate sample was 26.50 years (SD = 7.20), mean job tenure was approximately 1.50 years, and the female to male ratio was approximately 1/3.

Subordinates reported to one first-line workgroup supervisor within the context of 21 workgroups. The data for the 21 supervisors showed a mean age of 28.60 years (SD = 5.79), a mean education of approximately three years of college, a mean job tenure of approximately 1.50 years, and a female to male ratio of 1/10.

Production Sample

The Production subordinate sample was comprised of individuals in four, small, paper-product manufacturing plants, all of which performed essentially the same functions and were subsidiaries of the same parent company. Two plants were located in the West, one in the Midwest, and one in the South. The subordinate sample (n = 205) included only individuals who performed direct, production-line functions (e.g., machine operators, packers, lift-truck operators). The mean age for this sample was 34.14 years (SD = 11.05), mean job tenure was approximately 3.50 years, and the female to male ratio

was 1/5.

Subordinates reported to one first-line supervisor within the context of 23 workgroups. The mean age for the 23 supervisors was 41.0 years (SD = 8.28), the mean education was approximately one year short of high school graduation, mean job tenure was approximately 5.50 years, and the female to male ratio was approximately 1/10.

Questionnaires for subordinates and supervisors in both samples were administered by the authors, with assistance from organizational personnel, during working hours. Participation was voluntary, and confidentially was assured. Return rates were 88% and 100% for subordinates and supervisors in the Information Systems sample, respectively, and 80% and 100% for subordinates and supervisors in the Production sample.

Instruments

The instruments are described below, where each variable was categorized as one of the following: (a) situational attribute, (b) subordinate psychological climate, or (c) subordinate individual characteristic.

Situational Attributes

As discussed earlier, the situational attributes thought to be related to subordinates' psychological influence were work environment stability and structure, job complexity (routineness), and supervisor behaviors. If work environment is limited to the workgroup environment, then all of these attributes are measures of the "proximal work environment." In the present study, emphasis was placed on the proximal work environment because it presumably has the most direct and immediate ties to subordinates' work experiences (Indik, 1968; James & Jones, 1976; Lawler, Hall & Oldham, 1974; Newman, 1975). In

addition, to reduce the possibility of methological confounding between measures of situational attributes and subordinates' perceptions of psychological influence, the situational measures were obtained from either organizational records or workgroup supervisors' responses to a questionnaire. This does not suggest, however, that supervisors provided totally accurate or objective descriptions of the situation. On the other hand, as presented later, several methods were employed to assess the construct validity of these descriptions. The situational attributes are as follows.

Workgroup stability. A four item composite wherein a supervisor described the context of the workgroup environment in terms of its stability, certainty, complexity, and degree of change. The items were obtained from Porter, Lawler, & Hackman (1975), and were presented in a 5-point, semantic differential format (e.g., unstable 1 2 3 4 5 stable). The coefficient alpha for the item composite was .68.[4]

Workgroup structure. Workgroup structure consisted of two anatomical structure variables. These were "span of control", measured by the number of subordinates reporting directly to a workgroup supervisor, and "specialization", a measure of the division of labor in a workgroup, obtained by a count of the number of different job-types in the workgroup (high specialization indicates a high division of labor -- James & Jones, 1976). The above measures were obtained from organizational records and formal job descriptions. Their (nonsignificant) intercorrelations were .14 and .21 in the Information Systems and Production samples, respectively.

Job descriptors. The job descriptors consisted of "routineness of work" and "boundary-spanning," and were based on supervisors' descriptions of each unique job-type in the workgroup. Routineness was based on the item "The work done in this job is about the same from day to day," and

was employed previously by Hage and Aiken (1969) and Jones and James (Note 1) as a measure of job technology. Boundary-spanning was based on the item "This job requires the individual to work extensively with people from other parts of the organization." Higher levels of boundary-spanning suggest a more technologically interdependent and complex system and therefore a higher level of job complexity (James & Jones, 1976). Both items were measured on a 5-point Likert scale (1 = strongly disagree . . . 5 strongly agree). Their (nonsignificant) intercorrelations were -.13 (n = 30 jobs) in Information Systems and -.08 (n = 91 jobs) in Production.

Correlations among the stability, structure, and job descriptor variables were generally low and nonsignificant in both samples. Exceptions were correlations of .42 ($p < .05$) and .49 ($p < .05$) between stability and span of control and specialization, respectively, in the Production sample (n = 23).[5]

Supervisor behaviors. Each supervisor described each of his/her subordinates on the following three items: "I like to have this person's opinion on work related matters," "My confidence in this person is so great that I have set high goals for him/her," and "I encourage this person to think and act on his/her own." A five-point, Likert-type scale was used for each item (1 = Not at all . . . 5 = To a very great extent). The items had moderate to high correlations in both samples (.43 to .69), although not high enough to be considered redundant (cf. Mulaik, 1972).

The items above were based on discussions in House and Mitchell (1974) and Dansereau et al. (1975). Seeking the opinions of a subordinate suggests that the subordinate both participates in and has influence on the supervisor's decisions. Providing a subordinate with autonomy reflects a willingness on the part of the supervisor to furnish the subordinate with oppor-

tunities for decision-making latitude. Setting high goals for a subordinate based on confidence in him/her connotes that the supervisor holds the subordinate in high esteem. This is an indirect but nevertheless salient indicator of the subordinate's influence on the supervisor inasmuch as supervisors tend to be more receptive to ideas from subordinates that are considered to be more competent, motivated, and helpful (Graen, 1976).

Subordinate Psychological Climate

With slight revisions, the four psychological participation items presented by Vroom (1960) were employed to measure psychological influence. An example item was "I have very little say or influence on what goes on in my job." Five-point, Likert-type scales were used for measurement. Coefficient alphas were .77 and .76 for the Information Systems (n = 126) and Production (n = 205) samples, respectively.

Subordinate Individual Characteristics

"Achievement motivation" was based on a 13 item composite designed to assess an orientation toward success. Items included measures of need for achievement, preference for achievement related activities, aspiration level, and persistence (Fries & Knox, 1972; Hermans, 1970; Mehrabian, 1968; Steers & Braunstein, 1976). Answers were provided on 5-point, Likert-type scales; the coefficient alphas were .68 and .70 for the Information Systems and Production samples, respectively. "Job involvement" was based on five of the six items presented by Lawler and Hall (1970), and was designed to measure the degree to which individuals cognitively related their jobs to their self-esteem (Lodahl & Kejner, 1965). Coefficient alphas were .73 in the Production sample and .58 in the Information Systems sample. "Externality" was designed to measure an external locus of control (Rotter, 1966) and was based on items

from Levenson (1974) that appeared appropriate for work samples (e.g., Getting what I want requires pleasing those above me). Coefficient alphas, based on a six item composite (Likert scales), were .67 in Information Systems and .39 in Production. The .39 for Production was considered unacceptable and thus externality was not used in the analyses for this sample.

"Anxiety" was based on five items selected from the state-trait anxiety scale developed by Spielberger, Gorsuch, and Luschene (1968). All items had job referents (e.g., I am ususally tense while at work on my present job), and 5-point Likert scales were employed for responses. Coefficient alphas were .88 in Information Systems and .85 in Production. "Education" was measured by self-reported number of years in school, where 12 represented completion of high school.

The "rigidity" composite was based on theoretical and factor analytic studies by the authors. The common demoninator for the 12 items in the composite was a need for certainty (Brim, 1955; Jones & LaRocco, Note 2); related items from intolerance for ambiguity (Budner, 1962), dogmatism (Trodahl & Powell, 1965), and authoritarianism (Knapp, 1976; Struening & Richardson, 1965) scales were also included. Illustrative items were "I don't like things to be uncertain or unpredictable," and "I like to have everything organized before I start a task" (a Likert format was employed). Coefficient alphas were .76 in Information Systems and .61 in Production.

Correlations among the individual characteristic variables were generally low and frequently nonsignificant in the two samples. The highest obtained correlation occurred between achievement motivation and job involvement in the Production sample [r (203) = .48, p < .01].

RESULTS

The results are presented in the following order (a) situational correlates of psychological influence (PI); (b) individual characteristic correlates of PI, which includes a comparison of individual characteristic and situational correlates of PI, and (c) the P X S interactional analysis for PI.

Situational Correlates of Psychological Influence

The first analysis addressed the questions of (a) whether the Information Systems and Production samples differed significantly on the situational attributes, and (b) whether subordinates perceived higher levels of PI in situations characterized by comparatively more complex jobs and less stable and less structured workgroup environments. This analysis was based on between-sample comparisons (F-tests and eta squares) for the situational attributes and PI variables. The individual characteristic variables were also included for information purposes.

As shown in Table 1, workgroup environments in Information Systems, as compared to those in Production, were in fact significantly less stable, less structured, and comprised by less routine jobs that required more boundary-spanning (i.e., more complex jobs). Furthermore, the mean PI score (variable 9) was significantly higher in the Information Systems sample. These results supported the prediction that subordinates' perceptions of PI would be higher in workgroup environments characterized by less stability, less structure, and more complex jobs, presumably because supervisors in these types of environments had to rely more heavily on subordinates for information and decision-making purposes. Direct support for this assumption was provided by the finding that supervisors were more likely to seek opinions from, set high goals for, and provide autonomy to subordinates in Information Systems.

Thus, it appeared that subordinates' perceptions of PI were significantly and meaningfully related to differences on the situational attributes for the samples studied.

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Insert Table 1 about here

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The second analysis addressed relationships between supervisor behaviors (for each subordinate) and subordinate perceptions of PI (i.e., a vertical dyad analysis). These relationships were computed separately for the Information Systems and Production samples because relationships based on combined samples might not be descriptive of relationships within a sample (e.g. differences in sample means on the variables might result in spuriously high correlations in the combined samples).

Before computing the supervisor behavior-PI relationships, it was considered important to determine whether superivsors varied their (self-reported) behaviors among subordinates in their workgroups. This assessment was based on computing a standard deviation for each behavior item for each supervisor, using subordinates with the same supervisor as the sample. As shown in Table 2, standard deviations on the supervisor behavior items were larger than zero for the majority of supervisors. This indicated that supervisors did in fact tend to vary behaviors among different subordinates in the same workgroup. A salient implication of these results was that opportunities for participative decision-making differed among subordinates in the same workgroup.

Correlations between the supervisor behaviors and PI are presented in Table 3 (variables 6 through 8). In general, the correlations were significant,

but not of large magnitude. This suggested that (a) supervisor behaviors were significant predictors of subordinates' PI, but (b) subordinates' PI involved other sources of variation. The former of these suggestions was more strongly supported in the Information Systems sample.

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Insert Tables 2 and 3 about here

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Table 3 also includes within-sample correlations between the other situational attributes and PI. Of interest were the findings that PI covaried positively with stability and specialization in the Production sample. These results were not consistent with the between-sample analysis (Table 1), where it was found that increases in PI were related to decreases in stability and specialization. Such inconsistencies may occur frequently when one moves across levels of analysis (e.g., between-sample to within-sample, and vice-versa -- Firebaugh, 1978). The implication here is that both the between-sample and within-sample analyses provided important information, but one could not generalize results from one level of analysis to the other (James & Jones, 1976; Schneider, 1975).

Individual Characteristic Correlates of Psychological Influence

The predictions made earlier for the individual characteristic-PI relationships were generally supported, as shown by the correlations between PI and variables nine through 13 in Table 3. Seven out of a possible nine correlations were both significant ($p < .05$) and in the predicted directions. For example, job involvement correlated positively with PI in both samples, which suggested that involved subordinates tended to perceive themselves as having influence on decisions affecting their jobs. In contrast, externals

in Information Systems and more anxious subordinates in both samples tended to perceive themselves as having lower levels of PI. It is also noteworthy that the magnitudes of the correlations were relatively consistent across samples, indicating cross-sample generalizability.

The results above indicate that most of the individual characteristics served as learned cognitive predispositions for perceptions of PI. However, this interpretation rests on the assumption that the individual characteristics had a developmental basis and by adulthood were relatively stable and not likely to change greatly as a function of experiences in the specific work environments studied. On the other hand, evidence exists that suggests that individual characteristics such as personality attributes might change as a result of later experiences, including job experiences (cf. Anderson, 1977; Adrisani & Nestel, 1976; Elton & Rose, 1973; Endler & Magnusson, 1976; Lefcourt, 1972; Mischel, 1976). If this were the case, then the correlations between PI and the individual characteristics might be spurious (i.e., due to joint underlying relationships with situational attributes). For example, a lack of actual influence in participative decision-making might lead to higher levels of externality and lower levels of perceived PI. Consequently, the externality-PI correlation would be spurious. For a spurious condition to exist, however, the situational attributes would have to account for all the covariation between PI and the individual characteristics. It follows that if the individual characteristics were significantly related to PI after <u>controls</u> for the situational attributes have been effected, then a stronger case could be made that PI-individual characteristic correlations reflected inputs of individual differences in the perceptions. That is, of course, a heuristic approach, but does represent an attempt to assess whether indiviudal differences are important components in cognitive information processing.

The first step in effecting controls for the situational attributes consisted of an examination of the within-sample correlations between the situational variables (variables 1 through 8, Table 3) and the individual characteristics (variables 9 through 13). Within-sample correlations were employed for reasons expressed earlier and because experiences within a particular environment should have been the factors that resulted in any changes that took place in the individual characteristics. It was found that of 72 possible correlations between the individual characteristics and the eight situational variables (across both samples), only five correlations were significant ($p < .05$). Not only were these results barely above chance expectations, but the only correlation greater than /$\pm$ .20/ occurred between specialization and education in the Information Systems sample [r (124) = -.30, $p < .01$]. The straightforward implication of these results was that the individual characteristics were generally not related to situational experiences associated with stability, structure, job characteristics, and, particularly, supervisor behaviors. Moreover, an examination of the standard deviations for the situational variables in Table 1 and the demonstrated variation in supervisor behaviors (Table 2) suggested that the results and implications above were not due simply to restriction of range.

The second step of this examination was accomplished by hierarchical regression analyses designed to predict PI. In each sample, situational variables with significant zero-order correlations with PI were entered into the regression equations in the first phases of the analysis. Individual characteristics with significant zero-order correlations with PI were then entered into the equations, and tests were conducted to determine if their inclusion added significantly to the prediction of PI. The results of these analyses are presented in Table 4. As shown, the individual character-

istics contributed significantly to the prediction of PI after the situational variables had already been entered into the regression equations. As a point of interest, the situational variables provided additional and significant prediction for PI in relation to the variance already accounted for by individual characteristics.

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Insert Table 4 about here

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In sum, the results presented in this section indicated that perceptions of PI were related to individual characteristics in a consistent manner across samples and that these relationships were not spurious (i.e., due to situational experiences). As an additional check, both the individual characteristics and PI were correlated with job tenure (a position variables -- Newman, 1975). The PI-tenure correlations were nonsignificant in both samples, as were almost all of the individual characteristic-tenure correlations. Thus, it appeared that neither situational attributes nor an important position variable could provide alternative explanations for the obtained PI-individual characteristic relationships.

P X S Interactional Analysis for Psychological Influence

It was predicted that high rigids in comparatively complex jobs and less stable and structured work environments (i.e., Information Systems) would be attentive to opportunities to influence their supervisors' decisions because (a) needs for certainty would be manifested in this relatively uncertain situation and (b) opportunities to influence supervisory decisions provided a means for increasing control and clarification, and thereby certainty. It

was also predicted that high rigids in comparatively routine jobs and stable and structured work environments (i.e., the Production sample) would have little reason to manifest their needs for certainty, and thus would not be attentive to opportunities to increase control and clarification by influencing decisions made by their supervisors. Based on these predictions, it was postulated that the PI-supervisor behavior relationships would be positive and significant for high rigids in Information Systems and low for high rigids in Production. Furthermore, positive and significant PI-supervisor behavior relationships were predicted for low rigids in both the Information Systems and Production samples. Low rigids were expected to be attentive to opportunities for human relations styles of leadership and autonomy, irrespective of the work environment.

The statistical tests for the predictions above consisted of comparing the PI-supervisor behavior relationships for high rigids in Production, where the relationships were expected to be low, with the PI-supervisor behavior relationships in each of the remaining three groups, where the relationships were expected to be positive and significant. High and low rigidity subgroups were constructed within both the Information Systems and Production samples.[6] The mean rigidity score for combined samples was used as the basis for separation into subgroups within each sample. This procedure resulted in subgroups with the following characteristics: (a) high rigidity - Information Systems (n = 37), M(rigidity) = 3.83, SD = .30); (b) low rigidity - Information Systems (n = 88, M = 3.03, SD = .35); (c) high rigidity - Production (n = 140, M = 3.89, SD = .27); and (d) low rigidity - Production (n = 62, M = 3.22, SD = .23). Several points are of importance here. First, no relationship existed between workgroup membership and rigidity; the high and low rigidity subgroups in each sample were comprised of different subordinates from the same workgroups.

Second, the mean rigidity scores for the two low rigidity subgroups were close to the theoretical midpoint of the scales, which was "not sure" on an agree-disagree continuum. The descriptor "low rigidity" was used in a comparative sense to indicate that these subordinates had lower scores than high rigids, who, on the average, "agreed" with the rigidity statements. Third, the subgroups formed within the same sample had different $\underline{n}$'s. This reflected the findings that (a) the mean rigidity score for Production was significantly higher than that for Information Systems (see Table 1), and (b) the subgrouping within each sample was based on the overall rigidity mean for combined samples. The same (overall) rigidity score was employed to form subgroups within each sample because high rigidity and low rigidity should be operationally defined in the same manner for both samples, especially when comparisons are to be made across samples.

The tests for differences in PI-supervisor behavior relationships between high rigids in Production and the other three subgroups were based on comparisons of both correlation coefficients and unstandardized regression weights (James et al., Note 3). The two sets of tests provided similar results, and thus only the tests for correlations are reported. Given the a priori hypotheses for directions of differences, one-tail tests of significance were employed, although the stipulation was made that at least one zero-order correlation in a particular comparison had to be significant before the test would be conducted.

The results of the P X S interaction analysis are presented in Table 5. It should be noted initially that rigidity had (a) low correlations with PI (see Table 3) and (b) nonsignificant correlations of $\leq |\pm .10|$ with the supervisor behaviors.

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Insert Table 5 about here

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In general, the results supported the predictions. First, low rigids in Production and high and low rigids in Information Systems were predicted to have positive and significant PI-supervisor behavior correlations. Seven out of a possible nine of these correlations were both positive and significant. Second, high rigids in Production were not expected to be attentive to the supervisor behaviors. This prediction was supported; three out of a possible three PI-supervisor behavior correlations were not significant. Third, correlations for the former three subgroups were expected to be larger than correlations for high rigids in Production. The results supported this prediction in five out of a possible nine comparisons. The results were not strong, however, for comparisons between low rigids in Information Systems and high rigids in Production.[7]

In summary, the results above indicated that perceptions of PI were partially a function of P X S interactions. These results stand in need of additional empirical examination, especially given the small sample sizes for several of the subgroups. On the other hand, the results did not appear to be attributable to statistical artifacts such as restriction of range. For example, some of the largest correlations appeared in the smallest sample (high rigids in Information Systems). Moreover, while the means for supervisor behaviors and subordinates' PI were lower in the two Production subgroups in relation to the two Information Systems subgroups, (a) the standard deviations on these variables were roughly comparable across all four subgroups (see Footnote 5), and (b) the PI-supervisor behavior correlations for low rigids

in Production were comparable to their counterparts in the two Information Systems subgroups. Thus, while mean differences existed, the moderator results based on relationships appeared to reflect meaningful differences and not statistical artifacts.

DISCUSSION

The research results presented generally supported the assumptions that subordinates' perceptions of psychological influence involved multiple types of correlates. While the results could not be interpreted causally, it was shown that perceptions of PI were meaningfully related to macro differences in work environments, variations in supervisor behaviors within work environments, individual characteristics, and P X S interactions. Thus, the data supported situational, phenomenological, and interactional perspectives of perception, and suggested that none of these perspectives would suffice as a singular approach to understanding perceptions of PI. This conclusion corroborates the original premise of the study, which was that more information was needed regarding the relationships between PI and both person variables and P X S interactions in order to develop a more knowledgeable base on which to explain PI perceptions or to apply the results of PI studies in the world of work. Finally, the results indicated that the theoretical assumptions underlying the psychological climate approach to work environment perceptions were empirically verifiable, at least for perceptions of PI.

It is also noteworthy that this was an exploratory study and included a number of shortcomings. For example, as discussed earlier the sample sizes for several of the subgroups were rather small. Moreover, questions might be raised about the construct validity of the situational variables, artifactual relationships due to method variance, generalizability of the results to other

samples, and other predictors or moderators for PI. These questions are addressed below in either the discussions of results for situational, individual characteristic, and interactional correlates of PI, or recommendations for future research.

Situational Correlates of Psychological Influence

Both the between-sample comparisons and the vertical dyad analysis supported the assumption that PI would be related to situational attributes. The results of the between-sample comparisons were consistent with prior research, which found that subordinates' influence tended to increase as work environments and jobs became more complex and supervisors had to rely on subordinates for information inputs in the decision-making process (cf. Hill & Hughes, 1974; Vroom & Jago, 1978). However, the results also indicated that only 10% of the variance in subordinates' PI was accounted for by between-sample differences. This result is consistent with reviews by Hater (Note 4) and James et al. (1978), who reported that between-sample differences accounted for approximately 12% of the variance, on the average, in work climate perceptions.

The between-sample comparisons also provided a means for addressing the construct validity of the situational variables furnished by workgroup supervisors. Stability, routineness of job, boundary-spanning, and the supervisor behaviors differentiated significantly between the samples and in predicted directions. Additional support for the construct validity of the supervisor behaviors was provided by their significant relationships with subordinates' PI in the vertical dyad and P X S interaction analyses. Not only were many of these relationships of at least moderate magnitude, but

they also conformed to predictions. Thus, while it could not be said that the situational variables furnished by supervisors were totally accurate, the data supported the conclusion that these variables were measuring what they were designed to measure and performing as predicted. It was concluded, therefore, that the situational variables had sufficient construct validity to serve as situational indicators in this study.

With respect to the vertical dyad analysis, the finding that the majority of supervisors reported variations in participation opportunities and decision-making latitudes for subordinates was consistent with a number of prior studies (cf. Graen, 1976; House & Mitchell, 1974). Moreover, the generally significant correlations between the differences in supervisor behaviors and subordinates PI indicated that supervisors and subordinates tended to agree, albeit partially, on subordinates' participation in and influence on supervisors' decisions. These results also support prior research by Graen and associates (cf. Graen, 1976), and suggest further that variations in perceptions of PI among members of the same workgroup might in part be a function of differences in situations.

Individual Characteristic Correlates of Psychological Influence

The analyses of relationships between individual characteristics and PI showed that (a) the PI-individual characteristic correlations were often significant and in predicted directions, (b) the individual characteristics were generally not related to the situational variables (within sample), and (c) the individual characteristics contributed uniquely and significantly to the prediction of PI in the hierarchical regression analyses. While not conclusive, these results support the original premise that individuals with different learning experiences, as reflected primarily by differences in

externality, job involvement, and anxiety, would be cognitively predisposed to construct different perceptions of PI (James et al., in press; Mischel, 1973; Stotland & Canon, 1972). Furthermore, the almost total absence of relationships between the individual characteristics and the situational variables, including the supervisor behaviors, was consistent with the assumption that the individual characteristics had an historical basis and may not have been highly susceptible to change as a function of experiences in a particular situation (Jones & Gerard, 1967). It is not suggested, however, that experiences in work environments have no effect on individual characteristics. This is certainly a possiblity, especially when individuals are studied over long periods of time and across different types of situations. Nevertheless, the results of this study indicated that individual characteristics are important components in a psychological climate, cognitive information processing, approach to environmental perception.

As a final point, it might be argued that the results above could be attributed to method variance (i.e., PI and the individual characteristics were measured in the same questionnaire). Results presented in Table 3, however, tend to contraindicate such an argument. For example, if one wished to attribute the PI-job involvement correlations to method variance, then how would one explain the low correlations between PI and achievement motivation, education, and rigidity? The latter three variables were measured in the same survey as PI and job involvement. Furthermore, the items comprising job involvement, achievement motivation, and rigidity were randomly presented in the same section of the questionnaire. Thus, it is proposed that method variance cannot be employed as an alternative explanation of the results discussed above, although we do not wish to imply that method

variance was totally absent.

Interactional Correlates of Psychological Influence

The P X S interaction analysis was predicted on the assumption that subordinates would be differentially attentive to opportunities to participate in and to influence supervisors' decisions as a function of two moderators, rigidity and type of work environment. Differential attentiveness is believed to be an intrinsic part of the cognitive processes underlying perception in the sense that individuals selectively attend to only certain situational events in the process of constructing interpretations of their environments (Erdelyi, 1974). When the results of the interaction analysis are reviewed from this perspective, it appeared that low rigids generally employed supervisor behaviors in constructing perceptions of PI, regardless of the work environment. Supervisor behaviors also appeared to be important components of PI perceptions for high rigids in comparatively more complex but less stable and less structured work environments.

In constrast, high rigids in comparatively routine, stable, and structured work environments did not appear to employ supervisor behaviors in constructing perceptions of PI. As discussed earlier, the rationale for this finding was that high rigids would not manifest needs for certainty in environments that were already comparatively certain. Thus, there would be little need to be attentive to opportunities to increase certainty by means of influencing supervisors' decisions. This rationale was further supported by additional reviews of the data, where it was found that PI was correlated with stability [$r(138) = .34$, $p < .01$] and specialization [$r(138) = .20$, $p < .05$] for high rigids. The implication of these findings is that high rigids in stable and structured work environments rely on a stable and structured authority system as an indicator for perceptions of influence.

The results of the P X S interaction analysis corroborated a major premise of the psychological climate approach, which is that individuals have capacities to uniquely and divergently construct subjective cognitive environments (James & Jones, 1974, 1976). In addition, the findings reported here have what might be some important implications for interactional analysis of work environmental perceptions. First, it appears that different types of individuals might be attentive to the same aspects of their environments for somewhat different reasons. An example was the finding that both high and low rigids in Information Systems appeared to be attentive to supervisor behaviors in the construction of PI perceptions. However, as discussed earlier, the attentiveness of high rigids was attributed to a need to increase certainty by clarifying, controlling, or otherwise influencing supervisors' decision, while the attentiveness of low rigids was attributed to preferences for nonauthoritarian, participative styles of leadership and autonomy. Based on extrapolations from House and Mitchell (1974) and Schuler (1976), it is also possible that low rigids in Information Systems were attentive to the supervisor behaviors because they provided a means for clarifying paths to goals in somewhat ambiguous environments. However, the comparatively lower scores on rigidity for this subgroup, where a high need for certainty was not indicated, suggests that the explanation above is also a viable possibility.

Second, it may often be necessary to address both individual and situational moderators when investigating P X S interactions. For example, as shown here, it was simply not enough to assess whether a subordinate was a high or low rigid. Rather, it was also necessary to attempt to postulate whether the need for certainty underlying rigidity would be manifested in

a particular work environment. Consequently, high rigids in comparatively stable, structured, and routine work environments did not appear to manifest their needs for certainty whereas the opposite appeared to be the case for high rigids in less stable, less structured, and more complex environments. Furthermore, the apparent lack of manifestation of certainty needs for high rigids in the Production sample, and the accompanying lack of attention to supervisors' behaviors, provides a basis for the explaining the rather modest supervisor-PI relationships for the overall Production sample.

Recommendations for Future Research

The most straightforward research need is that of ascertaining whether the results of this study are generalizable to other samples. A word of caution is in order here. As discussed above, the characteristics of the samples (populations) are important, and it is recommended that presumed differences in samples with respect to situational attributes be empirically demonstrated before such things as P X S interactional analyses are conducted. This does not necessitate the use of the same types of samples or situational variables employed in this study. However, it does suggest that armchair speculations about differences in situational attributes should be avoided. In addition, the present study was designed to illustrate a general approach and while attempts were made to employ salient predictors and moderators for PI, the list of variables was not exhaustive. Additional predictors (e.g., group processes, aptitudes, and abilities) and moderators (e.g., needs for independence and authority) might be important contributions to future studies of PI.

The use of the psychological climate paradigm to study correlates, or causes (e.g., path models, cross-lagged models), of other work environment

perceptions is recommended. Such perceptions might include other domains of leadership as well as job attributes, roles, workgroup processes, and subsystem and organizational processes. It is also important to note a salient component of the psychological climate approach was not included in this study. This component deals with the potential for reciprocal causations between (a) persons and environments, (b) perceptions and behaviors, and (c) perceptions and affective variables such as job satisfaction (Bandura, 1978; Endler & Magnusson, 1976; James et al., in press). The logic of reciprocal causation and its implications for cognitive information processing are discussed at length in the references above, while James and Singh (in press) have reviewed a form of structural equation analysis that is applicable for the assessment of reciprocal causation. However, this is an extremely demanding procedure with respect to both theory and data, and additional exploratory studies such as that reported here may be needed before attempts are made to implement it.

In conclusion, work environment perceptions such as psychological influence have important roles in industrial and organizational research and development. Our most general recommendation is that the underlying correlates and hopefully causes of work environment perceptions be addressed more fully in the future. Research such as that reported here connotes that a reliance on an assumption of perceptual veridicality, which is to say that perceptions are highly accurate reflections of situational events, is very likely to be misleading. The implications of this conclusion for research have been discussed. The implications for development are, however, at least equally important. For example, subordinates' perceptions of work environments are frequently employed in the design of organizational development programs. A prevalent

approach in this process is to aggregate the perceptions of a particular leader to identify an "overall leadership style." The results of the present study suggest that time would be more productively spent on attempting to ascertain why perceptions of the leader varied among subordinates. In addition, emphasis might be placed on developing flexibility in leader behaviors in the interest of increasing the compatibility between leader behaviors and the needs of subordinates.

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Footnotes

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[1]Vroom (1960) used the term "psychological participation" to refer to subordinates' perceptions of influence. The liberty was taken of renaming the construct "psychological influence" to underscore the fact that we were addressing perceptions of influence in participative decision-making events.

[2]The technical basis for this prediction is <u>selective attention</u>, which refers to occasions where different individuals emphasize different aspects of their environment in the process of arriving at perceptions (Erdelyi, 1974).

[3]The hypotheses for the P X S interactions were extrapolated, partially, from prior leadership theory and research (House & Mitchell, 1974; Kenis, 1978; Schuler, 1976; Weed, Mitchell, & Moffitt, 1976; Vroom, 1959, 1960). However, all of these studies dealt with relationships between perceived leader behaviors and subordinate attitudes and behaviors, as moderated by such things as authoritarianism. Since our hypotheses addressed moderated relationships between situational events and perceptions, it was considered inappropriate to employ the above studies to support our predictions. Never-

theless, their role in our formulations should be noted.

[4]Given the small samples of supervisors in the Information Systems and Production samples, it was considered appropriate to compute the estimates of internal consistency on a combination of supervisors from the above samples as well as those available from other studies. These included first-line supervisors from a Firefighter sample, as well as noncomputer related and nonproduction related supervisors in the Information Systems and Production samples (e.g., supervisors for salesmen in the Production sample). The total supervisory n was 173.

[5]Results of these analyses and others not presented here are available from the authors.

[6]The subgrouping moderator approach was employed because it has been shown to be applicable to field data (James, Coray, Hornick, & Demaree, Note 3). The other popular form of moderator analysis, moderated regression (Saunders, 1956), was not considered applicable here for technical reasons beyond the scope of this article (cf. Sockloff, 1976a, 1976b, 1977).

[7]The remaining situational attributes (i.e., stability, structure, job complexity) were also entered into the moderator analyses for exploratory purposes. The results were generally nonsignificant and are not reported here.

Table 1

Means, Standard Deviations, and Sample Comparisons

Variables	Information Systems			Production			
	M	SD	n	M	SD	n	Eta^2
Workgroup Context and Structure							
1. Stability of Workgroup Environment	2.22	.63	21	3.24	.61	23	.40**
2. Routineness of Job	2.90	.92	30	4.04	1.00	91	.21**
3. Boundary-Spanning	3.90	.92	30	2.85	1.30	91	.12**
4. Span of Control	7.42	4.15	21	11.61	4.92	23	.18**
5. Specialization	1.89	1.05	21	4.78	.157	23	.54**
Supervisor Behaviors/Each Subordinate							
6. Like to Have Subordinate's Opinion	3.63	.50	125	3.31	.46	202	.03**
7. Set High Goals for Subordinate	3.71	.96	125	3.21	.89	202	.07**
8. Encourage Subordinate to Act on Own	3.78	.90	125	3.39	.99	202	.04**
Psychological Climate							
9. Psychological Influence	3.18	.80	126	2.58	.93	205	.10**
Individual Characteristics							
10. Achievement Motivation	3.91	.37	126	3.83	.30	205	.01
11. Job Involvement	2.97	.58	126	2.79	.78	205	.01
12. Externality	2.87	.62	126	----	---	---	---
13. Anxiety	2.12	.64	126	2.44	.86	205	.04**
14. Education	14.94	1.56	126	11.28	1.83	205	.51**
15. Rigidity	3.27	.49	126	3.68	.40	205	.18**

Note. The mean scores for item composites were based on the mean of the items comprising the composite. Thus, these means have the same scales as the items, which were usually 1 (low) to 5 (high).

*$p < .05$ on F-tests

**$p < .01$ on F-tests

Table 2

Variation on Supervisor Behaviors Within Each Workgroup

Supervisor Behaviors	Frequency of Supervisors Within Each Standard Deviation Range							
	0		.01 to .50		.51 to 1.00		>1.00	
	IS	P	IS	P	IS	P	IS	P
1. Like to Have Subordinate's Opinion	3	6	3	3	9	9	4	4
2. Set High Goals for Subordinate	2	2	1	6	9	10	7	4
3. Encourage Subordinate to Act on Own	6	5	0	5	10	8	3	4

Note. IS = Information Systems supervisors (n = 19), P = Production supervisors (n = 22). Only supervisors with two or more subordinates were included in this analysis.

Table 3

Correlations with Psychological Influence

Variables	Information Systems	Production
Workgroup Context and Structure		
1. Stability of Workgroup Environment	.16	.26**
2. Routineness of Job	-.06	-.10
3. Boundary-Spanning	-.10	.14*
4. Span of Control	-.10	.01
5. Specialization	-.04	.20**
Supervisor Behaviors/Each Subordinate		
6. Like to have Subordinate's Opinion	.25**	.12
7. Set High Goals for Subordinate	.38**	.20**
8. Encourage Subordinate to Act on Own	.24**	.21**
Individual Characteristics		
9. Achievement Motivation	.10	.19**
10. Job Involvement	.27**	.42**
11. Externality	-.35**	-----
12. Anxiety	-.28**	-.26**
13. Education	-.04	-.17*
Moderator		
14. Rigidity	.12	.15*

*$p < .05$

**$p < .01$

Table 4

Multiple Correlations for Psychological Influence

Predictor Sets	Information Systems	Production
Set A: Context, Structure, and Job Attributes	——[a]	.35*
Set B: Supervisor Behaviors	.38*	.21*
Set C: Individual Characteristics	.49*	.47*
Set A + Set B[b]	.38*	.40*
Set A + Set B + Set C[b]	.59*$^{\lambda\delta}$	.58*$^{\lambda\delta}$

[a]Multiple correlation not computed because of lack of significant zero-order correlations.

[b]Set A variables not included for Information Systems.

*Multiple correlation significant at $p < .01$.

$^{\lambda}\underline{R}^2$(Set A + Set B + Set C) - $\underline{R}^2$(Set A + Set B) significant at $p < .01$ -- contribulation of individual characteristics.

$^{\delta}\underline{R}^2$ (Set A + Set B + Set C) - $\underline{R}^2$ (Set C) significant at $p < .01$ -- contributation of situational variables.

Table 5

Moderated Correlations for Psychological Influence

Supervisor Behaviors	Moderator Subgroup		t
	Low Rigids - P	High Rigids - P	
1. Like Opinion	.29*	.04	1.73*
2. Set High Goals	.32*	.13	1.34
3. Act on Own	.42**	.09	2.39**
	High Rigids - IS	High Rigids - P	
4. Like Opinion	.52**	.04	2.83**
5. Set High Goals	.43**	.13	1.73*
6. Act on Own	.20	.09	----
	Low Rigids - IS	High Rigids - P	
7. Like Opinion	.17	.04	----
8. Set High Goals	.36**	.13	1.79*
9. Act on Own	.25*	.09	1.21

Note. IS = Information Systems, P = Production. Sample sizes were as follows: Low Rigids-P = 62, High Rigids-P = 140, LowRigids-IS = 88, High Rigids-IS = 37.

*$p < .05$

**$p < .01$

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