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PERSON-SITUATION INTERACTION: AN EXPLORATION OF COMPETING MODELS OF FIT

Working Paper 80-115*

by

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Abstract

This paper identifies three competing models of person-situation interaction which are apparent in the organizational literature. Statistical criteria are presented for discriminating among the models. Evidence from one organization is presented indicating the usefulness of the three interaction perspectives. Preliminary support for the existence of various types of person-situation interaction with respect to criteria of job performance and satisfaction is demonstrated.

In spite of the wide recognition that individuals' psychological climates can influence attitudes and behaviors, few researchers have attempted to extend these findings by examining the way in which aspects of an organization's climate, the tasks people perform and the personality characteristics of employees interact to influence work satisfaction and job performance. Climate has often been viewed as having a single "main effect" on attitudes, behaviors and motivations (cf., Schneider, 1975; James & Jones, 1974; Jones & James, 1979; Hellriegel & Slocum, 1974; and Joyce & Slocum, 1979). This view however, ignores the issue that an individual's perception of the organization's climate may interact with personality factors as well as task characteristics to affect performance and satisfaction. Arguments citing situational characteristics (e.g. climate) rather than individual attributes or interaction effects, are frequently noted in the research literature as the main cause of behavior in organizations (Pritchard & Karasick, 1973; James, Hater, Gent & Bruni, 1978).

Although interactions between individuals and situations have been considered an important influence on individual behavior, climate researchers have neglected to explicitly conceptualize and operationalize such interactions despite the practical consequences for improving the quality of working life and the productivity of the organization's labor force. The purpose of this paper is, therefore, to develop a preliminary taxonomy of person-situation interactions, by A) identifying three models of congruence or "fit", B) developing statistical criteria for each model, and C) presenting preliminary evidence on the adequacy of these models from one data set.

An Interaction Perspective

Schneider (1975), James et al. (1978), and Joyce and Slocum (1979) have suggested that individuals tend to respond to features of work situations that are psychologically meaningful to them. This perspective is rooted in the Functionalist School of Thought (Marx & Hillix, 1973) and suggests that outcomes such as performance and satisfaction, can be imporved by the creation and maintenance of a "fit" between the individual's personality and the environment in which the person performs (cf., Argyris, 1973; Pervin, 1968; James et al., 1978). This argument implies that when such a "fit" or congruence is non-existant, individual outcomes will be adversely affected. Although research indicates that the fit between persons and situations may be an important influence on work performance and satisfaction, the nature and meaning of such fit has not been clear. Inconsistent findings have typically pleagued research in person-situation interaction, with few meaningful conclusions having emerged. In an effort to make sense from these apparent contradictory and competing views of person-situation interaction, the following three interaction models are presented.

Model I: Effect Congruence

Effect congruence is a model of congruency or "fit" that emphasizes the matching of individual and organizational variables which are <u>each</u> believed to contribute independently to criterion variance. This stems from the continued controversy among contingency theorists concerning the relative importance of individual or situational factors in explaining behavior. Proponents of this model argue that characteristics of <u>both</u> the situation and the individual are improtant influences on behavior. In many cases this leads to a "more is better" perspective in which it is assumed that the variance accounted for will continue to improve as additional

independent variables reflecting attributes of both the individual and the situation are considered. This model is intuitively appealing when only one or two independent variables are considered, but loses its attraction when many variables are considered simultaneously. In such cases "more can be too much", as evidenced by motivation research suggesting that an excess of job challenge can be as debilitating as too little for high need achievement individuals.

Although the effect congruence model appears to emphasize interactions between persons and situations, this model stresses the consequences of the main effects (not the interactions) of potentially interacting variables. Effect congruency has often been viewed as important in previous research studies; for example, Rabinowitz, Hall and Goodale (1977) concluded that "the effects of individual differences and job scope on job involvement are independenedent and additive. The expected interaction between the individual difference variables and job scope did not occur" (p. 278). If however, such interactions are present in some cases, they may reflect important sources of criterion variance not explained by effect congruence (Model I).

Model II: General Congruency

In contrast with the effect Congruence Model, the simple matching or interaction of individual and situational characteristics affects behavior. General congruency models have their origin in a strong research tradition beginning with Lewin, who suggested that "we can best maximize this sort or relevance of personality to environment by conceptualizing and measuring these two terms in commensurate dimensions. . . " (cited in French, 1963, p. 42). Following this, when related measures of person and situation were developed, thinking concerning the nature and form of the interaction between these variables resulted in simple concepts of matching related dimensions.

Unlike Model I, Model II hypothesizes interaction effects, however these tend to be somewhat restrictive in nature. Specifically, congruency is said to exist when conceptually similar dimensions of persons and situations are correspondingly "high"or "low". Congruency is determined by this fit between independent variables, and thus may be assessed without reference to any specific criterion. Studies of a general congruency nature frequently hypothesize that individual outcomes will be improved when persons scoring high on a particular personality dimension are matched with a situation presumed to require such characteristics. Studies by Cawsey (1973), Andrews (1967), Downey, Hellreigel and Slocum (1975) and Litwin and Stringer (1968) offer support for this position. The general congruency model however fails to recognize that other types of fit between persons and situations may also lead to high performance. Individuals high in need for achievement, who describe their work setting as challenging, might outperform those individuals socring low on both of these dimensions; yet, both sets of individuals are equally congruent with their environment.

This model makes substantially different predictions than the Effect Congruency perspective (Model I). Model I might hypothetically predict high levels of work performance when high need achievement individuals perform motivating tasks, but lower performance when both of these predictors are low. In contrast, no differences in performance would be expected using Model II. In this example both individuals are equally congruent with their environment. Unlike Model I, the general congruency model emphasizes the similarity and matching of levels of independent variables as determinants of satisfaction and performance. However, the general congruency model fails to account for more complex congruency relationships that do not emphasize theoretical similarity of predictors.

Model III Functional Congruency.

Lewin (1936) was heavily influenced by the functionalist school of thought which has been concerned with the "function of the individual's behavior in adapting to the environment" (Marx & Hillix, 1973, p. 129). The functional perspective appears in work by Schneider (1975) and Pervin (1968) who states that investigations of fit assume that:

> for each individual there are environments (inter-personal and non-interpersonal) which more or less match the characteristics of his personality. A "match" or "best-fit" is viewed as expressing itself in high performance, satisfaction, and little stress in the system, whereas a "lack of fit" is viewed as resulting in decreased performance, dissatisfaction, and stress in the system (emphasis ours) (p. 56).

The functional congruency model differs from Models I and II in significant ways; it does not propose a "more is better" perspective as does Model I, nor does it argue that the general congruency of predictors should exclusively result in high criterion levels. Although such hypotheses are reasonable, neither model suggests for example that either an achievement climate or a motivating task may be sufficient to produce high performance but that the joint occurrence of both may do little to improve satisfaction and/or performance.

The three models of fit may be constrasted in terms of their reference to criteria and reliance upon statistical concepts of interaction. Model I defined congruence in terms of the effects of person and situation variables on a criterion such as job performance, but included only the main effects of such variables. Model II allowed for interactions but did not make reference to any particular external criterion in defining fit (e.g., the combination of high levels of person and situation variables represents "fit" regardless of the criteria examined). Model III, represents a more general model combining both an emphasis on statistical interaction and consideration of particular criteria. Consequently, Model III subsumes Model II as a

specific form of Functional Congruency, by suggesting that it may involve any combination of predictors leading to high criterion levels. Two other forms of Functional Congruency illustrate the variety of combinations of predictors which significantly impact criteria; we have termed these blocking and substitute effects.

A blocking effect occurs when one variable screens the potential effects of another. These effects were identified by Dunham (1977) in a multivariate study of job characteristics and affective outcomes. He concluded that "Existing theories which attempt to explain worker responses to task design do not account for organizational moderating effects. . . It appears that some blockage can prevent workers from responding favorably to expanded task design. . . Workers may be 'distracted' from obtaining valued outcomes" (p. 63). If such blocking effects commonly exist they need to be identified, and subsequently categorized into a typology for assessing their relative impact on criteria.

A substitute effect occurs when either independent variable (P or S) affects levels of the criteria when the remaining independent variable is low. Thus, when either the P or S variable is low, we can affect the criteria by altering levels of the other indenpendent variable. In this sense, either variable may be said to substitute for the other in its effects on the criteria. Kerr and Jermier (1978) have recently introduced a related notion of a substitute for hierarchical leadership as well as a "neutralizer" variable which is conceptually similar to a blocking effect.

The models discussed above reflect the considerable degree of complexity present in studies of person-situation interaction. Although over-reliance on a single model is likely to restrict research and while it is important to test alternative models, the potential problems with developing a taxonomy for classifying person-situation interaction are numerous. Interaction theories have been primarily criticized on methodological grounds, but little attention has been paid to the need for constructively integrating and extending previous climate research. For these reasons, and because the differences between the

models are both complex and subtle, the following section outlines the statistical requirements necessary to detect each model in some detail.

Model Criteria

Figure I summarizes distinctions between the models developed using an Analysis of Variance format. Four specific examples are illustrated

Insert Figure 1 About Here

corresponding to the models of Effect Congruence, General Congruence, and the two varieties of Functional Congruence: substitute and blocking effects. Each is explained separately below.

Criteria for Model I, Effect Congruence.

Since Effect Congruence does not require statistical interaction, a two-way interaction plot illustrating the (non) interaction of two factors -- P (person) and S (situation) -- would therefore be represented by two parallel lines. The Effect Congruence model simply requires the existence of multiple main effects. Unlike Effect Congruence, Models II and III require significant interaction effects. Distinctions between these latter two models are made on the basis of the form of the interaction between factors: specifically a-priori contrasts between cell means. In a 2 x 2 model of person-situation interaction there are six possible contrasts of cell means as shown in Figure 1a; a particular model is supported by the pattern of significant effects present in such contrasts.

Criteria For Model II, General Congruence.

Figure 1c illustrates an interaction pattern supporting the General Congruency model where:

1) equally congruent levels of person and situation factors are associated

with equivalent levels of the criterion (compare [H, H] vs. [L, L] and [H, L] vs. [L, H] and

2) congruent levels of person and situations factors are associated with higher levels of the criterion than incongruent levels (compare [L, L] or [H, H] vs. [L, H]).

The 6 possible contrasts may be conveniently grouped to represent contrasts between cells comprising rows, columns, and diagnonals of the basic 2 x 2 ANOVA model in Figure 1a. The General Congruency model requires specific inequalities between row and column cells, and equality between diagonal cells as shown in the figure.

Criteria for Model III, Functional Congruence (Blocking and Substitute Effects.)

A hypothetical blocking effect is shown in Figure 1d. In this example, a blocking effect is judged to exist because the following two conditions hold: 1) when the situation factor is high, changes in the level of the person factor are not associated with changes in the criterion level (compare the [L, H] and [H, H] points); and 2) when the person factor is either high or low, changes in the level of the situation factor are associate with changes in criterion levels. In this case high levels of S "block" the effects of P. The converse is not true.

When particular levels of either factor can block the effects of the other a "substitute" effect is present. Figure 1e illustrates such an interaction. A substitute is judged to exist because the following three conditions hold: 1) when the person factor is high, changes in the level of the situation factor are not associated with changes in criterion levels; 2) when S is high, changes in the level of P are not associated with changes in creiterion levels; and 3) when either P or S is low, a change in the remaining factor is associated with a change in criterion level. The illustrations of blocking and substitute effects shown in Figure 1 are examples only; clearly a number of examples can be developed illustrating each type of

effect. The statistical criteria should therefore reflect this generality while maintaining the identity of separate models.

As noted above in Figure 1a, the 6 possible contrasts between cells of a 2 x 2 ANOVA have been grouped to represent comparisons between cells comprising rows, columns, and diagonals of the design. With respect to these groupings of contrasts, the existence of a substitute effect requires one significant contrast from the row group and one significant contrast from the column group. The direction of these differences is immaterial, as are any effects within the diagonal grouping.

A blocking effect also requires a significant contrast within both row and column groups, with the additional constraint that both contrasts within one or the other, but not both of these groupings be significant. The direction of these differences is immaterial as is the presence of effects within the diagonal grouping. The reader may verify that any interaction represented by a combination of contrasts meeting these criteria may be appropriately considered either a blocking or substitute effect.

The criteria developed above and presented in Figure 1 provide for discrimination between alternative models of person-situation interaction. Each set of criteria therefore represents a competing hypothesis concerning the nature of such interaction. The following section discusses the methodology utilized to test for these competing models in this study.

METHOD

Sample

Questionnaire data were collected from 186 first line foremen in 3 plants of a large manufacturing firm. These foremen supervised employees engaged in long-linked technological operations with sequential task interdependence. The foremen's duties were administrative and discretionary in nature. We

would, therefore, not expect the dominant work technology to be a significant factor constraining job performance of the foreman in this sample. The sample was all male, with a mean age of 40, a salary of $15,000, and most had completed at least two years of college. Their mean tenure on the present job was 4.3 years. Since climate perceptions have been found to vary by organizational level (Schneider & Snyder, 1975; Downey et al., 1975), the present research controlled for hierarchical level by sampling employees from only the foreman level.

Measurement of the Variables

Climate Measures

Climate was assessed using the instrument developed by Campbell and Pritchard and reported in research by Pritchard and Karasick (1973). Previous researchers (Schneider & Snyder, 1975; Hellreigel & Slocum, 1974; LaFollette & Sims, 1975) indicate that it is important to distinguish climate perceptions from job satisfactions. Climate is more frequently measured as a summary perception which people have of an organization reflecting descriptions (not evaluations) of organizational practices and procedures (Payne, Fineman, & Wall, 1976). The specific dimensions utilized in this research were selected based upon Schneider's (1975) review of the climate literature. Schneider (1975) proposed that there are climates which facilitate the display of individual differences. These climates correpsond to what Stern (1970) has called anabolic press. The anabolic press of an environment facilitates self expression. Climates rated as low on the dimensions suggested by Schneider to encourage the display of individual differences would be termed catabolic, indicating their controlling nature (Joyce & Slocum, 1979). Schneider's review, taken in the context of Stern's (1970) distinctions between anabolic and catabolic press, suggested the specific climate dimensions hypothesized to interact with individual differences and task characteristics to affect performance

and satisfaction. These dimensions were:

(1) LEVEL OF REWARDS: degree to which managers felt they were well rewarded; this includes salary, fringe benefits, and other status symbols.

(2) PERFORMANCE-REWARD DEPENDENCY: extent to which the reward system (salary, promotions, benefits, etc.) was seen as fair and appropriate; degree to which these rewards are based on ability, worth, and past performance rather than factors such as luck, who you know, how well a manager can manipulate people, etc.

(3) MOTIVATION TO ACHIEVE: degree to which the organization is viewed as attempting to excel; the strength of its desire to be number one. A high rating reflects a lack of complacency even in the face of good growth and profits.

(4) FLEXIBILITY AND INNOVATION: willingness to try new procedures and experiment with changes which result not from crisis but rather to improve a situation or process which may be working satsifactorily.

(5) SUPPORTIVENESS: degree to which the organization is seen as interested in and willing to support its manager in both job- and non-job related matters.

The climate measures, their inter-correlations, and reliabilities are reported in Table 1. Reliabilities compare favorably with those reported by Pritchard and Karasick (1973). The intrameasure responses for these dimensions,

Insert Table 1 About Here

both reported by Pritchard and Karasick (1973) and in the present research, indicate that the climate dimensions are significantly related to each other ($r = .44$). Therefore, the scale dimensions were combined into a single global measure and labeled "achievement climate" suggesting that high scores on these dimensions reflect an anabolic climate. According to Nunnally (1967, p. 72-74)

when the scale dimensions are highly intercorrelated, a summative model best represents the fit between the dimensions. The internal consistency reliability of the summative measure was α = .85.

Job Satisfaction

Job satisfaction was measured using scales from the Job Descriptive Index (Smith, Kendall, & Hulin, 1969). Schneider and Snyder (1975) noted that Smith, et al. mixed descriptive and evaluative items in developing the work satisfaction scales for the JDI. Smith, Smith, and Rollo (1974) refactored the JDI work scale and reported loadings on both descriptive and evaluative factors. Since climate and satisfaction are often distinguished along precisely these dimensions the possibility exists that previous climate researchers employing the JDI may inadvertently have analyzed relationships among alternative evaluative measures. To avoid such confounding, the work scale was factor analyzed using a principal components analysis with varimax rotation to determine if a dual factor structure existed. Two factors were obtained which corresponded to the descriptive and evaluative dimensions found by Smith, et al. (1969). Only the evaluative scale was analyzed in this research. The internal consistency reliability of this measure was α = .87.

The individual's drive for high achievement was measured by the Cleaver (1965) personality instrument. This instrument is based on the personality theory of Martson (1931) who postulated that human behavior is a function of the environment and the individual's orientation to it. This measure is therefore particularly relevant to this research. The scale measures the individual's need for achieving success in assigned tasks and goals, in making decisions, and in solving problems that are challenging. The predictive and construct validity of the instrument have been independently and favorably assessed by Donelly, Mahan, and McManus (1965) and Howard (1967). The internal consistency reliability of the instrument was α = .89.

Job Performance

Job performance was measured by having the foreman's immediate supervisor complete ratings on fifteen performance dimensions (e.g., knowledge of job, quality-mindedness). Raw scores were converted to stanines for each employee based upon the distribution within their work group. Thus, each employee's performance score was directly comparable. Total performance scores ranged from 100 to 1300, with a mean of 755 and a standard deviation of 203. The internal consistency reliability of this measure was α = .96.

Motivating Potential Score

The motivating potential of the task was assessed using the Job Diagnostic Survey developed by Hackman & Oldham (1975). This instrument measures five core dimensions of an individual's job: skill variety, task identity, task significance, autonomy, and feedback. The psychometric properties of this instrument are reported by Hackman and Oldham (1975). The internal consistency reliabilities, computed by coefficient alpha, for the present study were skill variety .73; task identity .57; task significance .60; autonomy .60; autonomy .60; and feedback .61. These reliabilities are similar to those reported by Pierce & Dunham (1978). The MPS index for each foreman was computed as follows:

$$MPS = \frac{(\text{Skill Variety} + \text{Task Identity} + \text{Task Significance})}{3} \times \text{Autonomy} \times \text{Feedback}$$

Statistical Methods

Since the criteria which were developed to distinguish alternative models of person-situation fit were based on an Analysis of Variance format, a 2 X 2 X 2 design was utilized to assess the complex effects of drive, movtiating potential and achieving climate on the criteria. Foremen were allocated to the cells of this design by dichotomizing each of the three

independent variables at their medians, forming high and low contrast groups for each independent variable. This process resulted in unequal cell frequencies. Consequently, special procedures were required to adjust for non-orthogonality, and additional tests of assumptions were conducted which would not have been critical had cell frequencies been equivalent.

The problem of non-orthogonality was addressed by using statistical procedures that assessed the independent contribution of each main and interaction affect to explained variance in the criterion. In this process, each term in the full linear model is reordered last in a regression format corresponding to the analysis of variance design. The independent contribution of each term is then assessed using a one step backward elimination procedure and partial F-Test (Draper and Smith, 1966). This process ensures that only the portion of criterion variance independently attributable to each of the independent variables is considered in tests of significance.

The unequal cell frequencies encountered in this study also make the design sensitive to violations in assumptions of normality and homoscedasticity. Standardized residuals were plotted and examined for normality, and Bartlett's test for homogeneity of variance was conducted. No violations of assumptions of normality were noted. However, the distribution of work satisfaction scores was heteroscedastic, and required adjustment. No violations were noted for the job performance scales.

The violations noted above ensured that ordinary least square (OLS) procedures would provide distorted indications of the significance of main and interaction effects for the satisfaction scale. Therefore, generalized-least-square (GLS) or Aitken estimation procedures were utilized. The procedures have been discussed in a more restricted sense as weighted-least square techniques (WLS) (Draper and Smith, 1966). The conclusions of this study, therefore, reflect all necessary adjustments for dealing with violations

of assumptions underlying the complex design.

RESULT

Work Satisfaction

The results of the ANOVA using work satisfaction as the dependent variable are shown in Table 2. The results indicate that several types

Insert Table 2 About Here

of congruence may be jointly associated with work satisfaction. Both achieving climate and the motivating potential of the task acted as main effects ($\underline{F}$ [1,185] = 21.4, $p < .001$ and $\underline{F}$ [1,185] = 32.0, $p < .001$, respectively) on work satisfaction. The existence of these main effects suggests the importance of Effect Congruence (Model I) as a predictor of work satisfaction. Other types of congruence were also important. All possible two-way and three-way interactions were at least weakly significant. The plots of these interactions are shown in Figure 2.

Insert Figure 2 About Here

The interaction between achieving climate and motivating potential of the task (Figure 2a) was the strongest of these effects (F [1,185] = 10.6, $p < .001$). With reference to the statistical criteria developed previously the pattern of contrasts of cell means suggests a substitute form of functional congruency, which could be interpreted as follows. When the climate is achievement oriented (high), changes in the level of motivating potential of the tasks do not relate to changes in work satisfaction. Similarly, when tasks are judged to be motivating (high), the level of the climate variable is not associated with significant differences in the level of work satisfaction. However, when <u>either</u> of these independent variables is low, changes in the level of the other <u>are</u> associated with different levels of

work satisfaction. The resulting effect is that climate and task variables "substitute" for one another, with high levels of either offsetting the adverse effects of low levels of the other.

The weaker results for climate X person ($\underline{F}$ [1,185] = 2.78, $p < .10$) and task X person ($\underline{F}$ [1,185] = 2.92, $p < .10$) interactions also support Model III. In both of these cases, the pattern of contrasts among cell means indicates a blocking form of Functional Congruency (See Figures 2b and 2c). Since these effects are quite similar in form they are best interpreted jointly.

When either climate or task characteristics are high (achieving or motivating), the level of the person variable is not associated with signficnat differences in satisfaction levels. However, when these variables are low, changes in the individuals drive level <u>are</u> associated with changes in satisfaction. The converse is not true. Different levels of task and climate variable are significantly associated with work satisfaction regardless of the level of the person variable. These results are in marked contrast to the substitutes relation above, where <u>either</u> independent variable could block or screen the effects of the other.

A further point may be made with respect to these data which illustrate the usefulness of the interaction perspective. Individuals high in drive appear to respond more favorably to challenging jobs and climates (compare the difference between points 2 and 3, and 1 and 4 in Figure 2b). This finding is consistent with previous research that reports that individuals high in growth need strength respond more positively to enriched jobs (cf. Umstot, Mitchell and Bell, 1978), but adds additional information.

In this setting, motivating tasks and climates appear to be necessary, to avoid substantially <u>lower</u> work satisfaction for individuals high in

drive (point 2 in Figure 2b). This, in combination with the blocking effect, suggests that tasks high in motivating potential are desirable regardless of foreman personality, but are necessary for individuals high in drive to achieve work satisfaction. This constrasts with the common implication drawn from job design research that motivating tasks are desirable only for individuals high in growth need strength (Hackman, Pearce & Wolfe, 1978).

The final interaction affecting satisfaction is shown in Figure 2d. This plot suggests a complex three-way interaction between climate, task characteristics, and personality. Personality affects satisfaction scores for individuals low in both climate and task characteristics. However, when either the climate or task characteristcs are motivating, the individual's personality makes little difference (compare points 3 and 4, and 5 and 6). Hence, task characteristics and climate may substitute or compensate for one another by blocking the potential effects of one's personality on work satifaction.

This three-way effect is conceptually similar to the less complex two way interactions discussed at length above, with the exception that in this case a combination of two independent variables blocks the effects of a third. The criteria developed above to identify various types of congruency may also be used to "decompose" more complex higher order interactions of this type so that their basic form (or forms) can be identified.

Job Performance

Table 3 summarized the results of the ANOVA using job performance as the dependent variable. The analysis indicates that task characteristics

Insert Table 3 About Here

acted as a significant main effect ($F\ [1,185] = 4.42$, $p < .05$), and that climate, task, and personality variables weakly interacted to affect performance

(F [1,185] = 2.80, $p < .09$). The data provide some support for a congruency perspective when the criterion is job performance. In order to appreciate the nature of this congruency it is necessary to examine the three-way interaction plot for performance. This diagram is shown in Figure 2e.

When this interaction is decomposed, climate moderates the form of congruency. When climate is percieved as non-achieving the General Congrueny model for these variables (Model II, compare points 1, 2, 3, 4) is suggested. However, when climate is high (achievement oriented), the data support a Functional Congruency model (Model III, compare points 5, 6, 7, 8); specifically the substitute form.

These data indicate that in situations where either climate or task characteristics are seen as motivating (points 3 and 4, and 5 and 6), individuals high in drive outperformed those low in drive. Where both climate and task characteristics were either high or low (points 1 and 2, and 7 and 8), individuals low in drive were the better performers. These results are very consistent with the theory of need-achievement in which high n-ach individuals have been found to perform more effectively in situations which are moderately challenging. This research indicates that task characteristics and psychological climate represent two important sources of job challenge, and that both should be considered concurrently in attempting to udnerstand performance.

Discussion

This paper has identified three competing models of person-situation interaction, and has tested for the effects of each of these in order to provide a first attempt at a taxonomy for classifying patterns of fit between persons and situations. Climate, task, and personality variables were used to provide measures of person-situation interaction.

In this study, some support was generated for each of the three models of congruency. This suggests that each is plausible with reference to specific independent variables; and, from a functional perspective, with respect to particular criteria. In terms of the specific outcome variables of this study, Effect Congruency (Model 1) was most important with respect to work satisfaction. Fucntional Congruency (Model III) also was important, with both substitute and blocking effects noted. General Congruency (Model II) was not supported in relation to work satisfaction.

In this study, congruency appears less important when job performance is the criterion. Because only one main effect (due to task characteristics) was obtained, Effect Congruency (Model I) effects were not evident. One complex three-way interaction was obtained that could be interpreted in terms of the General Congruency and Functional Congruency models; however, this effect was weak. For this three-way interaction, climate appears to moderate the type of fit describing the relationship between these variables.

These results suggest that individuals may be overwhelmed (as well as underwhelmed) by aspects of their work settings. Simple prescriptions for job enrichment or climate building therefore should be considered as potentially competing for the individual's limited cognitive ability to attend to and cope with increased environmental complexity and challenge. Here, the joint occurence of both high achieving climate and motivating task potential did not improve criterion outcomes significantly and actually resulted in lower scores for job performance. Although the magnitude of some of the findings is modest, the results theoretically argue for increased attention to "environmental interactionism". Treating climate and task characteristics, or other variables such as leadership, structure, or group influences, separately does not seem appropriate. This conclusion is consistent with other current work indicating that environmental variables interact with

one another to influence individual outcomes in complex ways (James et al., 1978).

Other researchers are also beginning to consider similar issues (cf. Kerr & Jermier, 1978, in the leadership area; Dunham, 1978 in the job design area; Von Glinow, 1978, in the professionalism area) and there appears to be an increasing amount of convergence in results. Such convergence suggests that interaction theorists are attempting to proceed beyond simple generalizations and bivariate relationships to more complex, and potentially more useful models of fit. This research has attempted an initial taxonomy of the forms of such interaction, and has provided preliminary evidence supporting the existence of alternative types of fit within one data set. Hopefully this taxonomy can provide the impetus for additional systematic thought concerning the problem of person-situation interaction.

Figure 1
Illustration of Competing Models of Fit
With General Statistical Requirements
to Detect Each

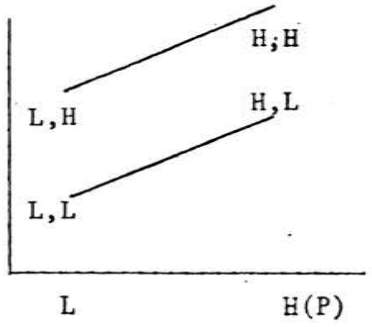
MODEL I | MODEL II | MODEL III

1a. ANOVA DESIGN

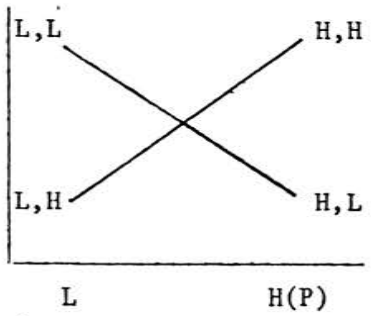
Situation

Person	L	H
	1	2
	3	4

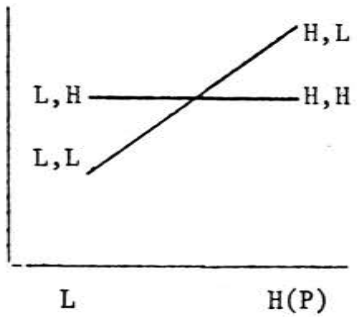
1b. EFFECT CONGRUENCY



1c. GENERAL CONGRUENCEY



1d. FUNCTIONAL CONGRUENCY



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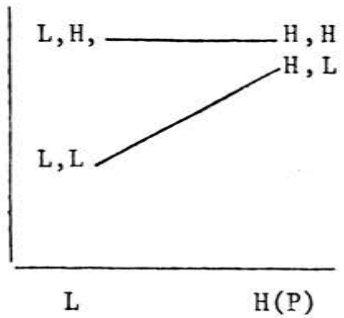


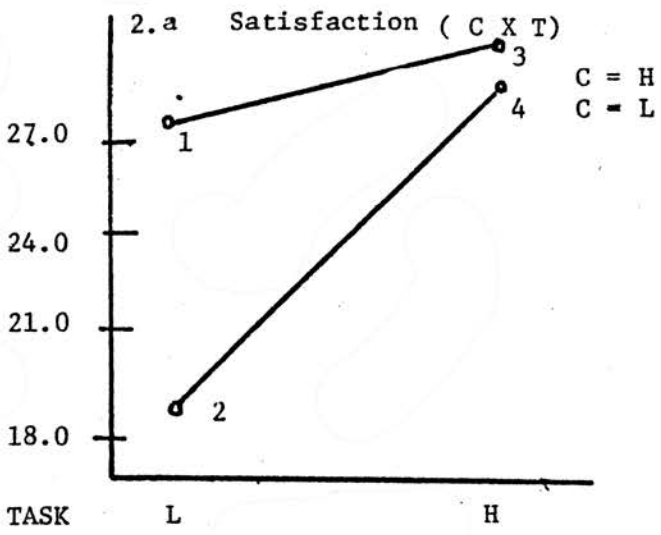
Possible Contrasts in ANOVA Design	Contrast Required for Effect Congruency	Contrasts Required for General Congruency	Contrasts Required for Blocking Effect*	Contrasts Required for substitute
Row	Row	Row	Row	Row
1. HL(1) vs. HH(2)	1. HH > HL	1. HH > HL	1. HH ≠ HL	1. } one and only
2. LL(3) vs. LH(4)	2. LH > LL	2. LL > LH	2. LH ≠ LL	2. } one inequality
Column	Column	Column	Column	Column
3. HL(1) vs. LL(3)	3. HL > LL	3. LL > HL	3. } one and only one	3. } one and only one
4. HH(2) vs. LH(4)	4. HH > LH	4. HH > LH	4. } inequality	4. } inequality
Diagonal	Diagonal	Diagonal	Diagonal	Diagonal
5. HL(1) vs. LH(4)	5. no requirement	5. HL = LH	5. } immaterial	5. } immaterial
6. LL(3) vs. HH(2)	6. HH > LL	6. LL = HH	6. }	6. } to detection of substitute

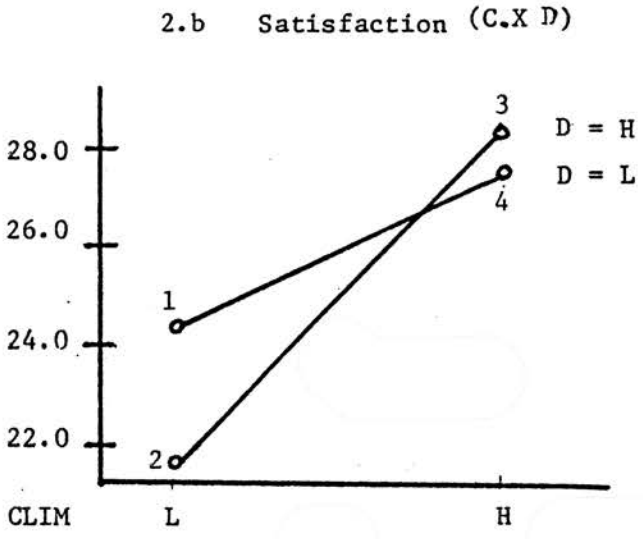
*The row and column contrasts required to deomonstrate blocking effects may be reversed and still yield a blocking phenomenon, as described in the text.

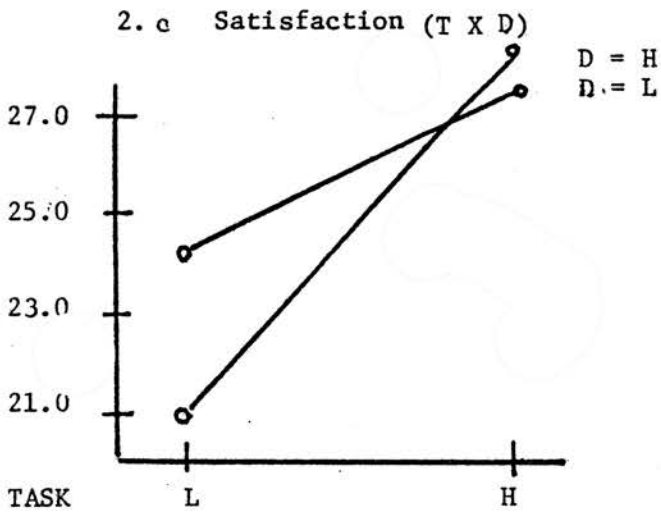
Figure 2

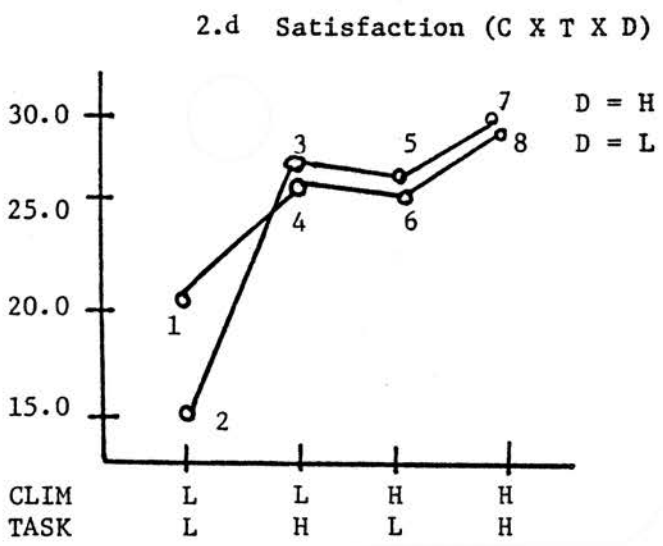
Interaction Plots from Analyses of

Variance for Performance and Satisfaction









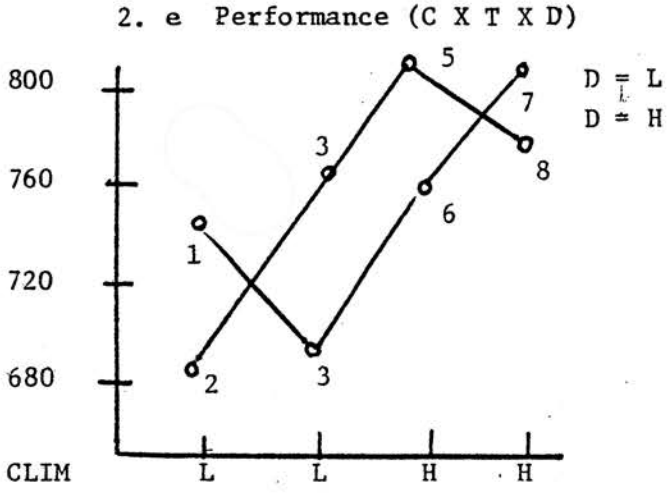


Table 1

Intercorrelations and Reliabilities of Climate Dimension [b]

Dimension	1	2	3	4	5	6
1. Level or Rewards [a]	(.61)					
2. Perf.-Rew.-Dependency	.63	(.74)				
3. Motivation to Achieve	.41	.52	(.65)			
4. Flexibility and Innovation	.43	.46	.56	(.53)		
5. Supportiveness	.41	.57	.39	.40	(.61)	
6. Achievement Climate	.68	.83	.75	.62	.77	(.85)

[a] Internal consistency reliabilities shown in parentheses were computed by coefficient alpha.

[b] n = 186

Table 2

Results of Analysis of Variance - Effects of Climate, Task, and Drive on Work Satisfaction

Source of Variation	Degree of Freedom	Sum of Squares	Mean Square	F	Level of Significance
Climate	1	22.2	22.2	21.4	.00
Task	1	33.2	33.2	32.1	.00
Personality	1	.9	.9	.9	.35
C X T	1	11.0	11.0	10.6	.00
C X D	1	2.9	2.9	2.8	.10
T X D	1	3.0	3.0	2.9	.09
C X T X D	1	2.9	2.9	2.8	.10
Error	185	191.8	1.04		

Table 3

Results of Analysis of Variance - Effects of Climate, Task, and Drive on Job Performance

Source of Variation	Degree of Freedom	Sum of Squares	Mean Square	F	Level of Significance
Climate	1	2095	2095	.05	.82
Task	1	176276	176276	4.41	.04
Personality	1	2621	2621	.06	.80
C X T	1	967	967	.02	.88
C X D	1	3553	3553	.08	.76
T X D	1	5	5	.00	.99
C X T X D	1	111900	111900	2.80	.09
Error	185	738221	39904		

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