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PERSON/SITUATION SELECTION RESEARCH: THE PROBLEM OF IDENTIFYING--ETC(U)
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PERSON/SITUATION SELECTION RESEARCH: THE PROBLEM
OF IDENTIFYING SALIENT SITUATIONAL DIMENSIONS

BENJAMIN SCHNEIDER

Research Report No. 13

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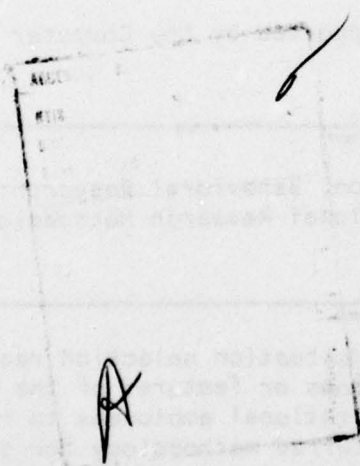
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A persistent problem in conducting person/situation selection research has been the identification of relevant dimensions or features of the situation. The usual strategy of asking organizational employees to respond to a set of predetermined questions as the preferred methodology for discovering relevant perceptual dimensions of organizational life is questioned and an alternative, the open-ended interview, is proposed. Sixty-seven employees were interviewed (and taped) and responded to a questionnaire.		

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Fifteen interview content categories were identified and all interviews were coded for (a) mention of the issue (frequency), (b) importance of the issue, and (c) affect with which the issue was raised. Interviews were reliably (interrater) coded; only coding for affect converged with questionnaire responses. Only 4 of the 15 issues were mentioned by 60 percent or more of the interviewees. Implications of the results for designing surveys that are systematically meaningful and useful for conducting person/situation selection research are presented.



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Person/Situation Selection Research: The Problem of
Identifying Salient Situational Dimensions¹

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Personnel selection researchers are one of the few groups of psychologists who have continually attempted person/situation research. Since the earliest attempts at making staffing decisions in World War I, selection researchers have studied the attributes of jobs with the aim of identifying the kinds of skills people must have in order to perform the job adequately. Beyond studying this person-situation relationship, however, selection researchers in particular, and industrial psychologists as a group, have shown little interest in exploring the Lewinian dictum that $B = f(P, E)$. As Guion (1976, p. 798) noted:

¹Data collection for this report was partially supported by the Company in which the data were gathered.

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The problem is that environmental factors influencing performance have not been considered very often in attempting predictions during the hiring process. . . . There are many potentially important situational variables, but only a few have been reported in studies relevant to selection. . . . Any management practice which is suggested in the literature or folklore of management . . . is . . . appropriately considered as a possible predictor or moderator.

The problem is identifying the relevant situational predictor or moderator to be used in a given setting and/or for specific individuals. Usually the procedure for such identification has been for researchers to either experimentally manipulate a situational parameter (cf. Dunnette, 1973; Weinstein & Holzbach, 1973) or develop an interview or survey procedure for assessing employee attitudes toward various situational features (cf. Bray, Campbell, & Grant, 1974; Forehand, 1968; Howard, 1976). The concern of the present research is with the latter approach; i.e., the problem being addressed is the relevance or salience of the typical interview or questionnaire approach to isolating situational variables to be used in person-situation selection research.

The use of structured questionnaires and interviews assumes that, a priori, the dimensions or facets of employee perceptions assessed are the appropriate and important targets of study. That

is, these questionnaires have been designed to assess those facets of employee attitudes that researchers/theoreticians and, in some cases, upper-level managers, have determined should be the targets of study. Respondents to these surveys are then asked to indicate their beliefs or opinions with respect to some statements or questions.

Regardless of the kind of attitude under investigation the described strategy for the development of procedures for assessing attitudes has been the norm. Thus not only studies of satisfaction (Smith, Kendall, & Hulin, 1969), but research on job involvement (Lodahl & Kejner, 1965), job enrichment (Hackman & Oldham, 1975), organizational identification (Hall, Schneider, & Nygren, 1970), organizational climates (Schneider & Bartlett, 1970), and role conflict and ambiguity (Rizzo, House, & Lirtzman, 1970) begin with a set of questions to which the respondent reacts. Herzberg's (cf. Herzberg, Mausner, & Snyderman, 1959) research also fits this model because he asked respondents what makes for a good or bad day at work; a priori he assumed that this was an important issue to those to be interviewed.

It may be that reaction to items or questions as stimuli is what these researchers desired to study. However, an alternative target of interest might have been answering the question: How do people characterize their work worlds?. That is, if one has an hypothesis that people do, in fact, conceptualize their worlds, work and other, in an effort to make these worlds comprehensible

(Allport, 1955; McGregor, 1967; Ryan, 1970; Schneider, 1975), an important focus of study becomes how people in those worlds characterize them rather than how we, as researchers, think they are (or perhaps, even should be) described. In brief, then, one may ask, "What are the salient dimensions of organizational life to employees of an organization?"

Research on person-perception aimed at the question of dimension salience has also concentrated on the questionnaire approach. This approach corresponds completely to the same technique used in studying work attitudes; a priori questions are asked and responses, or reactions, to these questions constitute the data of interest. However, as Dornbusch, Hastorf, Richardson, Muzzy, and Vreeland (1971, p. 69) noted, ". . . the desire for quantification and control has led researchers to specify the categories upon which the subject is required to report his perceptions. In these types of studies, the relevance of the categories has been defined by the investigator, not by the subject." The same has been true of studies investigating the perceptions employees have of their organization.

The purpose of the present paper is to report a systematic procedure for identifying the dimensions with which employees "naively" (Heider, 1958) characterize their work organization. For this primarily methodological study no formal hypotheses were generated to guide the collection and analysis of data. There were, however, a number of identifiable concerns: (a) the kinds of issues

mentioned by employees when they are asked to respond to a general question about their work organization; (b) the relative frequency with which the issues were mentioned; (c) the importance and affect with which issues were discussed; and (d) the convergent validity (Campbell & Fiske, 1959) and reliability of coded interview protocols.

Frequency, importance and affect were all coded to examine their relative dependence as facets of salience. That is, salience of an issue to a person seems to be a function of more than whether it is mentioned (frequency) but also the issue's relative importance to the person, and how affectively the issue is described. How these facets of salience were related to each other was, then, an additional question of interest. This becomes an important question of interest because in making predictions about individual behavior based on a person x situation model, it may be crucial to be able to identify for a person the particular situation variable of interest. Thus, for one group of people, job challenge may be the salient issue, but for others management policy on EEO would be the more relevant situational variable. The latter concepts will not be addressed in the present study but, to the extent that the situational issues mentioned by respondents are not generally shared by all respondents, to that extent does person-situation selection research become a more difficult problem.

Method

Sample

The 67 interviewees were all employed by a large Middle Atlantic Coast utility. They were distributed approximately as in the larger company except for an overrepresentation of higher level employees and blacks. The demographics on the sample follow: (1) sex-26 females, 41 males; (2) race-12 blacks, 55 whites; (3) level-13 Upper management, 13 Middle management, 14 Lower management, 13 Skilled workers, and 14 Clerical and unskilled persons; (4) all four geographically dispersed major divisions of the company were represented; and (5) all five departments within each division were represented.

Procedure

Potential interviewees were contacted by telephone and asked to participate; only three of those called refused to cooperate and be interviewed. At the time this study was being conducted the company had no "attitude survey" program in existence so being contacted for participation in this kind of project was a novel experience. Interviews were conducted in the work place if a quiet room was available, or outside the work place. All interviews were taped after discussing the anonymity/confidentiality of the data. There were four interviewers, two males and two females; none were black. Each interviewer tended to do an entire division of the company and thus a cross-section of employees.

The interview consisted of the following statement/question:

Usually when a company decides to do a survey they want specific answers to specific questions; that is not what this project is about. We want to identify the kinds of things that are important to people without assuming that we know what those things are. We'd like you to tell us the kinds of things you think about when you think about your job and the Company.

No topics were mentioned by the interviewer. If the interviewer thought a stimulus was needed to have the interviewee begin speaking (rarely necessary) two agreed-upon probes were available: (1) "If someone were thinking about coming to work for [the Company] and asked you about the Company what would you tell them?"; or (2) "On your way to work in the morning, what sorts of things go through your head as you think about your job and the company?" Interviewees were encouraged to speak about issues as thoughts came to them. The researchers would occasionally summarize what had been said and then ask "are there other kinds of things you think about?" Thus, the attempt was to "get at" what employees recall rather than how they react to presented stimuli.

Because the central focus of this study was issue identification rather than discovering how people felt about issues, interviewers did not initially pursue respondents' comments. Thus, if a respondent said "The Company is very concerned about high performance,"

he or she was not asked if that was good/bad or satisfying/dissatisfying or why they felt that way. However, if no new thoughts were being mentioned, interviewees might be questioned about the specific events, conditions or experiences that led them to perceive the company as one concerned with high performance.

Some issues, of course, were mentioned in evaluative or affective terms. In our coding of responses (to be described below) this was taken into consideration.

Although the interview was of the open-ended form (i.e., only a general question was prepared and no particular kinds of responses were expected), a brief structured questionnaire was included at the conclusion of the interview. The questionnaire contained 7 questions, 6 of them utilizing the kind of response format employed by Hackman and Lawler (1971) that anchors the extremes and mid-point of the scale with an integrated set of anchors. These questions were: (1) How much autonomy do you have on your job; how much are you left on your own to do your own work? (Hackman & Lawler, 1971); (2) To what extent are you proud of the fact that you work for the Company?; (3) To what extent do you feel you personally contribute to the service [the Company's] customers receive?; (4) To what extent does working for [the Company] provide the opportunity for you to assume more work responsibility?; (5) To what extent do you do a "whole" piece of work (as opposed to doing part of a job which is finished by some other employee)? (Hackman & Lawler, 1971); (6) How much confidence do you have that [the Company] management can make

the kinds of decisions in the future that will help the Company achieve its goals? Finally, the seventh question was the Faces scale (Kunin, 1955) addressed to ". . . how satisfied or dissatisfied you feel with your overall experiences at [the Company]?" The first six questions had 7-point scales; the Faces were 6 in number with two positive, a neutral, and 3 negative faces. In all cases a high score meant more of the content of the item.

Questionnaire items were included for two reasons. First, it was important to have some data collected through more traditional procedures to enable an examination of multi-method convergence (Campbell & Fiske, 1959). Such convergence, if it existed, would provide additional evidence regarding the validity of the content analysis method as a technique for coding responses. Second, because items were needed for assessing multi-method convergence the questions selected were relevant to issues in which the company studied had some interest.

Results

The Interview Sessions

No interview lasted less than 30 minutes and a few lasted more than three hours. The interviewees seemed quite comfortable responding to the general question; indeed views of their job and company most frequently came spilling out and it was fortunate that interviewers were taperecording.

Coding the Interviews

For each interview a written summary of the tape was prepared. This written summary was used in subsequent codings; reliability data are presented later. Each summary was then read by one of the four interviewers and a list of the topics mentioned in the interview was generated. Through a number of meetings the list of individual topics mentioned was sorted, compressed and distilled into 15 major categories. The names of these categories with examples of the kinds of comments coded for each follows:

1. Promotion/Evaluation - uncertainty over the bases for being promoted; questions about the accuracy and validity of evaluations; some people have Godfathers; college graduates shouldn't have promotion preference.

2. Company Management - frustration with edicts from higher-ups; poor communication from top levels down; company has mature attitude about people; decisions can be made at the most appropriate levels.

3. Pay/Security - salary is good for the type of work; pension plan is not clear; too much security to leave the company; sick-pay benefits could start earlier.

4. Supervision - there are too many supervisors; amount of paperwork keeps supervisors from interpersonal contact; first line supervisors should have more authority; supervisors promoted from within are loyal to the company.

5. Customer Service - service is the company's goal and reason

for existence; company may be too big to treat each customer as an individual; customers are unappreciative of the high quality service they receive; some departments are too far removed from customer contact.

6. Equal Employment Opportunity - the company is determined to eliminate discrimination; some jobs are not being filled by those who are most qualified; older workers resent changes in the employee body of the company; women promoted into management positions have put equivalent level males to shame.

7. Pride - people are no longer as likely to say "I work for the X Company;" the younger workers lack pride in their job; company image is a source of pride; company is too big to feel pride in it.

8. Job Challenge - technical jobs become monotonous and boring; company pays you to learn new things all the time; the job relies heavily on memory and good common sense since all contingencies can't be known; computerization has made the job more interesting because computers do the routine stuff and we do the more complicated things.

9. Training - it is better to train people in the classroom than on the job because in the classroom they learn good habits; information about available training courses is not publicized; not enough training courses available at the management level; the company policy seems to be to emphasize administrative, rather than technical, training.

10. Centralization/Standardization - company is concerned about organization of work flow to maximize production; the home office



staff of the organization has the power with line people playing a supporting role; computerization permits the centralization of decision-making; regardless of the division, the company wants everyone to do things similarly.

11. Bureaucracy - there are too many Chiefs and not enough Indians; too much paperwork and reports on reports; you can't find a supervisor when one is needed because they are always in meetings; red tape and paperwork have become so much that people avoid personal and informal group contacts.

12. Organization's Environment - competition from other organizations is a problem; the company is trying to educate all employees about its role in the community; other organizations and the government continually throw up roadblocks to organizational innovation; borrowing capital for growth is becoming a more and more difficult endeavor.

13. Interdepartment Relations - the company is too departmentalized; in order to get the job done one must gain the respect of people in other departments; different departments have different views of what is important, and thus have different objectives; there is interdepartmental buck passing with no one taking responsibility for errors.

14. Organization Development - reorganization to get more involvement and participation from lower levels has led to more effective decision-making; how do you integrate new people into the organization without permitting them to contribute to decision-

making?; MBO appears to be effective; authority should be commensurate with responsibility.

15. Friendships - everybody is easy to get along with; as the company has grown in size friendliness has gone down; there are good peer relationships; everyone is so friendly - you eat at a table where you don't know anyone and they all talk to you.

After the decision regarding the number and names of categories was made, each interview was coded for whether the interviewee mentioned the category (frequency), how important the issue mentioned seemed to be to respondents (i.e., relative to the other issues s/he mentioned), whether or not there was affect associated with the way the issue or topic was mentioned and the directionality (positive, negative) of that affect. The procedures for coding are described shortly with the data presentation. In all cases, the summaries, not the actual interviews, were coded.

Parenthetically it should be noted that 5 interviews were summarized by two different people. The maximum number of issues found by one coder for the five was 37 and by the other coder 33; there were only 4 cases in which coders disagreed over whether an issue was mentioned on a tape. Further data on the agreement between coders came from the coding of importance and affect. The 2 coders coded the 33 issues in common for importance and affect yielding a total of 66 codings for each coder. For the two coders the correlation across the 66 codings was .87.

Frequency. Table 1 reports the frequency with which each of

Table 1

Frequency, Importance, and Affect Coding for Issues Mentioned in Interviews

	Frequency Percent	Rank	\bar{X}	Importance σ	Rank	\bar{X}	Affect(1) σ	Rank	Affect(11) Percent	Rank
Promotion/Evaluation	84	1	2.46	1.67	1	1.73	.80	11	70	6
Company Management	67	2	3.04	2.19	4	1.76	.73	10	59	9
Pay/Security	63	3	3.64	2.28	11	2.21	.95	4	75	3
Supervision	60	4	2.88	2.15	2	1.95	.69	7	43	12
Customer Service	58	5	3.05	2.14	5	2.01	.65	5	42	13
Equal Employment Opportunity	57	6	3.03	1.94	3	1.66	.63	12	50	11
Pride	56	7	4.14	2.42	14	1.82	.80	9	68	8
Job Challenge	43	8	3.31	2.33	7	2.41	.82	2	83	2
Training	42	9	3.89	2.15	13	1.64	.78	13	71	5
Centralization/Standardization	33	10	3.14	1.88	6	1.86	.77	8	59	9
Bureaucracy	28	11	3.63	2.06	10	1.11	.32	15	89	1
Organization's Environment	21	12	3.71	2.13	12	2.00	.55	6	29	15
Interdepartment Relations	21	12	4.36	1.74	15	1.46	.66	14	69	7
Organization Development	18	14	3.50	2.24	8	2.33	.49	3	33	14
Friendships	16	15	3.55	2.42	9	2.73	.47	1	73	4

Note: For Importance a low mean indicates more importance; for Affect(1) a low mean indicates positive affect. Affect(11) indicates the frequency with which the issue was mentioned in an affective (positive or negative) manner.

the 15 categories was mentioned. Frequency was relatively easy to code since either interviewees mentioned it or failed to. The issues mentioned most frequently were Promotion/Evaluation (84%), Company Management (67%), Pay/Security (63%) and Supervision (60%). Least frequently mentioned were the Organization's Environment (21%), Interdepartmental Relationships (21%), Organization Development (18%), and Friends (16%). Four of the 15 issues were mentioned by 60 percent or more of the respondents.

Importance. Importance was coded ipsatively, after the coding for frequency. Thus no attempt was made to compare the importance accorded a topic by one person with the importance of that same topic to others; only within interview importance was judged. Of course, if the issue was not mentioned by a respondent, no importance score was coded.

The 5 most important topics mentioned by each respondent were ranked 1 through 5; all other topics mentioned were coded with a 7.

Table 1 presents average importance rankings for all those mentioning each topic and reveals that Promotion/Evaluation ($\bar{x} = 2.46$) and Supervision ($\bar{x} = 2.88$) were the most important. The least important issues seem to be Pride ($\bar{x} = 4.14$) and Interdepartmental Relations ($\bar{x} = 4.36$).

Affect. Level of affect of the issue was coded 1, 2 or 3, where 1 = a negatively mentioned issue ("the sick benefits are lousy"), 2 = a neutrally or descriptively mentioned issue ("money is important to me"), and 3 = a positively mentioned issue ("I like my pay"). As

with importance, only if the topic was mentioned was a coding of affect accomplished.

Table 1 summarizes results for the coding of affect in the last two columns, labelled Affect(I) and Affect(II). Affect(I) indicates the average positiveness or negativeness with which the issues were mentioned, with Bureaucracy being the most negative ($\bar{X} = 1.11$) and Friendships the most positive ($\bar{X} = 2.75$). Affect(II) indicates the frequency with which each issue was mentioned in an affective (as compared to descriptive) way. This column reveals that only 4 issues, Organization's Environment, Organization Development, Customer Service, and Supervision, were mentioned more often in a descriptive or "neutral commentary" fashion. Two issues, Bureaucracy and Job Challenge, were mentioned affectively more than 80 percent of the time (note in Affect(I) that these two issues were, on the average, respectively a high negative and a high positive).

Questionnaire Item-Interview Code Convergence

Table 2 presents convergence correlations between the questionnaire item responses and the codings of importance and Affect(I).

Table 2 reveals some convergence between coded Affect(I) and the questionnaire items. Since post-hoc discussions of results always "make sense," each significant convergent relationship will not be discussed in detail. However the following general observations will be noted: (1) Those questionnaire items concerning pride, and opportunity to assume responsibility are more strongly and con-

Table 2

Correlations Between Questionnaire Items and Codings of Importance and Affect(1)

Interview Coding Categories	Questionnaire Items						
	Autonomy	Pride	Service Contribtn	Responsibility	Whole Task	Confid. in Mgt.	Faces
Promotion/Evaluation (56)	14 09	-16 25	05 25	-02 36***	15 09	11 14	-01 38***
Company Management (45)	07 35**	-03 36**	01 19	-02 43***	27 21	24 31*	01 40***
Pay/Security (42)	-12 28	-01 44***	22 16	-08 17	24 32*	07 43***	-07 40***
Supervision (40)	29 21	24 11	08 -04	17 10	-10 19	30 29	47*** 16
Customer Service (39)	09 22	-17 46***	-19 17	-28 34*	-01 -03	-22 14	-09 32*
Equal Employment Oppty (38)	22 10	-16 -06	-05 13	04 20	-13 -03	-03 21	-08 07
Pride (38)	19 37**	12 49***	01 20	15 56***	-35** -10	10 32*	26 46***
Job Challenge (29)	15 -02	-01 37**	03 31	23 52***	10 -21	06 -07	38** 52***
Training (28)	06 04	08 54***	-07 29	17 37**	-27 03	05 16	25 29
Centralization/Stand. (22)	-34 31	-07 62***	-31 33	-43 39	-22 -08	06 52**	-30 54***
Bureaucracy (19)	17 -22	-12 36	01 -28	-36 20	05 06	-11 -42	-22 29
Organization's Env. (14)	-06 12	0 50	-03 16	-03 19	64** 57**	29 33	-28 43
Interdepartment Rel. (14)	-06 12	-04 24	47 32	-28 48	13 51	-10 47	-10 33
Organization Development (12)	-12 45	19 43	14 16	-16 14	20 -08	-06 57	25 25
Friendships (11)	01 34	11 39	-04 09	-14 35	06 -41	54 35	05 35
Questionnaire Items							
Autonomy	--						
Pride	29**	--					
Service Contribution	35***	25**	--				
Responsibility	41***	39***	48***	--			
Whole Task	05	09	16	-06	--		
Confidence in Management	10	41***	23	36***	17	--	
Faces	39***	59***	43***	51***	02	35***	--

** p < .05

*** p < .01

Note: In each cell, the questionnaire item/coded importance and questionnaire item/affect relationships are presented to the upper left and lower right, respectively. The sample size for each correlation is presented by the interview category label except for the intercorrelation matrix of questionnaire items where N = 67.

sistently related to the 15 affect codings (especially the 10 more frequently mentioned issues) than are the questionnaire items related to autonomy, service contribution, and doing a whole task³; (2) for the questionnaire items the strongest correlate of overall satisfaction (Faces) was pride (shown at the bottom of Table 2 in the questionnaire items-only intercorrelation matrix); (3) only 7 of the 15 interview category affect codes were significantly related to overall satisfaction.

The results revealing some convergence of coded responses and questionnaire responses, coupled with the earlier report of inter-rater agreement, support the validity (multi-method convergent) and reliability of the coding process. Additional evidence supporting these codings may be derived from Table 1.

From the data in Table 1 it is possible to calculate the relationship between the ranks of frequency, importance, Affect(I) and Affect(II). If the ranks for the various facets of salience were strongly related, this would suggest that salience is uni- not multi-dimensional. Low or moderate relationships, on the other hand, would suggest some relative independence of the dimensions of salience and a gain in information. In fact the rank order correlation between: frequency and importance was .58 ($p < .05$); fre-

³ Respondents had trouble with this questionnaire item, especially management people for whom the concept of doing a whole task was a difficult one to understand. This might also explain the low relationship between whole task and the other questionnaire items, as shown in Table 2.

quency and Affect(I), $-.071$ (n.s.); frequency and Affect(II), $.04$ (n.s.); importance and Affect(I), $.13$ (n.s.); importance and Affect(II), $-.08$ (n.s.); and, between Affect(I) and Affect(II), $r = .14$ (n.s.).

Because frequency and importance were significantly related, one more piece of evidence is provided that supports the reliability of the coding process. Thus, one might have argued that the lack of significant correlations between the questionnaire items and the coding of importance was due to relative unreliability of the coding process; if that coding was highly unreliable, the significant relationship between frequency rank and importance rank could not exist.

Discussion

This investigation was designed to explore a method, the unstructured interview, for isolating employee views of the salient dimensions of organizational life. The research was prompted by a concern for conducting person x situation selection research and the realization that little is known about the way employees "naively" characterize their work environments. It was reasoned that for person x situation selection research to yield accurate predictions, defining the situation in person-salient terms was a prerequisite.

It was shown that: (a) interviewees can speak to a very general question regarding thoughts they have about their jobs and organization; (b) the content of interview responses to the general question

can be reliably (interrater) coded with respect to the frequency with which issues are mentioned, the importance of issues to people, and the affect with which issues are discussed; (c) only 4 of the 15 coded issues were mentioned by more than 60 percent of the interviewees; (d) there exists some convergence between coded affect and responses obtained to items from a traditional questionnaire; (e) across the 15 issues there is a significant relationship between the frequency with which issues are mentioned and the coded importance of the issue; (f) there is no relationship across the 15 issues between frequency and coded affect; (g) there is no relationship across the 15 issues between coded importance and coded affect; and (h) coded importance was generally unrelated to the various questionnaire item responses.

The major implication of these results is that identifying the salience of various facets of organizational life to organizational employees is far more complex than has been imagined. That is, given (a) that only four issues commanded the attention of more than 60 percent of the respondents, and (b) that frequency, importance and affect were not strongly related, it is clear that the relevance of particular facets of organizational life for employees is not something to be understood by the administration of a typical "attitude" survey. That survey, the present results suggest, probably taps into only one dimension of salience, Affect(1).

Given the history of the development of attitude questionnaires the finding that Affect(1) coding is most strongly related to the

questionnaire item responses is not surprising. As Ostrom (1968) has noted, the evaluative characteristic of attitudes has been prepotent in the development of attitude theories and measures. Schneider (1975) has argued, further, that job satisfaction measures have also followed this tradition. This concentration on evaluation seems to have resulted in a situation wherein the general public is so accustomed to reacting to interviews and questionnaire that obtaining careful and thoughtful responses may be quite difficult. That is, when we ask a specific question we may, in fact, be demanding a response; respondents may feel they have no choice but to respond. This fact alone might account for the relatively high degree of empirical (as compared to conceptual) overlap in responses to evaluative (satisfaction) and belief (climate) items in questionnaires (Johannesson, 1973; Schneider, 1975; Schneider & Snyder, 1975). If questionnaires primarily yield affective or evaluative data, then factorial analyses of such inventories may yield dimensions of satisfaction but whether those dimensions adequately represent the various facets of salience to employees is questionable. It is questionable precisely because the affect people expressed regarding the 15 issues was unrelated to how frequently the issue was raised and to how important the issue was to people.

These findings, especially the fact that only four of fifteen issues were mentioned by more than 60 percent of the responses, are critical for conducting person x situation selection research.

They suggest that the situational parameter in the prediction model should, perhaps, not be the same for each person but that a determination needs to be made regarding the appropriate situational issue to include in a regression equation for a particular person. This may not be as difficult as it seems because "appropriateness" may very well be defined as the issue most salient to people already in the work situation to which the new employee will go. The problem, of course, still remains of identifying those very same situationally salient issues.

One alternative is to conduct interviews. However, this is time-consuming and requires training. The finding that only four issues were raised by more than 60 percent of the interviewees suggests one potential modification of questionnaires; encourage respondents in a work situation to only respond to items tapping issues they have thought about. Perhaps an alternative to the traditional instruction of "respond to every item" would be to ask respondents to respond only to items that represent issues that are salient to them or that they have thought about. Obviously, asking employees to respond only to items that are important to them would not suffice; the current results suggest this is only one dimension of salience. Another alternative might be to have respondents answer those items that are relevant for them.

There is a second implication for designing survey measures in these results and it concerns the inclusion of many more potential issues in attitude surveys than has typically been the recent

case. In the present research the issues that were salient (on at least one dimension of salience) to these respondents should probably all be included in a general diagnostic-type survey. Such inclusion might well suggest to respondents the researchers' awareness of relevant systemic issues and yield, as Alderfer and Brown (1972) showed, more valid data. Of the ten most frequently mentioned issues, for example, questions about Company Management, Customer Service, EEO, Pride, Training, and Centralization/Standardization probably would not have appeared in a "typical" survey [although recent developments of inclusive or omnibus diagnostic surveys (cf. Survey Research Center, 1975; Taylor & Bowers, 1972) come close to assessing all of these]. It would be important, however, not to just "throw them all in and see what we get," for this would defeat the idea of constructing a survey that is relevant for the system in which it is to be used.

One final argument needs to be made regarding the study of employees' views of organizational life, and this concerns the fact that organizational researchers have tended to concentrate on management-defined outcomes (production, turnover) as their targets of study. Yet, in retrospect, the coders of the present interviews did not feel such outcomes were the kinds of issues people tended to frequently mention. This suggests that an emphasis on management- or organization-defined targets of study has effectively eliminated many psychologically relevant issues from study. Only recently, for example, have strong links been generally made between perfor-

mance appraisal and the necessity to work with employee careers (Hall, 1976), between management requirements for controls and employee response to same (Lawler & Rhode, 1976), and between the selection (Schneider, 1976a) and training (Goldstein, 1974) processes and subsequent employee adaptation to organizational life. Having employees define the relevant issues might be a way of opening the study of behavior in organizations to the study of the full range and complexity of that behavior.

Conclusion

The important result of this paper is to begin to question the range and quality of the data we have been gathering, analyzing, and using in person x situation research when we essentially demand that every item be answered in a questionnaire which contains management-determined content. The utility of questionnaires for collecting data is not the issue; how they are to be constructed and used is the important thought.

A corollary of the above is to begin to focus in on the assessment of issues meaningful to individuals. Were attitude measures constructed to be more salient to people both in the kinds of issues raised (Alderfer & Brown, 1972) and the directions used (to respond to salient items or questions), they might prove more useful in attempts to document the perceptual dimensions with which employees characterize their work settings and as in aid in gaining more reliability in person x situation research (cf. Endler & Magnusson, 1976). Especially in research which emphasizes the

interaction of employee perceptions of the work world and other employee attributes as a strategy for understanding employee behavior (cf. Hackman & Oldham, 1975; Schneider, 1975, 1976b) having perceptions about salient issues would seem to be crucial.

References

- Alderfer, C. P., & Brown, L. D. Designing an "empathic questionnaire" for organizational research. Journal of Applied Psychology, 1972, 56, 456-460.
- Allport, F. H. Theories of perception and the concept of structure. New York: Wiley, 1955.
- Bray, D. W., Campbell, R. J., & Grant, D. L. Formative years in business: A long-term A.T.&T. study of managerial lives. New York: Wiley, 1974.
- Campbell, D. T., & Fiske, D. W. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 1959, 56, 81-105.
- Dornbusch, S., Hastorf, A. H., Richardson, S. A., Muzzy, R. E., & Vreeland, R. S. The perceiver and the perceived: Their relative influence on the categories of interpersonal cognition. In, J. L. Freedman, J. M. Carlsmith, and D. O. Sears (Eds.), Readings in social psychology. Englewood Cliffs, N.J.: Prentice-Hall, 1971.
- Dunnette, M. D. Performance equals ability and what? University of Minnesota, Department of Psychology, ONR Technical Report No. 4009, 1973.
- Forehand, G. A. On the interaction of persons and organizations. in, R. Tagiuri and G. Litwin (Eds.), Organizational climate: Explorations of a concept. Boston: Division of Research, Harvard Business School, 1968.

- Goldstein, I. L. Training: Program development and evaluation. Belmont, Calif.: Brooks/Cole, 1974.
- Guion, R. M. Recruiting, selection and job placement. In, M. D. Dunnette (Ed.), Handbook of industrial-organizational psychology. Chicago: Rand McNally, 1976.
- Hackman, J. R., & Lawler, E. E., III. Employee reactions to job characteristics. Journal of Applied Psychology Monograph, 1971, 55, 259-286.
- Hackman, J. R., & Oldham, G. R. Development of the Job Diagnostic Survey. Journal of Applied Psychology, 1975, 60, 159-170.
- Hall, D. T. Careers in organizations. Pacific Palisades, Calif.: Goodyear, 1976.
- Hall, D. T., Schneider, B., & Nygren, H. T. Personal factors in organizational identification. Administrative Science Quarterly, 1970, 15, 176-190.
- Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.
- Herzberg, F., Mausner, B., & Snyderman, B. The motivation to work (2nd ed.). New York: Wiley, 1959.
- Howard, A. Intrinsic motivation and its determinants as factors enhancing the prediction of job performance from ability. University of Maryland, Department of Psychology, ONR Technical Report No. 11, 1976.

- Johannesson, R. E. Some problems in the measurement of organizational climate. Organizational Behavior and Human Performance, 1973, 10, 118-144.
- Kunin, T. The construction of a new type of attitude measure. Personnel Psychology, 1955, 8, 65-78.
- Lawler, E. E., III, & Rhode, J. G. Information and control in organizations. Pacific Palisades, Calif.: Goodyear, 1976.
- Lodahl, T. M., & Kejner, M. The definition and measurement of job involvement. Journal of Applied Psychology, 1965, 49, 24-33.
- McGregor, D. M. The professional manager. New York: McGraw-Hill, 1967.
- Ostrom, T. M. The emergence of attitude theory: 1930-1950. In, A. G. Greenwald, T. C. Brock, and T. M. Ostrom (Eds.), Psychological foundations of attitudes. New York: Academic, 1968.
- Rizzo, J. R., House, R. J., & Lirtzman, S. I. Role conflict and ambiguity in complex organizations. Administrative Science Quarterly, 1970, 15, 150-163.
- Ryan, T. A. Intentional behavior: An approach to human motivation. New York: Ronald, 1970.
- Schneider, B. Organizational climates: An essay. Personnel Psychology, 1975, 28, 447-479.
- Schneider, B. Staffing organizations. Pacific Palisades, Calif.: Goodyear, 1976. (a)

- Schneider, B. Personnel selection and organizational behavior:
An integrated view. Department of Psychology, University of
Maryland, ONR Technical Research Report No. 14, 1976.(b)
- Schneider, B., & Bartlett, C. J. Individual differences and organ-
izational climate, II: Measurement of organizational climate
by the multitrait-multirater matrix. Personnel Psychology,
1970, 23, 493-512.
- Schneider, B., & Snyder, R. A. Some relationships between job
satisfaction and organizational climate. Journal of Applied
Psychology, 1975, 60, 318-328.
- Smith, P. C., Kendall, L. M., & Hulin, C. L. The measurement of
satisfaction in work and retirement: A strategy for the study
of attitudes. Chicago: Rand McNally, 1969.
- Survey Research Center. Michigan organizational assessment package.
Ann Arbor: ISR, The University of Michigan, 1975.
- Taylor, J. C., & Bowers, D. G. Survey of organizations. Ann Arbor:
CRUSK, The University of Michigan, 1972.
- Weinstein, A. G., & Holzbach, R. L., Jr. Impact of individual dif-
ferences, reward distribution, and task structure on product-
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