

ORGANIZATIONAL BEHAVIOR(U) MARYLAND UNIV COLLEGE PARK
DEPT OF PSYCHOLOGY B SCHNEIDER AUG 84 RR-84-3
N00014-83-K-0551

1/1

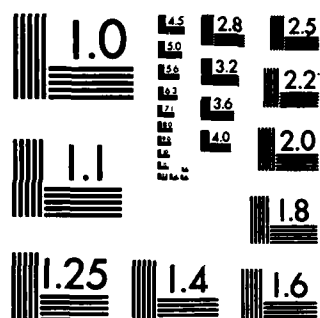
F/G 5/10

NL

END

FILMS

DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

(12)

AD-A146 238

ORGANIZATIONAL BEHAVIOR

BENJAMIN SCHNEIDER

Research Report No. 84-3

August, 1984

**DTIC
ELECTE
S OCT 1 1984 D
B**

Partial support for the writing of this report was provided by the Organizational Effectiveness Research Programs, Psychological Sciences Division, Office of Naval Research under Contract No. N00014-83-K-0551, NR 270-958, Benjamin Schneider and F. David Schoorman, Principal Investigators.

Reproduction in whole or part is permitted for any purpose of the United States Government. Approved for public release; distribution unlimited.

DTIC FILE COPY

psychology



84 09 26 125

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Research Report No. 84-3	2. GOVT ACCESSION NO. AD A146 238	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) ORGANIZATIONAL BEHAVIOR		5. TYPE OF REPORT & PERIOD COVERED Technical Report
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Benjamin Schneider		8. CONTRACT OR GRANT NUMBER(s) N00014-83-K-0551
9. PERFORMING ORGANIZATION NAME AND ADDRESS Department of Psychology University of Maryland College Park, MD 20742		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 270-958
11. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Programs Office of Naval Research Arlington, VA 22217		12. REPORT DATE August, 1984
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 81
		15. SECURITY CLASS. (of this report) Unclassified
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Chapter prepared for the 1985 <u>Annual Review of Psychology</u>		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Organizational behavior Organizational culture Productivity Motivation Work attitudes Leadership Work groups		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A review of contemporary theory and research in Organizational Behavior (OB) is presented. The review emphasizes the 1983 journal literature in OB interpreted within historical trends in the field. There are three major foci for the review: (a) a focus on individual attributes (motivation, job attitudes including job satisfaction, organizational commitment, stress and turnover), (b) a focus on group and organizational characteristics (intergroup theory and teams, leadership, organizational climate and (cont.)		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-LF-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

20. culture) and (c) a focus on productivity. A methodological and conceptual theme, level of analysis, is emphasized throughout. It is concluded that OB is alive and well and living on many levels.

S/N 0102-LF-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

ORGANIZATIONAL BEHAVIOR

Benjamin Schneider

Department of Psychology & Center for
Innovation, University of Maryland
College Park, MD 20742
(301) 454-7115

Chapter to appear in the 1985 Annual
Review of Psychology

Running Title: Organizational Behavior

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Distribution	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



Contents

INTRODUCTION		1
What is OB?	1	
Chapter Organization	3	
INDIVIDUAL FOCI		5
Worker Motivation	5	
Job Satisfaction and Attitudes Behavior	10	
Job Satisfaction	10	
Role Stress	13	
Organizational Commitment	17	
Socialization	18	
Turnover	19	
Summary	23	
GROUP AND ORGANIZATIONAL FOCI		24
Leadership and Management	25	
Groups	31	
Intergroup Theory	32	
Demographics	34	
Group Structure and Team Performance	34	
Summary	38	
Organizational Climate and Culture	38	
PRODUCTIVITY		43
Literature Summarizing Productivity and OB	44	
Utility	51	
Toward an Integrated View of OB	52	
CONCLUSIONS		54
ACKNOWLEDGMENTS		56
LITERATURE CITED		57

INTRODUCTION

This is the fourth review of Organizational Behavior (OB) in six years. The first was published by Mitchell in 1979 (Mitchell 1979) followed by Cummings (1982) and Staw (1984). Four reviews in a relatively brief time period have allowed authors to take a broad perspective on this growing field because they have not had to summarize many years of work in one review.

The present review will use the historical works of the field as a framework for interpretation. Within that framework, the journal literature in OB that appeared in 1983 will be highlighted. In addition, a recurring methodological theme, the level of analysis issue, will be presented. Finally, a strong argument will be made for adopting utility (cost-benefit) analyses as a way (not the only way) of documenting the practical significance of OB.

What is OB?

OB is the confluence of individual, group and organizational studies flowing from Industrial-Organizational (I/O) Psychology, and Organization and Management Theory (OMT) with headwaters in Psychology (Social, Psychometrics), Sociology (Organizational, Work and Occupational), and Management (Scientific, Human Relations). The field is bounded by concern for behavior primarily in profit-making work organizations so the study of public, educational and civic institutions is not usual even though many people work there.

Most OB researchers and theoreticians are currently located in American business schools. Impressive theoretical and practical contributions have also come from England (e.g. Pugh 1981, Trist 1981),

examination of Japanese management and organizational design (e.g. Ouchi 1981, Pascal & Athos 1981), as well as more discipline-oriented programs in Psychology (I/O Psychology) and Sociology (Work and Occupations).

Due to this mixed heritage, the range of issues addressed by OB scholars is very broad indeed ranging from "micro OB" studies of individual employee motivation to "macro OB" studies of organizational structural arrangements (size, span of control, technology) as a function of environmental turbulence. Unfortunately, micro and macro issues have rarely been theoretically integrated much less concurrently studied (Roberts et al 1978), although recently this has been changing.

OB is fundamentally, and perhaps logically, schizophrenic with respect to a focus on organizational survival and effectiveness versus concern for the human element in the organization. The management lineage, concerned with strategies focused on survival, remained relatively uninfluenced by Psychology and Sociology until the early 1960s. Since then, however, management has certainly taken on a more humanistic tone (Perrow 1973, Schein 1980). Industrial-Organizational (I/O) Psychologists, in particular, were attracted by schools of business and by 1971 OB was strong enough to have its own Division of the Academy of Management. While the tension between the disciplines of general management and OB is now frequently difficult to find in business and industry, the tension in business schools between OB and other business disciplines can be felt. Marketers, Finance/Accountants, Management Scientists (those in management who did not "go behavioral") and especially Economists share the common language of dollars while OB speaks the foreign language of motivation, leadership, job satisfaction,

environmental turbulence, and so on. In a business school, OB (including Personnel Management and Organization Theory) is a definite, and different, field.

In summary, OB is a field which experiences numerous healthy tensions yielding differences in foci for theory and research, some of which lead to different perspectives on conducting research, and some of which result in a "we-they" tension in business schools. It will be argued that this tension might be somewhat alleviated if OB researchers paid more attention to the economic benefits of OB (Cascio 1982).

Chapter Organization

The reason why OB encompasses such a wide variety of perspectives is that employee, organizational, and environmental issues are continually in reciprocation (McGuire 1973, Weick 1979). Because reciprocal rather than unidirectional cause and effect relationships predominate, the OB researcher must make judgments about the proper focus or foci for theory and/or research. The two major foci of choice are the individual and his/her group and organizational work context. However, because these foci are in reciprocal relationship, a concentration on any one level frequently makes it appear that the other levels are irrelevant.

For example, an absenteeism problem in an organization cannot be understood as an environmental problem unless the context of the organization is considered (Clegg 1983). The usual approach in OB to understanding absenteeism would be to conduct an individually-focussed study by perhaps correlating individual attitudes with absenteeism. This kind of study would make the implicit assumption that individual attitudes is the issue of interest and that individual variance in

attitudes is the major correlate of absenteeism.

An alternative perspective would be that there is something unique about the organization that provides a milieu in which the absenteeism rate is likely to be high (e.g. Smith 1977) and, within that milieu, who will be absent is predictable based on assessments of individual attitudes. By only assessing individual attitudes, the absenteeism problem is, ipso facto, an individual behavioral problem. By having an inter-organizational perspective, absenteeism is an organizational behavior problem. Almost no research in OB concurrently focuses on individual and organizational variance in behavior in an attempt to explain both who does what and in what contexts particular behavior rates occur.

This extended introduction to the organization of the review was necessary because the reviewers dilemma is to both capture the multi-level nature of problems studied in OB and to develop each of the major topics in the field. Resolution of the dilemma resulted in a presentation of separate topics, but with continual reminders of the reciprocity across levels of concern.

The three major topics to be covered are individual (motivation, job attitudes), group and organization (groups, leadership, climate and culture), and productivity and utility.

A number of topics are not explicitly covered: organization structure (including technology, organization-environment relationships), decision-making (by individuals, groups, management), personnel management (selection, appraisal, wage and salary administration), industrial relations (unions), research methodology and

organization development and change. The latter issues, research methodology and change, are referenced throughout the chapter but only particular issues (ones that fit the writer's biases in both areas?) are mentioned.

INDIVIDUAL FOCI

Worker Motivation

Worker motivation is at the very foundation of OB. The earliest theory and research in what has come to be OB was concerned with understanding why workers failed to behave the way management said it wanted them to behave. Argyris (1957), Herzberg (Herzberg et al 1959), McGregor (1960), and Likert (1961) all made important early statements about worker motivation, generally supporting the thesis that management frustrates rather than facilitates the display of employee energy toward the accomplishment of organizational goals.

The early theories tended to be proposed by organizational diagnosticians (Argyris, Likert), organizational researchers (Herzberg et al), or ex-managers (McGregor). The organizational frame of reference yielded works that ascribed common motives to employees. Unfortunately, the well-trained researchers in the early days of OB translated the theories into individual differences models. This resulted in tests of Argyris' & McGregor's formulations being conducted on many individuals in a setting instead of across many settings. The conclusions to these efforts were a general failure to find support for such formulations and disillusionment of psychologists with the more universally-focused portraits of employee motivation (Campbell & Pritchard 1976).

In contrast, Vroom's (1964) individually-oriented expectancy theory and its early variants (Porter & Lawler 1968) were enthusiastically adopted, which resulted in a flood of research papers. Although only moderately supported by research, this perspective on motivation was consistent with the training of researchers. Because of the necessity to test various nuances in the theory, expectancy theory articles persisted in the literature through the middle 1970s and, recently have begun to appear again. The more recent papers focus on some older issues such as within- versus between-subjects designs (Kennedy et al 1983, Wanous et al 1983) but some newer efforts also appeared. These included the novel long-term prediction of job satisfaction by Pulakos & Schmitt (1983) and of stress by Cooke & Rousseau (1983), a potential integration of expectancy theory and goal-setting theory that employs both effort level and direction of effort to predict performance (Katerburg & Blau 1983), and the role of expectancies of success in the decision to pursue job alternatives (Rynes & Lawler 1983).

Paradoxically the more universal formulations about human motivation that were found inappropriate by researchers were more readily adopted by management while expectancy theory never really was (except in the crude form of incentive pay). The reason for this appears to be that managers know they must do things which affect large numbers of workers rather than one individual at a time. Where worker motivation is concerned, then, workers as a group are the target of interest.

One topic that replaced expectancy theory for researchers was goal-setting theory, a work motivation theory unconcerned with individual

differences in needs, desires or instrumentality perceptions the theory is also non-specific with respect to management philosophy about workers but it does seem useful in improving worker productivity (Locke et al 1981). At the moment, this motivation theory is receiving the most research attention. It is fairly well established now that specific, difficult goals accompanied by feedback result in superior performance to general, "do your best" goals and the absence of feedback. Boundary conditions on the general propositions just noted are a focus for study, especially contrasting the effects of participation and goal setting on performance (Latham & Steele 1983; goal setting is superior again), explicating the role of self-regulation vis a vis goal acceptance in the model and research (Erez & Kanfer 1983), and concern for the nature (Matsui et al 1983) and role (Ashford & Cummings 1983) of feedback in performance. This last paper is particularly intriguing when viewed as a vehicle for introducing some individual differences in internal states into the goal-setting paradigm -- the variable is called feedback-seeking behavior (FSB).

A second topic that received attention by researchers interested in motivation was what has come to be called job characteristics research (JCR; Hackman & Oldham 1980). JCR represented a contemporary integration of the Herzberg/McGregor/Argyris perspectives on the relative centrality of the work itself as a motivator of performance with a consistent trend concerned with the role of tasks in the design of organizations (Turner & Lawrence 1965, Hackman & Lawler 1971, Miller 1976). JCR was very prominent during the middle to late 1970s but by 1983 essentially no new work was being published. The relatively nega-

tive review of the topic by Roberts & Glick (1981) may have merely signaled an already existing declining interest in JCR.

That review, essentially a critique of perceptions as "real" data and as distinct from job satisfaction, argued for abandoning JCR as a viable approach to explicating work as a central role in motivation. Perhaps the most damaging idea presented by Roberts & Glick was that perceptions of task characteristics are just that, perceptions, and that they (the perceptions) do not represent the attributes of tasks. Griffin (1983) and Jenkins et al (1983), convincingly show that this is not true, that perceptions are a useful source of data about jobs. Given the long history of successful job analysis work in I/O Psychology, this comes as no surprise (McCormick, 1979).

A work motivation theory that never became as popular as expectancy theory, goal setting or JCR but continues to generate research, is equity theory (Adams 1963). A reformulation of equity theory by Cosier & Dalton (1983) presents the idea that the equity theory formulation most familiar to researchers is ahistorical and that, in laboratory tests, the theory did not take history into account. Cosier & Dalton argue that an important consideration for people in judging equity is the past inequities that have been experienced, that past inequities lead to the "straw that breaks the camel's back."

Equity theory, of course, has provided a useful framework for research on pay in organizations (Lawler 1981). On the one hand it is unfortunate that the theory has typically only been applied to pay (for an exception see Telly et al 1971) but we should be thankful that pay research has at least been able to find a contemporary home (Birnbaum

1983).

Some other research on pay has been accomplished recently, especially work having to do with comparable worth issues at hiring (Rynes et al 1983) or the setting of market wages (Schwab & Wichern 1983). Two interesting studies, one of participatively set wages for engineers (Bullock 1983) and the other of tipping in a luxury hotel (Shamir 1983), revealed that when wages are participatively set, workers perceive equity and a performance-pay relationship. In the hotel study, the comparison was between those who receive tips and those who receive only wages. What continues to amaze this reviewer is how little is known about pay and how little it is studied.

In summary, the universalistic motivation theories of Argyris and McGregor are not thought of as motivation theories any longer -- now they are theories of organization design, perhaps included under the Quality of Work Life (QWL) rubric (Seashore 1981). This is unfortunate because it removes motivation from the arena of comparative organization studies and fails to entertain the idea that people with different motivations are attracted to different kinds of organizations (Holland 1973, Schein 1978, Schneider, 1983a). Without a macro motivation construct, comparative organization behavior becomes person-less, a study of the anatomy of organizations.

At the other extreme, contemporary motivation theory is relatively devoid of good new testable frameworks depicting internal states. Essentially there is no research on the older need-based formulations or expectancy theory, and gratuitous inclusion of "individual differences" in a piece of research does not make it a motivation study (for an

exception see Kohn & Schooler's 1983 book on work and personality). Only in the later discussion of research on turnover will internal states return as important for understanding human behavior at work. One could ask "What happened to motivation research?"

Job Satisfaction and Related Attitudes and Behavior

There is far more contemporary research on attitudes, specifically job satisfaction, than on motivation. The distinction between the two is that attitudes are evaluations/feelings about objects/ conditions/outcomes while motivation refers to the energizing and directing of effort toward the attainment of objects/conditions/outcomes. The idea in job satisfaction research, in particular, is that people are motivated to attain objects/conditions/outcomes and that when attainment is achieved they will feel good.

Job Satisfaction One aim of all management and motivation theories is to have a satisfied work force; the differences exist over what management and motivation theorists believe is satisfying. Taylor (1911) believed incentive pay would be satisfying, Herzberg et al (1959) that "motivators" would be satisfying (talk about confusion!), and Alderfer (1972) that attaining desires would be satisfying. The problem is that we have no comprehensive theories of what leads to job satisfaction except, perhaps, for equity theory which specifies quite precisely the conditions for dissatisfaction.

One hypothesis for the importance accorded job satisfaction in OB research is relative ease of study of important issues. For example, what is the relationship between flexi-time (Krausz & Frieback 1983), unions (Berger et al 1983) or status (Golding et al 1983) and job

satisfaction?

An alternative hypothesis is that satisfaction is an important human outcome of organizational life. As such it deserves study because the satisfaction people experience in organizations is as much a part of the organization as anything else. This perspective would maintain that meaningful differences in satisfaction exist for members of different organizations and that, as a fact of life, these differences are worthy of study. A few earlier studies supported this perspective (Herman et al 1975, Sutton & Rousseau 1979) as do some recent efforts. For example, Green et al (1983) showed that the market characteristics of branch banks (obtained from archival data) were related to differences in employee satisfaction. More multi-unit and/or multi-organization studies investigating job satisfaction of organizational members as a correlate of larger environmental forces might enhance our knowledge of the human side of organizations especially if those studies are lodged in a meaningful conceptual framework.

A third hypothesis, sometimes supported by the literature, is that satisfaction is a useful predictor of important behaviors like absenteeism (the literature on this is not clear according to Clegg 1983) and turnover (fairly consistent findings according to Youngblood et al 1983); turnover will receive additional attention later.

These three hypotheses as a group suggest the necessity for useful conceptual models of satisfaction itself. As noted earlier, a major inhibition to the development of such a framework has been the continual confounding of motivation and satisfaction (Miner & Dachler 1973). A second problem is the wide variety of individual and organizational

variables that have been shown to be related to job satisfaction (Locke 1976). The combination of poor theory and a wide variety of variables has led to a proliferation of measures making any comparison of findings from different studies difficult.

Perhaps the most useful and simple model of the determinant of global job satisfaction is congruence or fit of the person to the setting because this conceptualization underlies all attempts to study satisfaction (Locke 1976, Tziner 1983). The element to note here is the focus on global job satisfaction because, from a basic research standpoint this is what theories need to predict. They need to predict this because (a) the variety of facets that are potentially predictable is great and (b) the sum of the facets do not appear to be the same as the results obtained from global measures (Scarpello & Campbell 1983). Given a global measure of job satisfaction as a criterion in studies of the antecedents of satisfaction, and the same global measure as a predictor in studies of other criteria of interest, perhaps a grounded theory would emerge that captures the role of satisfaction in organizational studies.

A focus on the fit of people to work settings would, in turn, tend to eliminate studies in which raw personal attributes like age, sex or race are examined. These physiognomic variables are not very interesting even when they correlate with something (and frequently they do not, e.g. Golding et al 1983). It is the psychology or sociology or organizational behavior associated with these variables (e.g. self-esteem, family situation or supervisory behavior) that is relevant, not the demographics per se. This issue will be discussed again under the

section on intergroup theory.

Because no accepted taxonomy exists for specifying the kinds of issues to assess in conducting studies on person-environment fit (cf Pervin & Lewis 1978) each researcher specifies the variables of interest. As such studies accumulate, the person and environment variables important for the study of job satisfaction will become evident, as summarized, for example, by Locke (1976). Personality-organization fit (Sterns et al 1983, Wiggins et al 1983) and the fit of personal values with job and organizational characteristics (Butler 1983, Greenhaus 1983) are only two examples of the kinds of interesting research that can be accomplished.

Role Stress Obviously, job satisfaction is not the only job attitude of interest in organizational behavior; role stress (ambiguity and conflict) and organizational commitment have also been foci of study. As with job satisfaction research, theoretical formulations have lagged the proliferation of measures (House et al 1983) and bi-variate studies. Because the hard conceptual work has not preceded data collection (Roberts et al 1978), not only are the results of any one study difficult to interpret but how a study of commitment differs from one on satisfaction and from organizational identification and from role stress is also frequently not clear. For example, in a meta-analytic study Fisher & Gitelson (1983) showed that role conflict and role ambiguity consistently correlate about .20-.35 with organizational commitment, job involvement and various kinds of facet satisfaction; which is what given such apparent intercorrelations is difficult to know in the absence of a nomological net (Morrow 1983). The point is that correlations

of .50, .60 or even .70 certainly do not reflect redundancy; they only do so in the absence of reasonable explanations for why they are not redundant. This is a case where redundancy is presumed in the absence of competing hypotheses for observed data.

The simple bivariate studies of the past on role conflict and role ambiguity appear to have stopped and more complex formulations for these variables in particular and stress, in general, have appeared. For example, Nicholson et al (1983) explored how different kinds of work environments might moderate role stress-satisfaction relationships. Their findings were mixed, as are most moderator variable studies in field settings, but the effort represents the desirable goal of understanding linkages between organizations and member reactions to them.

Jackson (1983) also proposed and tested a more complex formulation of the role of experienced conflict and ambiguity in organizations. She studied nurses' and hospital clericals' participation in decision making as an antecedent to role conflict/ambiguity and then role conflict/ambiguity as antecedents to job satisfaction. The implied hypotheses were supported utilizing a modified Solomon four-group design permitting some more-than-usual causal ordering. Similarly permitting causal inferences, Bateman & Strasser (1983) studied nurse satisfaction in reciprocal causal relationship with job tension in a cross-logged regression design. Apparently nurses are a good, and available, sample for research on stress -- Vredenburg & Trinkhaus (1983) also studied them, as did Murphy (1983) and Sheridan & Abelson (1983).

Murphy's (1983) study is particularly interesting because he

experimentally studied the utility of three stress reduction techniques for nurses (biofeedback, progressive muscle relaxation and, the control condition, self-relaxation). Not only were daily sessions for one hour over two weeks effective in reducing tension for the biofeedback and progressive muscle relation groups but at the end of three months these groups reported significantly higher levels of job satisfaction. It may be useful to note that Murphy's study was found in Human Factors, an excellent source for research on stress. It also must be noted that stress reduction experiments are not being reported in the usual OB outlets.

The fact that nurses were available for stress studies suggests a caution regarding drawing conclusions from research efforts on any one occupational group, from any single organization study, or, indeed, from any set of organizational studies where self-selection or volunteerism could be an important factor (Pfeffer 1981). Such caution is obvious when one considers the empirical documentation of differences in person types in different careers (e.g. Holland 1973) and organizations (e.g. Wanous et al 1983). The caution is further substantiated by the finding that behavior-based job analysis information itself (Position Analysis Questionnaire; PAQ) correlates with job stress (Shaw & Riskind 1983), suggesting that people who enter particular jobs are likely to experience high levels of stress.

Shaw & Riskind used archival data for both PAQ data and stress scores for jobs thus eliminating any R-R contamination; their results are thus for jobs and not for individuals. Shaw & Riskind's results were quite strong with some astounding relationships found between PAQ

dimension and job stress indicants. Some multiple correlations of PAQ dimensions against stress were frequently about $R = .60$ (Suicides = .61; Role Conflict = .65; Role Ambiguity = .77; Cardiovascular problems = .71; Respiratory problems = .79). These results suggest that correlations within a job class (like nurses) may be constrained by range restrictions and, perhaps more importantly, that job and (organizational, e.g. Gaines & Jermier 1983, Parker & DeCotiis 1983) differences in stress may only be symptomatic of other important job differences in, for example, satisfaction (Yukl 1981), information-privacy values (Stone et al 1983) and motivation (Litwin & Stringer 1968). These are differences that warrant more attention.

A major category of newer studies of job stress became clear in 1983, research on life-job relationships. While this relationship has had a long history in studies of satisfaction, it is relatively new for job stress (except for some earlier studies of dual career women, Hall & Gordon 1973). Bhagat (1983) and Martin & Schermerhorn (1983), for example, developed frameworks for studying how life events and work factors jointly determine satisfaction and then both physical and mental health (stress for Bhagat).

OB researchers seem not to be crossing over into the more physiological assessment of stress, depending essentially on self-reports of coping, tension and conflict/ambiguity. It could be argued that failure to tie experienced job stress to individual physiological health and/or organizational economic health will prevent OB from influencing major decision-making with both the medical and business establishments (Brief et al 1981).

Organizational Commitment A major contribution to the commitment literature was presented by Morrow (1983) who summarized research on the five major forms of work commitment: Value focus (e.g., Protestant work ethic), Career focus (career salience), Job focus (job involvement), Organizational focus (organizational commitment and identification), and Union focus (attitudes towards unions). In addition to summarizing work accomplished under each focus, Morrow revealed that much of the literature on work commitment cuts across these various foci. She concluded that (1983:486): "...these concepts are partially redundant and insufficiently distinct to warrant continued separation."

Perhaps one reason for this state of redundancy is the use of existing measures as a source of items for new measures. In studies of job involvement, for example, the Lodahl & Kejner (1965) measure in original or modified form dominated the early literature on work commitment; more recently the Organization Commitment Questionnaire (OCQ; Mowday et al 1982) has been the measure of choice. Examination of the items in the OCQ reveal most of them tap into the feelings of attachment, and intentions to remain attached through effort and physical presence, that have appeared in the literature on job satisfaction and the various foci of work commitment as outlined by Morrow (1983). It is not surprising, then, that when OCQ results are related to other surveys and attachment intentions the results are substantial (Ferris & Aranya 1983).

A few authors have been promoting some new ideas about commitment. Organ and his colleagues (Bateman & Organ 1983, Smith et al 1983), following on the works of Katz & Kahn (1978), present the idea that it

is behaviors that go beyond the job description -- cooperativeness, performance in a crisis -- that define commitment. They call these behaviors organizational citizenship behaviors and show two forms these behaviors take, Altruism (helping other persons) and Generalized Compliance. Conceptualized this way, commitment behaviors can be rated by observers (supervisors) as performance and, when this is done, job satisfaction is found to be quite strongly related to performance ($r = .40$) and, apparently, reciprocally so (Bateman & Organ 1983).

A novel and relevant question regarding commitment was asked by Jackson et al (1983): What happens to people who are committed to working when they experience forced unemployment? In a 3-year longitudinal study, Jackson et al showed: (a) psychological distress is higher for the unemployed than for the employed and (b) this is particularly true for those whose employment commitment was high. The Jackson et al study was conducted in England; in the U.S. an entire issue of Human Resource Management (1983) was devoted to individual and organizational coping under conditions of retrenchment and decline. While the articles are provocative, the reports of research are more directed to practicing human resources consultants and professionals than researchers.

Socialization Some interesting new directions were noted in studies of socialization to work. Socialization can be conceptualized as an organization's formal and informal attempts to influence employees' future attitudes (and behavior but attitudes has been the focus). Past research has tended to be concerned almost exclusively with what organizations do to people (Van Maanen, 1976) and how people experience

and cope with these attempts to help the newcomer learn the ropes (Louis 1980). More recent work has introduced the idea that people approach new jobs from different experiential backgrounds so the outcomes of the "same" socialization processes may differ across people (Jones 1983a). In a similar paper, Louis et al (1983) showed that socialization practices are differentially available to newcomers and that some practices are more helpful than others. Finally, Feldman & Brett (1983) showed that people are proactive in their own socialization in that they seek social support and help from others. Feldman & Brett's paper is one of very few examples to include the role of the person in socialization research (Schneider 1983b).

Putting these three papers together suggests an interesting framework for research on socialization: availability of various formal and informal organizational practices $\times$ prior experience of newcomer $\times$ level of proactive behavior of newcomer = job attitudes and behavior. Perhaps explicating the variety of ways by which people can become socialized to work can explain some of the differences found in research on the realistic job preview (RJP, Breaugh 1983). That is, the RJP has been researched as a process equally applicable to all newcomers but the proposed framework suggests at least two individually-based sources of variability in effects, level of prior work experience and level of proactive behavior. Individual differences have not received attention in either the RJP or socialization research literatures (Schneider 1983b) but these recent writings suggest some possible projects.

Turnover Turnover and absenteeism are the criteria most often used in studies concerned with the job attitudes reviewed above. In fact, studies

in OB so frequently focus on these withdrawal behaviors that Staw (1984) made them a focus of his review; as such, the background of the study of turnover is not presented here and, because research on absenteeism was rare, that topic is not addressed at all.

The 1983 literature on turnover continues to focus on the early participation model of March & Simon (1958), the more elaborate "intermediate linkages" version presented by Mobley et al (1979), or a matching model patterned after the work adjustment theory of Lofquist & Dawes (1969) and Wanous (1980). Jackofsky & Peters (1983a), for example, tested the March & Simon proposition that a combination of perceived ease of movement and the perceived desirability of one's present job predicts actual movement. A twist in their study was the criterion: internal movement vs. movement to another organization. Their results supported the hypothesis that the desirability of a job helps predict job (internal) movement better than it predicts movement to another organization. Incidentally, in another paper they (1983b) suggest that people with higher levels of ability may experience greater perceived ease of movement but that model has not yet been tested.

In another twist on March & Simon, Motowidlo (1983) deduced that pay was a critical issue in turnover, specifically current pay satisfaction and future pay expectations. He showed in a 19-month study that pay satisfaction, but not pay expectations, was a stronger correlate of turnover than general satisfaction but that, as usual (Mobley 1982), turnover intentions were the strongest correlate of turnover.

Mobley's (1982) model in fact attempts to explicate what leads to turnover intentions precisely because intentions are the immediate

cause of turnover. Spencer et al (1983) and Youngblood et al (1983) both showed the value of various linkages in understanding this cognitive model of the individual turnover process. The Youngblood et al study is an important effort because of the unusual care taken to (a) explicate and operationalize the model, (b) obtain multiple (three or four years) time-period assessments, and (c) obtain a sufficiently large sample for testing multiple linkages (N = 1445). This care responds to many of the criticisms of turnover research raised in an excellent methodological and conceptual critique of turnover and absenteeism research by Clegg (1983).

Another noteworthy longitudinal, multi-phase effort was conducted by Rusbult & Farrell (1983) who tested an investment model of turnover. Their approach was to monitor how various costs and benefits change for individuals over time and to examine how these changes are reflected in turnover. They showed that those who left experienced a decline in job commitment over time which was associated with a decline in rewards, an increase in costs and a decrease in investment size, with costs and investments increasing in importance over time. Such results provide support for the ideas that turnover is a process and that the process can be monitored.

Sheridan & Abelson (1983) explicitly tested a dynamic decision process model using job tension and organizational commitment as key variables. Employing a catastrophe (discontinuous) framework, they were able to show that the turnover process is characterized by discontinuity (abrupt shifts followed by relative stability) and that when this characteristic of the process is considered, more accurate predictions of

leavers is possible. In support of Rusbult & Farrell, Sheridan & Abelson also showed that changes in commitment over time are important for understanding differences between stayers and leavers. In addition, like Zedeck et al (1983), tension was also an important issue.

The Sheridan & Abelson and Rusbult & Farrell papers address one of Clegg's (1983) major conclusions, that the major conceptual correlate of turnover is failure to have individuals "pulled in" rather than them being "pushed out" of organizations. Conceptually, then, commitment to the organization should be superior to satisfaction as predictors of turnover. In his own work, Clegg shows this to be so and Mowday et al (1982) support the conclusion as well. These results also suggest the potential importance of socialization to the work setting as a determinant of turnover.

These are exciting developments in the prediction and understanding of individual turnover. However, it is not time to be sanguine for it is clear that understanding the cognitive processes of individuals as they consider their futures yields relatively little direct insight into what interested organizations can do to improve retention rates. That is, it may be one problem to be able to predict which of a group of people is more likely to leave but another problem to change the rates at which people, collectively, leave. The issue here is one of emphasizing the slope of the regression line rather than its intercept, of asking can we predict and understand individual differences in turnover versus can we change our turnover rate.

As an example of the latter issue, consider the Katz & Tushman (1983) study which asks: how does a supervisor's behavior at t_1 , relate

to his subordinates' eventual turnover at t_2 ? In other words, are the rates of turnover different for different supervisors? In fact, Katz & Tushman showed that young R & D engineers who worked for gatekeeper supervisors (really those with high external liaison activity) at t_1 , were far more likely to still be employed at t_2 (5 years later).

Of course, across a number of supervisors, their gatekeeper behavior could be used as a direct correlate of individual subordinate behavior by assigning to each subordinate his or her supervisor's behavior. However, as noted earlier, there exist precious few examples of this kind of analysis (see Bowers 1983 for an exception) and, except in productivity intervention efforts to be described later, there are essentially no OB studies of turnover rates for organizations.

Summary The literature on job satisfaction and other job attitudes is characterized by a focus on the assessment of post-organization entry experiences (job satisfaction, role stress, commitment) as correlates of other organizational attributes (flexitime, participation in decision-making, socialization) and outcomes (turnover, absenteeism). A problem noted with the literature was one concerning redundancy of measures across attitude constructs due to insufficient conceptual clarity. Even so, some encouraging conceptual and empirical work on commitment and socialization were noted.

Contrary to this reviewer's expectations, the "social construction of reality" (SCR) movement (Salancik & Pfeffer 1978) does not seem to have received recent research attention. When it did, little or equivocal support for it was found (Griffin 1983, Jenkins et al 1983). This is not surprising to the present author for, as noted elsewhere

(Schneider 1983b) much of the conceptual support for the SCR construct was derived from one-shot laboratory studies devoid of meaningful frames of reference in which laboratory subjects could interpret their experiences.

Finally, a brief survey of the turnover research conducted in 1983 revealed some excellent conceptual and methodological efforts. They, collectively, extend our knowledge about the turnover process and clearly show a capability to make useful predictions.

GROUP AND ORGANIZATIONAL FOCI

There has always been a certain tension between OB researchers who take a more micro focus (on motivation and job attitudes) and those who study other units of analysis. The issue here is more than one of just letting each party "do their own thing" because the differences in foci lead to different levels of conceptualization and, thus, the use of different levels of analysis (Mossholder & Bedeian 1983a,b). Clarity about the level or unit of analysis problem is central to avoiding the ecological fallacy. The ecological fallacy is the OB researchers' equivalent of anthropomorphizing in biology -- attributing characteristics to a unit of analysis different from the one studied (what Mossholder & Bedeian call cross-level inferences). Simply stated, if groups or organizations are studied one can only say something about the rates of behavior in a group or organization because predictions about particular individuals are not possible.

Group and organizational research looks loose and sloppy to individually oriented researchers because, of necessity, more macro/inclusive variables (management philosophy, inter-group competition) are

assessed. Fine-grained, micro data on individuals are not useful, much less required, when attempting to predict competitiveness in a particular market or industry. Focus, or the criterion of interest, pushes the level at which the research will be conceptualized. The question of concern in evaluating research should not be "does the research meet some arbitrary micro standards" but "does the research achieve prediction and understanding of the criterion of interest?" When research is thought of this way, good research allows for prediction and understanding only for criteria of interest, not for all criteria -- this is why anthropologists can be accurate in the generalizations they make about norms surrounding male-female relationships, food-gathering or warfare that characterize a culture but might be inaccurate when predicting the behavior of a particular person in that culture.

This long introduction to the group and organization topics was intended to highlight a problem many psychologists wonder about, namely how does one study a whole organization when we have enough difficulty studying individuals? The answer is: we change what we look at and how we look at it. We look at planets not atoms with a telescope; we follow Thorngate's (1976) rule that because it is not possible to be specific, accurate and general at the same time, no one piece of research can be expected to answer all relevant questions at all relevant levels of analysis.

Leadership and Management

Leadership and management are topics that, on the surface, one would suspect would be researched concurrently but this is not true (Filley et

al 1976, Campbell et al 1970). It follows from the introductory notes to the section on group and organization studies that if micro OB researchers study leadership, they will focus on the attributes and behaviors of leaders of clearly defined groups. Conversely if macro OB people study management, they will concentrate on the attributes and behaviors of people who manage in larger systems where what and who in being managed is not easily defined. In the early history of leadership studies, researchers were primarily psychologists untrained in business but well-versed in trait and group studies. These researchers studied the traits, either personality (Stogdill 1948) or behavior (Fleishman 1953a), of leaders in interpersonal interaction with each other. These studies tended to ignore the non-interpersonal facets of managing (financial, informational, political); in fact, Stogdill's (1974) Handbook of Leadership failed to index the word management.

Because numerous recent and excellent reviews of leadership and management have recently appeared (Bass 1981, Yukl 1981), none of the major frameworks are presented in detail. Suffice it to say that, like motivation, 1983 was not a good year for more traditional topics of research: no papers appeared on behavior trait approaches (consideration and initiating structure); Fiedler's (1967) contingency theory, especially the use of the Least-Preferred Coworker (LPC) measure, was still controversial (see Vecchio's 1983 reply to Strube & Garcia's 1981 meta-analytic data supporting Fiedler); other contingency theoretical approaches (e.g. House 1971) received little attention (see Wofford & Srinarasan 1983, for an exception) vertical Dyadic Linkage (VDL) theory (Dansereau et al 1975) received one extensive test (Rosse & Kraut 1983)

with, at best, moderate support, and Vroom & Yetton's (1973) decision-based theory received no attention.

On the management side, a similarly bleak picture exists with almost no research on what managers do (a la Mintzberg, 1973), nor, obviously, what they do that makes them effective. Campbell et al (1970) would be saddened by the failure to develop the kinds of behavior taxonomies of managerial work that would build on the early job analyses performed by Hemphill (1959).

Apparently only Lau and his associates (Lau et al 1980, Lau & Parett 1980, Parett & Lau 1983) and McCall and his colleagues (McCall et al 1978) have recently pursued the development of measures of managerial activities that pattern the classical management functions (e.g. planning, organizing) as supplemented by Mintzberg's (1973) data on what Chief Executive Officers do. Lau and his co-workers have not only developed a job analysis-based set of managerial behaviors but have shown how different kinds of management jobs (functional specialty, e.g., sales/marketing, production/engineering) require different patterns of behaviors for effectiveness. This line of research, building on job analysis methodology (cf. McCormick 1979) and supplemented by a focus on effectiveness could prove useful if used as a basis for the design of additional techniques to assess and predict managerial effectiveness. The word "additional" is used because, contrary to some textbook treatment of the role of individual differences in the prediction of management effectiveness, the trait approach (especially via the assessment center method) is alive and well (Schmitt & Schneider 1983).

In fact a development in leadership and management has been a renewed focus on traits as correlates of effectiveness. The newer efforts focus on cognitive complexity or cognitive style (Robey & Taggart 1981) defined as the way people process and evaluate information. Exactly what is new here is not clear because some of the measures being employed are quite old (e.g., Embedded Figures Test, Myers-Briggs Type Indicator) and are suspect in terms of traditional psychometric standards (Schweiger 1983). Especially the MBTI seems to enjoy popularity with consultants despite, as Schweiger notes, negative reviews of its psychometric properties.

Whether particular traditional personality tests can be effectively used to predict leadership and/or management behavior across various situations must still be questioned. Note that the question is not whether particular personality tests (or other relevant measures of individuals) can predict but which particular ones can predict for which jobs in which situations (Schneider 1983b, Yukl 1981).

Perhaps what is required is a new way of thinking about leader or manager attributes if the goal is to make predictions based on one or more universal measures of some individual difference or differences. In Interactional Psychology, the concept of coherence is used to describe a person for whom behavioral differences from setting to setting is characteristic (Magnusson & Endler 1977). Thus, consistency in behavior for a coherent person would be change, but similar change when confronting the same or similar situations. A considerable amount of evidence exists to support situational specificity of behavior in general (Mischel 1968) and for managers, in particular (James & White

1983). A conclusion that some have reached based on these findings is that people do not have stable predispositions that guide their behavior and, therefore, behavior is not predictable based on the assessment of predispositions. This is an incorrect conclusion for two reasons: (a) behavior in work organizations, as noted earlier, is predictable, and (b) people can behave coherently (flexibly), changing in ways that are characteristic for them as they move from one situation to another (Bowers 1973; Mischel 1973).

A major contribution to this line of thinking was published by Kenny & Zaccaro (1983). Using as data a reanalysis of a rotation design study (each person is confronted by different situations, both members and tasks, that provide an opportunity for leadership), Kenny & Zaccaro showed that between 49% and 82% of leadership variance can be accounted for by some "stable" characteristic. Perhaps the stable characteristic is flexibility or, as it is known in the assessment center literature, "behavior flex." While numerous writings address a personality characteristic such as flexibility (e.g. Mischel 1973), paper and pencil measures focussed on behavior flex appear to be nonexistent. Some measures, like Miner's (1978) Sentence Completion Blank, might be adapted for future use in this area.

In summary, research studies of leadership and management appear to be in a somewhat similar position as motivation; there is a dearth of new activity. One possible explanation for this is the absence of a link between leadership and management and organizational effectiveness. Thus, while studies of OD interventions targeted on management and supervision tend to result in positive improvements for various hard

criteria (Katzell & Guzzo 1983, Nicholas 1982), the correlational studies of the past have not yielded the kinds of systems-oriented results desired; this is probably due to the focus on narrow, micro criteria (Yukl 1981) to the exclusion of macro indices of systems effectiveness. Again, as with motivation theory, the initial focus on the enterprise somehow yielded research at the individual level of analysis.

Perhaps it is time to return to a macro level integration of motivation and leadership/management theory. It is sometimes difficult to remember that early OB scholars viewed motivation and management as essentially two faces of the same coin: management's role was to create conditions for subordinate motivation and commitment (Argyris 1957, McGregor 1960). In those early treatises, the relatively sloppy criteria of organizational functioning and organizational health were the outcomes of interest. Recent excellent work by Nicholas (1982) in summarizing the importance of systems-wide interventions that necessarily involve management, and which focus explicitly on improving general levels of staff motivation through OD, show just how much we really can positively affect organizational effectiveness.

More general, systems, perspectives on leadership and management could move us closer to capturing the complex, multi-pressured, juggling, hip-shooting but planful nature of management jobs and the crucial role even (especially?) the lowest level supervisor plays in organizational growth and survival. Perhaps when it is recognized that managers are the real cause of efficient organizational subsystem functioning (Katz & Kahn 1978) and design (Van de Ven & Joyce 1981),

then the research that is needed will be accomplished at the level of analysis required (Roberts et al 1978) and over the time periods necessary for the observation of real growth (Kimberly & Miles 1980). The publication of a simulation of managers at work, a kind of group assessment center called Looking Glass, Inc. (Lombardo et al 1983), might facilitate this kind of work.

Groups

One level of analysis not yet addressed is the group. It is interesting to realize that an entire section on leadership and management never required the mention of groups. Leavitt (1975) argues that it is possible to ignore groups because American industry and American psychologists have implicitly subscribed to an individualistic design for organizations making individuals, not groups, the focus of interest. Given an American value system that emphasized the individual it can be expected that both management and management's psychologists would focus on the role individuals play in organizational effectiveness. Leavitt argues that if we took groups seriously, then groups not individuals would be the building block of organizations. Then we would select, train, pay, promote, design jobs for, fire and so on groups rather than individuals. Only when organizations are literally designed around the group, he says, will groups be an important focus of study.

Likert's (1961) framework for describing organizations emphasized groups and the socio-technical systems literature also reflects this emphasis (Pasmore & Sherwood 1978, Trist 1981) but, for the most part, OB researchers have yielded the study of groups to OD. In fact, previous OB Annual Reviews have not discussed groups leaving the topic

to social psychology (McGrath & Kravitz 1981) or as a component of Organization Development (OD; Alderfer 1977).

There are a few critical exceptions to the abandonment of the study of work groups to being vehicles for intervention and change in organizations. One exception is the intergroup conceptualization, a way of viewing the multifaceted way group memberships are a source of knowing and behaving (Alderfer 1983). A second exception, in some ways quite similar to intergroup theory, is called social systems or organizational demography. This theory emphasizes the role of inter-generational differences that arise from regeneration processes in organizations (Pfeffer, 1983). A third theme concerns the continued attempt to describe various facets of group structure as correlates of group or team performance (Bass 1980). Paranthetically it is worth noting that of these three contemporary foci on groups only the team performance issue summarized by Bass (1980) received attention in the last Annual Review of groups (McGrath & Kravitz 1981).

Intergroup Theory Intergroup theory (Alderfer 1983, Brown 1983, Smith 1983) is an emerging set of constructs for conceptualizing not only groups but individuals, organizations and nations. The logic of intergroup theory is that interactions between people at any level of analysis (individuals, groups, etc) represent the effects of group memberships. In its most reductionist form this perspective is a view of individuals as a composite of group memberships (sex, race, management, generation, school and so on) and in its most expanded form it emphasizes the embedded nature of groups, i.e. every group is always embedded in other groups (units in an organization in an industry in a

market in a society, and so on) and, thus, behavior is a product of multilevel embeddedness. For example, two work groups composed of the "same" people but functioning in different functions (sales vs. engineering) would not be the "same" people.

There are two major kinds of groups according to intergroup theory: identity groups (e.g. gender, ethnicity, and family), and organizational groups (e.g. tasks, and hierarchy; Smith 1983). Generally speaking intergroup theorists deny the relevance of single identity group characteristics like sex or ethnicity arguing that it is the psychological component of identity attributes, not the attributes themselves, that are important. Thus research in 1983 on sex correlates of leadership (Garland et al 1983) or commitment (Bruning & Snyder 1983, Graddick & Farr 1983, Lacy et al 1983) all failed to support the idea that sex was an important variable (for a counter-argument see Heilman 1983). The point in intergroup theory is that constellations of identity and organizational group characteristics are meaningful ways of characterizing people and that a single attribute would probably not be useful.

Alderfer (1983) has presented a very clear and thorough review of the history and current thinking on intergroup theory, including applications of the theory to understanding issues as diverse as group composition, organizational culture and the teaching of OB in schools of management. The review is an excellent source of insight into group processes in general because it asks the reader to think about groups from a new perspective.

Demographics Pfeffer (1983) has proposed that an overlooked issue in

understanding OB concerns the nature of cohorts inside organizations. He argues that the presence of clearly defined demographic cohorts may lead to conflict between cohorts over various resource issues and that, within cohorts, group solidarity and a "we-they" mode of thinking might emerge.

The presence of generational differences in organizations has been noted before (e.g. Alderfer 1971) and they are included explicitly in intergroup theory. What is unique about the demographic approach is its exclusive emphasis on generational cohort differences to the exclusion of other group or individual characteristics. Perhaps more interesting is the apparent power of this focus on generational differences in an organization to account for important differences in organizationally relevant outcomes.

For example, McCain et al (1983) presented results showing that a significant portion of the variance in the turnover rates of faculty in 32 academic departments could be accounted for by demographic indices over and above the variance accounted for by such department attributes as size or budget per faculty.

Pfeffer suggests that intergenerational differences may help account for conflict between groups including power struggles over scarce resources. Research to support such an hypothesis is presented by him as well as by Alderfer, suggesting the utility of a group focus in attempting to understand various organizational phenomena.

Group Structure and Team Performance Group structure here refers to what Bass (1980) means by the interaction (more technically the intersection) of member characteristics (demographics, abilities), task

characteristics and group design (interpersonal relationships, group training and experience). In his review of team or group performance Bass showed that, other things being equal, interaction processes within a group are the determinant of effectiveness. Unfortunately, actual interaction processes in groups have not been a focus of contemporary research so little is known about the micro facets of interaction that are critical for effectiveness (Hackman 1983).

Some thinking exists, however, about the idea that training a group to be cooperative/interactive may not be as important as previously imagined; that the conditions in which the group must function (the "climate" of the situation) is the major determinant of cooperativeness (Boss 1983, Hackman 1983). For example, Hughes et al (1983) showed that, following team development, long-term changes in both team climate and performance were observed but probably only because the situations to which the teams returned were ones that supported and expected the changes.

In a wide-reaching paper on group structure, performance and organizational context, Pearce & David (1983) reached a similar conclusion. They developed the argument that previous research on the relationship between organizational design and group performance has yielded conflicting results because different group structures emerge under different organization design properties. Thus, they note, in a mechanistic vs. organic organization different patterns of connectedness, centrality, differentiation, evaluation formation, and so on can be expected. It follows that different performance outcomes should also emerge. The framework developed by Pearce & David yields a number of

testable hypotheses and suggests possibilities for integrating group and organization design foci in OB. Schneider (1983a) has presented a similar argument. He notes that particular kinds of people are attracted to and selected by organizations and leave if they do not fit. The result of what he calls the attraction-selection-attrition cycle is a relatively homogenous group of similar people. In his framework, then, the people are both the group and the context.

Boss (1983), in another paper, showed how group functioning can be attributed to the group's context. He attempted to counter the team building regression effect noted by Beer (1980) and others (Berney 1983). This effect, similar to one documented in the training of foremen more than 30 years ago (Fleishman 1953b), is revealed when immediate post-training assessments fails to be transferred to the work setting (Goldstein 1980). To enhance the support of team building, Boss had the Chief Executive Officer (CEO) meet (usually) biweekly with unit supervisors to facilitate their mutual support of the process. Results across some 23 groups in both the public and private sector suggest the benefits of such Personal Management Interviews (PMI) as vehicles for reducing regression effects.

In the traditional social psychological literature the context in which the group must function is a generally unresearched area yet both the intergroup and team development perspectives on work groups suggest its potential importance for any understanding of the role of groups at work. Perhaps a failure to focus on the embedded nature of groups in organizations has, in fact, resulted in so much inconsistency in field study findings that it drives much of the fine-grained research into the

laboratory. In addition, a contextual orientation drives most of the field efforts to having groups be only one component of systems-wide OD efforts (Hackman 1983). Summaries of OD efforts suggest that this is the case (Katzell et al 1977, Nicholas 1982), that groups are only one of many foci in OD efforts. Teasing out the effects of groups-based interventions in larger OD efforts will be very difficult. This is especially true if findings like those presented by Scarpello (1983) continue to emerge. His results suggest the possibility that OD interventions may have systems effects without being reflected in group or individual changes. The interpretation of his results is difficult because of some methodological problems Scarpello faced but they serve to caution against the assumption that a change at one level will necessarily be reflected in change at another level.

Hackman (1983) integrated much of the early literature on small groups with the OD perspective on groups in his pursuit of a normative model of group effectiveness. He also shows how work group context is strategically important in understanding team effectiveness. This is especially true with respect to information about the goals of the group and access to such data as the consequences of adopting different group strategies and achieving different outcomes. In addition to context, Hackman emphasizes the critical nature of group design (structure of task, composition of groups, establishment of norms) and group synergy (actual follow-through on planning and implementing). Hackman's normative model not only specifies what should exist for effective team functioning but the role of management in facilitating those conditions. This model is a call for action at the organizational level and an

assignment of responsibility for making groups a focus, not the focus of attempts to improve organizations.

Summary The three foci of this section, Intergroup and Demography Theory, and Teams, represent a dramatic change from the more traditional groups literature. That literature was characterized by single laboratory studies of communication patterns, cohesiveness, coalition formation or interpersonal attraction (McGrath & Kravitz 1981). The change suggests rich theoretical and normative frameworks for achieving Leavitt's (1975) plea to take groups in the work context seriously.

Organizational Climate and Culture

The review of the work group literatures makes the embedded nature of behavior in work settings quite clear from an wholistic conceptual perspective. The idea that groups and organizations have cultures or climates has been acknowledged through research since Lewin et al's (1939) research on creating social climates (authoritarian, democratic, laissez-faire). Climate, in particular, has a relatively rich history in OB, probably because the definition and measurement problems have generated some interesting research efforts both in the laboratory (Litwin & Stringer 1968) and the field (Jones & James 1979) as well as critical commentary (Guion 1973, Woodman & King 1978). While there have only been a few active researchers of climate itself, the term is used by almost everyone who studies Quality of Work Life (QWL), OD, or innovation (the group researchers retain the more central "context").

Most people who use the term climate are referring to interpersonal practices (the social climate). When used this way it refers to both formal and informal policies and activities that are typical of the way

peers relate to each other ("open") and/or the "style" that characterizes superior-subordinate relationships ("trusting"). But climate has also been used as a shorthand for describing other sets of formal and informal policies and activities that reward, support and expect service (Schneider et al 1980), safety (Zohar 1980) and innovation (Ahbey & Dickson 1983), among others (Schneider & Reichers 1983).

Climate research, which came out of the Gestalt Psychology tradition after Lewin (Schneider 1975), like Gestalt Psychology seems to have died from acceptance. Although there are certainly conceptual and methodological advances still to be made in climate research (Mossholder & Bedeian 1983a, Schnake 1983), it now seems clear that multiple dimensions of policies and activities relevant to a particular issue (interpersonal relationships, service) can be reliably and validly assessed.

Although used interchangeably for years (e.g. Katz & Kahn 1966, 1978) the climate and the culture constructs are apparently in opposite patterns of descendance and ascendance. Culture is not only academically prominent (an entire issue of Administrative Science Quarterly and Organizational Dynamics in 1983) but prominent in business and industry as well. For example, In Search of Excellence (Peters & Waterman 1982) has been a number one best seller for many months (see Carroll 1983 for an insightful critique of Peters & Waterman as research).

Recent writers on culture, like writers on climate before them (Guion 1973), have generally failed to reference earlier works going by a different name. So, almost no reference is made to climate research

in the ASQ issue (e.g. Smircich 1983) despite some overlapping theory (Schneider & Reichers 1983). There also appears to be essentially no overlap in research methods. Culture researchers favor more qualitative and/or case study methodologies (Gregory 1983) compared to the survey methods most often used in climate research (Schneider 1975). At one level, one hopes that culture researchers will pay as much attention to the collection of data and to the nuances of their ethnomethodology (Morgan 1984, Van Maanen 1979) as climate researchers tended to adhere to the psychometric tradition. At another level, one agrees with Daft (1983) that perhaps the choice is not between ethnomethod (qualitative) and psychometric (quantitative); that researchers should capitalize on ways to profit from application of the whole of the research craft, not just parts of it.

Culture is thought to be a deeper construct than climate has been. Whereas climate researchers have been concerned with the dimensions or facets of policies and activities that characterize particular organizational phenomena (service, innovation), culture scholars want to understand (a) the norms and value systems that give rise to the policies and activities (Jones 1983b, Sathe 1983) and (b) the modes by which the norms and values are communicated and transmitted (Schall 1983).

In pursuit of these goals, research focuses on meaning — the meaning people attach to policies and activities and the mechanisms by which meaning is transmitted and shared (Barley 1983, Mitroff 1983) and becomes part of the ego of organizational members (Broms & Gahmberg 1983). Of special interest to researchers of culture is the role myths and stories play as vehicles for transmitting meaning (Koprowski 1983,

Smith & Simmons 1983, Wilkins 1983), thus providing the "glue" for the sharing of meaning. Joyce & Slocum (1982, 1984) found a novel technique for revealing how organization members share meaning. They administered climate questionnaires to employees, converted item responses into profiles and cluster analyzed the resultant individual profiles. The resultant clusters represented groups of employees who literally shared meaning. In fact, the clusters reproduced known groupings (functions, jobs) of employees.

Some other interesting findings are emerging from the energy being focused on the culture construct, especially when the research has a comparative focus. For example, Martin et al (1983) argue that seven kinds of stories seem to occur in diverse kinds of organizations. Through script and content analysis of stories, the following types emerged (some names are mine): rule-breaking, founder, rags to riches, reductions in force (rif), relocation of employees, reactions to mistakes, and organizational coping. Of course, although these are common story types, their frequency profile from organization to organization could be a useful diagnostic.

Wilkins & Ouchi (1983) present data to show however, that every organization does not have a distinct culture -- distinct meaning different from others and/or different from the larger environment of which it is a part. Conversely, Riley (1983) and Martin & Siehl (1983) find that organizations frequently have subcultures and countercultures, respectively! It seems obvious that, depending on one's focus (level of analysis) both findings are possible.

Climate and, more recently, culture seem to have taken OB full

circle to the idea that organizations are a viable behavioral unit of analysis; that organizations themselves can be described in terms of patterns of activities (Argyris 1957), philosophies (McGregor 1960), and unit relationships (Likert 1961).

One thing that has been learned in the interim, mostly implicitly, is that to describe organizations requires macro level research methods and foci that fit the descriptive terminology of organizations; that to conduct research on individuals as individuals as the unit of analysis is important and interesting but not when trying to understand and predict an organization's behavior (Mossholder & Bedeian 1983a). A second principle has been that at each level of analysis at which important and interesting research can be conducted, the next larger unit in which the behavior of interest is embedded will also have an impact (Alderfer 1983). This principle has both practical and methodological implications. On the practical side it says that when changing anything to achieve a goal, the context of the change also needs to be at least considered and, probably, also changed.

Methodologically the implication is that a study that includes data derived from a focus on only one unit of analysis will yield relatively weak relationships because phenomena exist at multiple levels of analysis and need to be assessed at multiple levels (Wallace 1983). Thus, individually-based motivation studies of performance or turnover on the one hand, or group-based studies of group output on the other hand cannot be expected to yield strong findings because the unit of analysis being studied is embedded in, and affected by, at least the next level of analysis.

It is very important here to differentiate "affected by" from "moderated by." All of the research that is called contingency (or "it depends") research, is of the "moderated by" form. These efforts have yielded an infinite regress to more dependencies and few significant findings (Schneider 1983). The argument being presented here is that different levels of analysis have direct (linear) effects on behavior. For example, the linear logic suggests that individual motivation and group structure correlate with individual behavior not that group structure moderates the relationship between individual motivation and individual behavior. Also, the logic implies that group effectiveness would be a linear function not only of group characteristics but of the larger context of the group itself.

This view of the behavior in and of organizations takes an wholistic perspective (Astley & Van de Ven 1983, Wallace 1983) similar to the one implicitly used in OD (Asplind et al 1983, Bartunek 1983) and organization design (Van de Ven & Joyce 1981). This perspective will be useful in the discussion of productivity that follows.

Productivity

In the past few years a number of researchers have addressed the potential for behavioral science approaches to resolve organizational problems, especially productivity problems. These scholars have searched the research literature and cataloged the kinds of interventions that have proved effective; these will be summarized below.

There are three major reasons for summarizing these findings. First, it is very important for the science that inferences about the real world of organizations be tested in that world. Because most of OB

research is at best quasi-experimental in method and, more likely is merely one-shot correlational, any relationships that are established, and any inferences that are made about what can be changed to yield a desired effect, must be tested. The question is: is there validity to the inferences that have been made?

A second reason to summarize these findings is to encourage more of an integration of the OB and organization change literatures. Past chapters on OB have failed to address intervention successes while chapters on change (Friedlander & Brown 1974, Alderfer 1977, Faucheux et al 1982) have tended to focus on change processes, rather than on the variables being changed or the dependent variables being studied (see Staw 1984 for a review of dependent variables in OB). Here the focus will be on the latter topics and no claim whatever is made that this is a review of the organizational change literature.

Third, it will become clear that the literature on productivity interventions suggests that theories of behavior in and of organizations appear to have considerable validity for achieving productivity improvements. Given this success, it will be argued that OB researchers should address the potential economic benefits of their findings as a vehicle for (a) bringing about a rapprochement with other areas of business study and, (b) more importantly, educating business, industry and government to the very large (e.g. Hunter & Schmidt 1983) potential benefits of research and intervention in OB.

Literature Summarizing Productivity and OB

Katzell & Guzzo (1983) summarized the more extensive works by Katzell et al (1977) and Guzzo & Bondy (1983), each of whom reviewed worker

productivity experiments in the U.S. for 5 year periods. Thus, the Katzell & Guzzo data cover the period 1971-1981.

Katzell & Guzzo reviewed only studies in which an independent variable was actually manipulated and which had at least one concrete measure of productivity as a dependent variable. Their content analysis of 107 experiments revealed 11 types of interventions: Recruitment and selection, Training and instruction, Appraisal and feedback, Goal setting, Financial compensation, Work redesign, Supervisory methods, Organization structure/design, Decision-making techniques, Work schedules, and Sociotechnical systems redesign.

The effects of these interventions were evaluated against three major criteria, worker output (quantity, quality, or cost effectiveness), withdrawal behaviors (turnover, absenteeism), and work disruptions (accidents). Most of the studies used worker output (57%), then withdrawal behaviors (34%), then disruptions.

Eighty-six percent of the studies against output, 75% of those against withdrawal behaviors, and 77% against disruptions revealed significant effects. Goal setting, Appraisal and feedback, Sociotechnical systems redesign and Supervisory methods seem to be particularly effective in increasing output with better than 92% of such reported attempts yielding the desired increases. In addition to productivity increases, when quality of work life data were also collected in the experiment, across all studies 75% reported favorable changes; for changes in Supervisory methods and Socio-technical systems redesign the figures were both 100%.

Nicholas (1982) summarized the effects of 65 OD interventions

against 10 hard criteria: Turnover, Absenteeism, Grievances, Costs, Profits, Sales, Efficiency (e.g. input-output ratio), Production quantity (units per hour), Effectiveness (locally defined critical indices such as downtime, accidents), and Production quality.

Nicholas only included OD interventions that met the same experimental criteria as used by Katzell & Guzzo. He described three classes of OD interventions, Human processual (T-Groups, Team building, Survey Feedback), Technostructural (Job redesign and enrichment, Sociotechnical systems), and Multifaceted (the use of multiple behavioral techniques). The extent of overlap between Nicholas and Katzell & Guzzo is unknown since Nicholas does not cite Katzell et al (1977) and the Guzzo & Boudy (1983) book was probably "in press" when Nicholas' paper was prepared.

Nicholas' findings were less encouraging than those reported by Katzell & Guzzo about 50% of the studies revealed positive effects. There were no differences in overall success rate as a function of the general class of intervention but uniformly positive effects (about 70%) across criteria were associated with Socio-technical system and Participative Job enlargement (workers participate in the design) interventions.

A particularly interesting facet of Nicholas' findings, especially given the earlier concerns noted with units of analysis, was his subgrouping of interventions by group and organizational levels of analysis. This breakdown revealed that the Human process and Multifaceted interventions may have the most success at the organizational level whereas the Technostructural approaches work best

at the group level.

It is difficult to know why Nicholas' findings were less positive than Katzell & Guzzo's. One possibility is that because Nicholas included only studies that were in the OD tradition, more micro individual-level interventions were excluded, the focus being more on unit/organizational productivity. A second, related, possibility concerns the criterion problems associated with large unit interventions, especially the opportunities for confounding of effects.

In any case, the Katzell & Guzzo and Nicholas summaries suggest that at least one-half and, more likely, 90 percent of the interventions that are published report a significant effect. While there may be interventions which are failures that do not get published (see Mirvis & Berg 1977 for some of these), there are undoubtedly successes that also fail to become published for proprietary reasons and because of the interventionist's lack of interest/time/expertise to publish.

Although reference to Technical Reports was explicitly excluded from this Review because of the abundance of the existing published literature, an attempt was made to ascertain the extent of successes that have not been published by exploring some Department of Defense (DOD) productivity programs. Oliver et al (1983) report, for example, that in the Army such programs as Productivity gainsharing (improvements in time to complete a task), Quality circles (solution to production problems by workers meeting at the work place), and Sociotechnical interventions have all been shown to be effective. An idea of the magnitude of these efforts in the Army, can be appreciated by considering the following: At eight sites with a total of 853

employees, gain sharing resulted in a savings of 74,000 personhours and payments of \$376,000 to employees; at the many hundreds of Quality circles, when careful documentation is maintained, a return on investment in productivity of about 2 to 1 is not unusual (there appear to be no changes in attitudes); Sociotechnical interventions in many sites are currently underway, including formative as well as summative evaluation plans.

For the Navy, two sources of data were available. Crawford (1983) summarized efforts at the Navy Personnel Research and Development Center (NPRDC) where research on productivity has been underway since 1975. As in the Army, Gainsharing and Quality circles appear to have significant effects. Crawford notes that these are particularly useful when the larger context is receptive and supportive. Incidentally, Crawford also reported no changes in attitudes for the QC program.

More broadly, Broedling & Huff (1983) summarized all Navy productivity enhancement programs using Katzell & Guzzo's (1983) classification scheme (primarily). Twenty technical reports not published elsewhere are referenced in their report, with essentially all of them reporting significant effects. Organizational appraisal and feedback (survey feedback as an OD effort), Financial compensation (mostly gainsharing and other monetary incentives) and Supervisory methods (especially the implementation of traditional management practices) were the most frequently used methods. Some of the projects described by Broedling & Huff were "in process" but the wide variety of completed (fully evaluated) efforts and the apparent positive benefits were impressive.

Ginnett (1983) summarized similar efforts in the Air Force. In contrast to the Army and Navy interventions that have been accomplished under a centrally controlled authority (and most frequently on civilians), Air Force productivity improvement efforts are decentralized and most frequent with military rather than civilian personnel. Decentralization of the effort made it difficult for Ginnett to track down productivity improvement programs and some programs appeared to be relatively undocumented. Nonetheless work in all of Katzell & Guzzo's (1983) categories existed.

Finally, an overview of productivity programs throughout the Federal sector was presented by King et al (1983). This report is a sampling of more extensive talks presented at a workshop on productivity in the federal sector sponsored by the Office of Naval Research. Information from such diverse agencies as NASA, NSF and DOE, as well as DOD, are presented.

Pfeffer (1981:415) has noted (with tongue in cheek?) that "...in the field of organizational behavior, there is frequently very little that is either organizational or behavioral. Rather much of the research is a study of individual attitudes." The brief review of productivity enhancement efforts just presented suggests that considerable progress has been made on the behavioral and on the organizational level of analysis.

Given the enormous criterion problems that have been documented so well in so many places (e.g. Tuttle 1983) it is a tribute to researcher ingenuity (Daft 1983) that this large number of programmatic research efforts has been accomplished and documented.

Some themes emerging from the literature on productivity and productivity improvement follow:

1. Productivity is a term used to describe various organizationally relevant outcomes (quantity, quality, turnover), at all levels of analysis (individual, group, organizational).
2. Behavioral approaches to productivity improvement are effective far more often than not but they constitute only one kind of improvement efforts and should not be expected to accomplish everything (Hambrick & Schechter 1983, Tuttle 1983).
3. Productivity interventions are enhanced by systems-wide commitment to improvement and to the possibility that the intervention might yield improvement (Reilly & Fuhr 1983). This kind of commitment also facilitates the durability of the change (Goodman 1982).
4. Essentially all productivity improvement efforts are attempts at changing the group and or organizational context in the hopes of enhancing worker motivation. This comment does not apply to interventions of a personnel selection sort (Hunter & Schmidt 1983) but to all other interventions listed by Katzell & Guzzo (1983) and Nicholas (1982).
5. Productivity interventions rarely contribute to refinements of theory; they are attempts to capitalize on existing theory and data. As such, they most frequently have confounded micro variables in order to achieve an effect. In some sense, then, they follow the "burn the pig house down to get cooked pork" rule for action rather than trying to isolate precisely what needs to be done to achieve the desired result. But effect, not precision is the goal of action.

6. When converted into cost-benefit terminology (as in the Army and Navy reports in particular), the productivity improvements are very dramatic indeed in terms of dollars saved; this point will be addressed again below.

Utility

For at least 45 years (Taylor & Russell 1939) methods for calculating the dollar benefits of using personnel selection procedures for making decisions have been known. For 35 years (Brogden & Taylor 1950) techniques applicable to this calculation for any intervention have been known and for 20 years (Cronbach & Gleser 1965) application has been urged. Recently, Cascio (1982) has presented a wonderfully clear book filled with examples for calculating the utility of changes in organizations.

At its most basic level, the question of utility is: what is the dollar payoff? That is, taking into account the costs associated with an intervention (for example, improved selection, training, job design, job satisfaction, or socio technical system to achieve increased individual, unit or organizational productivity or decreased turnover), what are the benefits?

In the past, the major stumbling block to the calculation of utility was the standard deviation in dollar terms (Brogden & Taylor 1950) of the criterion variable -- the degree of variability on the index of productivity. Schmidt et al (1979) have apparently resolved this problem through a straight-forward estimation procedure (for which good interrater reliability was obtained). In fact, once the relationship between a predictor and criterion is known (say the

relative presence or absence of a socio-technical systems organization design and production quality), and the standard deviation in productivity (here production quality) is known in dollar terms, the benefits of changing an organization more towards a socio-technical systems, say one-quarter standard deviation more towards socio-technical systems, can be calculated. From that calculation, of course, one subtracts the costs, (e.g. of consultants, lost production time, and so on) to estimate return-on-investment (ROI).

Personnel selection researchers and researchers in the Department of Defense have been doing these calculations now for a number of years; it is time for OB researchers in general and change agents in particular to also begin presenting them (Feldman 1983). Such data will be very impressive because the benefits add up very quickly and the costs of OB interventions are relatively negligible. Anyone doubting the potential payoff and the speed at which benefits accumulate should see Cascio (1982).

Toward an Integrated View of OB

OB exists at many levels of analysis, all of which are correct and appropriate foci for understanding the behavior, and the outcomes of behavior, in and of organizations. Indeed, it seems likely that larger units of analysis than are typically studied by OB researchers (e.g. industries), are amenable to study with behavioral variables (Hage 1980). What allows these multiple levels of research to form a gestalt, to all be under the OB umbrella, is a focus on human attributes. Assumptions about humans are tested, not simply stated (as e.g. in Economics), and they are tested with respect to important human outcomes

regarding work and work organizations.

It would be an error to conclude that micro studies of the relationship between individual commitment or work motivation and turnover or performance will yield many valid insights into improved organizational functioning. Conversely, it would be similarly inappropriate to attempt to predict an individual's performance or turnover based on whether his/her organization functions in a dynamic or static environment. These are inappropriate and unreasonable because the predictors and criteria of interest exist at different levels of analysis.

This review has noted numerous instances of problems related to the level of analysis issue from misinterpretations about the level of analysis of early OB theoreticians to the use of the intergroup construct for understanding various levels of interpersonal relationships and, finally, to the interpretation of intervention efforts. It appears that neither researchers nor change agents have been careful in specifying the level of analysis of their foci and, one could argue, such carelessness has yielded a failure to substantiate hypotheses and/or to produce the desired change.

From a contemporary perspective on research and practice, the level of analysis issue cautions against the tendency to want to infer across levels. For example, if it is known that individual incentive systems produce higher rates of individual productivity it does not necessarily follow that an organization that puts all of its workers on individual incentive systems will be more productive. Similarly, it does not follow that an individual worker who works in an organization

characterized by the socio-technical systems perspective will be less likely leave. The traditional incentive system example is calibrated to only handle individual prediction and understanding while the socio-technical system example is calibrated to predict rates of individual behavior at the group or organizational level of analysis. The motto is to pick your levels carefully.

In addition to cautions against making the ecological fallacy, the level of analysis issue suggests some potentially very interesting research. For example, what are the effects of individual incentive systems on unit and organizational productivity (Lawler 1981)? Or, what does working in a unit characterized by a socio-technical systems perspective do to suppress/enhance individual differences in individual productivity? The point here is not that some of these between-levels kinds of studies have not been proposed before (see Van de Ven 1981 for an excellent example) but that in doing these studies it must be clear why one would expect a variable at one level of analysis to be related to another variable at another level of analysis. The literature seems to be able to handle the first issue but it has lacked clarity on the second (Roberts et al 1978). Clarity on this second issue might permit more of an integration in OB now that it is clearly possible to bring about change at many levels of analysis through the manipulation of numerous theoretically relevant variables.

Conclusions

Older perspectives of OB are being used as bases for effective intervention and new questions are being raised about individual, group and organizational issues. More specifically, goal setting is the

dominant motivation perspective and commitment and stress seem to have replaced satisfaction as major thrusts in individual motivation and attitude theory and research. At the group level, leadership research appears to be languishing but group research may yet have a resurgence based on either or both intergroup theory and a normative framework that considers the emotional life of group members. At the organizational level of analysis, organizational culture has arrived as a vehicle for attempting to understand why some organizations seem to have characteristic thrusts and/or modes of functioning. Of special interest to culture researchers are the processes by which culture is transmitted in organizations.

It was noted that culture theory and research emerging about 25 years after the real start of OB was noteworthy, especially because both the conceptual framework and the level of analysis (the organization) are similar to earlier theories. Reviews of OB productivity enhancement interventions based on the theory and research in the field yielded encouraging data regarding effectiveness, especially for non-OD based interventions. Finally an argument was made for the conversion of OB findings into dollar utility estimates.

Throughout this review, a major methodological/conceptual theme concerned the issue of level of analysis. It was noted that research needs to be carried out (a) at the level of analysis compatible with the original conceptualization and (b) in which the levels of analysis of predictor and criterion are conceptually congruent (though not at all necessarily the same). In conclusion, it is clear that OB is alive and well and living on many levels.

Acknowledgments

Writing of this review was partially supported by the Organizational Effectiveness Research Group, Psychological Sciences Division, Office of Naval Research under Contract No. N00014-83-K-0551, Contract Authority Identification Number NR270-958. Without the help of Liz Berney, Nancy Moeller and Dan Schechter this review would not have ever been completed. They, and Irv Goldstein, Joe Schneider, Dave Schoorman and Cindy Stahle, made very helpful suggestions on an earlier draft.

Literature Cited

- Abbey, A., Dickson, J. W. 1983. R & D work climate and innovation in semiconductors. Acad. Manage. J. 26:362-68
- Adams, J. S. 1963. Toward an understanding of inequity. J. Abnorm. Soc. Psychol. 67:422-36
- Admin. Sci. Q. 1983. 28:331-495
- Alderfer, C. P. 1971. Effects of individual, group and intergroup relations on attitudes towards a management development program. J. Appl. Psychol. 55:302-11
- Alderfer, C. P. 1972. Human Needs in Organizational Settings. New York: Free Press.
- Alderfer, C. P. 1977. Organization development. Ann. Rev. Psychol. 28:197-223
- Alderfer, C. P. 1983. An intergroup perspective on group dynamics. In Handbook of Organizational Behavior, ed. J. Lorsch. Englewood Cliffs, NJ: Prentice-Hall.
- Argyris, C. 1957. Personality and Organization. New York: Harper.
- Ashford, S. J., Cummings, L. L. 1983. Feedback as an individual resource: Personal strategies of creating information. Organ. Behav. Hum. Perf. 32:370-98
- Asplind, J., Behrendtz, H., Jernberg, F. 1983. The Norwegian savings bank case: Implementation and consequences of a broadly scoped, long-term, system-driven program for management development. J. Appl. Behav. Sci. 19:381-94

- Astley, W. G., Van de Ven, A. H. 1983. Central perspectives and debates in organization theory. Adm. Sci. Q. 28:245-73
- Barley, S. R. 1983. Semiotics and the study of occupational and organizational cultures. Adm. Sci. Q. 28:393-413
- Bateman, T. S., Strasser, S. 1983. A cross-lagged regression test of the relationships between job tension and employee satisfaction. J. Appl. Psychol. 68:439-45
- Bartunek, J. M. 1983. How organization development can develop organizational theory. Group Organ. Stud. 8:303-18
- Bass, B. 1980. Individual capability, team performance, and team productivity. In Human Performance and Productivity, ed. E. A. Fleishman, M. D. Dunnette. Hillsdale, NJ: Erlbaum.
- Bass, B. M., 1981. Stogdill's Handbook of Leadership. New York: Free Press.
- Bateman, T. S., Organ, D. W. 1983. Job satisfaction and the good soldier: The relationship between affect and employee "citizenship". Acad. Manage. J. 26:5887-95
- Beer, M. 1980. Organization Change and Development: A Systems View. Santa Monica, CA: Goodyear.
- Berger, C. J., Olson, C. A., Boudreau, J. W. 1983. Effects of unions on job satisfaction: The role of work-related values and perceived rewards. Organ. Behav. Hum. Perf. 32:289-324
- Bernard, H. S. 1983. The application of experiential learning. Group Organ. Stud. 8:149-58
- Berney, E. J. 1983. Here and now trainer action to make experiential learning applicable. Group Organ. Stud. 8:154-6

- Bhagat, R. S. 1983. Effects of life events on individual performance effectiveness and work adjustment processes within organizational settings: A research model. Acad. Manage. Rev. 8:660-71
- Birnbaum, M. H. 1983. Perceived equity of salary policies. J. Appl. Psychol. 68:49-59
- Boss, W. R. 1983. Team building and the problem of regression: The personal management interview as an intervention. J. Appl. Behav. Sci. 19:67-83
- Bowers, D. G. 1983. What would make 11,500 people quit their jobs? Organ. Dyn. 12:4-19
- Bowers, K. S. 1973. Situationism in psychology: An analysis and critique. Psychol. Rev. 80:307-336
- Breaugh, J. A. 1983. Realistic job previews: A critical appraisal and future research directions. Acad. Manage. Rev. 8:612-19
- Brief, A. P., Schuler, R. S., Van Sell, M. 1981. Managing Job Stress. Boston: Little, Brown.
- Broedling, L. A., Huff, K. H. 1983. Productivity enhancement in the Navy using behavioral science approaches. Presented at Ann. Meet. Am. Psychol. Assoc., Anaheim.
- Brogden, H. E., Taylor, E. K. 1950. The dollar criterion: Applying the cost accounting concept to criterion construction. Pers. Psychol. 3:133-54
- Broms, H., Gahmberg, H. 1983. Communication to self in organizations and cultures. Adm. Sci. Q. 28:482-95
- Brown, L. D. 1983. Managing Conflict at Organizational Interfaces. Reading, MA: Addison-Wesley.

- Bruning, N. S., Snyder, R. A. 1983. Sex and position as predictors of organizational commitment. Acad. Manage. J. 26:485-91
- Bullock, R. J. 1983. Participation and pay. Group Organ. Stud. 8:127-036
- Butler, J. K., Jr. 1983. Value importance as a moderator of the value fulfillment-job satisfaction relationship: Group differences. J. Appl. Psychol. 68:420-28
- Butler, R. P., Ardent, C. L., Miner, J. B. 1983. A motivational basis for turnover in military officer education and training. J. Appl. Psychol. 68:496-506
- Campbell, J. P., Dunnette, M. D., Lawler, E. E., III., Weick, K. E., Jr. 1970. Managerial Behavior, Performance, and Effectiveness. New York: McGraw-Hill.
- Campbell, J. P., Pritchard, R. D. 1976. Motivation theory in industrial and organizational psychology. In Handbook of Industrial and Organizational Psychology, ed. M. D. Dunnette. Chicago: Rand McNally.
- Carroll, D. T. 1983. A disappointing search for excellence. Harv. Bus. Rev. Nov.-Dec. 78-88
- Cascio, W. F. 1982. Costing Human Resources: The Financial Impact of Behavior in Organizations. Boston: Kent.
- Chisholm, R. F., Kasl, S. V., Eskenazi, R. 1983. The nature and predictors of job related tension in a crisis situation: Reactions of nuclear workers to the Three Mile Island accident. Acad. Manage. J. 26:385-405

- Clegg, C. W. 1983. Psychology of employee lateness, absence, and turnover: A methodological critique and an empirical study. J. Appl. Psychol. 68:88-101
- Cooke, R. A., Rousseau, D. M. 1983. Relationship of life events and personal orientations to symptoms of strain. J. Appl. Psychol. 68:446-58
- Cosier, R. A., Dalton, D. R. 1983. Equity theory and time: A reformulation. Acad. Manage. Rev. 8:311-19
- Crawford, K. 1983. Productivity research at the Navy Personnel Research and Development Center (NPRDC). Presented at AFHRL Prod. Conf., Brooks Air Force Base, Texas.
- Cronbach, L. J., Gleser, G. C. 1965. Psychological Tests and Personnel Decisions. Urbana, IL: University of Illinois Press.
- Cummings, L. L. 1982. Organizational behavior. Ann. Rev. Psychol. 33:541-79
- Daft, R. L. 1983. Learning the craft of organizational research. Acad. Manage. Rev. 8:539-46
- Dansereau, F., Jr., Graen, G., Haga, W. J. 1975. A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. Organ. Behav. Hum. Perform. 13:46-78
- Erez, M., Kanfer, F. H. 1983. The role of goal acceptance in goal setting and task performance. Acad. Manage. Rev. 8:454-63
- Faucheux, C., Amado, G., Laurent, A. 1982. Organizational development and change. Ann. Rev. Psychol. 33:343-70

- Feldman, D. C., Brett, J. M. 1983. Coping with new jobs: A comparative study of new hires and job changers. Acad. Manage. J. 26:258-72
- Feldman, J. M. 1983. Problems and prospects of organizational interventions. In Research in Personnel and Human Resources Management, Vol. 1, ed. K. M. Rowland & G. R. Ferris. Greenwich, CT: JAI.
- Ferris, K. R., Aranya, N. 1983. A comparison of two organizational commitment scales. Pers. Psychol. 36:87-98
- Fiedler, F. E. 1967. A Theory of Leadership Effectiveness. New York: McGraw-Hill.
- Filley, A. C., House, R. J., Kerr, S. 1976. Managerial Process and Organizational Behavior. Glenview, IL: Scott, Foresman, 2nd ed.
- Fisher, C. D., Gitelson, R. 1983. A meta-analysis of the correlates of role conflict and ambiguity. J. Appl. Psychol. 68:320-33
- Fleishman, E. A. 1953. The description of supervisory behavior. J. Appl. Psychol. 37:1-6 a
- Fleishman, E. A. 1953. Leadership climate, human relations training, and supervisory behavior. Pers. Psychol. 6:205-22 b
- Friedlander F., Brown, L. D. 1974. Organization development. Ann. Rev. Psychol. 25:313-41
- Gaines, J., Jermier, J. M. 1983. Emotional exhaustion in a high stress organization. Acad. Manage. J. 26:567-86
- Garland, H., Hale, K. F., Burnson, M. 1982. Attributions for the success and failure of female managers: A replication and extension. Psychol. Women Q. 7:155-61

- Gavin, J. F., Krois, P. A. 1983. Content and process of survey feedback sessions and their relation to survey responses: An initial study. Group Organ. Stud. 8:221-47
- Ginnett, R. C. 1983. Productivity enhancement in the Air Force using behavioral science techniques. Presented at Ann. Meet. Am. Psychol. Assoc., Anaheim.
- Golding, J., Resnick, A., Crosby, F. 1983. Work satisfaction as a functional gender and job status. Psychol. Women Q. 7:286-92
- Goldstein, I. L. 1980. Training in work organizations. Ann. Rev. Psychol. 31:229-72
- Goodman, P. S., ed. 1982. Change in Organizations. San Francisco: Jossey-Bass.
- Graddick, M. M., Farr, J. L. 1983. Professionals in scientific disciplines: Sex-related differences in working life commitments. J. Appl. Psychol. 68:641-45
- Green, S. G., Blank, W., Liden, R. C. 1983. Market and organizational influences on bank employees' work attitudes and behaviors. J. Appl. Psychol. 68:298-306
- Greenhaus, J. H., Seidel, C., Marinis, M. 1983. The impact of expectations and values on job attitudes. Organ. Behav. Hum. Perf. 31:394-417
- Gregory, K. L. 1983. Native-view paradigms: Multiple cultures and culture conflicts in organizations. Adm. Sci. Q. 28:359-76
- Griffin, R. W. 1983. Objective and social sources of information in task redesign: A field experiment. Adm. Sci. Q. 28:184-200

- Guion, R. M. 1973. A note on organizational climate. Organ. Behav. Hum. Perform. 9:120-25
- Guzzo, R. A., Bondy, J. 1983. A Guide to Worker Productivity Experiments in the United States 1976-81. New York: Pergamon.
- Hackman, J. R. 1983. The design of work teams. In Handbook of Organizational Behavior, ed. J. Lorsch. Englewood Cliffs, New Jersey: Prentice-Hall.
- Hackman, J. R., Lawler, E. E. III 1971. Employee reactions to job characteristics. J. Appl. Psychol. 55:259-86
- Hackman, J. R., Oldham, G. R. 1980. Work Redesign. Reading, MA: Addison-Wesley.
- Hage, J. 1980. Theories of Organization: Form, Process, and Transformation. New York: Wiley.
- Hall, D. T., Gordon, F. E. 1973. The career choices of married women: Effects on conflict, role behavior and satisfaction. J. Appl. Psychol. 58:42-48
- Hambrick, D. C., Schecter, S. M. 1983. Turnaround strategies for mature industrial-product business units. Acad. Manage. J. 26:231-48
- Heilman, M. E. 1983. Sex bias in work settings: The lack of fit model. In Research in Organizational Behavior, Vol. 5, L. L. Cummings, B. M. Staw, eds. Greenwich, CT: JAI Press.
- Hemphill, J. K. 1959. Job descriptions for executives. Harvard Bus. Rev. 37:55-67

- Herman, J. B., Dunham, R. B., Hulin, C. L. 1975. Organizational structure, demographics, and employee responses. Organ. Behav. Hum. Perform. 13:206-32
- Herzberg, F., Mausner, B., Snyderman, B. 1959. The Motivation to Work. New York: Wiley, 2nd ed.
- Holland, J. L. 1973. The Psychology of Vocational Choice. Waltham, MA: Blaisdell, rev. ed.
- House, R. J. 1971. A path goal theory of leader effectiveness. Adm. Sci.Q. 16:321-39
- House, R. J., Schuler, R. S., Levanoni, E. 1983. Role conflict and ambiguity scales: Reality or artifacts? J. Appl. Psychol. 68:334-37
- Hughes, R. L., Rosenback, W. E., Clover, W. H. 1983. Team development in an intact, ongoing work group: A quasi-field experiment. Group Organ. Stud. 8:161-86
- Hum. Resour. Manage. 1983. 22:335-489
- Hunter, J. E., Schmidt, F. L. 1983. Quantifying the effects of psychological interventions on employee job performance and work-force productivity. Am. Psychol. 38:473-78
- Jackofsky, E. F., Peters, L. H. 1983. Job turnover versus company turnover: Reassessment of the March and Simon participation hypothesis. J. Appl. Psychol. 68:490-95 a.
- Jackofsky, E. F., Peters, L. H. 1983. The hypothesized effects of ability in the turnover process. Acad. Manage. Rev. 8:46-49 b.
- Jackson, P. R., Stafford, E. M., Banks, M. H., Warr, P. B. 1983. Unemployment and psychological distress in young people: The moderating role of employment commitment. J. Appl. Psychol. 68:525-35

- Jackson, S. E. 1983. Participation in decision-making as a strategy for reducing job-related strain. J. Appl. Psychol. 68:3-19
- James, L. R., White, J. F., III. 1983. Cross-situational specificity in managers' perceptions of subordinate performance, attributions, and leader behaviors. Pers. Psychol. 36:809-56
- Jenkins, G. D., Glick, W. H., Gupta, N. 1983. Job characteristics and employee responses. In Proc. Acad. Manage. ed. K. H. Chung, Wichita, KS: Wichita State University.
- Jones, G. R. 1983. Psychological orientation and the process of organizational socialization: An interactionist perspective. Acad. Manage. Rev. 8:464-74 a.
- Jones, G. R. 1983. Transaction costs, property rights, and organizational culture: An exchange perspective. Adm. Sci. Q. 28:454-67 b.
- Jones, A. P., James, L. R. 1979. Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions. Organ. Behav. Hum. Perform. 23:201-50
- Joyce, W. F., Slocum, J. W. 1982. Climate discrepancy: Refining the concept of psychological and organizational climate. Hum. Relate. 35:951-72.
- Joyce, W. F., Slocum, J. W. 1984. Collective climate: Agreement as a basis for defining aggregate climates in organizations. Acad. Manage. J. In press.
- Katerberg, R., Blau, G. J. 1983. An examination of level and direction of effort and job performance. Acad. Manage. J. 26:249-57

- Katz, D., Kahn, R. L. 1966. The Social Psychology of Organizations. New York: Wiley.
- Katz, D., Kahn, R. L. 1978. The Social Psychology of Organizations. New York: Wiley, 2nd ed.
- Katz, R., Tushman, M. L. 1983. A longitudinal study of the effects of boundary spanning on turnover and promotion in research and development. Acad. Manage. J. 26:437-56
- Katzell, R. A., Guzzo, R. A. 1983. Psychological approaches to productivity improvement. Am. Psychol. 38:468-72
- Katzell, R. A., Bienstock, P., Faerstein, P. F. 1977. A Guide to Worker Productivity Experiments in the United States 1971-75. New York: New York University Press.
- Kennedy, C. W., Fossum, J. A., White, B. J. 1933. An empirical comparison of within-subjects and between-subjects expectancy theory models. Organ. Behav. Hum. Perf. 32:124-43
- Kenny, D. A., Zaccaro, S. J. 1983. An estimate of variance due to traits in leadership. J. Appl. Psychol. 68:678-85
- Kimberly, J. R., Miles, R. H., eds. 1980. The Organizational Life Cycle. San Francisco: Jossey-Bass.
- King, B. T., Lau, A. W., Sinaiko, H. W. eds. 1983. Productivity programs and research in U. S. Government agencies. Washington, D.C.: Smithsonian Institution.
- Kohn, M. L., Schooler, C., eds. 1983. Work and Personality. Norwood, NJ: Ablex.
- Koprowski, E. J. 1983. Cultural myths: Clues to effective management. Organ. Dyn. 12:39-51

- Kostecki, M. J., Mreta, K. 1983. Research note: The incompatibility of comparisons: Comparative studies of organizations and the cumulation of scientific knoweldge. Organ. Stud. 4:73-88
- Krausz, M., Freiback, N. 1983. Effects of flexible working time for employed women upon satisfaction, strains, and absenteeism. J. Occup. Psychol. 56:155-59
- Lacy, W. B., Bokemeier, J. L., Shepard, J. M. 1983. Job attribute preferences and work commitment of men and women in the United States. Pers. Psychol. 36:315-330
- Latham, G. P., Steel, T. P. 1983. The motivational effects of participation versus goal setting on performance. Acad. Manage. J. 26:406-17
- Lau, A. W., Newman, A., Broedling, L. A. 1980. The nature of managerial work in the public sector. Public Adm. Rev. 40:513-20.
- Lau, A. W., Parett, C. M. 1980. The nature of managerial work: A comparison of public and private sector managers. Group Organ. Stud. 5:453-66
- Lawler, E. E., III. 1981. Pay and Organization Development. Reading, MA: Addison-Wesley
- Leavitt, H. J. 1975. Suppose we took groups seriously... In Man and Work in Society, ed. E. L. Cass, F. G. Zimmer. New York: D. Van Nostrand.
- Lewin, K., Lippitt, R., White, R. K. 1939. Patterns of aggressive behavior in experimentally created "social climates". J. Soc. Psychol. 10:271-99
- Likert, R. 1961. New Patterns in Management. New York: McGraw-Hill.

- Litwin, G. H., Stringer, R. A. 1968. Motivation and Organization Climate. Boston: Harvard Business School, Division of Research.
- Locke, E. A. 1976. The nature and causes of job satisfaction. In Handbook of Industrial and Organizational Psychology, ed. M. D. Dunnette. Chicago: Rand McNally.
- Locke, E. A., Shaw, K. N., Saari, L. M., Latham, G. P. 1981. Goal setting and task performance: 1969-1980. Psychol. Bull. 90:125-52
- Lodahl, T. M., Kejner, M. 1965. The definition and measurement of job involvement. J. Appl. Psychol. 49:24-33
- Lofquist, L. H., Dawes, R. V. 1969. Adjustment to Work. New York: Appleton-Century.
- Lombardo, M. M., McCall, M. W., Jr., DeVries, D. L. 1983. Looking Glass. Glenview, IL: Scott, Foresman.
- Louis, M. R. 1980. Surprise and sense making: What newcomers experience in entering unfamiliar organizational settings. Adm. Sci. Q. 25:226-51
- Louis, M. R., Posner, B. Z., Powell, G. N. 1983. The availability and helpfulness of socialization practices. Pers. Psychol. 36:857-81
- Machungwa, P. D., Schmitt, N. 1983. Work motivation in a developing country. J. Appl. Psychol. 68:31-42
- Magnusson, D., Endler, N. S. 1977. Interactional psychology: Present status and future prospects. In Personality at the Crossroads: Current Issues in Interactional Psychology, ed. D. Magnusson, N. S. Endler. Hillsdale, NJ: Erlbaum.
- March, J. G., Simon, H. A. 1958. Organizations. New York: Wiley.

- Martin, J., Feldman, M. S., Hatch, M. J., Sitkin, S. B. 1983. The uniqueness paradox in organizational stories. Adm. Sci. Q. 28:438-53
- Martin, J., Siehl, C., 1983. Organizational culture and counterculture: An uneasy symbiosis. Organ. Dyn. 12:52-64
- Martin, T. N., Schermerhorn, J. R., Jr. 1983. Work and nonwork influences on health: A research agenda using inability to leave as a critical variable. Acad. Manage. Rev. 8:650-59
- Matsui, T., Okada, A., Inoshita, O. 1983. Mechanism of feedback affecting task performance. Organ. Behav. Hum. Perf. 31:114-22
- McCain, B. E., O'Reilly, C., Pfeffer, J. 1983. The effects of departmental demography on turnover: The case of a university. Acad. Manage. J. 26:626-41
- McCall, M. W., Jr., Morrison, A. M., Hannan, R. L. 1978. Studies of Managerial Work: Results and Methods. Greensboro, NC: Center for Creative Leadership
- McCormick, E. J. 1979. Job Analysis: Methods and Applications. New York: Amacom.
- McGrath, J. E., Kravitz, D. A. 1981. Group research. Ann. Rev. Psychol. 33:195-230
- McGregor, D. M. 1960. The Human Side of Enterprise. New York: McGraw-Hill.
- McGuire, W. J. 1973. The yin and yang of progress in social psychology: Seven Koan. J. Person. Soc. Psychol. 26:466-56
- McKelvey, B., Aldrich, H. 1983. Populations, natural selection, and applied organizational science. Adm. Sci. Q. 28:101-28

- Meglino, B. M. 1983. A longitudinal analysis of the turnover process.
J. Appl. Psychol. 68:507-16
- Miller, E. J., ed. 1976. Task and Organization. New York: John Wiley.
- Miner, J. B. 1978. Twenty years of research on role motivation theory of managerial effectiveness. Pers. Psychol. 31:739-60
- Miner, J. B., Dachler, H. P. 1973. Personnel attitudes and motivation. Ann. Rev. Psychol. 24:379-402
- Mintzberg, H. 1973. The Nature of Managerial Work. New York: Harper and Row.
- Mirvis, P. H., Berg, D. N., eds. 1977. Failures in Organization Development and Change. New York: Wiley.
- Mischel, W. 1968. Personality and Assessment. New York: Wiley
- Mischel, W. 1973. Toward a cognitive social learning reconceptualization of personality. Psychol. Rev. 80:252-83
- Mitchell, T. R. 1979. Organizational behavior. Ann. Rev. Psychol. 30:243-81
- Mitroff, I. I. 1983. Archetypal social systems analysis: On the deeper structure of human systems. Acad. Manage. Rev. 8:387-97
- Mobley, W. H. 1982. Employee Turnover in Organizations. Reading, MA: Addison-Wesley.
- Mobley, W. H., Griffeth, R. W., Hand, H. H., Meglino, B. M. 1979. Review and conceptual analysis of the employee turnover process. Psychol Bull. 86:493-522
- Moosbrucker, J. 1983. OD with a community mental health center: A case of building structures patiently. Group Organ. Stud. 8:45-59

- Morgan, G., ed. 1984. Beyond Method: Strategies for Social Research.
Beverly Hills, CA: Sage.
- Morrow, P. C. 1983. Concept redundancy in organizational research:
The case of work commitment. Acad. Manage. Rev. 8:486-500
- Mossholder, K. W., Bedeian, A. G. 1983. Cross-level inference and
organizational research: Perspectives on interpretation and
application. Acad. Manage. Rev. 8:547-58 a.
- Mossholder, K. W., Bedeian, A. G. 1983. Group interaction processes:
Individual and group effects. Group Organ. Stud. 8:187-202 b.
- Motowidlo, S. J. 1983. Predicting sales turnover from pay satisfaction
and expectation. J. Appl. Psychol. 68:484-89
- Mowday, R. J., Porter, L. W., Steers, R. M. 1982. Employee Organization
Linkages: The Psychology of Commitment, Absenteeism, and Turnover.
New York: Academic Press.
- Murphy, L. R. 1983. A comparison of relaxation methods for reducing
stress in nursing personnel. Hum. Fac. 25:431-40
- Nicholas, J. M. 1982. The comparative impact of organization
development interventions on hard criteria measures. Acad. Manage.
Rev. 7:531-42
- Nicholson, P. J., Jr., Nova, Goh, S. C. 1983. The relationship of
organization structure and interpersonal attitudes to role conflict
and ambiguity in different work environments. Acad. Manage. Rev.
26:148-55
- Oldham, G. R., Rotchford, N. L. 1983. Relationships between office
characteristics and employee reactions: A study of the physical
environment. Adm. Sci. Q. 28:542-56

- Oliver, L. W., van Rijn, P., Babin, N. 1983. Productivity improvement efforts in Army organizations. Presented at Ann. Meet. Am. Psychol. Assoc., Anaheim.
- Organ. Dyn. 1983. 12:4-80
- Ouchi, W. 1981. Theory Z. Reading, MA: Addison-Wesley.
- Parker, D. F., DeCotiis, T. A. 1983. Organizational determinants of job stress. Organ. Behav. Hum. Perf. 32:160-77
- Pascale, R. T., Athos, A. G. 1981. The Art of Japanese Management. New York: Simon and Schuster.
- Pasmore, W. A., Sherwood, J. J., eds. 1978. Sociotechnical Systems: A Sourcebook. LaJolla, CA: University Associates.
- Pavett, C. M., Lau, A. W. 1983. Managerial work: The influence of heirarchical level and functional specialty. Acad. Manage. J. 26:170-77
- Pearce, J. A., II., David, F. R. 1983. A social network approach to organizational design-performance. Acad. Manage. Rev. 8:436-44
- Perrow, C. 1973. The short and glorious history of organizational theory. Organ. Dyn. 2:4-17
- Pervin, L. A., Lewis, M., eds. 1978. Perspectives in Interactional Psychology. New York: Plenum.
- Peters, T. J., Waterman, R. H. 1982. In Search of Excellence. New York: Harper & Row.
- Pfeffer, J. 1981. Four laws of organizational research. See Van de Ven & Joyce.

- Pfeffer, J. 1983. Organizational demography. In Research in Organizational Behavior, Vol. 5, eds. L. L. Cummings, B. M. Staw. Greenwich, CT: JAI Press.
- Porter, L. W., Lawler, E. E., III. 1968. Managerial Attitudes and Performance. Homewood, Illinois: Irwin-Dorsey.
- Pugh, D. S. 1981. The Aston program perspective. See Van de Ven & Joyce.
- Pulakos, E. D., Schmitt, N. 1983. A longitudinal study of a valence model approach for the prediction of job satisfaction of new employees. J. Appl. Psychol. 68:307-12
- Reilly, B. J., Fuhr, J. P., Jr. 1983. Productivity: An economic and management analysis with a direction towards a new synthesis. Acad. Manage. Rev. 8:108-17
- Riley, P. 1983. A structurationist account of political culture. Adm. Sci. Q. 28:414-37
- Roberts, K. H., Glick, W. 1981. The job characteristics approach to task design: A critical review. J. Appl. Psychol. 66:193-217
- Roberts, K. H., Hulin, C. L., Rousseau, D. M. 1978. Developing an Interdisciplinary Science of Organizations. San Francisco: Jossey-Bass.
- Robey, D., Taggart, W. 1981. Measuring managers' minds: The assessment of style in human information processing. Acad. Manage. Rev. 6:375-83
- Rosse, J. G., Kraut, A. I. 1983. Reconsidering the vertical dyad linkage model of leadership. J. Occup. Psychol. 56:63-71

- Rusbult, C. E., Farrell, D. 1983. A longitudinal test of the investment model: The impact on job satisfaction, job commitment, and turnover of variations in rewards, costs, alternatives, and investments. J. Appl. Psychol. 68:429-38
- Rynes, S.L., Lawler, J. 1983. A policy-capturing investigation of the role of expectancies in decisions to pursue job alternatives. J. Appl. Psychol. 68:620-31
- Rynes, S. L., Schwab, D. P., Heneman, H. G., III. 1983. The role of pay and market pay variability in job application decisions. Organ. Behav. Human. Perf. 31:353-64
- Salancik, G. R., Pfeffer, J. 1978. A social information processing approach to job attitudes and task design. Adm. Sci. Q. 23:224-53
- Sathe, V. 1983. Some action implications of corporate culture: A manager's guide to action. Organ. Dyn. 12:4-23
- Scarpello, V. 1983. Who benefits from participation in long-term human process interventions? Group Organ. Stud. 8:21-44
- Scarpello, V., Campbell, J. P. 1983. Job satisfaction: Are all the parts there? Pers. Psychol. 36:577-600
- Schall, M. S. 1983. A communication-rules approach to organizational culture. Adm. Sci. Q. 28:557-81
- Schein, E. H. 1978. Career Dynamics: Matching Individual and Organizational Needs. Reading, MA: Addison-Wesley.
- Schein, E. H. 1980. Organizational Psychology. Englewood Cliffs, NJ: Prentice-Hall. 3rd ed.

- Schmidt, F. L., Hunter, J. E., McKenzie, R. C., Muldrow, T. W. 1979.
Impact of valid selection procedures on work-force productivity.
J. Appl. Psychol. 64:609-26
- Schmitt, N., Schneider, B. 1983. Current issues in personnel
selection. In Research in Personnel and Human Resource Management,
ed. K. Rowland, R. Ferris. Greenwich, CT: JAI Press.
- Schnake, M. E. 1983. An empirical assessment of the effects of
affective response in the measurement of organizational climate.
Pers. Psychol. 36:791-807.
- Schneider, B. 1975. Organizational climates: An essay. Pers.
Psychol. 28:447-79
- Schneider, B. 1983. An interactionist perspective on organizational
effectiveness. In Organizational Effectiveness, ed. K. S. Cameron,
D. A. Whetten. New York: Academic. a.
- Schneider, B. 1983. Interactional psychology and organizational
behavior. In Research in Organizational Behavior, Vol. 5, ed. L.
L. Cummings, B. Staw. Greenwich, CT: JAI Press. b.
- Schneider, B., Reichers, A. E. 1983. On the etiology of climates.
Pers. Psychol. 36:19-40
- Schneider, B., Parkington, J. J., Buxton, V. M. 1980. Employee and
customer perceptions of service in banks. Adm. Sci. Q. 25:252-67
- Schwab, D. P., Wicher, D. W. 1983. Systematic bias in job evaluation
and market wages: Implications for the comparable worth debate.
J. Appl. Psychol. 68:60-69
- Schweiger, D. M. 1983. Measuring managers' minds: A critical reply to
Robey and Taggart. Acad. Manage. Rev. 8:143-51

- Seashore, S. E. 1981. Quality of working life perspective. See Van de Ven & Joyce.
- Shamir, B. 1983. A note on tipping and employee perceptions and attitudes. J. Occup. Psychol. 56:255-59
- Shaw, J. B., Riskind, J. H. 1983. Predicting job stress using data from the Position Analysis Questionnaire. J. Appl. Psychol. 68:253-61
- Sheridan, J. E., Abelson, M. A. 1983. Cusp catastrophe model of employee turnover. Acad. Manage. J. 26:418-36
- Singh, R. 1983. Leadership style and reward allocation: Does least preferred co-worker scale measure task and related orientation? Organ. Behav. Hum. Perf. 32:178-97
- Smircich, L. 1983. Concepts of culture and organizational analysis. Adm. Sci. Q. 28:339-58
- Smith, C. A., Organ, D. W., Near, J. P. 1983. Organizational citizenship behavior: Its nature and antecedents. J. Appl. Psychol. 68:653-63
- Smith, F. J. 1977. Work attitudes as predictors of attendance on a specific day. J. Appl. Psychol. 62:16-19
- Smith, K. K., Simmons, V. M. 1983. A Rumpelstiltskin organization: Metaphors on metaphors in field research. Adm. Sci. Q. 28:377-92
- Spencer, D. G., Steers, R. M., Mowday, R. T. 1983. An empirical test of the inclusion of job search linkages into Mobley's model of the turnover decision process. J. Occup. Psychol. 56:137-44
- Staw, B. M. 1984. Organizational behavior: A review and reformulation of the field's outcome variables. Ann. Rev. Psychol. 35:627-66

- Sterns, L., Alexander, R. A., Barrett, G. V., Dambrot, F. H. 1983. The relationship of extraversion and neuroticism with job preferences and job satisfaction for clerical employees. J. Occup. Psychol. 56:145-53
- Stogdill, R. M. 1948. Personal factors associated with leadership: A survey of the literature. J. Psychol. 25:35-71
- Stogdill, R. M. 1974. Handbook of Leadership: A Survey of Theory and Research. New York: Free Press.
- Stone, E. F., Gueutal, H. G., Gardner, D. G., McClure, S. 1983. A field experiment comparing information-privacy values, beliefs, and attitudes across several types of organizations. J. Appl. Psychol. 68:459-68
- Strube, J. J., Garcia, J. E. 1981. A meta-analytic investigation of Fiedler's model of leadership effectiveness. Psychol. Bull. 90:307-21
- Sutton, R. I., Rousseau, D. M. 1979. Structure, technology, and dependence on a parent organization: Organizational and environmental correlates of individual responses. J. Appl. Psychol. 64:675-87
- Taylor, F. W. 1911. The Principles of Scientific Management. New York: Harper.
- Taylor, H. C., Russel, J. T. 1939. The relationship of validity coefficients to the practical effectiveness of tests in selection: Discussion of tables. J. Appl. Psychol. 23:565-78

- Telly, C. S., French, W. L., Scott, W. G. 1971. The relationship of inequity to turnover among hourly workers. Adm. Sci. Q. 16:164-72
- Thorngate, W. 1976. "In general" vs. "it depends": Some comments on the Gergen-Schlenker debate. Pers. Soc. Psychol. Bull. 2:404-10
- Trist, E. L. 1981. The sociotechnical perspective. See Van de Ven & Joyce.
- Turner, A. M., Lawrence, P. 1965. Industrial Jobs and the Worker: An Investigation of Response to Task Attributes. Boston, MA: Harvard University Press.
- Tuttle, T. C. 1983. Organizational productivity: A challenge for psychologists. Am. Psychol. 38:479-86
- Tziner, A. 1983. Correspondence between occupational rewards and occupational needs and work satisfaction: A canonical redundancy analysis. J. Occup. Psychol. 56:49-56
- Van de Ven, A. H., Joyce, W. F. eds. 1981. Perspectives on Organization Design and Behavior. New York: Wiley.
- Van Maanen, J. 1976. Breaking in: Socialization at work. In Handbook of Work, Organization, and Society, ed. R. Dubin. Chicago: Rand McNally.
- Vecchio, R. P. 1983. Assessing the validity of Fiedler's contingency model of leadership effectiveness: A closer look at Strube and Garcia. Psychol. Bull. 93:404-08
- Vredenburg, D. J., Trinkaus, R. J. 1983. An analysis of role stress among hospital nurses. J. Vocat. Behav. 23:82-95
- Vroom, V. R. 1964. Work and Motivation. New York: Wiley.

Vroom, V. H., Yetton, P. W. 1973. Leadership and Decision-Making.

Pittsburgh: University of Pittsburgh Press.

Wallace, M. J., Jr. 1983. Methodology, research practice, and progress in personnel and industrial relations. Acad. Manage. Rev. 8:6-13

Wanous, J. P. 1980. Organizational Entry: Recruitment, Selection and Socialization of Newcomers. Reading, MA: Addison-Wesley.

Wanous, J. P., Keon, T. L., Latak, J. C. 1983. Expectancy theory and occupational/organizational choices: A review and test. Organ. Behav. Hum. Perf. 32:66-86

Weick, K. E. 1979. The Social Psychology of Organizing. Reading, MA: Addison-Wesley, 2nd ed.

Wiggins, J. D., Lederer, D. A., Salkowe, A., Rys, G. S. 1983. Job satisfaction related to testing congruence and differentiation. J. Vocat. Behav. 23:112-21

Wilkins, A. L. 1983. The culture audit: A tool for understanding organizations. Organ. Dyn. 12:24-38

Wilkins, A. L., Ouchi, W. G. 1983. Efficient culturers: Exploring the relationship between culture and organizational performance. Adm. Sci. Q. 28:468-81

Woodman, R. W., King, D. C. 1978. Organizational climate: Science or folklore. Acad. Manage. Rev. 3:816-26

Wofford, J. C., Srinivasan, T. N. 1983. Experimental tests of the leader-environment-follower interaction theory of leadership. Organ. Behav. Hum. Perform. 32:35-54

- Youngblood, S. A., Mobley, W. H., Meglino, B. M. A longitudinal analysis of the turnover process. J. Appl. Psychol. 68:507-16
- Yukl, G. A. 1981. Leadership in Organizations. Englewood Cliffs, NJ: Prentice-Hall.
- Zedeck, S., Jackson, S. E., Summers, E. 1983. Shiftwork schedules and their relationship to health, adaptation, satisfaction and turnover intention. Acad. Manage. J. 26:297-310
- Zohar, D. 1980. Safety climate in industrial organizations: Theoretical and applied implications. J. Appl. Psychol. 65:96-102

DISTRIBUTION LIST

AUGUST 1984

Defense Technical Information
Center (12)
ATTN: DTIC DDA-2
Selection and Preliminary
Cataloging Section
Cameron Station
Alexandria, VA 22314

Deputy Chief of Naval Operations
(Manpower, Personnel, and
Training)
Director, Human Resource
Management
Plans and Policy Branch(OP-150)
Department of the Navy
Washington, D.C. 20350

Naval Material Command
Deputy Chief of Naval
Material, MAT-03
Crystal Plaza #5
Room 236
Washington, DC 20360

Library of Congress
Science and Technology Division
Washington, D.C. 20540

Chief of Naval Operations
Head, Manpower, Personnel,
Training and Reserves Team
(Op-9640)
The Pentagon, 4A478
Washington, D.C. 20350

Naval Personnel R&D Center (4)
Technical Director
Director, Manpower & Personnel
Laboratory, Code 06
Director, System Laboratory,
Code 07
Director, Future Technology,
Code 41
San Diego, CA 92152

Office of Naval Research (3)
Code 4420E
800 N. Quincy Street
Arlington, VA 22217

Naval Research Laboratory (6)
Code 2627
Washington, D.C. 20375

Chief of Naval Operations
Assistant, Personnel Logistics
Planning (Op-987H)
The Pentagon, 5D772
Washington, DC 20350

Navy Personnel R&D Center
Washington Liaison Office
Ballston Tower #3, Room 93
Arlington, VA 22217

Office of Naval Research
Director, Technology Programs
Code 200
800 N. Quincy Street
Arlington, VA 22217

Program Administrator for
Manpower, Personnel, and
Training
MAT-0722
800 N. Quincy Street
Arlington, VA 22217

Commanding Officer
Naval Health Research Center
San Diego, CA 92152

Psychologist
Office of Naval Research
Detachment, Pasadena
1030 East Green Street
Pasadena, CA 91106

Commanding Officer
Naval Submarine Medical
Research Laboratory
Naval Submarine Base
New London, Box 900

Deputy Chief of Naval Operations
(Manpower, Personnel, and
Training)
Head, Research, Development, and
Studies Branch (Op-115)

Naval Material Command
Management Training Center
NAVMAT 09M32
Jefferson Plaza, Bldg #2, RM 150
1421 Jefferson Davis Highway
Arlington, VA 20360

Groton, CT 06349

1812 Arlington Annex
Washington, D.C. 20350

Commanding Officer
Naval Aerospace Medical
Research Lab
Naval Air Station
Pensacola, FL 32508

Director
Civilian Personnel Division(OP-14)
Department of the Navy
1803 Arlington Annex
Washington, D.C. 20350

Naval Material Command
Director, Productivity Management
Office
MAT-00K
Crystal Plaza #5
Room 632
Washington, DC 20360

Program Manager for Human
Performance (Code 44)
Naval Medical R&D Command
National Naval Medical Center
Bethesda, MD 20014

Psychology Department
Naval Regional Medical Center
San Diego, CA 92134

Navy Health Research Center
Technical Director
P.O. Box 85122
San Diego, CA 92138

Naval Postgraduate School (3)
ATTN: Chairman, Dept. of
Administrative Science
Department of Administrative
Sciences
Monterey, CA 93940

Commanding Officer
Human Resource Management
School
Naval Air Station Memphis
Millington, TN 38054

Naval Training Analysis
and Evaluation Group
Orlando, FL 32813

Human Resource Management School
Naval Air Station Memphis (96)
Millington, TN 38054

Commanding Officer
ATTN: TIC, Bldg. 2068
Naval Training Equipment Center
Orlando, FL 32813

U.S. Naval Academy
ATTN: Chairman, Department of
Leadership and Law
Stop 7-8
Annapolis, MD 21402

Commanding Officer
Human Resource Management Center
1300 Wilson Boulevard
Arlington, VA 22209

Chief of Naval Education
and Training (N-5)
Director, Research Development,
Test and Evaluation
Naval Air Station

Superintendent
ATTN: Director of Research
Naval Academy, U.S.
Annapolis, MD 21402

Commanding Officer
Human Resource Management Center
5621-23 Tidewater Drive
Norfolk, VA 23511

Pennsacola, FL 32508

Officer in Charge
Human Resource Management
Detachment
Naval Air Station
Alameda, CA 94591

Commander in Chief
Human Resource Management
Division
U.S. Atlantic Fleet
Norfolk, VA 23511

Chief of Naval Technical Trainin
ATTN: Code D17
NAS Memphis (75)
Millington, TN 38054

Officer in Charge
Human Resource Management
Detachment
Naval Submarine Base
New London

Officer in Charge
Human Resource Management
Detachment
Naval Air Station Whidbey Island
Oak Harbor, WA 98278

Navy Recruiting Command
Head, Research and Analysis
Branch
Code 434, Room 8001
801 North Randolph Street

P.O. Box 81
Groton, CT 06340

Commanding Officer
Human Resource Management Center
Box 23
FPO New York 09510

Arlington, VA 22203

Officer in Charge
Human Resource Management
Division
Naval Air Station
Mayport, FL 32228

Commander in Chief
Human Resource Management
Division
U.S. Naval Force Europe
FPO New York 09510

Navy Recruiting Command
Director, Recruiting Advertising
Department
Code 40
801 North Randolph Street

Commanding Officer
Human Resource Management
Center
Pearl Harbor, HI 96860

Officer in Charge
Human Resource Management
Detachment
Box 60
FPO San Francisco 96651

Arlington, VA 22203

Commander in Chief
Human Resource Management
Division
U.S. Pacific Fleet
Pearl Harbor, HI 96860

Officer in Charge
Human Resource Management
Detachment
COMNAVFORJAPAN
FPO Seattle 98762

Naval Weapons Center
Code 094
China Lake, CA 93555

Officer in Charge
Human Resource Management
Detachment
Naval Base
Charleston, SC 29408

Naval Military Personnel
Command (2)
HRM Department (NMPC-6)
Washington, DC 20350

Jesse Orlansky
Institute for Defense Analyses
1801 North Beauregard Street
Alexandria, VA 22311

Headquarters, U.S. Marine Corps
Code MPI-20
Washington, DC 20380

Headquarters, U.S. Marine Corps
ATTN: Scientific Adviser,
Code RD-1
Washington, D.C. 20380

Education Advisor
Education Center (E031)
MCDEC
Quantico, VA 22134

Commanding Officer
Education Center (E031)
MCDEC
Quantico, VA 22134

Commanding Officer
U.S. Marine Corps
Command and Staff College
Quantico, VA 22134

Defense Advanced Research
Projects Agency
Director, Cybernetics
Technology Office
1400 Wilson Blvd. RM 625
Arlington, VA 22209

Dr. Douglas Hunter
Defense Intelligence School
Washington, DC 20374

Dr. Brian Usilner
GAO
Washington, DC 20548

National Institute of Education
EOLC/SMO
1200 19th Street, N.W.
Washington, DC 20208

National Institute of Mental
Health
Division of Extramural
Research Programs
5600 Fishers Lane
Rockville, MD 20852

National Institute of Mental
Health
Minority Group Mental Health
Programs
Room 7 - 102
5600 Fishers Lane
Rockville, MD 20852

Office of Personnel Management
Office of Planning and
Evaluation
Research Management Division
1900 E Street, N.W.
Washington, D.C. 20415

Chief, Psychological Research
Branch
U.S. Coast Guard (G-P-1/2/TP42)
Washington, DC 20593

Social and Developmental
Psychology Program
National Science Foundation
Washington, DC 20550

Dr. Earl Potter
U.S. Coast Guard Academy
New London, CT 06320

Division of Industrial Science
& Technological Innovation
Productivity Improvement
Research
National Science Foundation
Washington, DC 20550

Douglas B. Blackburn, Director
National Defense University
Mobilization Concepts
Development Center
Washington, DC 20319

Chairman, Dept. of Medical
Psychology
School of Medicine
Uniformed Services University
of the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814

Headquarters, FORSCOM
ATTN: AFPR-HR
Ft. McPherson, GA 30330

Army Research Institute
Field Unit - Leavenworth
P.O. Box 3122
Fort Leavenworth, KS 66027

Technical Director (3)
Army Research Institute
5001 Eisenhower Avenue
Alexandria, VA 22333

Head, Department of Behavior
Science and Leadership
U.S. Military Academy, NY
10996

Walter Reed Army Medical Center
W.R. Army Institute of Research
Division of Neuropsychiatry
Forest Glen
Washington, DC 20012

Army Military Personnel
Command
Attn: DAPC-OE
200 Stovall Street
Alexandria, VA 22322

Research Psychologist
Selection and Classification
Performance Measurement Team
Army Research Institute
Attention: PERI-R5
5001 Eisenhower Avenue
Alexandria, VA 22333

Air University Library
LSE 76-443
Maxwell AFB, AL 36112

Head, Department of Behavioral
Science and Leadership
U.S. Air Force Academy, CO
80840

MAJ Robert Gregory
USAF/DFBL
U.S. Air Force Academy, CO
80840

AFOSR/NL
Building 410
Bolling AFB
Washington, DC 20332

Department of the Air Force
HQUSAF/MPXHL
Pentagon
Washington, DC 20330

Technical Director
AFHRL/MD(T)
Brooks AFB
San Antonio, TX 78235

AFMPC/MPCYPR
Randolph AFB, TX 78150

Australian Embassy
Office of the Air Attache (S3B)
1601 Massachusetts Avenue, N.W.
Washington, DC 20036

British Embassy
Scientific Information Officer
Room 509
3100 Massachusetts Ave. N.W.
Washington, DC 20008

Canadian Defense Liaison Staff,
Washington
ATTN: CDRD
2450 Massachusetts Avenue, N.W.
Washington, DC 20008

Commandant, Royal Military
College of Canada
ATTN: Department of Military
Leadership and Management

Kingston, Ontario K7L 2W3

National Defense Headquarters
DPA
Ottawa, Ontario K1A 0K2

Mr. Luigi Petrullo
2431 North Edgewood Street
Arlington, VA 22207

Dr. Clayton P. Alderfer
Yale University
School of Organization and
Management
New Haven, CT 06520

Dr. Janet L. Barnes-Farrell
Department of Psychology
University of Hawaii
2430 Campus Road
Honolulu, HI 96822

Dr. Jomills Braddock
John Hopkins University
Center for the Social
Organization of Schools
3505 N. Charles Street

Baltimore, MD 21218

Dr. Jeanne M. Brett
Northwestern University
Graduate School of Management
2001 Sheridan Road
Evanston, IL 60201

Dr. Terry Connolly
University of Arizona
Department of Psychology, RM 312
Tucson, AZ 85721

Dr. Richard Daft
Texas A&M University
Department of Management
College Station, TX 77843

Dr. Randy Dunham
University of Wisconsin
Graduate School of Business
Madison, WI 53706

Dr. Henry Emurian
The Johns Hopkins University
School of Medicine
Department of Psychiatry and
Behavioral Science

Baltimore, MD 21205

Dr. Arthur Gerstenfeld
University Faculty Associates
710 Commonwealth Avenue
Newton, MA 02159

Dr. J. Richard Hackman
School of Organization and
Management
Box 1A, Yale University
New Haven, CT 06520

Dr. Wayne Holder
American Humane Association
P.O. Box 1266
Denver, CO 80201

Dr. Daniel Ilgen
Department of Psychology
Michigan State University
East Lansing, MI 48824

Dr. Lawrence R. James
School of Psychology
Georgia Institute of
Technology
Atlanta, GA 30332

Dr. David Johnson
Professor, Educational Psycholog
178 Pillsbury Drive, S.E.
University of Minnesota
Minneapolis, MN 55455

Dr. Dan Landis
The University of Mississippi
College of Liberal Arts
University, MS 38677

Dr. Frank J. Landy
The Pennsylvania State Univ.
Department of Psychology
417 Bruce V. Moore Building
University Park, PA 16802

Dr. Bibb Latane
The University of North Carolina
at Chapel Hill
Manning Hall 026A
Chapel Hill, NC 27514

Dr. Cynthia D. Fisher
College of Business Admin.
Texas A&M University
College Station, TX 77843

Dr. Lynn Oppenheim
Wharton Applied Research Center
University of Pennsylvania
Philadelphia, PA 19104

Dr. Thomas M. Ostrom
The Ohio State University
Department of Psychology
116E Stadium

404C West 17th Avenue
Columbus, OH 43210

Dr. William G. Ouchi
University of California,
Los Angeles
Graduate School of Management
Los Angeles, CA 90024

Dr. Robert Rice
State University of New York
at Buffalo
Department of Psychology
Buffalo, NY 14226

Dr. Irwin G. Sarason
University of Washington
Department of Psychology, NI-25
Seattle, WA 98195

Dr. Benjamin Schneider
Department of Psychology
University of Maryland
College Park, MD 20742

Dr. Edgar H. Schein
Massachusetts Institute of
Technology
Sloan School of Management
Cambridge, MA 02139

Dr. H. Wallace Sinaiko
Program Director, Manpower
Research and Advisory Service
Smithsonian Institution
801 N. Pitt Street, Suite 120

Alexandria, VA 22314

Dr. Eliot Smith
Psychology Department
Purdue University
West Lafayette, IN 47907

Dr. Richard M. Steers
Graduate School of Management
University of Oregon
Eugene, OR 97403

Dr. Barbara Saboda
Public Applied Systems Division
Westinghouse Electric Corporation
P.O. Box 866
Columbia, MD 21044

Dr. Harry C. Triandis
Department of Psychology
University of Illinois
Champaign, IL 61820

Dr. Anne S. Tsui
Duke University
The Fuqua School of Business
Durham, NC 27706

Dr. Andrew H. Van de Ven
University of Minnesota
Office of Research Administration
1919 University Avenue
St. Paul, MN 55104

Dr. Philip Wexler
University of Rochester
Graduate School of Education &
Human Development
Rochester, NY 14627

Dr. Sabra Woolley
SRA Corporation
901 South Highland Street
Arlington, VA 22204

END

FILMED

10-84

DTIC