ORGANIZATIONAL BEHAVIOR: WHERE WE'VE BEEN, WHERE WE'RE GOING

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In 1979, Terry Mitchell, author of the first Annual Review of Psychology chapter on organizational behavior (OB), noted that OB "has become a distinct discipline with a focus on individual and group behavior in the organizational context" (1979:244). In the 11 years since this first chapter, there have been five additional reviews of OB (Cummings 1982; Staw 1984;

Schneider 1985; House & Singh 1987; Ilgen & Klein 1989). Ilgen & Klein (1989) call attention to the cognitive revolution that has characterized much theory and research in OB. House & Singh (1987) offered an in-depth treatment of leadership and reminded us to consider the ramifications of organizational evolution as we study processes within organizational settings. Schneider (1985) noted the importance of distinguishing between the individual and group levels of analysis in our research. Staw (1984) focused on the more applied aspects of OB as seen in the typical outcome variables used by OB researchers. Cummings (1982) called attention to macro-OB topics and highlighted methodological advances. Each of these chapters provides a rich cross-section of the field during the past 11 years.

Other important books, updates, and summaries have also appeared. For example, a recent issue of the American Psychologist was devoted to the changing face and place of work. In the introductory article, Offermann & Gowing (1990) discuss the future challenges facing both scholars and practitioners interested in organizations. They note the dramatic changes in the demography of the US workforce, the increased competition and challenges of maintaining productivity in a global environment, and the enormous impacts on organizations these will bring. How does research in the field of organizational behavior fit with these changes?

As we enter the 1990s, it seems useful to reflect broadly on what has changed in OB research since 1979 and to consider where the field is headed. This chapter is organized around three general questions. First, "Where has the field of organizational behavior been?" The six *Annual Review* chapters and other research summaries and journal contents offer a clear record of the trends and progress of the last decade.

Second, "Where is the field of OB today?" An answer can be found in the major organizational behavior journals published during the period 1987–1990 [i.e. Academy of Management Journal (AMJ), Academy of Management Review (AMR), Administrative Science Quarterly (ASQ), Journal of Applied Psychology (JAP), and Organizational Behavior and Human Decision Processes (OBHDP)]. These journals form the core for North American OB researchers. Other psychology and sociology journals (e.g. Journal of Personality and Social Psychology, American Journal of Sociology) and more international journals (e.g. Journal of Occupational Psychology, Human Relations) also publish relevant research. A content analysis of the types of articles published in these core journals as well as a review of the research published in a broad set of relevant journals will define the current state of OB research.

Finally, "Where is the field of OB going?" Based on emerging trends in research and exogenous changes in organizations and their environments, suggestions are made about areas of research that appear to offer promise for

the construction of new theories and better insight into organizational phenomena.

WHERE HAS THE FIELD OF ORGANIZATIONAL BEHAVIOR BEEN?

What Is OB?

Each of the previous Annual Review chapters on the field has offered a definition of organizational behavior. Some authors have defined it in terms of its disciplines. Schneider (1985), for instance, defines OB as "the confluence of individual, group, and organizational studies flowing from industrialorganizational (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)" (p. 574). Barry Staw (1984) focuses on the fundamental bifurcation in the field between the micro side (with its roots in psychology) and the macro side (drawing from sociology, political science, and economics). OB functions almost as two separate disciplines, with the macro researchers typically identifying with the American Sociological Association and the micro researchers with the American Psychological Association. This schizophrenic orientation is heightened by the tension between basic and applied research: Macro researchers are characteristically interested in broad theories and descriptive, empirical research not aimed at application, while micro researchers tend toward narrower theories and research topics involving application.

Fortunately, micro and macro research interests intersect at several points. The first is in the professional association, the Academy of Management, and its major journals, *The Academy of Management Journal* and the *Academy of Management Review*. These publications, along with others such as *Administrative Science Quarterly* and *Human Relations*, publish a blend of micro- and macro-OB studies. Second, as shown below, the tendency is growing for micro and macro studies to draw from each other's theory and research (Pfeffer 1982), and attention to issues of cross-level theory and research is increasing (e.g. Capelli 1990). Given the scope of the field and the interests of readers of the *Annual Review*, the present chapter reviews primarily material in micro-OB. Reviews of macro topics are available in the *Annual Review of Sociology*.

Themes in OB Research

Over the past decade, the micro-OB themes most frequently researched and reviewed have been: job attitudes; motivation; leadership; job design; individual differences; and outcomes such as absenteeism, turnover, and per-

formance. While progress has been made, many of the discipline's theoretical streams have reached the point of diminishing returns. Many early theories of motivation, leadership, and job design have now been well researched. Recent studies tend to clarify fine theoretical points or establish boundary conditions rather than set off in new directions. For example, in the late 1970s, competing theories of job design created a lively intellectual dispute, and various theories of leadership competed actively for attention; but much of this theoretical foment has receded over the last ten years. Several books and chapters have provided authoritative summaries of research areas (e.g. Griffin 1987; Locke & Latham 1990; Vroom & Jago 1988), but few new theories or topics have emerged to focus attention. Many researchers now exhibit a more methodological orientation, with numerous meta-analytic studies summarizing areas of study (e.g. McEvoy & Cascio 1989; Wanous et al 1989).

While the micro side of OB seems to be in a dormant period, attention and interest have shifted substantially to the macro side. In 1979, 70% of the studies published in the *Academy of Management Journal* were on micro topics. By 1989 this figure had fallen to 38%. *Annual Review* authors in 1982, 1984, 1985, and 1987 called for more attention to cross-level research, studies that incorporate both individual and group or organizational-level variables. Mitchell (1979) and Ilgen & Klein (1989) both noted that micro-OB may have focused too narrowly, concentrating on rigorous empirical studies at the expense of more encompassing theory. Indeed micro-OB has attended to a comparatively narrow range of topics during the past decade.

WHERE IS THE FIELD OF MICRO-OB TODAY?

For the years 1987, 1988, and early 1990, all articles published in *JAP*, *AMJ*, *AMR*, *ASQ*, *OBHDP*, and the annual *Research in Organizational Behavior* volumes edited by Cummings & Staw and Staw & Cummings (1987–1989), were classified into content categories (e.g. test validation, job design, leadership, strategy, groups, etc). The proportion of studies published on particular topics was then used as an indicator of research interest.

Several themes defining the field of OB are notable. First, while both JAP and OBHDP remain almost exclusively micro or psychological in their orientation, the three major cross-disciplinary journals (AMJ, AMR, and ASQ) are now predominantly macro. For example, fewer than 40% of the articles published in AMJ are micro, while fewer than 20% of AMR and ASQ papers could be considered fundamentally psychological. This represents a significant shift in the field toward such macro topics as strategy and organizational design—approximately 40% of articles in AMJ during 1987–1990 were on strategy, organizational design, or control. A decade ago a comparable proportion of studies would have been on work attitudes and motivation.

On the micro side, the tally shows much of the research focused on methodological or validation issues. During the period reviewed here, almost 30% of articles published in *JAP* were methodological (e.g. validity generalization). If, for purposes of this review, one ignores more traditional industrial/organizational studies (e.g. performance appraisal, jury selection, training, human factors) and focuses primarily on traditional micro-OB topics, most research during 1987–1990 has centered on five areas: motivation (61 studies); work attitudes such as job satisfaction and commitment (38 studies); job analysis and task design (34 studies); studies of turnover and absenteeism (32); and leadership (21 studies). Not surprisingly, these have also been the topics most often reviewed by *Annual Review of Psychology* authors.

In 1979, Terry Mitchell organized his chapter around job attitudes, motivation, and leadership, taking a more pessimistic view of research on personality and individual differences. The following sections briefly review the five topic areas in micro-OB that received the most research attention during 1987–1990. Let's see what, if anything, has changed in the intervening decade.

Motivation

Over the past several years, motivation has been the most frequently researched topic in micro-OB, with over 60 studies published. In their recent review, Katzell & Thompson (1990) define work motivation as "a broad construct pertaining to the conditions and processes that account for the arousal, direction, magnitude, and maintenance of effort in a person's job" (p. 144). Under this general definition, a variety of new approaches have been suggested. Hyland (1988), for example, proposes a control-theory framework in an effort to integrate early motivational theories, including those by Atkinson, Deci, and Locke. In this view, behavior is explained in terms of variation in either the amount of energy invested in specific goals, the goals themselves, or the organization of the goals. Klein (1989) also proposes a control-theory model to integrate earlier work. Both of these approaches are ambitious but at present lack empirical support. Guastello (1987) also offers a new perspective, suggesting that motivation may best be explained using nonlinear catastrophe models. He offers some evidence for these nonlinear effects in explaining academic performance. Other novel approaches to motivation include the use of scripts as determinants of behavior (Lord & Kernan 1987) and a focus on the role of language in motivation theory (Sullivan 1988). Kanfer & Ackerman (1989) offer both a theoretical perspective and relevant empirical evidence demonstrating how motivation and cognitive ability can be integrated within an information-processing framework. They show, for instance, how interventions designed to engage motivational processes may impede task learning if presented before the subject understands the task. Their results suggest that researchers must pay greater attention to interactions between cognitive abilities and motivational interventions.

While these represent less frequently used motivational theories, the bulk of the empirical research in organizational behavior continues to focus on two dominant theories: goal setting and equity. A resurgence of interest in intrinsic motivation has occurred primarily in social psychology.

GOAL SETTING This approach continues to attract the bulk of research attention, with over 20 studies published in the past few years. Locke & Latham (1990) have published the definitive book on the subject, A Theory of Goal Setting and Task Performance, in which they summarize and integrate research done over 25 years and encompassing over 500 experiments and 40,000 subjects. Their comprehensive review treats the efforts of such researchers as Earley (e.g. Earley et al 1989), Hollenbeck (e.g. Hollenbeck et al 1989), and Erez (e.g. Erez & Earley 1987). In their Chapter 2, Locke & Latham summarize the core findings of this stream of research: goal difficulty is linearly related to performance; and the establishment of specific, difficult goals is associated with levels of performance higher than those associated with instructions to do your best or with an absence of assigned goals. Further, goal commitment is crucial to the effectiveness of goal setting (e.g. Locke et al 1988). Overall, this work is broad, deep, and, as Locke & Latham (1990) stress, useful to practitioners.

Two noteworthy studies illustrate this general approach. Pritchard et al (1988) report the results of an extraordinary field study using five intact work groups studied over two years. The study involved multiple, sequential examinations (using the researchers' own productivity measurement system) of how feedback, goal setting, and incentives affected group productivity. Group-level feedback increased productivity an average of 50% over baseline, group goal setting increased productivity another 25%, and incentives increased productivity still further. This study, complex and careful, provides convincing evidence for the utility of goal setting, feedback, and incentives in attempts to increase group productivity.

In a second notable study, Latham, Erez, and Locke (Latham et al 1988) jointly designed an experiment to resolve their conflicting findings. Previous research by Erez and her colleagues had shown that participation in goal setting was crucial to obtaining goal commitment. Latham and his colleagues had found that assigned goals were generally as effective as those set participatively. In collaboration with Locke, a set of definitive experiments was jointly designed and conducted. Results showed that previous differences had resulted from Erez's "tell" instructions under the assigned-goals condition

versus Latham's "tell and sell." Together, the experiments conducted by Latham et al (1988) showed that the motivational effects of assigned goals are as powerful as those of participatively set goals in generating goal commitment and subsequent performance.

EQUITY THEORY Equity theory has continued to attract substantial attention, with 13 studies during 1987–1989. Much of the current interest is focused on issues of procedural and distributive justice (e.g. Greenberg 1987a). A core problem with equity theory has been that in emphasizing the results of reward-allocation, researchers have typically ignored reactions to how the decision leading to the results was made. Evidence, however, suggests that people may react differently to the same inequity depending on their beliefs about how the inequity was created. Greenberg (1987b), for instance, offers an interesting taxonomy based on how various equity theories focus attention on the processes used to make decisions.

Evidence for the general validity of equity theory and data on the effects of both procedural and distributive justice continue to accumulate. For example, Greenberg (1988), in a clever field experiment involving the office relocation of insurance company employees, finds that workers reassigned to higher-status offices raised their performance while those reassigned to lower-status offices lowered their performance levels, both predictions consistent with equity theory. Folger & Konovsky (1989), in a study of employee reactions to pay raises, found that distributive justice considerations better accounted for variance in satisfaction, while procedural justice accounted for greater variance in several other work attitudes. In a laboratory study, Greenberg (1987c) found that subjects were most concerned with procedural justice when they were underrewarded.

Several new theoretical variants of equity theory have also been developed. Lind & Tyler (1988) proposed a group-value approach to procedural justice. Tyler's results (1989) suggest that judgments about the fairness of the process may affect both preferences for the procedure and assessments of procedural justice. Folger (1986) has proposed a referent-cognitions-theory (RCT) approach to procedural justice that emphasizes the role decision-making procedures play in shaping perceptions of unfair treatment. Cropanzano & Folger (1989) found that subjects who expressed a preference for how their performance was to be judged and then were told that their preference had not been heeded were more likely to complain of unfair treatment than subjects who were not given a choice. Other research has also demonstrated that feelings about equity may be affected by individual preferences and interpersonal factors (Dalton et al 1987; Griffith et al 1989; Huseman et al 1987; Rasinski 1987). These refinements and extensions in theory continue to make equity an active topic in micro-OB.

In 1979, Mitchell noted that one of the new INTRINSIC MOTIVATION directions in research on motivation was based on Deci's (1975) finding that when people are engaged in intrinsically interesting tasks, added external rewards (e.g. monetary payments) may decrease task interest. Similarly, people who can be induced to engage in a task without extrinsic rewards may subsequently evaluate the task on its intrinsic properties, even when such tasks seem uninteresting. Extending this early theory, Deci & Ryan (1985) have argued that contextual factors do not determine behavior in any straightforward sense; instead, individuals provide psychological meaning, referred to as "functional significance," to those contextual factors. Of central importance is whether people construe contexts as supporting their autonomy (e.g. encouraging them to make their own choices) or controlling their behavior. Deci & Ryan (1987) have recently extended their theory and conclude, based on a wide range of evidence, that "when the context is autonomy supportive, people initiate regulatory processes that are qualitatively different from those that are initiated when the functional significance of the events or context is controlling" (p. 1033). In their view, what distinguishes intrinsic and extrinsic motivation is whether an activity is engaged in for its inherent satisfaction or done to obtain a separable goal.

Deci et al (1989) offer empirical evidence that supervisors' support for self-determination increased subordinate trust and satisfaction. Other studies have obtained similar results (e.g. Cellar & Wade 1988). In general, how contextual cues affect motivation depends on the nature and salience of an individual's performance goals. When an individual is engaging in a task for intrinsic rather than instrumental reasons, extrinsic rewards and feedback typically reduce interest, whereas the opposite is not the case (e.g. Harackiewicz et al 1987; Sansone et al 1989). Cellar & Barrett (1987) suggest that these results may stem from different scripts or labels applied to the activity (e.g. play vs work). Hirst (1988) demonstrated that task interdependence and goal setting can affect intrinsic motivation. Using 64 managers engaged in two laboratory tasks, he showed that for each independent activity, setting specific, difficult goals increased intrinsic motivation while the same goalsetting process reduced intrinsic motivation when the tasks were reciprocally interdependent. He interpreted these findings as showing that task interdependence provides more opportunities for subjects to experience feelings of competence.

While findings such as these generally support Deci & Ryan's (1987) theory, questions still exist about the circumstances under which extrinsic reinforcers impair intrinsic motivation. Scott et al (1988), for instance, have shown that adding a monetary incentive increased task performance without diminishing intrinsic interest. In an analysis of a 114-month data series from a unionized iron foundry, Wagner et al (1988) found that a nonmanagerial

incentive system had positive long-term effects on productivity. These results suggest the importance of understanding the individual's motives for engaging in a task, and of recognizing that people have both instrumental and intrinsic interests. Research has not yet clarified these distinctions sufficiently. Nevertheless, given the prevalence of extrinsic reinforcers in organizations and the frequent need for initiative and innovation among workers, interest in intrinsic motivation appears to be important for future organizations.

Overall, motivation continues to generate a great deal of research, both in what Katzell & Thompson (1990) refer to as exogenous theories (those concerned with independent variables that can be changed by external agents, such as goals or reinforcements) and in endogenous theories (those focused on internal processes that mediate the effects of work conditions on performance, such as equity and attributions). Most recent research has centered on the three major theories discussed. Other work has examined individual differences, such as needs (Raven 1988), self-esteem (Sandelands et al 1988), and Type A patterns (Spence et al 1989). The importance of the topic of motivation for practitioners is likely to increase in the next decade as the number of new workers entering the work force declines. Offermann & Gowing (1990) report that in the 1970s there were about 3 million new workers per year. By 1995 there will be 1.3 million fewer workers, in absolute terms, in the 18-24-year-old cohort. The number of people aged 48-53 will increase by 67% between 1986 and 2000. These are massive changes. At lower organizational levels, there may be significant labor shortages; and in the middle of the hierarchy, promotion rates may slow considerably. Issues of motivation for younger, older, and ethnically diverse workers will likely become more salient.

Work Attitudes

Work-related attitudes (e.g. job satisfaction, commitment, and self-reported stress) comprise the second most frequently published topic in micro-OB. Work attitudes are typically defined as positive or negative evaluations about aspects of one's work environment. While much of this research is conventional, concerned with the development and validation of attitude measures (e.g. Ironson et al 1989) or investigating antecedents and consequences of job attitudes (e.g. Frone & McFarlin 1989; Meyer et al 1989), new and exciting research has begun to explore the basic nature of affect in the workplace (e.g. Levin & Stokes 1989), the relationship between moods and work outcomes (Meyer & Shack 1989; Sinclair 1988), and the expression of emotion at work (Rafaeli & Sutton 1989). This research shows great promise for clarifying and extending our understanding of work-related attitudes.

JOB SATISFACTION In spite of substantial evidence that it is not consistently linked to performance (e.g. Staw 1984), job satisfaction remains the single most frequently studied job attitude, accounting by some estimates for over 4000 published studies (O'Connor et al 1978). Researchers continue to develop and refine measures of job satisfaction. Roznowski (1989), for instance, suggests improvements to Smith et al's (1969) Job Descriptive Index (JDI), the most frequently used measure of job satisfaction. Ironson et al (1989) describe the construction of a global satisfaction measure, the Job in General scale. Using over 9000 respondents, they argue that global and facet satisfaction scales may not be equivalent. Other researchers continue to develop alternative satisfaction scales (Kerber & Campbell 1987; Scarpello & Vandenberg 1987), including instruments intended to determine whether job satisfaction measures are comparable (e.g. Brief & Roberson 1989; Sawyer 1988) or susceptible to method bias (Spector 1987).

Researchers continue to explore the antecedents and consequences of job satisfaction. For example, questions still exist about the nature of the association between age and job satisfaction. In a meta-analysis, Brush et al (1987) report positive associations between age and satisfaction, while Kacmar & Ferris (1989) find support for both a linear and a U-shaped relationship. Pond & Geyer (1987) find that employee age is associated with the relation between perceived job alternatives and satisfaction. Tsui & O'Reilly (1989) argue that demographic effects may be nonlinear, with increasing distance (in tenure, age, race, and education) between superiors and subordinates having progressively larger effects. They show, for example, that increasing variation in demographic attributes between superiors and subordinates have negative effects on job attitudes beyond what is captured by simple demographic variables.

Several studies have focused on how satisfaction at work is related to satisfaction away from the job. Shaffer (1987) suggested that the inconclusiveness of such studies may be explained by the varying background experiences of the workers in the samples. Contrary to previous reviews, Tait et al (1989) found considerable overlap between work and nonwork satisfaction, with stronger associations for men than for women, in studies published prior to 1974. In a related vein, Parasuraman et al (1989) reported lower levels of job satisfaction among husbands of employed women than among husbands of housewives.

An interesting dispute in the literature concerns the degree to which job satisfaction may be dispositional. The controversy was provoked largely by the studies of Staw and his colleagues (Staw et al 1986; Staw & Ross 1985), who provided evidence suggesting that affective responses to work may be stable over time and across jobs. This position has been vigorously attacked by situationists in a resurrection of the person-situation debate (e.g. Davis-

Blake & Pfeffer 1989). Gerhart (1987), for example, criticizes the original Staw research and uses longitudinal data to assess the impact of changes in job complexity on job satisfaction. He argues that over a three-year interval job complexity significantly affects subsequent job satisfaction. However, Gerhart also finds previous job satisfaction to predict current satisfaction and acknowledges the importance of both. In a provocative study of 34 pairs of identical twins, Arvey et al (1989) reported that roughly 30% of variance in general job satisfaction was due to genetic factors. (The investigators attempted to control for job characteristics.) Other studies, notably those showing the stability of negative affect as a disposition (e.g. Levin & Stokes 1989), raise interesting issues about the causes and consequences of job satisfaction. These significant new approaches may extend the study of job satisfaction in useful ways.

COMMITMENT In 1979, Mitchell noted that research in organizational commitment was relatively new. By 1985, a substantial amount of research had accumulated, with the Organizational Commitment Questionnaire (OCQ) representing the dominant approach (Mowday et al 1982). By this point, however, Schneider (1985) noted that some confusion had developed in defining the construct. Although progress is being made, some of this confusion still exists.

First, what is commitment and how does it differ from similar constructs such as job involvement and satisfaction? Mowday et al (1982) define commitment in terms of an individual's identification with and involvement in a focal organization. Their measure, the OCO, includes assessments of motivation, intent to remain, and identification. Several researchers have examined the factor structure of the OCQ and reported multiple factors rather than a unidimensional structure (e.g. Tetrick & Farkas 1988). Others have suggested that there may be two types of commitment; one attitudinal (reflecting identification) and the other behavioral (indicating an intent to stay) (Meyer & Allen 1984). McGee & Ford (1987) report that there may be even more dimensions. Using the Meyer & Allen (1984) measures, they found a single dimension for affective commitment and two dimensions for continuance commitment (one based on having few employment alternatives, the second on the personal sacrifice associated with leaving the organization). Affective commitment was correlated negatively with few employment alternatives and positively with personal sacrifice. O'Reilly & Chatman (1986) argue that part of the confusion surrounding the construct stems from a failure to differentiate between the antecedents to commitment and the consequences of being committed. They suggest distinguishing commitment (psychological attachment resulting from identification and internalization) from compliance. Caldwell et al (1990) report two factor-analytically derived dimensions, one defined by identification [similar to that of Mowday et al (1982)] and one based on compliance or instrumental attachment [similar to the continuance commitment of Meyer & Allen (1984)]. Other studies have broadened the notion of commitment to include commitment to careers (Blau 1988) and to the union (e.g. Klandermans 1989; Magenau et al 1988; Tetrick et al 1989). Other research has shown that commitment is empirically distinct from related constructs such as job satisfaction and job involvement (Brooke et al 1988; Farkas & Tetrick 1989; Glisson & Durick 1988; Meyer et al 1989).

Numerous other investigations have explored both the antecedents and the consequences of commitment. Several studies have shown that organizational attributes such as structure, human-resource practices, reward systems, and leadership may affect individual commitment (DeCotiis & Summers 1987; Glisson & Durick 1988; Luthans et al 1987; Mottaz 1988). In an interesting qualitative study of a college basketball team, Adler & Adler (1988) identified five elements essential to the development of intense loyalty: domination by a strong leader, identification with the group and its leader, commitment through investment and public expression, integration into cohesive groups, and clarity of goals and expectations. These socialization experiences appear similar to the processes that lead to behavioral commitment (Staw & Ross 1989) and are often found in high-involvement organizations (Galanter 1989; Lawler 1988; O'Reilly 1989).

Continuing interest in organizational commitment stems in part from the generally positive consequences that result when organizations have committed members. Research findings continue to show that higher levels of commitment are related to lower turnover intentions (Shore & Martin 1989), lower actual turnover (Farkas & Tetrick 1989; O'Reilly & Chatman 1986), and higher job performance (Meyer et al 1989). Randall (1987), however, doubted that the consequences of high employee commitment are uniformly positive and suggested that negative personal and organizational consequences may stem from family tensions and lack of organizational flexibility. In a partial test of the latter suggestion Romzek (1989) investigated the relationship between job commitment and satisfaction (both in and out of work). She reported that the consequences of employee commitment for the individual are positive, supporting the notion that psychological attachment to an organization may yield personal benefits and contradicting the idea that individuals must pay a high price for high levels of organizational commitment.

STRESS During 1987–1990, 19 studies focused on the determinants of job stress. Several suggest that the lack of clarity in previous research on the topic stems from the multidisciplinary nature of the field and the overreliance on self-report measures (Handy 1988; Steffy & Jones 1988). Brief et al (1988)

offer provocative evidence that a person's disposition toward negative affectivity may inflate reports of stress. Convincing evidence exists for the relationship between certain aspects of job design and increased stress, although the evidence for moderator effects remains mixed (Dooley et al 1987; Frone & McFarlin 1989; Martocchio & O'Leary 1989; Sutton & Rafaeli 1987). Spector et al (1988) find both convergent and discriminant validity for the associations between stress and job autonomy, workload, number of hours worked, and number of people worked for. Martin & Wall (1989) report increased stress from jobs with increased attentional demand and cost responsibility. In a new book, Karasek & Theorell (1990) conclude that stress is a function of what they call "decision latitude"—whether the incumbent has a chance to use skills, exercise initiative, and otherwise control the working conditions. Tetrick & LaRocco (1987) also report that understanding and control can moderate reports of stress, as can support from others (Barling et al 1987; Russell et al 1987) and stress management interventions (Bruning & Frew 1987; Jones et al 1988). A comprehensive review and critique of stress management interventions (Ivancevich et al 1990) concludes that much of our present knowledge about these techniques is based on methodologically weak research, although more rigorous studies are appearing at a slowly increasing rate.

Research in the area of positive/negative affect and AFFECT AND MOOD mood promises to reorient our thinking about work attitudes. In 1982, Zevon & Tellegen (1982) suggested that positive and negative affect might be separate dimensions, not opposite ends of the same continuum as assumed in most research on job attitudes. In a short time frame, the two feelings may appear inversely related, since we typically have a dominant affective response to a stimulus; but Diener & Emmons (1985) have cleverly demonstrated how, over time, positive and negative affect are independent constructs. Watson & Tellegen (1985) confirmed the two-factor structure of mood. They showed that high positive affect reflects the degree to which a person feels enthusiastic, active, and alert. Low positive affect is characterized by sadness and lethargy. High negative affect is a general dimension of subjective distress and unpleasurable engagement including feelings of anger, disgust, and guilt. Low negative affect is characterized by feelings of calmness and serenity. Watson & Tellegen (1985) offer a circumplex of moods defined by the positive and negative axes that has been replicated several times (e.g. Russell et al 1989a). Most recently, Meyer & Shack (1989) have shown how the two mood dimensions may relate to basic personality structures.

Drawing upon this work, a number of researchers have developed measurements of positive and negative affect. Watson et al (1988) developed a brief,

easy to administer 10-item mood scale, the Positive and Negative Affect Schedule (PANAS). Russell et al (1989b) constructed the Affect Grid, a single-item scale, designed as a quick means of assessing affect along the dimensions of pleasure-displeasure and arousal-sleepiness. Burke et al (1989) offer four unipolar factors assessing each of the four affective states.

Recognizing that positive and negative affect are separate dimensions and that these affective states may be dispositional has fundamental implications for the study of work attitudes. For instance, even transitory positive moods have been shown to increase helping behavior (Carlson et al 1988), increase the likelihood of accepting feedback (Esses 1989), result in more positive impressions of others (Forgas & Bower 1987), and facilitate creative problem solving (Isen et al 1987). Positive mood states have also been found to affect subjects' utility estimates (e.g. Isen et al 1988). Negative affect has been shown to increase perceived stress, health care needs (Salovey & Birnbaum 1989), and the accuracy of perceptions (e.g. Sinclair 1988). Shelley Taylor (1989) has summarized much of this research in a recent book.

The recognition that affect cannot be adequately assessed as a single dimension and that affect may have a dispositional component raises important questions about traditional work attitudes, such as satisfaction (Levin & Stokes 1989), job stress (Burke et al 1989), and even outcomes such as absenteeism (George 1989) and group behavior (George 1990). Indeed, as Sutton & Rafaeli (1988) have shown, the question of how emotion is displayed at work has been underresearched (e.g. Rafaeli 1989; Rafaeli & Sutton 1987, 1989). The general approach to work-related attitudes appears to be undergoing a provocative reappraisal.

Job Design

In his 1984 review, Barry Staw identified research on job design as the most active forum for work on job attitudes. During the 1970s, most of this research was based on Hackman & Oldham's Job Characteristics Theory (1980). This formulation posited that five job characteristics (skill variety, task identity, task significance, autonomy, and feedback) contribute to internal work motivation and job attitudes. This approach is based on a needfulfillment notion that certain job characteristics are associated with increased motivation. In the late 1970s, Salancik & Pfeffer (1977, 1978) criticized this approach and proposed an alternative Social Information Processing (SIP) view, which claimed that task perceptions and affective responses were functions of social cues. These alternative perspectives sparked substantial debate and research (e.g. Roberts & Glick 1981). In reviewing this literature, Ilgen & Klein (1989) conclude that "The primary conclusion to be drawn from this work is that social cues do affect perceptions of job characteristics and affective responses to jobs" (Griffin 1987; Griffin et al 1987).

Although evidence for an integrated perspective seems convincing, research continues on both sides of the debate (Hogan & Martell 1987; Kilduff & Regan 1988). Several recent studies, for example, have proposed revisions of the original Job Diagnostic Survey (JDS) (Idaszak et al 1988; Idaszak & Drasgow 1987; Kulik et al 1988). Zaccaro & Stone (1988), in a study of chemical plant employees, confirmed the relationship between JDS-based measures and job satisfaction but also found effects for job characteristics not assessed with the JDS, leading them to conclude that use of the JDS alone may needlessly restrict researchers' ability to explain outcomes such as job satisfaction and intent to leave. They argue that two non-JDS measures, job-related danger and intellectual demand, are also important. Other researchers have also suggested the need for better measures of task complexity (Campbell 1988; Gerhart 1988). From an SIP viewpoint, Kulik (1989) has shown that judgments of a job's motivating potential may depend on the categorizations made by respondents; that is, individuals may use protypical categories to assess a job's motivating potential rather than systematically evaluating job characteristics. Sandelands & Calder (1987) found that subjects may organize perceptions of tasks in ways not adequately captured through a priori measurement schemes. James & James (1989) explored the larger question of how individuals impute meaning to their work environments. Using a hierarchical cognitive model they find a single, general factor underlying several different measures and conclude that people may evaluate work based on a simple notion of how its facets are personally beneficial.

Staw & Boettger (1990) address a new topic, task revision. They argue that an overlooked aspect of job design is the ability and willingness of job incumbents to correct faulty procedures. Results of several laboratory experiments show that goal setting inhibited task revision while accountability pressures facilitated it. Overall, however, the excitement in job design research shown in the late 1970s has diminished, with most current efforts falling into the realm of extensions or refinements of existing theories.

An interesting perspective on the current state of job design research is offered by Campion (1988), who notes that in micro-OB most research has focused on the motivational properties of jobs. However, other active streams of research on job design in disciplines such as industrial engineering, ergonomics, and human information processing, have had different outcome measures in mind. For example, using a sample of 92 jobs and over 1000 respondents, he shows that different job attributes are systematically related to different job outcomes and largely independent of each other and of individual moderator effects. Perceptual and motor skill assessments, for example, were strongly related to reliability of performance but not to job attitudes. Campion concludes that, independent of the types of jobs, nature of the instruments used, or level of analysis, a comprehensive theory of job design needs to be

interdisciplinary. He offers a useful taxonomy. This suggestion seems particularly appropriate since most of the industrial psychological research on job analysis has proceeded virtually independently of interest in job design (e.g. Harvey & Lozada-Larsen 1988; Mullins & Kimbrough 1988).

Turnover and Absenteeism

During the past three years over 30 studies of absenteeism and turnover have been published. In general, these investigations try either (a) to predict absenteeism or turnover by using an arbitrary set of predictors or by selecting variables from one or another model of the withdrawal process (e.g. Frayne & Latham 1987; Griffeth & Hom 1988; Inwald 1988) or (b) to improve prediction through the identification of moderator variables (e.g. Carsten & Spector 1987; Kanfer et al 1988; Parkes 1987).

For instance, direct associations between turnover and job satisfaction have typically not been large—usually less than r = .40 (Carsten & Spector 1987). This has led researchers to search for potential moderators of this relationship. Several studies have shown that people are less likely to leave their jobs when the external labor market makes leaving one's job costly or when alternative employment opportunities are fewer (Capelli & Chauvin 1990; Rusbult et al 1988; Withey & Cooper 1989). Carsten & Spector (1987) showed that satisfaction-turnover relationships were stronger when alternative job opportunities were plentiful. Others have argued that the use of self-report measures of job alternatives is flawed (Steel & Griffeth 1989). In a meta-analysis of studies of turnover and employee performance, McEvoy & Cascio (1987) found that turnover is generally lower among good performers. In a field study of new employees, Kanfer et al (1988) found that poor performers were more likely to leave in the first year than were good performers; poor performers were absent more frequently during this period. Analogous studies have found moderators of absenteeism to include variables such as body weight (Parkes 1987), organizational policies (Farrell & Stamm 1988; Majchrzak 1987) and gender (Hackett 1989). In an interesting field study of underground coal miners, Goodman & Garber (1988) showed that absenteeism was related to increased chances of accidents when such absenteeism lessened familiarity with job procedures. In another interesting approach, Mathieu & Kohler (1990) showed that group-level absence significantly predicted subsequent individual absence beyond that predicted by previous individual absence. This evidence suggests that group-level factors may influence individual absence behavior.

While these studies add useful increments to our knowledge about absenteeism and turnover, perhaps the most interesting developments in this area have been methodological. Two techniques with origins in biomedical statistics—survival analysis and event history models—are particularly well

suited to longitudinal analysis of data with such binary dependent variables as absenteeism and turnover. While these models have been widely used in sociology (Tuma & Hannan 1984), they have only recently been introduced into the micro-OB literature (e.g. Fichman 1988, 1989; Peters & Sheridan 1988). Morita et al (1989) provide an excellent introduction to survival analysis of turnover, while Harrison & Hulin (1989) provide an equally lucid application of event history models to absenteeism.

Both of these approaches allow time to be included as a variable in the research design. Harrison & Hulin (1989), for example, note that the typical study of absenteeism uses measures created by aggregating either the frequency or duration of absences over an arbitrary period. Such measures are rarely normally distributed, and the arbitrary selection of a time frame for aggregation can create difficulties in assessing causality. By their estimate, 25 of 27 studies of absenteeism published during 1982–1986 failed to take these biases into account and used inappropriate analyses.

The advantage of survival analysis is that one can simultaneously examine the relationships of occurrence and timing of turnover. These statistical models are based on the probability that an event of interest (e.g. turnover or absence) will occur for a given individual in a specified time interval. These estimated probabilities can be related to linked variables of theoretical interest. Problems of right- or left-censored data can also be accommodated. O'Reilly et al (1989) used event history models to examine the impacts of work group demography and social integration on turnover. They found that heterogeneity in group composition based on date of entry led to decreased social integration. This, in turn, led to subsequent turnover. These data analytic approaches are both more appropriate and more powerful elucidators of behavioral processes that unfold over time than the static analyses often seen in the literature. They should permit future research to examine the causes of absenteeism and turnover more carefully.

Leadership

Leadership has continued to attract considerable research attention over the past three years, with more than 20 studies published. Indeed, Bass (1981) estimates that over 5000 studies of leadership have been published. Several excellent reviews of this topic are available, so extensive coverage need not be provided here. House & Singh (1987) provide a comprehensive review of much of the recent literature, and a number of other excellent chapters and books have been published recently (Fiedler & Garcia 1987; Vroom & Jago 1988; Yukl 1989).

Hollander & Offerman (1990) have summarized the development and current state of leadership research. They call attention to an important distinction often overlooked in discussions of this area: that between supervi-

sion and executive leadership. This is more than a troublesome methodological oversight. Leadership research originated in studies of what should properly be labeled supervision, and many current theories also focus on the interaction between the supervisor and his or her subordinates (e.g. Crouch & Yetton 1987; Keller 1989; Vecchio 1987, 1990). More recently, interest has emerged in the broader construct of executive leadership and how this affects the entire organization (e.g. Conger & Kanungo 1987; Gardner 1990). Here the concern is primarily with the leader's ability to affect large numbers of followers, not simply immediate subordinates. These two very different topics are likely to require different theoretical underpinnings.

With respect to supervision, research based on theories of superior-subordinate continues, albeit at a slow pace. Recent studies treat path-goal notions (Keller 1989), superior-subordinate interaction (Crouch & Yetton 1988; Sutton & Woodman 1989; Turban & Jones 1988), situational leadership (Hammer & Turk 1987; Vecchio 1987), operant approaches (Komaki et al 1989), and tests of the Vroom-Yetton model (Crouch & Yetton 1987; Curtis 1989). In general, these provide refinements to well-developed theories.

A more active and innovative stream of research focuses on executive leadership. Here a debate continues over whether leadership exists as a useful construct. On the one side are claims that leadership may be more subjective than objective. Meindl & Ehrlich (1987) suggest that the leadership concept has a romantic and heroic quality unrelated to observable practices. Cronshaw & Lord's (1987) laboratory study suggests that organizational participants may rely on simple cognitive heuristics such as categorization in forming leadership impressions. On the other side of the debate are those who argue that executive leadership is an observable and influential phenomenon. Thomas (1988), for example, in a reanalysis and replication of an early study critical of the executive leadership concept, found that new Chief Executive Officers had a substantial impact on firm performance beyond that accounted for by year, company, or industry. He reported that over 60% of the variance in profit and sales of UK retail stores was associated with changes in the top executive. Day & Lord (1988) suggested that executive leadership can explain as much as 45% of an organization's performance. In a study of nuclear power plants, Osborn & Jackson (1988) showed that some styles of executive leadership can increase safety risks.

Several approaches to characterizing executive leadership have been taken. Bass (1985) differentiated between transactional leadership centered on social exchange principles and transformational leadership based on charisma, shared visions, and strong leader-follower identification. Some evidence is available that supports this distinction. Hater & Bass (1988) found top-performing managers to be significantly higher than ordinary managers on dimensions of charisma and individualized consideration (treating sub-

ordinates as individuals, teaching, etc). Subordinates rated these leaders more effective than those practicing transactional leadership. In a 1989 working paper, R. J. House, W. D. Spangler, and J. Woycke used the notions of charisma and transformational leadership to explain significant variance in experts' ratings of Presidential performance. Others have suggested that charismatic leadership may be an important and underresearched ingredient in organizational success (Conger & Kanungo 1988; Kuhnert & Lewis 1987).

I agree with House & Singh's (1987) assessment that the field of leadership has advanced significantly over the past several years. Many of the theories reviewed by Mitchell in 1979 have come to fruition. With substantial empirical evidence accumulating, the central issues of many of these theories seem well explicated. Recent efforts to understand the impact of executive leadership and the motives underlying its various styles raise interesting new possibilities (e.g. Biggart & Hamilton 1987; Meindl 1989).

Summary

Micro-OB is in a fallow period. Useful micro-OB work is being done, but more excitement and attention are currently being generated by macro-OB. The areas of micro-OB that Mitchell considered dominant—job attitudes, motivation, leadership, and individual differences—remain the most frequently researched areas today, though today they may generate less intellectual excitement.

The motivation domain is dominated by well-researched theories. Goal-setting, the most often investigated area, has demonstrable validity and practical utility. Studies in this vein aim mainly to clarify portions of the theoretical framework. Equity (most frequently in the form of procedural and distributive justice) is similarly well researched. While clever work continues (Greenberg 1988), most studies are directed toward refinements within the existing framework (e.g. Miller & Grush 1988). The same applies to studies of intrinsic motivation.

Studies of job design and work attitudes (e.g. satisfaction, commitment, and stress) are largely variations on familiar themes. While much of this work provides useful refinements of measures and tests designed to clarify previous ambiguities, few advances into new theoretical domains are apparent—with the notable exception of research on affect and emotion. Here, new theories and interesting empirical work have begun and may result in some important rethinking of these topics.

Studies of absenteeism and turnover attempt to identify moderators that can increase the predictive power of existing models. The excitement in this area is primarily methodological, with a set of more appropriate and powerful survival analysis techniques being brought to bear. These approaches may help clarify early research and enhance new theories.

Finally, research on leadership continues to add refinements to existing theories, with some interest emerging in charisma and executive leadership. This interest may benefit us by requiring more ambitious studies in which the outcomes will necessarily be organizational variables rather than the attitudes and behaviors of subordinates.

WHERE IS THE FIELD OF MICRO-OB GOING?

Two themes seem to characterize recent trends in micro-OB research. First, increased attention is being paid to the influence of context upon individuals and groups in organizations (Capelli 1990). This interest is manifest in the study of organizational demography (Zenger & Lawrence 1989), the reemergence of the person-situation debate (Mitchell & James 1989), studies of organizational culture (Rousseau 1990), and a concern about the impact of physical space on organizational members (Oldham 1988). Second, the growing influence of macro-OB theories is creating an awareness of the potential contribution of sociological approaches to OB. For example, interest in internal labor markets (Capelli 1990), growth and decline processes (Sutton 1990), and executive team dynamics (Mascarenhas 1989) is increasing.

The Importance of Context

Organizations are fundamentally relational entities. As Pfeffer (1983) has pointed out, the distributional properties of groups and organizations can have important effects beyond those of the group's simple demographic characteristics; that is, the composition of units may explain group interaction patterns better than simple demographics can (e.g. O'Reilly et al 1989). This observation is hardly a new one, and previous Annual Review authors have regularly called for more attention to cross-level theory and research. Indeed, many of our theories are explicitly situational, often invoking variables at a higher level of analysis as moderators of cause and effect relationships. For example, the use of social information processing notions in job design explicitly acknowledges the influence of social norms on respondents' interpretations of job characteristics (Griffin 1987); and organizational policies may affect judgments about equity (e.g. Folger & Konovsky 1989). However, two aspects of the research in the past few years appear different and noteworthy: the number of studies explicitly considering cross-level effects, and the increasing number of studies assessing compositional effects.

Several studies have used social-network methods to address relational aspects of organizations. Nelson (1989) investigated the relationship between social networks and conflict in 20 organizational units. He found that low-conflict organizations were characterized by a larger number of strong intergroup ties. Krackhardt & Porter (1985, 1986) also used a sociometric

approach to examine the impact of employee turnover on the attitudes of those who remained with the company. Their approach blended both micro and macro theories of turnover and demonstrated how neither of these perspectives alone could adequately explain the attitudes of employees who did not leave. Use of social-network methodologies can enable researchers to operationalize such constructs as informal organizational structures in ways that permit cross-level analysis and theory construction (Krackhardt 1989).

The relational or compositional effects of groups can readily be seen in studies of organizational demography. Several previous studies have shown that, beyond simple demographic effects, increased heterogeneity in work groups can lead to increased turnover (e.g. O'Reilly et al 1989). Zenger & Lawrence (1989) have also shown that the dispersion of age and tenure within groups does affect critical communication patterns. Other studies show that these variations influence innovation (Bantel & Jackson 1989) and salary (Berkowitz et al 1987; Pfeffer & Davis-Blake 1987). Markham (1988), for instance, found no pay-for-performance relation at the individual level of analysis and suggests the need to consider group-level effects. Other studies of group performance reiterate the necessity of considering both exogenous determinants (such as labor market factors) and group effects (such as norms and structure) (e.g. Argote 1989; Argote et al 1989; David et al 1989).

The influence of context on individuals is also revealed by social psychological studies of social loafing—the phenomenon of people generating less effort when working together than when working alone (e.g. Earley 1989). Studies have shown that when subjects performing in groups cannot be evaluated, either by themselves or others, they expend less effort on physical and cognitive tasks than when they can be evaluated (Price 1987; Weldon & Mustari 1988). Reducing this tendency requires the promulgation of standards that allow the group and/or others to evaluate individual contributions to performance (Harkins & Syzmanski 1989).

Students of OB have begun to understand how group demography and dynamics affect both the members and the functioning of groups with respect to communication, social interaction, and group development (Gersick 1988, 1989; O'Reilly et al 1989; Zenger & Lawrence 1989). The very composition of the group may have important effects on individual outcomes, beyond what is normally captured in measures of individual attributes (Tsui & O'Reilly 1989). As Sundstrom et al (1990:130) note in their review of research on work team effectiveness, "For researchers, an obvious next step is to study the demographics of work groups or the prevalence of various applications of work teams and their organizational contexts" (italics in the original). Large-scale changes in workforce demography are now occurring, and it will be useful to understand how they will affect individuals and groups within organizations.

Both the Academy of Management Review (e.g. Mitchell & James 1989) and the Journal of Vocational Behavior (e.g. Caplan 1987) have recently devoted special issues to a reemergence, in a temperate form, of the personsituation debate. In two important studies, Wright & Mischel (1987, 1988) have argued that dispositional constructs such as traits summarize specific condition-behavior contingencies; that is, dispositional statements are viewed as clusters of if-then propositions that implicitly reflect both the situation and the person. They note (1988:455) that "the study of dispositional constructs requires an analysis of the specific situations in which people believe dispositionally relevant behavior will occur."

In the current version of the debate both sides acknowledge that the person and the situation interactively affect attitudes and behavior (Davis-Blake & Pfeffer 1989; Kenrick & Funder 1988; Schneider 1987). Needed now are careful specification of the theory and measurement of the effects; and in this regard, progress is being made. Caldwell & O'Reilly (1990) have shown how Q-sort techniques can be used to describe both situations and people and to assess the fit of one to the other. They report significant correlations between person-job fit and performance.

Concern about contextual effects can also be seen in the burgeoning literature on organizational culture. Although scholars differ over how culture should be defined or measured (Rousseau 1990), most agree that it helps to determine how well an individual fits into an organization (Rynes & Gerhart 1990). Using a Q-sort approach to assess individual and organizational values, J. A. Chatman (unpublished working paper) and O'Reilly et al (1990) found highly significant associations between person-organization fit and outcomes such as performance, job attitudes, and turnover. Similar approaches to the measurement of person-situation congruence have been reported by Enz (1988) and Meglino et al (1989). Much of the current fascination with organizational culture stems from an awareness of the importance of person-context effects at the individual, group, and organizational levels (e.g. Rousseau 1990; Saffold 1988; Wiener 1988).

The Impact of Macro-OB Theory

As the proportion of macro-OB studies in the literature has increased, so has the opportunity for the blending of psychology and sociology. For instance, a number of studies of internal labor markets and career dynamics have begun to draw upon theories from sociology, economics, and psychology. Bills (1987), in a detailed case study of three organizations, shows how internal labor markets are constructed, based partially on managerial beliefs. Other studies have shown that internal labor markets and careers are often quite different from what pure disciplinary theories would suggest, reflecting forces such as political pressures and individual tastes (Di Prete 1987; West et al

1987). Forbes (1987), for example, blends both psychological and sociological reasoning to explain patterns of early intraorganizational mobility.

Other researchers have combined macro and micro theories to explain the growth and decline of organizations. Boeker (1989) and Romanelli (1989) have explored how early strategic choices can affect the probability of survival of new organizations. Boeker (1989) shows that one determinant of strategy is the founder's background and previous experience. Bird (1988) discusses how entrepreneurs' states of mind set the form and direction of their organizations. Similarly, Cameron et al (1987), Hambrick & D'Aveni (1988), and others (e.g. McKinley 1987; Weitzel & Jonsson 1989) have explored how the process of organizational decline can affect micro-OB processes such as leadership, conflict, and decision-making. Sutton (1990) provides a comprehensive review of this literature and offers a social psychological perspective for integrating many of these findings. These studies note the influence of growth and decline processes on psychological dynamics within the organization. For example, Mascarenas (1989) found that strategic group dynamics were significantly affected by whether the unit was in a period of economic growth or decline. Others have noted the critical function served by top management teams and the importance of investigating the dynamics of their interaction (Hambrick 1987; Tushman et al 1986). Similar effects of external economic conditions have been seen on individual-level phenomena such as turnover and satisfaction relationships (Capelli 1990; Capelli & Chauvin 1990). Together, these more macro studies are increasing micro researchers' awareness of the importance of economic and sociological theories. They offer interesting opportunities for cross-disciplinary research that can broaden the focus of micro-OB.

CONCLUSIONS

First, there is room for optimism: Many of the theories that characterized the field over the past decade have been carefully investigated and, in some instances, shown to be valid and useful. Second, the field of micro-OB is in a period of consolidation, with much of the work concentrating on mature streams of research; the macro side of the field appears to be generating more intellectual excitement at the present. Third, several new and promising trends are emerging from the basic disciplines. As Ilgen & Klein (1989) note, development in the disciplines often takes several years to emerge in micro-OB. New themes from personality, social psychology, and sociology are beginning to be reflected in micro-OB research. Needed is a broadening of micro-OB theory and research to address the micro side of macro topics, such as the social psychology of top management teams, the goal-setting aspects of organizational reward systems, or the grounding of economic models in a more complex and realistic understanding of motivation. As massive de-

mographic changes occur over the next decade, some of the recent research on context and cross-disciplinary influences is likely to become more important. Just as research over the past 20 years has reflected the abundance of new workers, the next decade's problems will reflect the organizational consequences of the aging of the baby boom generation and the shortage of new entrants into the work force. Micro-OB research cannot help but reflect these changes.

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