

Just a Mirage: The Search for Dispositional Effects in Organizational Research

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There has been renewed interest in dispositional explanations of individual behavior in organizations. We argue that this new stream of dispositional research is flawed both conceptually and methodologically, and we suggest several theoretical and empirical improvements. We conclude by discussing the costs of a dispositional perspective for both organizations and organizational participants.

One of the central problems that interested early students of organizations was whether there are individual attributes that can be reliably measured and used to select individuals for organizational roles. The field of industrial and organizational psychology initially was concerned with measuring individual dispositions and with relating these dispositions to effectiveness in work roles. Most students of organizations are familiar with the search for traits associated with effective leadership (Fleishman, 1953; Ghiselli, 1971; Stogdill, 1974) or with the search for personality factors, such as the need for achievement (McClelland, 1961) or growth need strength (Hackman & Oldham, 1976, 1980), that could be used to explain individual reactions to the work environment.

Several students of organizations have again become interested in dispositional explanations for attitudes and behavior in organizations (Arvey, Bouchard, Segal, & Abraham, 1989; Gerhart, 1987; Pulakos & Schmitt, 1983; Schneider, 1987; Staw, Bell, & Clausen, 1986; Staw & Ross, 1985; Weiss & Adler, 1984). These new dis-

positionalists have undertaken various programs of field research designed to understand how individual dispositions affect attitudes and behavior in the naturally occurring world of organizations. This new dispositional research is at a relatively early stage and, so far, has been focused primarily on attitudes rather than behavior. However, ultimately these researchers hope to explain both attitudes and behavior of individuals in organizations. For example, in discussing the results of their work on the determinants of affective disposition, Staw et al. (1986, p. 74) stated that "positive affect could hinder performance in some managerial staff roles. As a result, we may need to examine each organizational role for the amount of enthusiasm versus critical thinking involved in order best to fit jobs with individuals' affective dispositions."

This resurgence of interest in the extent to which individual dispositions affect people's attitudes and behavior in organizations means that questions about the theoretical and empirical underpinnings of the dispositional approach

must again be addressed by organizational scientists. In 1984, Weiss and Adler (1984, p. 42) noted that personality constructs had a "tarnished reputation" among organizational researchers, due mainly to "years of research which has produced comparatively little insight into organizational behavior." In this article, we argue that some of the research of the new dispositionalists contains important conceptual and empirical flaws that must be addressed if this line of research is going to be more fruitful than the research reviewed by Weiss and Adler. If this renewed attention to dispositional effects is to produce more insight than past inquiries into this area, organizational researchers must reexamine some of the basic conceptual, empirical, and practical problems that confront a dispositional approach to organizational behavior. The purpose of this article is threefold: to outline these problems, to suggest some solutions, and to sensitize organizational researchers to the potential costs of a dispositional approach to job attitudes and behaviors.

This paper is organized into four major sections. First, we briefly review the major elements of the dispositional approach and highlight its underlying assumptions. We then describe some critical conceptual problems faced by researchers who use the dispositional approach to organizational behavior. Second, we briefly discuss the empirical evidence for the dispositional approach, focusing specifically on the evidence that has been gathered during the past decade. We then discuss several problems that make this evidence difficult to interpret. Third, we summarize several ways in which these conceptual and empirical problems can be addressed. Finally, we describe some of the important practical limitations of the dispositional approach.

Although much of what follows is highly critical of the dispositional approach, our arguments are not meant to suggest that there are no dispositional effects on individuals' attitudes and behavior in organizations. Rather, throughout the article, we suggest that the new dispositional research has been marred by serious, al-

though potentially solvable, problems. Furthermore, we argue that, although there are certainly dispositional effects on people's attitudes and behavior in organizational settings, it is unlikely that dispositional effects are as important as situational effects.

Using Dispositions to Understand Individual Behavior

The essence of the dispositional approach is that individuals possess stable traits that significantly influence their affective and behavioral reactions to organizational settings. For instance, Holland (1985) argued that most people have one of six basic personality types and that vocational choice is an expression of personality type. Furthermore, vocational satisfaction and achievement are affected by the degree of congruence between an individual's personality and the characteristics of his or her work environment. The greater the degree of congruence, the higher the level of satisfaction and achievement.

It is important to distinguish the dispositional approach from other approaches that use individual differences to explain attitudes and behavior in the workplace. Few people would argue with the statement that there are some stable individual attributes that affect individual experiences in and reactions to the workplace. For example, physical attractiveness, race, and gender are stable over time and are very likely to affect how individuals are treated in and respond to organizations. The large amount of literature on the effect of gender on the structure and compensation of work roles (Baron & Bielby, 1985; Deaux, 1985; Kanter, 1977; Pfeffer & Davis-Blake, 1987; Treiman & Hartmann, 1981) attests to the fact that there are stable individual attributes that affect individual experiences and reactions in organizations. Similarly, some of the work on biodata by Owens and his colleagues (see Owens, 1976, for a review) suggests that relatively stable factors, such as an individual's educational level and the size and socioeconomic status of his or her family of ori-

gin, are good predictors of a variety of work-related attitudes and behaviors.

However, dispositionalists are not interested primarily in the effects of observable individual attributes such as race and gender. Rather, they argue that individuals possess unobservable mental states or dispositions (e.g., needs, values, attitudes, or personalities) that are relatively stable over time and that determine, at least to some extent, their attitudes and behavior in organizations (Weiss & Adler, 1984). Because dispositions are unobservable, their existence typically is inferred from intertemporal and intersituational consistency in observable behaviors and expressed attitudes. As Mischel (1968, p. 13) noted, "data that demonstrate strong generality in the behavior of the same person across many situations are critical for trait and state personality theories; the construct of personality itself rests on the belief that individual behavior consistencies exist widely and account for much of variance in behavior." Similarly, Bem and Allen (1974, p. 506) stated that the "underlying assumption of cross-situational consistency is still with us. It is most explicit in trait and type theories of personality, but some variant of it can be discerned in nearly all contemporary formulations."

It is also important to distinguish dispositional approaches from approaches that suggest that people's attitudes and behavior in organizations result from an interaction of personal traits and organizational factors. For example, a large group of researchers has attempted to find personality factors that moderate the effect that job characteristics have on employee attitudes (see White, 1978 for a review). However, as Weiss and Adler (1984) noted, a truly dispositional approach argues that individuals possess traits that have a significant effect on attitudes and behavior across all organizational settings. For example, Staw and Ross (1985) suggested that individuals possess a predisposition toward happiness, which significantly affects their job satisfaction in all types of jobs and organizations. Most organizational research that has in-

corporated personal dispositions has used an interactional framework. Therefore, until recently, there was a relatively long period when research on the main effects of individual dispositions was virtually neglected.

Two important conceptual problems plague a dispositional approach to individual attitudes and behavior in organizations. First, the approach suggests that individual dispositions have an important main effect on people's attitudes and behaviors in organizational settings. However, there is a substantial amount of evidence that organizational settings are strong situations that have a large impact on individual attitudes and behavior. Therefore, dispositions are likely to have only limited effects on individual reactions in organizations. Second, a dispositional approach also implies that individuals are stable and nonadaptive, yet a growing body of research indicates that individuals are highly responsive and adaptive to organizational settings and that personality traits change in response to organizational situations.

Organizations as Strong Situations

It has been well known for some time that dispositional effects are likely to be strongest in relatively weak situations and weakest in relatively strong situations (Bem & Allen, 1974; Bem & Funder, 1978; Mischel, 1968, 1977; Monson, Hesley, & Chernick, 1982). Because most organizational settings are strong situations, individual dispositions are likely to have only limited effects on individual reactions in organizations.

Three pieces of evidence suggest that situational pressures inside most organizations are quite strong. First, Zucker (1983) suggested that formal organizations have become an institutionalized means of performing a wide variety of activities and that attitudes and behaviors inside formal organizations are also highly institutionalized, or governed by "common understandings about what is appropriate and, fundamentally, meaningful behavior" (Zucker, 1983, p. 5). These common understandings lead organizational participants to adopt attitudes and behav-

iors that are consistent with their organizational roles, thus minimizing the effects of personality traits that participants bring to those roles (Kahn, Wolfe, Quinn, & Snoek, 1964).

Second, some of the research on organizational culture suggests that organizational attempts to actively develop common understandings about the organization's mission and methods may have powerful effects on individuals' attitudes and behavior (Schein, 1985; Wilkins & Ouchi, 1983). There is a growing body of literature that suggests an effect of organizational culture (as evidenced in symbols, stories, and rituals) on individuals. This research suggests that organizations may have important effects on people's attitudes and behavior without using a detailed set of rules, rewards, or obviously coercive structures.

Finally, the strength of most organizational situations is evidenced by the large body of research that has found that individual attitudes and behavior in organizations are significantly affected by structural factors such as compensation systems (Belcher & Atchison, 1976), reinforcement patterns (Hamner & Hamner, 1976; Luthans & Kreitner, 1975; Skinner, 1953), goals (Locke, 1968), and job design (Hackman & Oldham, 1980) as well as by socialization (Van Maanen, 1976) and position in social information networks (Griffin, 1983; Salancik & Pfeffer, 1978). Indeed, most research in the field of organizational behavior has examined the many ways in which organizational structures and processes affect the attitudes and behavior of organizational participants. Furthermore, the empirical research that has directly compared the effects that individual attributes and organizational structure have on people's affect and attitudes toward the job has suggested that "structural characteristics appear to be more directly linked to job attitudes than personality traits" (O'Reilly & Roberts, 1975, p. 144; Herman, Dunham, & Hulin, 1975; Herman & Hulin, 1972).

Much of the empirical work by the new dispositionalists has recognized the effect of organizational situations and has attempted to account

for the effect that organizational structure has on job attitudes. However, the conceptualization and measurement of organizational structure in the new dispositional research often has been inadequate. The measurement of organizational attributes in the work of the new dispositionalists will be discussed in more detail later.

Adaptation of Dispositions to Organizational Situations

By arguing that individuals possess stable traits that lead to cross-situational consistency in their attitudes and behavior, the dispositional approach implies that individuals may not adapt to different types of situations. However, there are two important problems associated with arguing that individuals may be nonadaptive. First, in order to convincingly argue that individuals are relatively stable and nonadaptive, it is necessary to identify and describe the mechanisms that create the stability. Just as population ecologists who posit the existence of structural inertia have developed arguments about how and why such inertia occurs (Hannan & Freeman, 1984), dispositionalists who posit the existence of attitudinal and behavioral inertia must develop arguments about how and why attitudes and behavior are unchanging. Although developing arguments about the source of attitudinal and behavioral inertia is not necessarily the first task of a dispositional theorist, it is a task that is ultimately necessary if the theory is to be complete and compelling. For example, a clear idea about the sources of dispositions is necessary in order to understand if and how dispositions can be changed. Even though explanations for the existence of attitudinal and behavioral inertia probably can be developed, those who advocate a dispositional approach must assume the burden of developing such explanations.

Clearly, one simple source of attitudinal and behavioral inertia is genetics. Therefore, the assumption that individual dispositions are genetically determined has been attractive to dispositionalists. For example, Staw and Ross (1985, p.

471) suggested that "one rather radical possibility is that job attitudes may reflect a biologically based trait that predisposes individuals to see positive or negative content in their lives." However, although there is some evidence for a genetic basis for some general personality characteristics (e.g., extraversion, Rose, Koskenvuo, Kaprio, Sarna, & Langinvainio, 1988; Tellegen et al., 1988), the evidence for a genetic basis for job attitudes is very limited. To date, the only research that examined a genetic basis for job attitudes was conducted by Arvey and his colleagues (Arvey et al., 1989). Although, in their study of identical twins who were reared apart, they found evidence that satisfaction with intrinsic elements of the job (e.g., ability utilization) has a genetic component, they found no evidence that satisfaction with extrinsic elements of the job (e.g., company policies) has a genetic component. Furthermore, they found no evidence of heritability for a single-item measure of overall job satisfaction such as those used by Gerhart (1987) and Staw and Ross (1985). Thus, according to current research, no genetic basis has been found for the intertemporal stability in job satisfaction reported by Staw and Ross and by Gerhart, although further research on the heritability of job attitudes may resolve this inconsistency.

A second, and more serious, problem with arguing that individuals are nonadaptive is the growing body of evidence that suggests that an individual's dispositions are changed by the organizations in which he or she participates. Thus, instead of remaining stable over time, an individual's dispositions are changed by all of the organizational settings in which he or she has taken part. If an individual's dispositions change as a result of exposure to organizational settings, in what sense can the individual be said to have a disposition that persistently and consistently affects his or her reactions to those settings?

Empirical research designed to address the question of the effect of various organizational settings on individual dispositions has revealed

that, over time, individuals' dispositions are significantly affected by the organizations in which they participate. Programs of longitudinal research that were undertaken by Kohn and Schooler (1978, 1982) and others (Anderson, 1976; Andrisani & Nestel, 1976; Brousseau, 1978; Brousseau & Prince, 1981; Jenkins, 1987; Miller, Schooler, Kohn, & Miller, 1979) have demonstrated that the organizational settings in which an individual works systematically affect his or her personality. For example, Kohn and Schooler (1982, p. 1257) reported that "self-directed work leads to ideational flexibility and to a self-directed orientation to self and society; oppressive working conditions lead to distress." Similarly, Jenkins (1987) reported that women who were employed in professions that allowed and encouraged expressions of the need for achievement showed larger increases in achievement motivation over a 14-year period than women who were employed in other types of professions. Also, Brousseau (1978) found that, in a group of engineers and scientists, several of the five core job design characteristics were associated with changes in active orientation and freedom from depression. This line of research provides significant evidence that individuals respond to organizational settings not only with changed attitudes and behaviors but also with changed dispositions.

Some dispositionalists have responded to the evidence that individuals adapt to organizations by arguing that there is no distinction between situational and dispositional approaches because situations are nothing more than the people who participate in the situation (Schneider, 1987). Because of differential attraction, selection, and attrition, people are not randomly assigned to organizations; thus, organizational contexts or situations are a reflection of the individuals who create them. Critiquing this line of argument in detail would require an additional article. However, we briefly note three important difficulties with this position.

First, the claim that "people . . . behave similarly because they are similar not because of

some external factors" (Schneider, 1987, p. 442) cannot account for the well-documented phenomenon that some situations (e.g., military academies, basic training) exert powerful influences over the people who participate in them (Dornbusch, 1955). These situations tend to create similar attitudes and behaviors in widely different, sometimes randomly chosen people. Zimbardo's work on prisons has documented the behavioral regularities induced in individuals who were randomly assigned to be prisoners or guards or who were randomly captured and placed in prisoner-of-war situations (e.g., Zimbardo, Ebbesen, & Maslach, 1977).

Second, the idea that the people are the situation does not tell us why individuals have multiple organizational memberships (e.g., bank employee by day and YMCA volunteer by night) and how individuals adjust to the different situations in which they participate. Individuals typically have multiple organizational memberships and often participate in organizations that include very different kinds of members. The idea that people and situation are the same neither predicts this phenomenon nor says anything about how to understand the behavior of the same individual across diverse organizational settings.

Finally, the concept that people and place are the same ignores the substantial body of theory and research that suggests that individual attitudes and behavior are often substantially changed by the groups and organizations in which individuals participate. Theories of social comparison (Festinger, 1954), informational social influence (Deutsch & Gerard, 1955), and social information processing (Salancik & Pfeffer, 1978) suggest that individuals are likely to learn appropriate attitudes and behaviors from co-workers and to demonstrate those attitudes and behaviors while they are on the job. Similarly, Blau and Scott (1962) argued that group climate can change the attitudes of group members and that prevailing group attitudes can affect individual conduct, regardless of the individual's own attitudes. In his studies of an employment

service office and an enforcement office of a government agency, Blau (1956) demonstrated that the composition of an individual's work group and organization can significantly affect his or her attitudes and behavior.

But, because organizational participants influence each other's attitudes and behavior does not mean that "the people make the place" in a simple, additive fashion. The process of developing social consensus is complex, and it is likely to be affected by three important factors other than the initial attitudes and behaviors of the participants: organizational structures, organizationally provided information, and the relationship of organizational participants to each other. Griffin's (1983) study of management-induced informational social influence indicated that work attitudes can be affected by both objective changes in the task and by informational cues from supervisors. Also, the research on organizational demography (McCain, O'Reilly, & Pfeffer, 1983; Pfeffer, 1983; Tsui & O'Reilly, 1988; Wagner, Pfeffer, & O'Reilly, 1984) suggests that it is the network of relationship among individuals, not merely the average level of any particular individual attribute, that accounts for organizational phenomena such as turnover. In other words, one cannot simply argue that turnover is inversely correlated with length of service and then use average length of service to predict turnover. Rather, turnover is best predicted by the distribution in length of service. In organizations that have widely dispersed tenure distributions, cohort formation is likely to be difficult (Reed, 1978), and turnover will be high. Similarly, in organizations that have more compact tenure distributions, it is likely that cohort formation will be facilitated and turnover will be attenuated.

The idea that people bring preexisting attitudes, values, and behavioral predispositions to an organization that are additively combined to produce an organizational situation is inconsistent with the evidence that individuals often are profoundly affected by organizational structures and by organizational and social informa-

tion. Furthermore, the idea that an organizational situation represents the individuals who comprise the situation is inconsistent with the evidence that relationships among individuals, not merely the average level of any individual attribute, affect people's attitudes and behavior in organizations.

Despite the conceptual difficulties just enumerated, there has been a revival of empirical investigations of dispositional effects on individuals' attitudes and behavior in organizations. These empirical studies have a set of methodological problems to which we now direct our attention.

New Empirical Evidence for the Dispositional Approach

The new dispositional research is based primarily on longitudinal studies of men and women in naturally occurring organizational settings. This research attempts to establish the existence of dispositionally based job attitudes by examining the extent to which an individual's attitude toward his or her job is stable over time (and also stable across different jobs and employers). Findings of intertemporal stability of job attitudes are interpreted as evidence of a personality trait that significantly affects that attitude. For example, Staw et al. (1986, p. 59) stated that "evidence of temporal stability provides at least a clue, if not evidence, that some dispositional forces may be operating on attitudes and behavior."

Several studies have used evidence of intertemporal stability of job attitudes to argue that job attitudes have a significant dispositional component. Pulakos and Schmitt (1983) reported that high school seniors' expectations about the extent to which work would satisfy existence, relatedness, and growth needs were significantly positively correlated with job satisfaction 20 months after graduation. Using the National Longitudinal Survey of Mature Males, Staw and Ross (1985) noted that a person's job satisfaction in 1966 was a significant predictor of his or her job satisfaction in 1971, even when changes in

occupational status, pay, occupation, and employer were controlled. Gerhart (1987) essentially replicated the Staw and Ross (1985) results, using a younger sample of both men and women and a more sophisticated methodology that also controlled for changes in job complexity (as measured by both the Job Characteristics Inventory and the *Dictionary of Occupational Titles*). Finally, Staw et al. (1986) described the results of several studies that were conducted on approximately 100 men, following them from early adolescence through late adulthood. They reported significant positive correlations between an individual's job satisfaction in adulthood and his overall affective disposition both earlier in adulthood and in adolescence. The correlations remained significant, even when the socioeconomic status of the individual's job was controlled.

Although these studies appear to support the idea that job attitudes have a significant dispositional component, the evidence presented in these studies is flawed in two important ways. First, it is impossible to establish the existence of a stable disposition merely by examining intertemporal correlations in job attitudes. Second, most of this research has not relied on a well-specified model of job attitudes; therefore, it has omitted important individual, job, and social network variables that are stable over time and that significantly affect job attitudes.

Difficulties in Interpreting Correlation Over Time

Although some of the research discussed above has combined correlational and regression analysis (Gerhart, 1987; Staw & Ross, 1985), some of it has relied solely on correlational analysis (Pulakos & Schmitt, 1983; Staw et al., 1986). However, a significant positive correlation between job attitudes during an earlier time period and job attitudes during a later time period does not mean that individuals possess a stable disposition that affects those attitudes. A methodology that uses the same data (i.e., correlations) to both infer the existence of a disposition and to

demonstrate the effect that disposition has on job attitudes is guilty of circular reasoning. In much of the new dispositional research, intertemporal stability in job attitudes is used to demonstrate the existence of a disposition. The disposition is then used to explain why job attitudes are stable over time.

Some of the work of Staw and Ross (1985) demonstrates the logical problems associated with using stability in job attitudes to infer the existence of dispositions. Staw and Ross (1985) reported that the level of job satisfaction among older male workers was somewhat stable over a five-year period. Based on this stability, they argued that there is a personality trait of positive (or negative) affect that predisposes an individual to be more (or less) satisfied with the situations he or she encounters. They also argued that this trait was, in fact, the cause of the stability in job satisfaction over the five-year period. The trait itself is never measured or even clearly described; both its existence and its effects are inferred from the same set of correlations.

Correlations such as those obtained by Staw and Ross (1985) are particularly difficult to interpret because, in a given sample of individuals, a positive correlation between job satisfaction in two time periods merely means that those individuals who were most satisfied in the earlier period were also the most satisfied in the later period. In other words, correlations only provide information about relative rankings. There may be large situational effects on job attitudes, but as long as the relative rankings of individuals remain the same over time, there will be a positive correlation between job attitudes over time (and there will appear to be significant dispositional effects). Arvey et al. (1989, p. 191) acknowledged this point when they noted that "job enrichment efforts may, however, have the intended effect of raising mean levels of job satisfaction for the individuals involved, even though rank-ordering of individuals is preserved."

An example can help to illustrate that inter-

temporal stability of a personal characteristic is not evidence of the existence of a disposition. The literature on social stratification has repeatedly demonstrated that, in almost any sample of individuals, present earnings are highly correlated with past earnings (Duncan, Featherman, & Duncan, 1972). This is because, even in the midst of a great depression, individuals tend to retain their relative rankings in the income distribution. One interpretation of this correlation is that individuals possess a stable, unobservable disposition called *desire to earn money*. However, few people would accept this interpretation, especially given the extensive evidence that other individual (e.g., family background, race, gender), job (e.g., required skills, responsibility), and organizational (e.g., size, unionization) attributes have an enormous effect on earnings (Blau & Duncan, 1967; Duncan et al., 1972).

Demonstrating the existence of stable personality traits that significantly affect attitudes and behaviors requires a more complex methodological approach than has been used in most dispositional research to date. Establishing the existence of dispositions requires more than simply establishing that individuals retain their relative rankings on some dimension over time. Although consistency in relative rankings over time suggests the possibility that the rankings are affected by some individual disposition, a dispositional approach must specify what that disposition is.

In order to avoid the circularities that are inherent in using the same piece of data to demonstrate both the existence and the effects of dispositions, the nature of the disposition being studied must be clearly defined. Then, the disposition must be measured in one setting or time period and used to predict attitudes and behavior in another setting or time period. This is the direction in which Staw et al. (1986) moved in their study of Berkeley men from adolescence through late adulthood. Staw et al. used clinical observations of the men's affective disposition in early adolescence and young adulthood to pre-

dict the men's job satisfaction later in life. This study is a major advance over past dispositional research, and it avoids the problems inherent in using the same correlations to infer the existence of a disposition and to demonstrate its effects.

In order to resolve the circularities inherent in current dispositional research, researchers will need to use new and more complex methods. Dispositions and their effects cannot be inferred from the same intertemporal correlations. Rather, dispositions must be adequately defined and measured, and the measurement of dispositions must be clearly separated from the measurement of the effects of dispositions.

Lack of an Appropriate Causal Model of Job Attitudes

Although the new dispositionalists, in their correlational analyses, have controlled for a small number of factors that are likely to affect job attitudes (e.g., status, job complexity), they have omitted several important individual, job, and social network characteristics that are likely to have a significant effect on job attitudes.

Empirical research by the new dispositionalists may have omitted important determinants of job attitudes because none of this research attempts to specify, a priori, a causal model of job attitudes or attitude change over time. However, merely examining the relationship between job attitudes at two points in time does not control for the very real possibility that there are fairly stable individual (e.g., race, gender, family background) and situational (e.g., status, real earnings) factors that are causally related to job satisfaction. Omitting these variables from models designed to predict job satisfaction over time can result in spurious relationships between job satisfaction at an earlier point in time and job satisfaction at a later point in time. As Gerhart (1987, p. 371) noted about the research by Staw and Ross (1985), "to the extent that important situational variables are omitted or poorly measured, the relative predictive power of previous job satisfaction will appear greater. . . . Instead any unexplained stability in job satisfaction was

attributed to unspecified traits." We argue that the new dispositional research has failed to account for three important situational effects: the stable, nondispositional attributes of workers and jobs; the detailed conditions of work; and the social networks in which individuals are located.

There is some evidence that job satisfaction is related to pay (Belcher & Atchison, 1976; Milkovich & Newman, 1984; Opshal & Dunette, 1966), and it is also likely that real earnings are comparatively stable, especially for workers who are well established in their careers, such as those studied by Staw and Ross (1985). Therefore, we might expect job satisfaction to be stable over time simply because an important situational determinant of job satisfaction (real earnings) also is relatively stable over time. Merely including change in pay in an equation in which satisfaction during an earlier period is used to estimate satisfaction during a later period (as Staw and Ross did) does not adequately control for the effect of pay on satisfaction for two reasons. First, if real earnings are relatively stable later in the career, then we would expect change in pay to merely reflect the rate of inflation during the period and not changes in real earnings that are likely to lead to increased satisfaction. Second, and more important, including change in pay in the equation does not account for the possibility that an important omitted variable (level of real earnings) may account for satisfaction in both the earlier and the later time periods. Omitting this variable from the equation results in a spurious relationship between satisfaction during the two time periods.

An argument similar to the one just described for real earnings also could be developed for race, gender, social status, and other important individual and situational variables that are likely to be stable over time and that have a significant effect on job satisfaction. As Markus (1979) noted, omitted variables cause serious problems in longitudinal analyses, especially if the omitted variables are stable over time. In a regression equation, stable omitted variables

lead to autocorrelated error terms (Johnston, 1979). As James, Mulaik, and Brett (1982, p. 80) noted, if "unmeasured causes are contained in the estimated disturbance terms, then it follows that the unmeasured causes will correlate with themselves over time because they are, by definition, stable." Although autocorrelation can be dealt with through the use of appropriate statistical procedures (e.g., two-stage least squares), to date, the longitudinal research on dispositions has not attempted to deal with the statistical problems created by omitted variables in longitudinal analyses. Until researchers undertake the difficult but necessary tasks of specifying a model of the determinants of job attitudes and of correctly estimating that model, it will be difficult to believe that the dispositional effects on job attitudes reported to date are anything more than a mirage created by omitted variables and autocorrelated error.

Some of the new dispositional research has made an attempt to control for the nature of jobs, but most of the controls used to date have been too crude to meaningfully measure the conditions of work that are likely to affect job satisfaction. Often, researchers who have attempted to control for job attributes have relied on job characteristics measured at the occupational level (Arvey et al., 1989; Gerhart, 1987; Staw & Ross, 1985). However, a growing body of evidence suggests that there is substantial intraoccupational variability in the conditions of work, partly because even detailed occupational groups contain a variety of jobs and partly because similar jobs may be structured differently, depending on the firms in which they are located (Baron & Bielby, 1980, 1984; Miller, Treiman, Cain, & Roos, 1980). Therefore, using occupational-level measures of job characteristics may furnish incomplete information about the nature of jobs.

It is premature for dispositional researchers who have merely used occupational-level measures of job characteristics to conclude that they have controlled for the conditions under which individuals work. The problems of using occupational-level measures of job characteristics

are readily apparent in the study on twins by Arvey et al. (1989). They reported that the occupational measures of job characteristics used in their research were unrelated to job satisfaction, a finding that is quite inconsistent with the large amount of literature that suggests that the conditions of work do affect job satisfaction (e.g., Hackman & Oldham, 1980). In order to use meaningful measurements of job characteristics, researchers must move beyond crude occupational surrogates to measures that actually reflect the characteristics of a particular job as it is structured in a particular organizational setting.

Adequate identification and measurement of job characteristics that are likely to affect satisfaction are particularly important in light of the growing body of evidence that suggests that individuals tend to occupy jobs that are matched to their dispositions. In a longitudinal study of over 3,000 men, Kohn and Schooler (1982, p. 1257) reported that "both ideational flexibility and a self-directed orientation lead, over time, to more responsible jobs that allow greater latitude for occupational self-direction." Similarly, in a study of adult identical twins who were raised apart, Arvey et al. (1989) noted that the twins (who presumably have identical dispositions) tended to hold similar jobs. Finally, Holland's (1973, p. 4) studies of vocational choice suggest that individuals seek out work environments that are consistent with their personality types: "Realistic types seek realistic environments, social types seek social environments, and so forth."

The possibility of a strong relationship between dispositions and job attributes makes it a serious problem to omit job attributes from models that are used to estimate the effects of dispositions. As James et al. (1982, p. 73) observed, if an omitted independent variable (e.g., job attributes) is a logical cause of the dependent variable (e.g., job attitudes) and is correlated with a measured independent variable (e.g., dispositions), "the causal influence that rightly belongs to α [the omitted variable] is instead attributed to z_1 [the measured variable]."

The possibility that dispositions affect not only individuals' reactions to jobs but also the kinds of jobs they select makes the relationship between an individual's levels of job satisfaction at two different points in time even more difficult to interpret. Intertemporal stability in job satisfaction could be due not only to stability in individual characteristics, such as race and gender, or to stability in very general characteristics of jobs, such as status and real earnings; it could also be due to stability in the detailed conditions of the work itself (e.g., autonomy, complexity, responsibility). Until researchers who are interested in the intertemporal stability of job attitudes are able to convincingly measure and control for the nature of jobs, it will be unclear whether job satisfaction is stable over time because most individuals possess a disposition to be satisfied (or dissatisfied) or because most individuals tend to move through a series of relatively similar jobs that are either satisfying or dissatisfying. Many researchers have argued that social information (e.g., Salancik & Pfeffer, 1978) and an individual's position in various social networks (e.g., Granovetter, 1985) have important effects on attitudes and behaviors. For example, according to Tsui and O'Reilly's (1988) study of the effect of demography on attitudes, the relationship of an individual's demographic characteristics to the characteristics of supervisors and peers was a more powerful predictor of attitudes than an individual's demographic characteristics alone. Lawrence (1988) found comparable results for the effect that age has on attitudes. In a similar vein, Kanter (1977) detailed the effects of group composition on attitudes and behaviors, and Krackhardt and Porter (1986) illustrated the effects of network position.

The evidence for the effects of demography (McCain et al., 1983; Pfeffer & O'Reilly, 1987; Wagner et al., 1984), group composition (Kanter 1977; Spangler, Gordon, & Pipkin, 1978), and, most important, networks of social influence (Griffin, 1983; O'Reilly & Caldwell, 1979) on individuals' attitudes and behaviors suggests another nondispositional reason why job satisfac-

tion may be highly stable over time, namely, that individuals tend to remain in relatively stable social networks. These social networks are sources of information and influence that tend to stabilize individual attitudes. The influence of social networks on attitudes may partly explain the finding that job satisfaction appears to be stable, even when individuals change occupations and employers (Gerhart, 1987; Staw & Ross, 1985). Although changing jobs or employers clearly disrupts some work-related ties, it may not disrupt social ties outside of work that influence people's reactions to the work environment. Furthermore, in light of the evidence that most individuals do not occupy radically different kinds of jobs throughout their lives, it seems possible that, when individuals change jobs, the social influences in the new job will be similar to the social influences in the old job. In the absence of measuring and accounting for these social influences, the attribution of intertemporal stability in job satisfaction to stable individual dispositions is, at best, a dubious activity.

Improving Dispositional Research

Throughout this article, we have identified a number of conceptual and empirical problems with the new dispositional research and have briefly suggested some ways of addressing those problems. This section of the article summarizes and expands our suggestions for improving dispositional research.

1. Dispositions should be clearly defined and measured. Specifically, measures of dispositions should be conceptually and empirically distinct from measures of the effects of dispositions. The same data (e.g., intertemporal correlations between attitudes) should not be used to infer both the existence of a disposition governing that attitude and the effects of the disposition on that attitude.

2. Given the large body of research evidence that suggests that factors other than dispositions have important effects on job attitudes, dispositional researchers should account for these ef-

fects, both theoretically and empirically. In other words, dispositional research should be based on a model of job attitudes and behavior that includes both dispositional and nondispositional causes. We have suggested three nondispositional causes of job attitudes that are important to include in such a model: stable, nondispositional attributes of individuals and jobs (e.g., race, gender, real earnings); attributes of the work itself (e.g., autonomy, complexity); and attributes of the social network in which the individual is embedded (at least the part of the network that is inside the organization).

Because failure to include known organizational causes of job attitudes in equations estimating job attitudes can lead to spurious results (i.e., overestimation of dispositional effects), it is essential to pay close attention to appropriate specification of models of job attitudes. If structural effects must be omitted from a longitudinal model, at a minimum, appropriate statistical techniques for dealing with the resulting autocorrelation (e.g., two-stage least squares) should be employed.

3. Given that there are several theoretical reasons for believing that dispositions are likely to have only limited effects on attitudes and behavior inside organizations, researchers must ultimately address the question of the relative importance of dispositional and organizational effects on individual reactions in organizations. Although dispositions may have a statistically significant effect on individual reactions, this effect may not be practically important. To address this question researchers must develop and test models that can simultaneously examine the effects of both dispositions and organizational situations.

4. Ultimately, researchers must develop some testable ideas about the sources and stability of dispositions. Such ideas would make the dispositional approach more complete, and they would allow researchers and practitioners to understand what tools, if any, are available for changing dispositions. If the effects of dispositions are as important and as pervasive as dispositionalists claim, then the question of

whether dispositions can be altered becomes very critical.

Researchers who develop such ideas about the sources of dispositions should draw on research evidence that indicates that an individual's dispositions are affected by the organizations in which he or she participates. These ideas should either be consistent with that evidence or they should suggest new research directions, which would lead to a reinterpretation of that evidence.

The Costs of Dispositional Research

We have argued that the new wave of dispositional research is faced with substantial theoretical and empirical problems. However, many of these problems can be resolved if researchers pay careful attention to measurement, methods, and omitted variables. As we stated at the beginning of this article, nothing in our arguments is meant to suggest that there are no dispositional effects, only that their investigation has been marred by serious problems and that there is little chance that, in organizational settings, dispositional effects are as important as situational effects. However, even within organizations, there are certainly dispositional effects on individuals' attitudes and behaviors, and, if enough resources are expended on their discovery, they probably will be found. But the fundamental question is, At what cost? In this section we will explore the potential costs of dispositional approaches for organizations and for organizational participants.

If individuals' attitudes and behaviors in organizations are significantly affected by stable individual dispositions, then the obvious prescription for organizations is to select individuals based on those dispositions. In fact, this is precisely what the new dispositionalists suggest. Staw and Ross (1985, p. 478) wrote that "one conclusion from our data is that it may be easier for organizations to improve the job attitudes of its employees by simply selecting individuals for membership who have positive dispositions

than by trying to build positive attitudes through situational changes.”

Clearly, selection based on affective disposition raises some difficult legal issues that have already been noted by Staw and Ross (1985) (i.e., unless affective disposition is related to performance on the job, it may be extremely difficult to legally justify dispositionally based selection procedures). However, dispositionally based selection procedures also raise important issues of social policy. Even if the difficult problems of identifying the dispositions on which selection is based and of developing reasonably reliable and valid measures of those dispositions could be solved, it is not clear that any socially useful purpose is served by selecting individuals whose dispositional makeup predisposes them to being satisfied on the job. It is not clear that a predisposition to being satisfied makes individuals more likely to be productive, more likely to be effective co-workers and supervisors, or less likely to be absent or to quit.

However, it does seem possible that a predisposition to being satisfied might make individuals more accepting of substandard wages and working conditions. Thus, managers who are interested in cutting wages, fringe benefits, and safety measures might simply select workers who are less likely to complain about such issues (i.e., workers with a predisposition to being satisfied). Dispositionally based selection procedures also might be used to exclude people from the workplace who are likely to organize and be organized into unions, thus limiting worker voice about the conditions of work (Freeman & Medoff, 1984). In an era when most social policies are designed to expand access to the workplace and a variety of rewards within the workplace (Treiman & Hartmann, 1981), the consequences of excluding individuals from the workplace solely on the basis of their affective dispositions must be carefully considered.

In addition to leading to socially costly selection procedures, a dispositionally based approach to job attitudes and behaviors tends to excuse individuals from confronting the consequences of their actions and, in particular, tends

to allow organizational participants to escape responsibility for the systems they design (Salancik & Pfeffer, 1977). If productivity is low, it can be blamed on the declining work ethic of American workers. If there is theft in the organization, insider trading, or client abuse, it can be blamed on the shortcomings of a few individuals, who can then be appropriately punished. Dispositional explanations for behavior in organizations encourage organizational participants to commit the fundamental attribution error (Nisbett & Ross, 1980) and tend to excuse them from responsibility for the effects of the systems they have created and in which they participate. In an age when organizational actors are becoming increasingly pervasive and increasingly powerful (Coleman, 1974), it is probably not socially useful to make it easier for managers and administrators to distance themselves from responsibility for the consequences of organizational actions.

Finally, it is important to note that, although most organizations can create at least some situational changes, there are a fairly large number of organizations that, either because of necessity or because of social policy, can exercise only very limited discretion over who some of their participants are (e.g., public schools, some hospitals, prisons, some voluntary organizations). For these organizations, the dispositional approach is almost completely irrelevant. The only way for these organizations to affect the attitudes and behavior of their participants is to create situations that are likely to lead to the desired attitudes and behavior.

We have argued that much remains to be done, both theoretically and empirically, in order to understand the extent to which dispositions influence individual attitudes and behavior in organizations. However, the solution of the research problems discussed in this article is just the beginning. A dispositional approach to attitudes and behavior in organizations also creates difficult social policy problems. Ultimately, solving the social and legal problems associated with dispositionalism may prove even more difficult than solving the research problems.

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