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PSYCHOLOGICAL EMPOWERMENT IN THE WORKPLACE: DIMENSIONS, MEASUREMENT, AND VALIDATION

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This research begins to develop and validate a multidimensional measure of psychological empowerment in the workplace. Second-order confirmatory factor analyses were conducted with two complementary samples to demonstrate the convergent and discriminant validity of four dimensions of empowerment and their contributions to an overall construct of psychological empowerment. Structural equations modeling was used to examine a nomological network of psychological empowerment in the workplace. Tested hypotheses concerned key antecedents and consequences of the construct. Initial support for the construct validity of psychological empowerment was found. Directions for future research are discussed.

Both organizational researchers and practitioners have identified psychological empowerment as a construct meriting critical inquiry (e.g., Kanter, 1989; Thomas & Velthouse, 1990). Widespread interest in psychological empowerment comes at a time when global competition and change require employee initiative and innovation (Drucker, 1988). Despite growing attention to empowerment in the organizational studies literature, the lack of a theoretically derived measure of psychological empowerment in a work context has deterred substantive research on empowerment. Researchers have not made previous attempts to measure psychological empowerment with a work context in mind (e.g., Zimmerman, in press), limiting the resultant measures' usefulness in organizational research. The purpose of this research was to contribute to the growing literature on empowerment by developing and validating a measure of psychological empowerment in a workplace context.

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CONSTRUCT DEFINITION OF EMPOWERMENT

In the past, organizational researchers have focused their work on empowering management practices, including the delegation of decision making from higher organizational levels to lower ones and increasing access to information and resources for individuals at the lower levels (Blau & Alba, 1982; Bowen & Lawler, 1992; Mainiero, 1986; Neilsen, 1986). Recently, Thomas and Velthouse (1990) advocated seeking alternative perspectives on empowerment that distinguish between situational attributes (e.g., management practices) and job incumbent cognitions about those attributes (e.g., psychological empowerment). Similarly, Conger and Kanungo (1988) argued that management practices are only one set of conditions and that those practices may empower employees but will not necessarily do so. Until recently, little research has taken an individual perspective on empowerment, focusing on the psychological experience of empowerment.

A Psychological Definition of Empowerment

Conger and Kanungo (1988) defined empowerment as the motivational concept of self-efficacy. After reviewing relevant research, Thomas and Velthouse (1990) argued that empowerment is multifaceted and that its essence cannot be captured by a single concept. They defined empowerment more broadly as increased intrinsic task motivation manifested in a set of four cognitions reflecting an individual's orientation to his or her work role: meaning, competence (which is synonymous with Conger and Kanungo's self-efficacy), self-determination, and impact.

Meaning. Meaning is the value of a work goal or purpose, judged in relation to an individual's own ideals or standards (Thomas & Velthouse, 1990). Meaning involves a fit between the requirements of a work role and beliefs, values, and behaviors (Brief & Nord, 1990; Hackman & Oldham, 1980).

Competence. Competence, or self-efficacy, is an individual's belief in his or her capability to perform activities with skill (Gist, 1987). Competence is analogous to agency beliefs, personal mastery, or effort-performance expectancy (Bandura, 1989). This dimension is labeled competence here rather than self-esteem because I focused on efficacy specific to a work role rather than on global efficacy.

Self-determination. Where competence is a mastery of behavior, self-determination is an individual's sense of having choice in initiating and regulating actions (Deci, Connell, & Ryan, 1989). Self-determination reflects autonomy in the initiation and continuation of work behaviors and processes; examples are making decisions about work methods, pace, and effort (Bell & Staw, 1989; Spector, 1986).

Impact. Impact is the degree to which an individual can influence

strategic, administrative, or operating outcomes at work (Ashforth, 1989). Impact is the converse of learned helplessness (Martinko & Gardner, 1982). Further, impact is different from locus of control; whereas impact is influenced by the work context, internal locus of control is a global personality characteristic that endures across situations (Wolfe & Robertshaw, 1982).

In sum, psychological empowerment is defined as a motivational construct manifested in four cognitions: meaning, competence, self-determination, and impact. Together, these four cognitions reflect an active, rather than a passive, orientation to a work role. By active orientation, I mean an orientation in which an individual wishes and feels able to shape his or her work role and context. The four dimensions are argued to combine additively to create an overall construct of psychological empowerment. In other words, the lack of any single dimension will deflate, though not completely eliminate, the overall degree of felt empowerment. Thus, the four dimensions specify a "nearly complete or sufficient set of cognitions" for understanding psychological empowerment (Thomas & Velthouse, 1990).

Assumptions. Some general assumptions about this definition of empowerment should be made explicit. First, empowerment is not an enduring personality trait generalizable across situations, but rather, a set of cognitions shaped by a work environment (Thomas & Velthouse, 1990). Thus, empowerment reflects the ongoing ebb and flow of people's perceptions about themselves in relation to their work environments (Bandura, 1989). Second, empowerment is a continuous variable; people can be viewed as more or less empowered, rather than empowered or not empowered. Third, empowerment is not a global construct generalizable across different life situations and roles but rather, specific to the work domain. As Pierce, Gardner, Cummings, and Dunham (1989) developed an organization-based self-esteem measure to contrast with global self-esteem measures, this research develops a work-based measure of psychological empowerment to contrast with previous global measures (Zimmerman, in press).

A PARTIAL NOMOLOGICAL NETWORK

Figure 1 depicts an initial nomological network of psychological empowerment in a work context for purposes of construct validation. Though a complete nomological network has not been developed, given the construct's early stage of development, the structure of this initial set of dimensions and variables is consistent with the critical components of Thomas and Velthouse's (1990) notion of the process of empowerment: an individual's work context and personality characteristics shape empowerment cognitions, which in turn motivate individual behavior. I present hypotheses regarding the basic properties of empowerment and some critical antecedents and consequences of the construct to begin to assess construct validity.

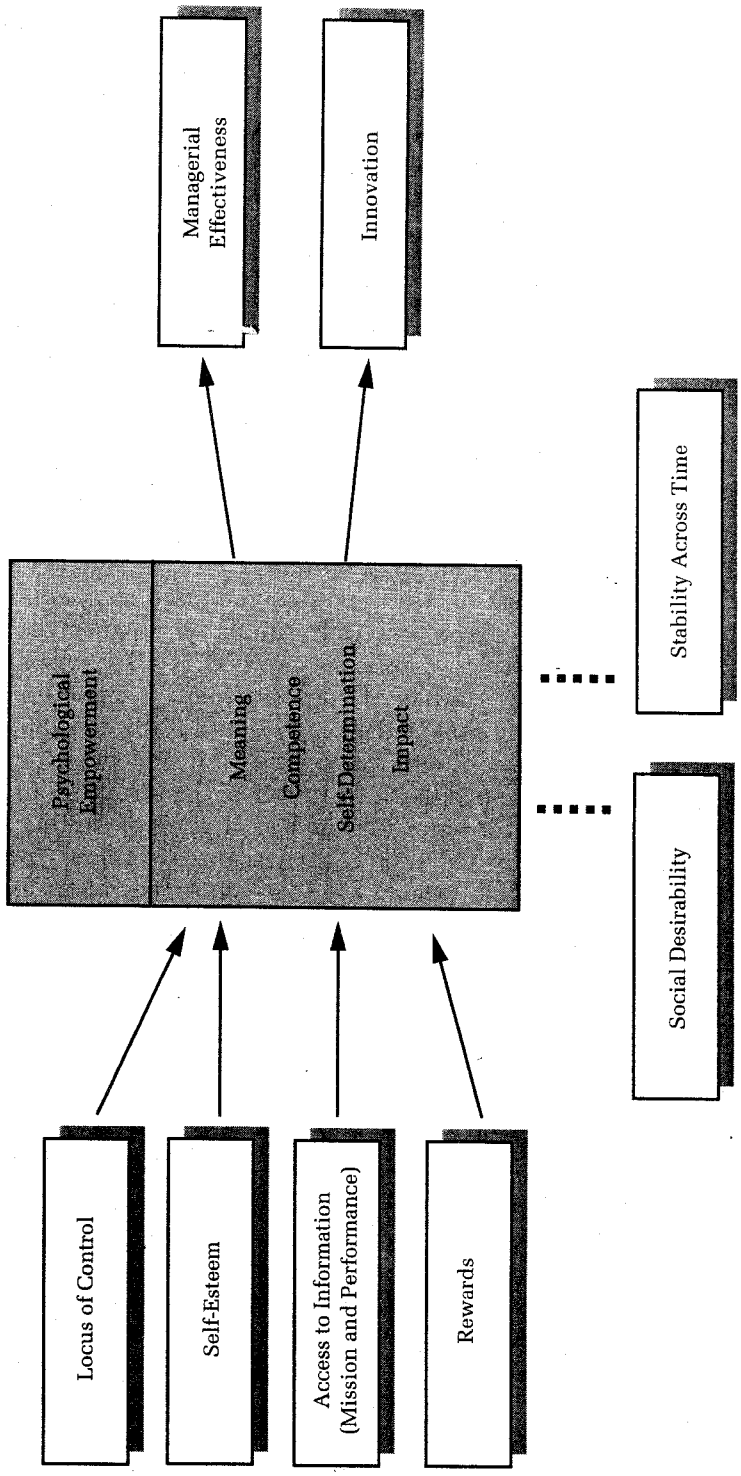

FIGURE 1
Partial Nomological Network of Psychological Empowerment in the Workplace

Properties of Psychological Empowerment

A critical component of construct validation is discriminant and convergent validity (Campbell & Fiske, 1959) of the four dimensions of empowerment. Establishing discriminant validity requires that, though they are naturally related, the dimensions of a construct reflect distinct components: none should be equivalent to another. Establishing convergent validity requires that, though distinct, each dimension contributes to an overall construct. Thus,

> *Hypothesis 1a: There are four distinct dimensions of psychological empowerment.*

> *Hypothesis 1b: Each dimension contributes to an overall construct of psychological empowerment.*

Antecedents of Psychological Empowerment

Both personality traits and work context variables are described to flesh out the initial nomological network. Two personality traits, self-esteem and locus of control, are hypothesized to be antecedents of empowerment because they shape how individuals see themselves in relation to their work environments. The work context is also hypothesized to influence an individual's sense of empowerment. I examined a key set of management practices that Lawler (1986) and Kanter (1989) both considered to be antecedents of empowerment. The first two practices involve information sharing, and the third involves the structure of rewards.

Self-esteem. Self-esteem, defined as a general feeling of self-worth (Brockner, 1988), is posited to be related to empowerment. Individuals who hold themselves in high esteem are likely to extend their feelings of self-worth to a work-specific sense of competence (Bandura, 1977). Through self-esteem, individuals see themselves as valued resources having talents worth contributing, and they are thus more likely to assume an active orientation with regard to their work and work units (Gist & Mitchell, 1992). In contrast, individuals with little self-esteem are not likely to see themselves as able to make a difference or influence their work and organizations (cf. Zimmerman, in press). Thus,

> *Hypothesis 2a: Self-esteem is positively related to psychological empowerment.*

Locus of control. Thomas and Velthouse (1990) suggested that locus of control, the personality trait most relevant to the impact dimension, will also be related to empowerment. Locus of control explains the degree to which people believe that they, rather than external forces, determine what happens in their lives (Rotter, 1966). Individuals with an internal locus of control regarding life in general are more likely to feel capable of shaping their work and work environments and hence to feel empowered. They are likely to see themselves as causal agents affecting their work en-

vironments rather than as being externally controlled by organizational forces. In contrast, "externals" are likely to see their behavior as strongly influenced by a dominant system. Thus,

Hypothesis 2b: Locus of control is positively related to psychological empowerment.

Although the two personality traits are argued to be antecedents to empowerment, they are also important additions to the nomological network for purposes of ascertaining construct nonequivalence. I expected that the construct of empowerment and its underlying dimensions would be distinct from the two personality traits; empowerment is a set of cognitions influenced by the work context, and personality traits are enduring dispositions not immediately influenced by the context at hand. Thus,

Hypothesis 2c: Self-esteem and locus of control are distinct from the overall construct of psychological empowerment.

Information. Kanter suggested that in order to be empowering, organizations must "make more information more available to more people at more levels through more devices" (1989: 5). Kouzes and Posner stated that "without information, you can be certain that people will not extend themselves to take responsibility or vent their creative energies" (1987: 157). Lawler (1992) suggested that two specific types of information are critical for empowerment: (1) information about an organization's mission and (2) information about performance. With regard to organizational mission, until people feel informed about where an organization is headed overall, they won't feel capable of taking initiative (Kanter, 1983). Information about mission is an important antecedent of empowerment because (1) it helps to create a sense of meaning and purpose (Conger & Kanungo, 1988) and (2) it enhances an individual's ability to make and influence decisions that are appropriately aligned with the organization's goals and mission (Lawler, 1992). With regard to information about performance, people need to understand how well their work units are performing in order to make and influence decisions to maintain and improve performance in the future. Performance information is fundamental to reinforcing a sense of competence and believing that one is a valued part of an organization. Thus,

Hypothesis 2d: Access to information about the mission of an organization is positively related to psychological empowerment.

Hypothesis 2e: Access to information about the performance of a work unit is positively related to psychological empowerment.

Rewards. Another work context variable believed to be critical for empowerment is an incentive system that rewards performance (Bowen &

Lawler, 1992). To be empowering, a reward system must recognize individual contribution (Lawler, 1986). Though rewards for group or organization performance may be beneficial, often individuals do not have a clear understanding of how their own actions can influence performance at higher levels (Lawler, 1986). Consequently, individual-performance-based rewards are argued to be important for empowerment. Individual incentives enhance empowerment by (1) recognizing and reinforcing personal competencies and (2) providing individuals with incentives for participating in and affecting decision-making processes at work. Thus,

> *Hypothesis 2f: An individual-performance-based reward system is positively related to psychological empowerment.*

Consequences of Psychological Empowerment

Two consequences of empowerment, effectiveness and innovative behavior, are also specified in the nomological network. Widespread interest in empowerment comes at a time when global competition and organizational change have stimulated a need for employees who can take initiative, embrace risk, stimulate innovation, and cope with high uncertainty (e.g., Block, 1987; Kizilos, 1990). Psychological empowerment is examined in relation to effectiveness and innovation in the complex, ambiguous, and little defined roles of managers (Bowen & Lawler, 1992). In a managerial context, empowerment has great potential to contribute to these outcomes because work processes cannot be solely structured by formal rules and procedures.

Managerial effectiveness is generally defined as the degree to which a manager fulfills or exceeds work role expectations. Because, by definition, empowered managers see themselves as competent and able to influence their jobs and work environments in meaningful ways, they are likely to proactively execute their job responsibilities by, for instance, anticipating problems and acting independently, and hence are likely to be seen as effective. More specifically, Thomas and Velthouse (1990) argued that empowerment will increase concentration, initiative, and resiliency and thus heighten managerial effectiveness.

Furthermore, in previous research, each of the individual dimensions of empowerment has been found to be related to behaviors conducive to managerial effectiveness. Meaning results in high commitment and concentration of energy (Kanter, 1983). Competence results in effort and persistence in challenging situations (Gecas, 1989), coping and high goal expectations (Ozer & Bandura, 1990), and high performance (Locke, Frederick, Lee, & Bobko, 1984). Self-determination results in learning, interest in activity, and resilience in the face of adversity (Deci & Ryan, 1987). Impact is associated with an absence of withdrawal from difficult situations and high performance (Ashforth, 1990). Thus, given the effect of each dimension on effectiveness-related outcomes,

Hypothesis 3a: Psychological empowerment is positively related to managerial effectiveness.

Innovative behaviors reflect the creation of something new or different. Innovative behaviors are by definition change-oriented because they involve the creation of a new product, service, idea, procedure, or process (Woodman, Sawyer, & Griffin, 1993). Most generally, intrinsic task motivation contributes to innovative behaviors (Redmond, Mumford, & Teach, 1993). More specifically, because empowered individuals believe they are autonomous and have an impact, they are likely to be creative; they feel less constrained than others by technical or rule-bound aspects of work (Amabile, 1988). Furthermore, because empowered individuals feel self-efficacious, they are likely to be innovative in their work and to expect success (Amabile, 1988; Redmond et al., 1993). Conger and Kanungo (1988) suggested that psychological empowerment is important for stimulating and managing change in organizations. Thomas and Velthouse (1990) posited a link between psychological empowerment and individual flexibility, which may contribute to innovative behavior. Kanter (1983) found that empowerment and innovative behavior were inextricably linked in her case studies of entrepreneurial organizations. Thus,

Hypothesis 3b: Psychological empowerment is positively related to innovative behaviors.

These predictions represent a partial nomological network for the construct; the variables included are believed to be key personality and contextual antecedents and individual consequences of psychological empowerment. Many of these relationships are likely to involve reciprocal effects. These relationships are consistent with Bandura's (1989) three-way reciprocal determinism, in which external environment, cognitive factors, and behaviors are perceived to be mutually reinforcing. I specified what I considered to be the strongest links in the network. Ultimately, longitudinal research will be needed to clarify these relationships.

METHODS

Sample

The primary sample used for construct validation was composed of mid-level employees from a *Fortune* 50 industrial organization. Data from this sample were used to examine Hypotheses 1a and 1b, 2a–2d, and 3a and 3b. A second sample, composed of lower-level employees from an insurance company, was used to cross-validate the results of the measurement model and to examine Hypotheses 2e and 2f.

The primary sample consisted of 393 managers randomly selected from diverse work units representing all functions, divisions, and geographic locations of the industrial company. Ninety-three percent were men and 85 percent were white; the mean age was 46 years and mean com-

pany and position tenures were 13 and 3 years, respectively. Seventy percent of these managers had at least a college education. The second sample included 128 employees selected by a stratified random sampling technique; the sample was stratified by team membership and function within a team. The demographic characteristics of this sample differed from and complemented those of the first group; these employees were largely nonmanagers (83%), women (84%), and high school graduates (54%) with a mean age of 40 years and an average company tenure of 15 years.

Data Collection Procedures

For the industrial sample, questionnaires were administered at the beginning of a managerial development program designed to address issues of leadership development, cross-functional integration, and total quality management. Respondents were assured of data confidentiality. Because the entire population of middle managers would participate in the program at a randomly determined time during a three-year period, potential for selection bias was minimized. A 100 percent response rate was achieved because the data were collected in conjunction with the program, further minimizing potential bias. For the insurance sample, empowerment measures were administered on company time twice in a five-month period. The reward and information about unit performance measures were collected only at the second administration. Respondents were assured of data confidentiality. A 100 percent response rate was achieved at time 1, and a 95 percent response rate was achieved at time 2.

Measures

A separate scale was used to measure each of the four dimensions of empowerment; items were adapted from previous research (see the Appendix). The following criteria were used to select appropriate scales: (1) scales had to focus on a single dimension, not bridge two or more dimensions, a feature critical for discriminant validity, (2) they had to use, or be adaptable to, a common format for ease of administration (e.g., a seven-point Likert scale), and (3) they had to focus on the individual experience of a dimension rather than a description of a work environment that might result in that experience; for instance, some measures of self-determination ask whether a job permits independence rather than whether the job holder experiences a sense of independence. All the measures had to be adapted to some extent, as is described below.

The meaning items were taken directly from Tymon (1988).[1] The

[1] One of Tymon's items is borrowed from Hackman and Oldham's (1980) meaningfulness scale. Hackman and Oldham's other items were not appropriate as they dealt with feelings of uselessness or how "most people" experienced their work rather than with a focal individual.

competence items were adapted from Jones's (1986) self-efficacy scale.[2] The self-determination items were adapted from Hackman and Oldham's (1985) autonomy scale,[3] and the impact items were adapted from Ashforth's (1989) helplessness scale.[4] A pretest was conducted on a separate sample of mid-level managers in the industrial organization. The questionnaire was revised to clarify ambiguous wording, and for each dimension the three items that had the strongest loadings in an exploratory factor analysis were retained in the questionnaire administered for this study.

Three items were created to measure access to information about an organization's mission. They asked the extent to which respondents agreed that they had access to the strategic information necessary to do their jobs well, understood top management's vision of the organization, and understood the goals of the organization. Three items were created to measure respondents' access to unit performance information. The items focused on the extent of their access to information on their units' quality and cost performance. Three items were created to measure individual pay for performance. The items asked the extent to which individual pay depended on how well an individual performed, specifically whether pay level and raises depended on performance.

Given the diverse jobs represented in the industrial sample, no common objective measures of effectiveness (including no appraisal data) were available. Therefore, a measure of perceived effectiveness (Denison, Hooijberg, & Quinn, in press) was used. Like Tsui's (1984) measure of reputational effectiveness, it assesses performance standards, overall success, comparison to peers, and performance as a role model. Innovative behavior was measured with four items from the competing values model (Quinn, 1988), whose construct validity has been shown (Denison et al., in press). To avoid common method bias, I assessed both managerial effectiveness and innovative behavior by questioning respondents' subordinates. Though superiors' assessments would have been preferable (particularly for assessing effectiveness), Tsui (1984) found that superiors' assessments of managerial effectiveness were highly consistent with subordinates' assessments in a comparable sample of middle managers. Subordinate assessments enhance reliability because there are multiple respondents and a wider domain of activities on which to base assessments, given frequent interactions between subordinates and managers.

All but one of the scales discussed thus far used a seven-point Likert response format; the exception was the unit performance information scale, which employed a five-point format to help minimize the potential

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[2] The items were altered to target competence in an individual's current job rather than in a new job, and "double-barreled" items were simplified.

[3] Two of the items were derived from a single double-barreled item from their original instrument, and a third item was adopted as is.

[4] Items were altered to emphasize the individual's "department" as the target of the influence efforts.

for response set bias. The last three scales were measured with the sum of multiple yes/no questions. Self-esteem was assessed with Coopersmith's (1967) scale. Locus of control was measured with Nowicki and Strickland's (1973) scale. Data on social desirability were collected to assess potential response bias in perceptions of empowerment using Jackson's (1967) scale.

Empowerment data were collected from both samples, though only two self-determination items could be asked of the insurance company employees. Except for access to unit performance information and rewards, all of the remaining measures were only collected in the industrial sample.

Analyses

The objective of the analyses was to examine the construct reliability and initial validity of the theory-based four-dimensional measure of empowerment, including the hypotheses regarding the partial nomological net. Cronbach alphas and test-retest coefficients were used to assess the reliability of the empowerment measures. Hypotheses 1a and 1b assess the psychometric properties of the multidimensional measure of empowerment. A second-order confirmatory factor analysis (CFA) was conducted on each sample to assess the convergent and discriminant validity of the empowerment items (Hypothesis 1a) and the contribution of the four dimensions to the overall construct of empowerment (Hypothesis 1b). In a second-order CFA, the factor structure is further specified to account for the relationships among the first-order factors (in this case, the empowerment dimensions). Confirmatory factor analysis provides a more rigorous test of construct validity than traditional multitrait-multimethod analysis (Campbell & Fiske, 1959).

Hypotheses 2a–2f and 3a–3b assess the preliminary nomological net of empowerment in a work context. To examine the antecedents and consequences, structural equations models were estimated using LISREL. In order to simplify the structural models for estimation, scales of the four dimensions (computed as the mean of the three items) were substituted for the individual items used in the CFAs. In examining the antecedents available in the industrial sample, a MIMIC model (Jöreskog & Sörbom, 1989) was estimated in which the three antecedent variables (self-esteem, locus of control, and access to information about organizational mission) were related to the unobserved latent variable, psychological empowerment. Because the measures are self-reported, social desirability was included in this analysis as a check for potential response bias. In examining the antecedents available in the insurance sample, I also estimated a MIMIC model. Regarding the consequences of empowerment, the unobserved latent variable psychological empowerment was modeled to relate to managerial effectiveness and innovative behavior.

A number of criteria were used to assess the fit of each LISREL analysis. First, the adjusted goodness-of-fit index (AGFI), which is "independent of sample size and relatively robust against departures from normality"

(Jöreskog and Sörbom, cited in Bagozzi and Yi [1988: 79]), should meet or exceed the 0.9 rule. Second, the root-mean-square residual (RMSR), an estimate of the average magnitude of the fitted residuals, should be less than 0.05. Finally, the noncentralized normed fit index (NCNFI, Bentler, 1990), which compares the hypothesized model to a null model, should meet or exceed a 0.9 threshold.

RESULTS

Descriptive Statistics and Reliability Estimates

Table 1 gives univariate statistics, reliabilities, and correlations among the empowerment items for the industrial organization, and Table 2 gives those statistics for the insurance sample. In general, the respondents reported a fairly strong sense of empowerment, and the highest correlations between items measured the same dimension. The measures attained excellent reliability in both samples. The Cronbach alpha reliability coefficient for the overall empowerment construct was .72 for the industrial sample and .62 for the insurance sample; given that this is an initial effort at measurement and that the four dimensions tap different components or aspects of empowerment, constituting an index more than mere multiple measures, these overall reliabilities are acceptable. The two data collections for the insurance sample permitted the assessment of test-retest reliability as well. Because no significant organizational changes transpired in the five months between time 1 and time 2 that would have given rise to new work experiences (e.g., a promotion, a new superior, or a work design change such as a switch to self-managing teams), we expected that psychological empowerment would demonstrate moderate test-retest reliability.[5] Table 3 gives univariate statistics and correlations for the test-retest relationships among the empowerment scales and the other variables; these suggest moderate stability over time. Thus, both internal consistency and the test-retest reliability are established for the empowerment scale items. (Table 3 is further discussed below in terms of the structural equation model.)

Convergent and Discriminant Validity of the Psychological Empowerment Items

Second-order CFAs were used to assess the convergent and discriminant validity of the empowerment measures in both samples (see Figure 2). In the industrial sample, an excellent fit was obtained (AGFI = .93, RMSR = .04, NCNFI = .97). A modest fit was obtained for the insurance sample (AGFI = .87, RMSR = .07, NCNFI = .98). Each of the items loaded

[5] Given the low level of theoretical development regarding the stability of the empowerment construct over time, I chose the five-month interval rather arbitrarily; thus this analysis should be viewed as exploratory.

TABLE 1
Univariate Statistics and Pearson Correlations Among Empowerment Items, Industrial Sample[a]

Items[b]	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11
1. Meaning 1	5.97	0.85											
2. Meaning 2	5.79	0.90	.66										
3. Meaning 3	5.90	0.87	.66	.76									
4. Competence 1	5.37	1.14	.30	.22	.32								
5. Competence 2	5.61	0.93	.30	.31	.36	.68							
6. Competence 3	6.08	0.87	.11	.15	.20	.52	.59						
7. Self-determination 1	5.44	1.03	.22	.29	.29	.23	.33	.21					
8. Self-determination 2	5.50	1.01	.22	.29	.34	.27	.36	.33	.54				
9. Self-determination 3	5.60	0.96	.25	.30	.31	.18	.39	.15	.60	.47			
10. Impact 1	5.33	1.06	.32	.38	.33	.23	.28	.17	.40	.31	.39		
11. Impact 2	5.55	1.03	.32	.42	.43	.21	.24	.19	.42	.42	.41	.61	
12. Impact 3	5.69	0.96	.29	.35	.39	.23	.30	.19	.41	.40	.45	.66	.78

[a] Significance: r's $\geq .10$, $p < .05$; r's $\geq .13$, $p < .01$; r's $\geq .17$, $p < .001$.

[b] See the Appendix for item texts.

TABLE 2
Univariate Statistics and Pearson Correlations Among Empowerment Items, Insurance Sample[a]

Items[b]	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Meaning 1	6.09	0.74										
2. Meaning 2	5.61	0.98	.57									
3. Meaning 3	5.90	0.84	.67	.76								
4. Competence 1	6.24	0.70	.34	.38	.31							
5. Competence 2	6.04	0.73	.33	.36	.30	.86						
6. Competence 3	5.88	0.94	.27	.28	.30	.54	.53					
7. Self-determination 1	5.36	1.16	.14	.22	.24	.17	.19	.16				
8. Self-determination 3	5.41	1.22	.08	.37	.30	.24	.29	.13	.64			
9. Impact 1	4.71	1.48	.22	.23	.38	.20	.15	.02	.33	.31		
10. Impact 2	3.27	1.51	.26	.18	.34	.13	.10	−.08	.21	.24	.65	
11. Impact 3	3.41	1.51	.30	.32	.41	.26	.22	.09	.28	.29	.68	.62

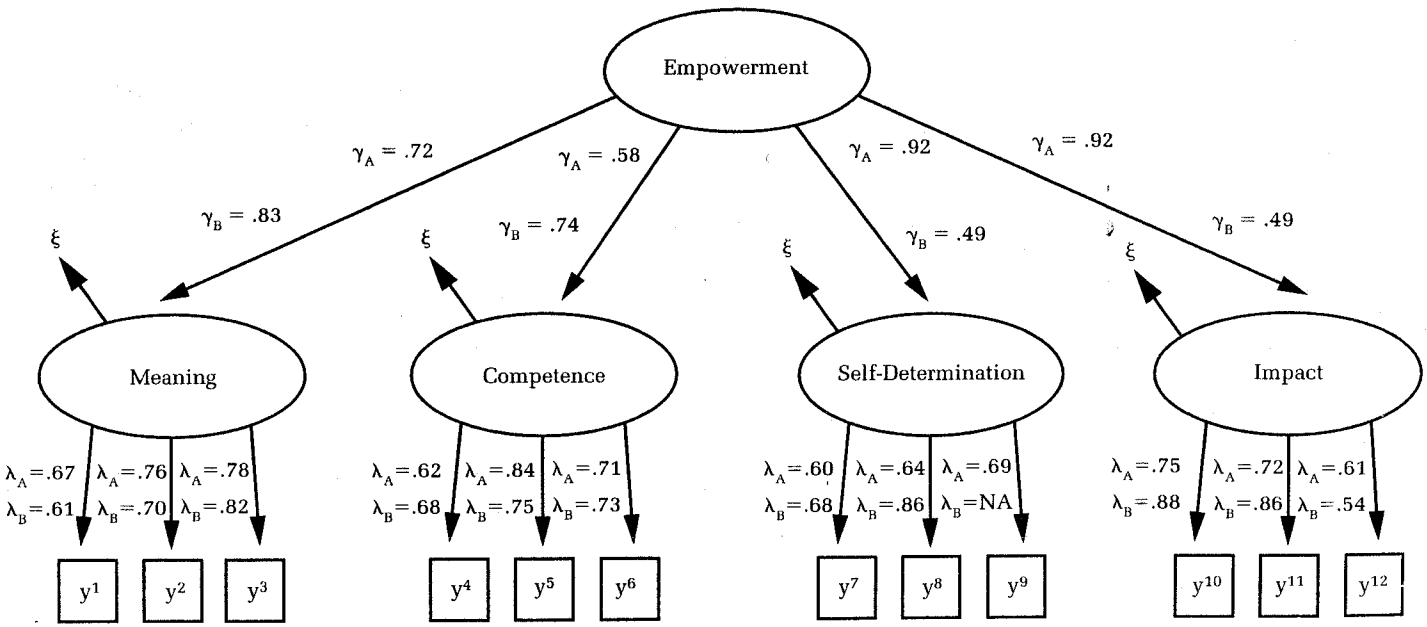
[a] Significance: r's $\geq .17$, $p < .05$; r's $\geq .23$, $p < .01$; r's $\geq .27$, $p < .001$.
[b] See the Appendix for item texts.

TABLE 3
Univariate Statistics and Pearson Correlations Among Scales, Insurance Sample, Times 1 and 2[a]

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Meaning scale, time 1	6.13	0.71	(.85)									
2. Competence scale, time 1	6.12	0.61	.48	(.84)								
3. Self-determination scale, time 1	5.70	0.87	.62	.54	(.80)							
4. Impact scale, time 1	4.28	1.51	.42	.21	.42	(.85)						
5. Meaning scale, time 2	5.94	0.76	.72	.42	.43	.36	(.85)					
6. Competence scale, time 2	6.02	0.88	.37	.58	.32	.24	.53	(.83)				
7. Self-determination scale, time 2	5.26	1.12	.39	.34	.74	.36	.43	.32	(.79)			
8. Impact scale, time 2	4.11	1.32	.23	.02	.23	.68	.40	.24	.33	(.84)		
9. Performance information scale	3.34	0.80					.24	.24	.26	.39	(.73)	
10. Rewards	3.88	1.38					.20	.02	.15	.35	.32	(.80)

[a] Cronbach alpha reliabilities are provided in parentheses. Significance: r's $\geq .29$, $p < .05$; r's $\geq .36$, $p < .01$; r's $\geq .48$, $p < .001$.

FIGURE 2
Results of Second-Order Confirmatory Factor Analysis[a,b]



[a] A=industrial sample; B=insurance sample.
[b] For the industrial sample, AGFI=.93, RMSR=.04, and NCNFI=.97; for the insurance sample, AGFI=.87, RMSR=.07, and NCNFI=.98

strongly on the appropriate factor, and the four factors were significantly correlated with each other in both samples. Though the dimensions are clearly not equivalent, the strong correlations among them suggest the need for continued work on discriminant validity.

Because the empowerment measures were self-reported, an alternative explanation for the second-order factor might be common method variance rather than the overall construct of empowerment. If the second-order factor represented common method variance, other self-reported measures would also load on the second-order factor. In additional analyses where self-esteem, locus of control, or social desirability were each included as additional first-order factors, the fit of the model was severely reduced, indicating that the second-order factor did not solely represent common method variance. Thus, the results provide initial support for Hypotheses 1a and 1b.

Nomological Net of Psychological Empowerment

Antecedents. Table 4 gives univariate statistics and correlations among the components of the nomological net—the full set of scales—from the industrial sample. The structural equation model for the antecedents of empowerment in the industrial sample indicates a good fit between the hypothesized model and the data (AGFI = .92, RMSR = .05, NCNFI = .93). Both self-esteem ($\gamma = .15$, $p < .01$) and access to information about an organization's mission ($\gamma = .45$, $p < .001$) were significantly related to empowerment, as hypothesized. As hoped, social desirability ($\gamma = -.06$) was not found to be significantly related to empowerment. Contrary to expectations, locus of control ($\gamma = .05$) was not found to be significantly related to empowerment. Because the theoretical links between locus of control and empowerment are quite strong, the lack of support for this hypothesis may be a result of measurement limitations. The reliability for the locus of control measure was marginal; the measure had considerably lower variance than self-esteem, which was measured using the same response format; and the items might have been too general to relate to issues of empowerment (an example is, "Do you believe you can stop yourself from catching a cold?"). For these reasons, strong conclusions cannot be drawn about the relationship between locus of control and empowerment. Given the small magnitudes of the gamma coefficients for both self-esteem and locus of control, initial evidence for the construct nonequivalence of empowerment from these two personality constructs is also provided. Thus, support for Hypotheses 2a, 2c, and 2d was found, though support was not found for Hypothesis 2b.

Table 3, presented earlier, provides univariate statistics and correlations among the components of the nomological net for the insurance sample. The structural equation model for the antecedents of empowerment in the insurance sample indicates a modest fit between the hypothesized model and the data (AGFI = .87, RMSR = .06, NCNFI = .92). As hypothesized, both information about unit performance ($\gamma = .42$, $p < .001$) and

TABLE 4
Univariate Statistics and Pearson Correlations Among Scales, Industrial Sample[a]

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Meaning scale	5.89	0.78	(.87)*									
2. Competence scale	5.69	0.84	.30	(.81)								
3. Self-determination scale	5.51	0.83	.28	.39	(.81)							
4. Impact scale	5.53	0.90	.43	.32	.63	(.88)						
5. Self-esteem	31.37	2.76	.07	.26	.16	.26	(.76)					
6. Information	4.77	0.86	.25	.25	.27	.28	.26	(.81)				
7. Social desirability	1.51	0.06	.02	.22	.12	.10	.22	.13	(.65)			
8. Locus of control	23.18	1.46	.05	−.06	−.01	.06	.42	.15	−.03	(.65)		
9. Effectiveness	3.85	0.54	.05	.20	.10	.20	.23	.17	−.09	.03	(.93)	
10. Innovation	4.89	0.71	.08	.25	.10	.19	.12	.04	−.11	.03	.60	(.91)

[a] Cronbach alpha reliabilities are provided in parentheses. Significance: r's $\geq .13$, $p < .05$; r's $\geq .16$, $p < .01$; r's $\geq .22$, $p < .001$.

rewards ($\gamma = .21$, $p < .01$) were significantly related to psychological empowerment. Thus, support for Hypotheses 2d and 2e was found.

Consequences. The structural model for the consequences of empowerment suggests a marginal fit (AGFI = .78, RMSR = .12, NCNFI = .72). Nevertheless, the relationships between empowerment and innovative behavior ($\gamma = .30$, $p < .001$) and managerial effectiveness ($\gamma = .26$, $p < .001$) were significant. Because the measurement model of the four dimensions was a good fit and because each path between empowerment and the outcomes was significant, the marginal fit of the LISREL model is likely due to multicollinearity between innovative behavior and managerial effectiveness. The multicollinearity is not surprising; Tsui (1984) found that managerial effectiveness as assessed by both superiors and subordinates was directly related to role performance in innovative activities.[6] When separate models were calculated for each outcome, each was found to be a strong fit to the data (innovative behavior: AGFI = .95, RMSR = .05, NCNFI = .96; managerial effectiveness: AGFI = .95, RMSR = .05, NCNFI = .96). These findings provide support for Hypotheses 3a and 3b and suggest that managerial effectiveness and innovative behaviors tend to be moderately related.

DISCUSSION

This research takes an initial step toward developing and validating a multidimensional measure of psychological empowerment in a work context. The measure, based on scales adapted from previous research, provides evidence for the construct validity of a nomological network of empowerment in the workplace. Data on mid-level employees in one organization provided initial evidence of the convergent and, to a lesser extent, discriminant, validity of the measurement model of the four-dimensional measure, and a complementary sample of lower-level employees in a second organization provided cross-validation. The measurement model suggests that each of the four dimensions contributes to an overall construct of empowerment in a second-order factor analysis and that the dimensions are not construct-equivalent. Results also show evidence of the internal consistency and test-retest reliability of the dimensions of psychological empowerment in a work context.

Further efforts at construct validation should explore what might be called a gestalt of empowerment that goes beyond a simple combination of the four dimensions and should establish the construct's independence

[6] Following Heide and Miner (1992), I conducted a multivariate regression analysis of the ten outcome variables on the four empowerment dimensions as an audit on the distinctiveness of the two outcome variables. Though the analysis indicated that the two dependent variables were indeed related as a group to the independent variables, the multivariate significance was not attributable to any one outcome variable. The multivariate test yielded a Wilks's lambda of .92 ($F = .000$), and the univariate test for each dependent variable was significant.

from other theoretically related constructs such as organizational commitment. The limited discriminant validity found here and some differences across the two samples suggest that continued refinement of the measures is necessary. To further document discriminant validity, future research should also identify and empirically examine different antecedents and consequences of each dimension of empowerment.

A partial nomological net of psychological empowerment in a work context was specified and empirically examined as an additional step toward construct validation. Partial support for the initial nomological net was found in a series of structural equations models estimated with LISREL. The nomological net indicates how personality and work context variables shape psychological empowerment as well as some of its individual outcomes.

Future research should address the limitations inherent in this first study of the nomological net of empowerment in the workplace. First, future research must address the generalizability of the nomological net across levels of the organizational hierarchy, in more demographically diverse samples, and in diverse organizational settings (e.g., not-for-profit organizations or government bureaucracies). Given the contexts of the two samples, future research should examine the framework in different organizational contexts because the respondents here may have been sensitized to empowerment issues. It is particularly important to examine the consequences of the nomological net at lower levels of organizational hierarchies, where empowerment interventions tend to be targeted.

Second, though key personality and organizational variables were addressed, a more comprehensive nomological network should be examined in future research. A more powerful test of the full empowerment model would be to tie empowerment to certain organizational manipulations in order to better explain the degree to which situational changes can produce motivational changes in employees. Future research should further examine the macro-micro linkages relevant to empowerment. As Zimmerman suggested, an overly individualistic conception of empowerment may limit understanding of the construct and "may unwittingly advance . . . a trait-oriented conception of empowerment while failing to consider environmental influences, organizational factors, or social, cultural, and political contexts" (1990: 173). Additional contextual variables for future research include structure, culture, job design, and high-involvement practices such as self-managing teams. Such research will facilitate theory development on organization design and development for workforce empowerment in contemporary organizations.

Future research should also examine a broader set of consequences of psychological empowerment than was examined here. Broader conceptualizations of managerial effectiveness, including superior assessments or actual performance appraisal ratings, should also be examined. The measure of perceived effectiveness used here is more likely to be related to empowerment than a measure of actual effectiveness. Research on other be-

havioral and organizational consequences of empowerment (such as commitment, organizational effectiveness, and total quality management) should be conducted to further expand the nomological network of empowerment. Moderators of the links between empowerment and these outcomes also need to be explored; moderators might include individual differences and organizational variables like alignment with organizational vision and job security.

Finally, longitudinal research is clearly needed to assess issues of causality as well as the strength and duration of the relationship between empowerment and various outcomes. Longitudinal research would help clarify the causal direction of the relationships identified in the nomological net. A more complete framework would specify reciprocal links inherent in the framework—for instance, innovative behaviors and effectiveness might also enhance a sense of empowerment.

Clearly, the empirical study of psychological empowerment is in its infancy. This research contributes to the literature by developing a conceptual definition of empowerment, measuring it, providing evidence of its construct validity, and demonstrating its relationship to a number of antecedents and outcomes in the nomological network. My hope is that clarifying these issues will encourage more organizational scholars to embark on substantive research addressing the dynamics of empowerment in the workplace.

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APPENDIX
Texts of Items
Measuring Empowerment

Meaning

The work I do is very important to me (meaning 1).
My job activities are personally meaningful to me (meaning 2).
The work I do is meaningful to me (meaning 3).

Competence

I am confident about my ability to do my job (competence 1).
I am self-assured about my capabilities to perform my work activities (competence 2).
I have mastered the skills necessary for my job (competence 3).

Self-Determination

I have significant autonomy in determining how I do my job (self-determination 1).
I can decide on my own how to go about doing my work (self-determination 2).
I have considerable opportunity for independence and freedom in how I do my job (self-determination 3).

Impact

My impact on what happens in my department is large (impact 1).
I have a great deal of control over what happens in my department (impact 2).
I have significant influence over what happens in my department (impact 3).

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