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**Psychological Empowerment in the
Workplace: Construct Definition,
Measurement, and Validation**

**CEO Publication
T 93-21 (241)**

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ABSTRACT

PSYCHOLOGICAL EMPOWERMENT IN THE WORKPLACE: CONSTRUCT DEFINITION, MEASUREMENT, AND VALIDATION

The literature on empowerment lacks the integrated conceptual underpinning necessary for cumulative theory development and empirical research. The goals of this paper were to integrate and extend the disparate efforts of previous authors and to develop and empirically validate a conceptualization of empowerment in the workplace. Through the integration of an interdisciplinary literature review and interview data on individual experiences of empowerment, four core dimensions of empowerment were identified. An instrument was created to measure the four dimensions, and confirmatory analysis provided empirical support for the construct validation of the multidimensional conceptualization of empowerment. Contributions to research and practice, and directions for future research, are discussed.

This paper is based upon my dissertation work at the University of Michigan School of Business Administration where the members of my dissertation committee included Robert E. Quinn, Susan Ashford, Richard Bagozzi, Karl E. Weick, and Marc Zimmerman. I would also like to thank Susan Cohen, Tom Cummings, and Aneil Mishra for thoughtful comments on previous drafts and the University of Michigan and of Southern California for financial support.

Both organizational researchers and practitioners have identified empowerment as a construct of critical inquiry for today's organizations (e.g., Kanter, 1989; Thomas & Velthouse, 1990). Widespread interest in empowerment comes at a time when global competition and environmental change demand new forms of management that encourage risk taking and innovation (Drucker, 1988). Despite growing attention to empowerment in the popular and academic literatures, however, current research on empowerment lacks the integrated conceptual underpinning that is essential to cumulative theory development and empirical research. "At this early stage of its usage, [psychological] empowerment has no agreed-upon definition. Rather the term has been used, often loosely, to capture a family of somewhat related meanings" (Thomas & Velthouse, 1990: 666). Zimmerman calls empowerment theory an "enigma" (1990: 169). The goal of this paper is to begin to integrate and extend the disparate efforts of previous empowerment researchers to provide a more systematic framework for understanding empowerment in the workplace. The specific objective is to develop a comprehensive conceptualization of empowerment in the workplace and to validate it empirically.

TOWARD CONSTRUCT DEFINITION OF EMPOWERMENT

In the organizational studies literature, empowerment has been viewed from two different perspectives (Conger & Kanungo, 1988). In the first perspective empowerment is viewed as a social-structural construct or an objective social condition (Blau & Alba, 1982; Mainiero, 1986; Neilsen, 1986). In this first perspective, empowerment refers to a specific set of management practices (Bowen and Lawler, 1992). Individuals are empowered when they have: (1) *power* to make decisions that influence organization direction, (2) *information* about organization strategy and performance, (3) *training* that provides requisite skills and knowledge, and (4) *rewards* based on the organization's performance (Lawler, 1988). This social-structural perspective on empowerment has received adequate conceptualization (Conger & Kanungo, 1988) and considerable research attention under the label of participative management (c.f. Cotton, Vollarth, Froggart, Lengnick-Hall, & Jennings, 1988).

The second perspective on empowerment focuses on the individual psychological or experiential aspects of empowerment. Within this second perspective, Conger and Kanungo (1988) equate

empowerment with a sense of self-efficacy. Thomas and Velthouse (1990) expand on Conger and Kanungo's work with a cognitive/interpretive model of empowerment. They specify a richer conceptualization of empowerment by supplementing self-efficacy with three additional cognitive variables (called task assessments) that enhance the intrinsic motivation of individuals. In spite of this work, definitional issues regarding psychological empowerment have yet to be resolved. Conceptualizations of psychological empowerment available in the organizational studies literature lack grounding in the more established disciplinary literature on empowerment as well as in the individual *experience* of empowerment. Furthermore, no empirical validation of these conceptualizations of psychological empowerment exists to date.

Objectives of the Paper

Because the psychological perspective on empowerment has received considerably less attention in the literature, and because it is believed to be critical in tapping the latent energy and innovative behaviors associated with notions of empowerment, the focus of this paper is on clarifying a definition of psychological empowerment in a workplace context. Clearly, formal construct definition and subsequent validation of a psychological conceptualization of empowerment are necessary before substantive research can be conducted. Construct definition and validation of psychological empowerment are the goals of this paper. To establish construct validity, the domain of the construct must be specified (i.e. content validity), and the construct must be found to be related predictably to other relevant constructs (i.e., predictive validity) (Nunnally, 1978). In this paper, the *domain of the construct* of empowerment is first explored through (1) a review of the broader contemporary, disciplinary literature on empowerment, and (2) an examination of interview data on individual experiences of empowerment in the workplace. The literature review is helpful in identifying the key dimensions which define psychological empowerment. The interview data establishes external validity of the literature-based conceptualization of psychological empowerment. Second, the *predictive validity* of psychological empowerment with regard to a relevant behavioral outcome (i.e., innovative behavior) is explored. One of the reasons empowerment has emerged as a critical workplace issue is a belief that empowerment will ignite creative and innovative employee

behaviors. Later in the paper, empirical validation of the conceptualization is assessed through the development and psychometric analysis of an instrument which purports to measure psychological empowerment. For simplicity, throughout the remainder of the paper, unless otherwise noted, the word "empowerment" should be assumed to mean *psychological* empowerment rather than *social-structural* empowerment.

Integration of the Interdisciplinary Literature on Empowerment

The literature review extends beyond the organizational studies literature to include psychology, theology, and sociology. These disciplines have a more developed tradition of studying empowerment and may inform the conceptualization of empowerment in a workplace context. In the *psychology* literature, empowerment has been endemic to a broad literature encompassing issues of human agency, mastery, and control. These notions of empowerment embrace such perennial philosophical concerns as the determinism of human action, intentionality, free will, and causality. In the literature on *theology*, empowerment is embedded within the literature on liberation theology. Liberation theology suggests that empowered individuals take responsibility for their own destiny and realize that the present situation is not natural, inevitable, or dictated by God. From a *sociological* perspective, empowerment is viewed as critical for understanding and solving fundamental societal problems through social change. Empowerment is embedded within a broad literature focusing on issues of societal democracy, egalitarianism, and human rights. The objective of this interdisciplinary review is to identify shared understandings of empowerment across different perspectives by integrating and synthesizing to a few key dimensions of empowerment. The goal is to develop a parsimonious and generalizable conceptualization of empowerment in an organizational context that may then be operationalized and measured.

The Integrative Process. In order to identify shared understandings of empowerment across the different perspectives, an exploratory thematic analysis of the literature was performed. First, an extensive interdisciplinary review of the empowerment literature was conducted using data base searches including ABI-Inform, Psychological Abstracts, Dissertation Abstracts, and a number of university card catalogs, among others. References which focused exclusively on an organization (rather than individual level of

analysis) or viewed empowerment exclusively from a social-structural perspective (rather than a psychological perspective) were not included in the literature review. After excluding 15 references for these reasons, 74 references remained in the review. The articles, books, and dissertations included in the review are denoted with asterisks in the reference section of the paper.

Careful notes were recorded concerning the definitions or, when definitions were not explicit, themes of empowerment articulated in each reference. The actual language used in the article, book, or dissertation was preserved and recorded onto index cards. Many references articulated multiple themes, and some themes were replicated across articles, though there was variation in the actual language articulated and the way the themes were expressed. Variation was maximized at this stage of the analysis as the purpose was to generate as much variation as possible in identifying the content domain of the construct of empowerment. Over 150 themes regarding empowerment were derived from this process. The themes were then sorted by two independent raters into content categories. An unstructured Q-sort of the themes was performed; that is, no underlying themes were theoretically specified *a priori*, and no minimum or maximum number of categories were predetermined (Kerlinger, 1986). The coders were instructed to sort the themes into the smallest number of meaningful categories which reflected the content domain of the empowerment themes. The objective of the task was emphasized in the coders' instructions: to integrate and synthesize the themes into a parsimonious set of dimensions that could be operationalized and measured. The coders were told to place any themes which did not fit into a meaningful category into a separate pile.

After completing their independent sorts, the two raters integrated their Q-sort results. In cases of disagreement about the categorization of themes, the coders discussed the reasons for the disagreement. First, there were several themes which did not fit into any general category including issues of optimism, learning, creativity, alignment, and social interaction. These themes were deleted from the analysis because they did not fit within any meaningful dimension, but they may nevertheless be informative in future research efforts which explore antecedents and outcomes of empowerment. Second, given that no specific number of categories was specified *a priori*, it is not surprising that the coders disagreed on the minimum number of dimensions that captured the essence of the empowerment themes. For example, it was not clear

to the coders whether the themes reflecting "mastery" and "self-efficacy" notions should be kept differentiated or whether they could be integrated into a more general dimension of competence. After reviewing the instructions regarding the purpose of the Q-sort, (i.e., to synthesize to a parsimonious set of dimensions which reflect the content domain of empowerment), the coders agreed to integrate strongly related themes such as mastery and self-efficacy into an overall dimension of competence. Overall interrater reliability was .72, suggesting that there was a fairly high level of agreement among the two coders regarding the dimensions, a level of reliability considered adequate for an exploratory study such as this (Nunnally, 1978). The results of the thematic analysis are summarized in Table 1. The two coders integrated the themes into four general dimensions of empowerment: (1) meaning, (2) competence, (3) self-determination, and (4) impact. As shown in Table 1, each of the four dimensions has roots in each of the different disciplinary perspectives on empowerment; that is, there are no blank cells in the table. The four dimensions are described below.

 Insert Table 1 about here

Meaning. In general, a sense of meaning involves a fit regarding the relationship between a given activity and one's beliefs, attitudes, and behaviors (Brief & Nord, 1990). In this sense of the word, meaning is "the value of [an activity's] goal or purpose, judged in relation to the individual's own ideals and standards" (Thomas & Velthouse, 1990: 672). An individual feels a sense of meaning when an activity "counts" in his or her own value system. Involvement in activities where one lacks personal meaning may create a sense of cognitive dissonance and hence may result in personal disengagement from the activity (Kahn, 1990). Conversely, those activities infused with personal meaning create a sense of purpose, passion, and energy. A sense of meaning may be with regard to either the activity itself, or the outcomes of the activity. A sense of meaning encompasses Hackman and Oldham's (1980) "meaningfulness" and is the converse of Seeman's (1959) "self-estrangement" dimension of alienation.

Specifically, the literature on empowerment evinces a sense of meaning in the following ways. Empowered individuals believe in and care about what they do; their activity is aligned with their value

system (Bennis and Nanus, 1985; Macher, 1988). They have passion, a kind of "cathexis for, or investment, of psychic energy in" activity (Alinsky, 1971; Boyte & Riessman, 1987; Thomas & Velthouse, 1990: 673). Those who are empowered have spiritual energy (Rappaport, 1987). Empowered individuals feel a sense of personal significance from their involvement (Block, 1987; Conger & Kanungo, 1988; Manz & Sims, 1989; Vogt & Murrell, 1990). They feel a sense of self-identity and personal integrity through their involvement; empowered individuals have a personal connectedness to the activity at hand (Halliday, 1987; Zimmerman, 1990b; Zimmerman & Rappaport, 1988). Individuals get "energized" about a given activity and thus become connected through a sense of meaning (Friere, 1970; King, Maynard, & Woodyear, 1988; Szivoa & Travers, 1988). From the literature synthesis, a sense of meaning is thus believed to be an important component of an individual sense of empowerment.

Competence. Competence, or self-efficacy, is strongly rooted in social psychology. It is a key dimension in Bandura's (1989) social learning theory and refers to a belief in one's capability to perform a role (Gist, 1987). It is often referred to as agency beliefs, or the conviction that one can successfully execute the behavior required for a given role (Bandura, 1989). Competence is conceptually similar to Adler's (1927) "mastery motivation (i.e., striving for competence in dealing with one's world), and White's (1959) "effectance motivation."

The literature on empowerment also evinces a dimension of competence. Empowered people believe in the efficacy of their skills and abilities. Empowered individuals have a sense of self-effectiveness or personal competence (Bennis & Nanus, 1985; Conger & Kanungo, 1988; Thomas & Velthouse, 1990). Not only do they believe that they have requisite skills and abilities (i.e., technical competence), but they also have the confidence they can perform adequately (Balcazar, Seekins, Fawcett, & Hopkins, 1990; Bandura, 1986; Gist, 1987; Ozer & Bandura, 1990; Soloman, 1976). Empowered individuals believe in their capacity to learn and grow to meet new challenges (Kieffer, 1986; Rappaport, 1987; Shor & Friere, 1987; Staples, 1990; Zimmerman, 1990a, 1990b). They have a sense of personal mastery (Rappaport, 1987; Vogt & Murrell, 1990; Zimmerman & Rappaport, 1988). Consequently, a second dimension extracted from the literature is a sense of competence or mastery in terms of one's ability to perform a given role.

Self-Determination. Where competence reflects a *mastery* of behavior, self-determination reflects a *choice* of behavior. "To be self-determining means to experience a sense of choice in initiating and regulating one's own actions" (Deci, Connell, & Ryan, 1989: 580). Self-determination is driven by a self-perception that one's involvement in a given activity is volitional and intentional (Deci & Ryan, 1987). Self-determination is represented by "intentional behaviors that are initiated and regulated through choices as an expression of oneself, rather than behaviors that are pressured and coerced by environmental forces" (Deci & Ryan, 1987: 1025). Self-determination is associated with a sense of personal freedom and autonomy and may be achieved through individual choice over the initiation and continuation of work behavior and inputs to the production process (e.g., making decisions about work methods, pace, and effort) (Bell & Staw, 1989). Self-determination is consistent with Bell and Staw's (1989) "control over behavior," Bagozzi's (1991) ideas on volition, Kohn and Schooler's (1978) "self-directedness," Hackman and Oldham's "autonomy," and Bazerman's (1982) "activity control".

Specifically, the literature on empowerment evinces a dimension of self-determination. Empowered individuals have a sense of responsibility for and ownership of their work (Rappaport, Swift, and Hess, 1984; Rappaport, 1987; Rose & Black, 1985; Staples, 1990; Zimmerman, 1990a). They see themselves as proactive, self-starters rather than as passive followers (Conger & Kanungo, 1988; Thomas & Velthouse, 1990). They have a propensity to act under their own volition, taking initiative at their own accord, and making independent decisions (Matza, 1990; Vogt & Murrell, 1990). Empowered individuals feel autonomous in their work roles with a variety of opportunities for participation (Belasco, 1989; Block, 1987; Burke, 1986; Gecas, 1989; Kouzes & Posner, 1987). Empowered individuals do not see their actions as predetermined, inevitable, or dictated externally (Friere, 1970). They see the "locus of initiative" as within themselves (Pascale, 1990). In an interesting medical case of self-determination, Cousins (1978) described the turning point in a cancer patient's recovery when "the patient rejected the traditional passive role of patient and insisted on being an active participant in one's own therapy" (as quoted in Gecas, 1989: 298). Although the patient had no control over the cancer itself, he assumed more personal responsibility for the choices to be made in his therapy. In this way, empowered individuals believe they have personal discretion concerning the methods used to perform their role in the system. Empowered individuals have

"conscientizacao" (Friere, 1970); they see themselves as active participants or "subjects" rather than powerless "objects." The dimension of self-determination is singularly most pronounced in the popular literature on empowerment (e.g., Thier, 1989; O'Reilly, 1992). Consequently, a third dimension derived from the literature is a sense of self-determination in terms of the initiation and continuation of work behavior.

Impact. Ashforth (1989) describes impact as an individual's belief that he or she can influence organizational outcomes; it concerns the degree to which an individual believes he or she has influence over strategic, administrative, and operating decisions in the organization or larger environment. Bell and Staw (1989) suggest that individuals experience a sense of impact when they believe they can change organizational outcomes (such as make-or-buy decisions or decisions to enter new markets). Greenberger and Strasser define impact as an individual's beliefs, at a given point in time, that he or she can "effect a change in a desired direction, on the environment" (1986: 165). Blauner (1964) suggests that individuals have a sense of impact when they can influence such things as general managerial policies and decision making. Impact is congruent with Bell and Staw's (1989) "control over outcomes," Zimmerman and Zahniser's (1991) "sociopolitical control," and Spector's (1986) "perceived control," and can be viewed as the converse of and Seeman's (1959) "powerlessness" dimension of alienation.

The literature on empowerment described a sense of impact in the following manner. Empowered individuals see themselves as "making a difference, that is producing the intended effect in one's task environment" (Thomas & Velthouse, 1990: 672). They believe they can effect desired change, manipulate, and have some control in the larger environment (Alinsky, 1971; Ashforth, 1989; Bookman & Morgan, 1988; Manz & Sims, 1989; Ngau, 1987). Empowered individuals partially dominate "strategic conversations" in organizations (Westley, 1990). Consequently, empowered individuals believe they can challenge existing organizational mindsets and push organizational boundaries (Burrell & Morgan, 1979; Goldfried & Merbaum, 1973; Kouzes & Posner, 1987; Peters, 1987). They see themselves as change masters and shapers of the organization's future (Kanter, 1983; Thier, 1989; Macher, 1988; Rappaport, et al., 1984; Rose & Black, 1985; Vanderslice, 1987; Zimmerman & Rappaport, 1988). The underlying philosophy of empowerment is consistent with the radical humanist paradigm of sociological analysis --

that is, a subjective perspective with an emphasis on radical change, not regulation (Bradshaw-Cambell, 1990). Consequently, a fourth dimension of empowerment derived from the literature is a sense of personal impact on the larger organizational system in which one is embedded.

To avoid potential for confusion, the last two dimensions are further distinguished: self-determination is "control over behavior" while impact is "control over outcomes" (Bell and Staw, 1989). The differentiating factor is a choice concerning the initiation or continuation of behavior (i.e., self-determination) versus a belief about the extent to which one can causally influence a desired outcome (i.e., impact). Where self-determination involves issues of volition and choice of behavior in one's work, impact involves a perception of influence or control over desired outcomes in the larger system in which one is embedded. More specifically, self-determination represents a choice to engage in specific work processes whereas impact represents a sense of control over work and organization outcomes.

Through this synthesis of the interdisciplinary literature on empowerment, four dimensions of empowerment have been identified: (1) a sense of meaning (i.e., my role is congruent with my value systems); (2) a belief in competence (i.e., I have competence to effectively perform my role); (3) a sense of self-determination (i.e., I have a choice in how I execute my role); and (4) a sense of impact (i.e., I can have influence over the system of which I am part). Together the four dimensions represent an active, rather than passive, individualized role with respect to the larger organizational context. These four dimensions suggest that empowered individuals see themselves as able to actively mold and influence their work and work environment in personally meaningful ways. Through the four dimensions, empowered individuals feel a sense of psychological ownership of their work; they feel competent and have personal control over meaningful components of their work and the larger system in which they are embedded. Because they are common across a number of disciplines, each based upon different philosophies and methods, some preliminary evidence of convergent validity is ascertained for the four dimensions of empowerment.

Individual Experiences of Empowerment in the Workplace

A critical question from the thematic analysis above is whether the four dimensions actually capture the essence of the *individual experience of empowerment in the workplace*. It may be that empowerment in an organizational context is captured by some subset of the above dimensions, or even more critical, may reflect additional dimensions not evident in the interdisciplinary literature synthesis. Thus, the purpose of the interviews is to begin to assess the external validity of the literature-derived conceptualization of empowerment. Interviews were conducted with 28 individuals on their personal conceptualizations of empowerment. Eighteen were randomly sampled from the managerial population of a high technology organization (from first-line supervisors to top management). The remaining ten were randomly selected from all levels of a service organization. Twenty were men and eight were women. The interviews were conducted over the phone or in person and lasted from 30 minutes to one hour. In the interviews, individuals were asked to (1) define empowerment and (2) describe personal experiences of empowerment and disempowerment. Though individuals had difficulty in defining empowerment, they had little problem in describing personal episodes of empowerment.

The interview data were then examined by the author with respect to the four dimensions generated above. First, a list of themes relating to each of the four dimensions was created from the literature review described above. For example, themes relating to the dimension of competence included self-efficacy, mastery, confidence in ability, appropriate skills and training, etc.. The interview data was then examined with respect to the list of themes for each dimension using both manual and computerized search procedures. In the second phase of the data examination, special emphasis was focused on identifying potential additional dimensions of empowerment not evident in the literature synthesis. Here, both manual and computerized search procedures were used to identify the existence of other potential additional dimensions of empowerment. The miscellaneous themes generated but deleted from the literature analysis (i.e., optimism, learning, creativity, etc.,) were used as a starting point in identifying the existence of additional dimensions. An additional dimension was judged to be worthy of consideration if it was identified in at least one quarter of the interviews. As the excerpts below illustrate, strong evidence was found for the four dimensions identified in the literature synthesis, and no evidence of additional dimensions

in the interview data was found (i.e. evident in at least one quarter of the interviews). In addition, no substantive differences in responses regarding the dimensions of empowerment were identified across the two different organization samples.

Meaning. A sense of meaning was salient in the interviews. For example, one person described empowerment as "doing things that I most believe in and maintaining my integrity." Another stated that empowerment was "following those things and ideas that I think are important and necessary. It's working toward a personal vision of how I believe things are supposed to be." In the examples of empowerment experiences, many spoke of the spiritual nature of the experience, how their personal identity was woven within the empowerment experience. Many described the drive or passion they felt in relation to the experience -- the feelings that bound them to a path of action. There was a strong affective quality to the experiences; one's "heart and soul were into it." Overall, these experiences were seen as energizing, where individuals felt congruence between their values, their behaviors, and the organization's expectations. In fact, in all 28 of the interviews, the individuals explicitly noted a sense of meaning during the experience.

Competence. A sense of competence was also evident in the interviews. For example, one person described an empowered experience as "knowing I have the skills and abilities necessary to get a project done. It's feeling confident, believing in myself, trusting myself, knowing that I can do it." In another, an empowered experience was described as "highly challenging, but never completely beyond my capacities." A third described empowerment as "overcoming especially difficult times on my own by drawing on my special talents and abilities." Individuals articulated feelings of competence and mastery in their abilities and skills. They elaborated on their sense of self-confidence in their skills and abilities. In 26 of 28 interviews, a sense of self-confidence in ability or competence was explicitly stated.

Self-Determination. In the interviews, a sense of self-determination was also evident. For example, one individual described empowerment as "taking things in my own hands. I am the one in the driver's seat." Another said, "I am empowered when I initiate action and am proactive. I decide what I think is the best course of action and then act on it. I take initiative at my own accord." A third described empowerment as when "I am energized and free to decide the best way to get my job done. I feel autonomous." These interviews suggest that empowered individuals feel a sense of ownership and

responsibility for an activity; the individuals reported themselves to be active participants rather than passive followers. Volition or a personal choice drove involvement and participation during experiences of empowerment. In fact, in 27 of the 28 interviews, individuals clearly described a sense of self-determination in empowered experiences.

Impact. A sense of impact was also highly evident in the interviews. For example, one individual described empowerment as "I think about how things can be different and better and develop a new vision on which I act. I know that I can make a difference." A second described, "I usually feel empowered in times of crisis and difficulty. I feel very challenged because the outcome of the situation is usually pretty uncertain, but I know that ultimately with a lot of hard work, I can have an impact." A third described empowerment as "doing things which have an effect on the company. It's making a difference through my work." In the interviews, individuals articulated a mindset of change rather than of regulation or maintenance. Most importantly, during experiences of empowerment individuals did not view the status quo as a given -- they had a propensity to challenge and make change when deemed necessary. In 25 of 28 of the interviews, respondents described situations where they felt they had the opportunity to have impact, to make a difference in the status quo.

Discussion of the Four Dimensions of Empowerment

The four dimensions of empowerment identified in the literature review were also articulated in the interview data. Importantly, little evidence of additional dimensions not uncovered in the literature review was found suggesting that the four dimensional conceptualization does capture the essence of individual empowerment in the workplace. Thus the interview data provide some evidence of external validity of this multidimensional conceptualization in actual individual *experiences* of empowerment. Further, the analyses of the literature and interview data reveal that empowerment is multifaceted and that its essence cannot be captured by a global variable. The "gestalt" of empowerment reflects the integration of the four dimensions of empowerment. The literature and interviews suggest that any single dimension is a necessary but not sufficient component of empowerment; empowerment is reflected in the psychological experience of the four dimensions together. For example, if individuals feel a sense *competence* that they have the skills

and abilities necessary to do their job well, have a sense of *self-determination* over how and when they do their work, and feel that they can have an *impact* in their departmental activities, yet don't see their work as personally *meaningful*, they will not feel empowered because they lack the personal connection to their work -- it doesn't mean something to them. Later in the paper, the four dimensions will be examined empirically to determine how they combine to create a "gestalt" of empowerment.

Assumptions. Some general assumptions about this conceptualization of empowerment should be made explicit. First, empowerment is assumed to be a dynamic phenomenon that can be influenced by the context (Conger & Kanungo, 1988). Empowerment reflects the ongoing ebb and flow of one's perceptions about the covariation among the self (as agent), behavior, and outcomes (Bandura, 1989). In the interviews, it was clear that an individual's sense of empowerment may be facilitated or discouraged by critical, salient environmental events. Second, empowerment is assumed to be a continuous variable where individuals can be viewed as more or less empowered, rather than empowered or not empowered. This was clearly the assumption individuals made in discussing empowerment in the interviews described above. Third, a sense of empowerment is assumed to be role-specific (Zimmerman, 1991). A given individual may feel highly empowered in one role yet highly disempowered in another role. For example, in an interview one individual reported feeling quite empowered in his role as the general manager of a large division undergoing a major transformation, but quite disempowered in his role as step-father to a teen-aged daughter. Thus, though there is likely some "spill over" between roles, empowerment must be studied within a given role.

Predictive Validity of Empowerment

The above effort to conceptualize empowerment according to four dimensions addresses the first component of construct validation -- establishing the content domain of empowerment. The second component of construct validation, predictive validity, examines the issue "does empowerment relate predictably to relevant behavioral constructs?" To establish predictive validity, the relationship between empowerment and innovative behavior in the workplace will be explored. A core assumption in the more popular literature on empowerment is that empowered employees are innovative and have creative energy

(Block, 1987). Innovation is defined as the process of making change in an organization or work unit and may involve taking calculated risks. Because empowerment reflects a proactive role in the larger organization context (Zimmerman, 1991), empowered individuals are likely to exhibit more change-oriented behaviors such as innovation and creativity. Because of a sense of meaning, empowered individuals may be more willing to assume the risks inherent in innovation because their work means something to them. Because of their sense of competence, empowered individuals may feel more able to make change. And because of their sense of self-determination and impact, they may believe that they have more control regarding how and what kind of innovation they can undertake.

The literature provides some initial support for this linkage between empowerment and innovative behavior. Empowerment and social change have been linked in the sociological literature (Soloman, 1976; Boyte & Riessman, 1986). In the community psychology literature, empowerment has been shown to be a key predictor of social change and citizen activism (Rappaport, 1987; Zimmerman, 1990b). In an organizational context, the relationship between empowerment and innovative behavior has been suggested but not empirically tested. Thomas and Velthouse (1990) purport that empowerment is related to action, concentration of energy, flexibility, initiation of new tasks, and resiliency -- all congruent with innovative behaviors. And, Kanter (1983) has suggested that empowerment and change mastery are inextricably linked based on case studies of entrepreneurial organizations.

A link between empowerment and innovation was also clear in the interviews conducted with individuals on their personal experiences of empowerment as described above. When describing experiences of empowerment, individuals articulated that they were willing to give more of themselves, to put themselves on the line, and to take risks. Many described examples where they deviated from the norms of behavior for a given situation. For example, one individual described, "I acted very creatively ... I knew that if [this unit's] efforts at continuous improvement and quality were going to work, then I would have to take responsibility for change and improvement." Another manager told of an empowered experience where she revamped the credit approval process by questioning the basic assumptions of the credit approval process. With revised assumptions, four of the eight steps in the credit approval process

were eliminated, and the cycle time was shortened from two days to eight hours. Overall, the interviews seemed to suggest a strong link between experiences of empowerment and innovative behavior.

Thus, in order to establish the second component of construct validity, the predictive validity of empowerment with innovative behaviors must be shown empirically. The next part of the paper begins an empirical investigation into the overall construct validity of the derived empowerment conceptualization.

CONSTRUCT VALIDITY OF EMPOWERMENT

Sample

Though the conceptualization was developed to be generalizable across individuals within an organization context, construct validity is examined empirically on a sample of middle managers. This sample is particularly interesting for studying empowerment because the traditional role of middle managers in many organizations is undergoing radical change. As evident in the business press, these changes exacerbate issues of empowerment for middle managers:

We hear over and over again that [middle] managers are feeling increasingly disenfranchised. Decision-making is moving higher and higher. Companies talk a good game about employee empowerment, but as times get tough, top management calls the shots (O'Reilly, 1992: 46).

The sample of 393 middle managers was randomly selected from the population of middle managers in a global, Fortune 50 industrial organization (hereafter referred to as the Major Corporation). These managers represented all functional areas, each division (including among others a luxury products division, an economy products division, a high technology division, a financial services division, and a components division), and all global locations of the Major Corporation (i.e., North America, South America, Europe, and Asia-Pacific). Each middle manager was drawn from a separate unit (typically a department) of the organization. Though these units are part of one organization, there exist strong differences in social structure across the Major Corporation's many divisions, functions, and geographic locations. In many ways, the Major Corporation represents a conglomeration of smaller companies. The middle managers in the sample were approximately 93 percent male, over 85 percent Caucasian, and had a mean age of 45.9 years. Seventy percent of the middle managers had at least a college education with

many having some graduate training. Their mean tenure in the company was approximately 13 years, and their mean position tenure was just over three years.

Procedure

Quantitative data were collected from questionnaires administered at the beginning of a managerial development program. All respondents were assured of complete confidentiality: each questionnaire was assigned an ID number and all data analysis was conducted by the University conducting the managerial development program. Because the entire population of middle managers would participate in the managerial development program at some time during a three year period and because the actual session in which they would participate was randomly determined, there was little chance of selection bias. A 100 percent response rate was achieved due to the data being collected in conjunction with the managerial development program, further minimizing the potential for selection bias. In addition, no differences were found in a comparison of demographic (i.e., age, education, race, and gender) and performance data (i.e., superior assessments of the middle manager's effectiveness) between the middle managers in this sample and the middle managers in the rest of the company, suggesting the sample was not biased with respect to good or poor performing managers.

Because the conceptualization of empowerment used in this study reflects the individual experience of empowerment, self-perceptions were most appropriate to assess empowerment. However, in the test of predictive validity, to avoid common method bias (Felson, 1981; Frone, Adams, Rice & Instone-Noonan, 1986), innovative behavior was assessed by a group of each middle manager's subordinates. Subordinates were chosen because, in comparison to superiors or peers, they are most likely to be aware of innovative behaviors exhibited by their managers due to their close day to day interactions.

The middle managers were instructed to distribute a set of surveys to eight subordinates with whom they interacted frequently on job-related matters and who knew them well.¹ Completed questionnaires were returned by mail to the university for processing. All subordinates were assured of

¹ As described by Ashford and Tsui (1991), the ideal design would be to identify the actual constituency set for each manager. The research then would randomly select the constituency samples. It would be, however, quite difficult and perhaps even prohibitive to identify the constituency set for 393 managers, particularly in an organization with some matrix structures.

confidentiality as only aggregate data were provided as feedback to the middle manager. Excellent cooperation was obtained. An average of six subordinates (a total of well over 2,000) responded resulting in a response rate of over 78 per cent. Because the number of subordinates who responded varied across the middle managers (from two to eight), an exact assessment of interrater reliability (such as the chow test suggested by Ashford and Tsui (1991)) would be very complicated to conduct for the sample of 393 middle managers. However, the extent of interrater consistency may be assessed partially by examining the variance on a given item across the subordinate responses for each middle manager. Low variance across subordinates for a given middle manager would be indicative of strong interrater consistency. For subordinate assessments of innovative behaviors, the average variance among subordinates for a given middle manager was .37 on a seven-point Likert scale. The average variance of subordinate responses across all the middle managers was much higher at .70 than the average variance across subordinates for a given middle manager, thus suggesting good internal consistency across multiple raters for a given manager.

Measures

Separate scales were used to measure each of the four dimensions of empowerment. It was difficult to identify appropriate measures from the literature because many scales encompassed, inadvertently, more than one of the dimensions of empowerment. Consequently, for each dimension, new items were created which were modeled after related items from the literature: meaning items were adapted from Tymon's (1988) meaningfulness scale, competence items were adapted from Jones' (1986) self-efficacy scale, self-determination items were adapted from Hackman and Oldham's (1980) autonomy scale, and impact items were adapted from Ashforth's (1989) helplessness scale. Four items per dimension were developed, each using a seven-point Likert response format (see the Appendix for actual items). To reduce the potential for response bias, some negatively worded items were included in the overall instrument. To increase the psychometric quality of the empowerment measures, some pretesting of the empowerment instrument was conducted on a separate sample of 80 middle managers in the Major Corporation. After examining the results from these preliminary respondents, the questionnaire was revised to clarify

ambiguous wording. Three items per dimension were retained to assess each dimension in the analyses reported in this paper.

Innovative behavior was measured with four items from the innovator role of instrument developed to measure the Competing Values Model of Leadership (Quinn, 1988). Convergent and discriminant validity of the scales for each of the eight roles in the Competing Values Model of Leadership has been shown (Denison, Hooijberg, & Quinn, 1991). See the Appendix for the actual items.

Analyses

The objective of the analyses was to examine the validity and reliability of the theory-based four-dimensional measure of empowerment. Confirmatory factor analysis was conducted to determine the construct validity and reliability of the four empowerment dimensions as described by Bagozzi, Yi, and Philipps (1991) and Bagozzi and Yi (1988). A second order confirmatory factor analysis was also conducted to assess the *gestalt* of empowerment. Univariate statistics for and correlations among the 16 empowerment items are provided in Tables 2 and 3. In general, the respondents reported feeling fairly empowered, with the highest correlations between items measuring the same dimension of empowerment. This pattern of correlations suggests some preliminary evidence of convergent and discriminant validity of the four dimensions of empowerment (Campbell & Fiske, 1959). The results of the confirmatory factor analysis (CFA) provide further evidence of validity.

 Insert Tables 2 and 3 about here

Confirmatory Factor Analyses. Due to the potential for measurement error, confirmatory factor analyses must be conducted to ascertain convergent and discriminant validity among the four factors. Without assessing the construct validity of the empowerment measure, "a hypothesis might be rejected or accepted because of excessive error in measurement, not because of the adequacy or inadequacy of the theory" (Bagozzi, Yi, & Phillips, 1991: 432).

The hypothesized model is illustrated in Figure 1: each item should have a positive and significant loading on the dimension it is purported to measure, the correlations among the dimensions should be

positive and significant yet distinct from unity, and the overall model should provide a good fit to the data. This hypothesized model was examined using LISREL (see Figure 1 for results). In assessing the fit of the model, Bagozzi and Yi's (1988) guide for the evaluation of structural equation models was followed. Each of the items loaded strongly on the appropriate factor with loadings ranging from .66 to .90. As expected, the four factors were moderately correlated with each other, ranging from .35 and .64, suggesting that the dimensions were indeed related, yet distinct from unity (i.e., four distinct factors). The preliminary evaluation criteria suggest an acceptable fit for the CFA model: (1) no error variances were negative, (2) no correlations were greater than one, and (3) no parameter estimates were extremely large. The adjusted goodness of fit index (AGFI), which is "independent of sample size and relatively robust against departures from normality" (Joreskog & Sorbom as cited in Bagozzi & Yi, 1988: 79), met the 0.9 rule-of-thumb (AGFI = .935). Further, the root mean square residual (RMSR), another measure of overall fit where values under .05 are considered a good fit, was more than adequate at 0.036. In addition, the composite reliability of each scale exceeded acceptable standards of .60 (Bagozzi & Yi, 1988), ranging from .79 for competence to .88 for impact. These clean loadings, strong reliabilities, and overall fit of the model are particularly noteworthy given this is the initial analysis of the instrument. In sum, the results suggest strong evidence for the discriminant validity of the four dimensions of empowerment (i.e., the four dimensions are distinct from one another). Convergent validity of the four dimensions into an overall "gestalt" of empowerment will be assessed with a second order CFA.

Insert Figure 1 about here

Second Order Confirmatory Factor Analysis: The Gestalt of Empowerment. As described in the conceptualization of empowerment, together the four dimensions are argued to reflect a higher order construct, or "gestalt", of empowerment. A second order CFA may be used to model such a higher order construct (see Figure 2 for an illustration). 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 four dimensions of empowerment). The second order factor represents the shared variance among the first order factors. Here

the four dimensions of empowerment are expected to be individual components of empowerment, that is, parts of the larger whole. The hypothesized model is illustrated in Figure 2: all of the conditions in the first order model should hold in addition to positive and significant loadings between the first order factors (i.e., the empowerment dimensions) and the second order factor (i.e., the gestalt of empowerment). When modeling a second order confirmatory factor analysis using LISREL (see Figure 2 for results), a good fit was obtained (AGFI = .925; RMSR = .044). Each of the gamma coefficients, which represent the links between each of the first order dimensions of empowerment and the second order empowerment factor, was highly significant and positive (ranging from .54 to .80). Interestingly, the self-determination dimension, which was most commonly articulated in popular conceptualizations of empowerment, loaded most strongly on the second order empowerment factor. In sum, this second order CFA suggests that empowerment reflects the shared variance among the four dimensions; that is, empowerment is indeed a "gestalt" of the four dimensions. Each of the dimensions contributes significantly to a single second order factor or "gestalt" of empowerment. This analysis provides strong support for the convergent validity of the multidimensional conceptualization of empowerment.

 Insert Figure 2 about here

Predictive Validity: Innovative Behavior. Univariate statistics for and correlations between the innovative behavior items and the empowerment items are provided in Tables 2 and 3. The hypothesized model is illustrated in Figure 3: all of the previous conditions must hold in addition to a positive and significant path between the second order empowerment factor and the innovative behavior factor. As describe above, where empowerment was measured with self-assessments, innovative behavior was measured with an aggregation of subordinate responses; thus a significant relationship would reflect a substantive relationship rather than common method bias. To examine the predictive validity, a causal modeling equation estimated with LISREL was employed. Once again, a good fit of the data to the model was obtained (AGFI = .925, RMSR=.043). The relationship between the second order empowerment factor and innovative behavior was significant and positive (gamma = .27), and the innovative behavior

latent variable had a good composite reliability of 0.82. As with the CFA models above, these strength of the fit statistics and loadings are particularly encouraging given the nascency of the conceptualization and instrument. This finding suggests that when individuals feel a sense of personal empowerment through the four dimensions, their subordinates see them as more innovative (i.e., coming up with inventive ideas, experimenting with new concepts, searching for innovation). This finding supports the popular belief that employees who feel empowered do in fact act more creativity and innovatively than employees who do not feel empowered.

Insert Figure 3 about here

CONCLUSION

This paper has achieved its purpose of integrating and extending the disparate efforts of previous authors and provides a systematic framework for understanding psychological empowerment in a work context. In the first part of the paper, psychological empowerment was conceptualized with respect to four core dimensions through the synthesis of an extensive interdisciplinary literature review. The resulting four dimensional structure was then corroborated with interview data on the individual experience of empowerment. In talking with people about their own experiences of empowerment, the four dimensional structure identified in the literature is grounded and enriched. In the second part of the paper, an instrument to assess the four dimensions of empowerment was developed, and the multidimensional conceptualization was then validated with empirical data from a set of middle managers in diverse units of a Fortune 50 organization. Confirmatory factor analysis was found to confirm the four dimensional structure of empowerment, a second-order CFA supported an empowerment "gestalt" of the four dimensions, and the predictive validity of empowerment with innovative behaviors was confirmed.

Contributions to Research and Practice

This paper extends previous study of empowerment in the organizational studies literature. First, this paper builds on the two published conceptualizations of psychological empowerment. This paper enriches Conger and Kanungo's (1988) theoretically derived unidimensional conceptualization of

empowerment. In their model, empowerment was equated with the single dimension of self-efficacy. This study also enriches Thomas and Velthouse's (1990) theoretically derived multidimensional conceptualization through grounding in both the interdisciplinary literature on empowerment. The dimensions derived from the literature synthesis are congruent with those articulated by Thomas and Velthouse (1990).

Second, this study also enriches the two previous theoretical papers on empowerment by melding qualitative and quantitative methods in the conceptualization and validation of empowerment. Neither Conger and Kanungo (1988) nor Thomas and Velthouse (1990) attempted to validate their work in the individual experience of empowerment. In this study, a series of interviews was conducted with individuals in order to achieve a deeper understanding of how individuals actually experience empowerment. Furthermore, an instrument to measure empowerment was developed in this study, something not attempted by Conger and Kanungo (1988) nor Thomas and Velthouse (1990), but critical for rigorous empirical work. Because an instrument to assess empowerment had not been developed, to date, virtually no empirical work has been conducted on empowerment in the workplace. Thus, by melding qualitative and quantitative methods in the conceptualization and validation of empowerment, this paper extends previous theory on empowerment.

A third contribution of this study is the integration of previously studied concepts which have been studied in isolation from one another. For example, two of the dimensions in this study are part of Hackman and Oldham's (1980) Job Characteristics Model. Meaning was one of three critical psychological states in their model, and autonomy (or self-determination in this study) was one of their job dimensions. What are the implications of omitting the dimensions of competence and impact on the Job Characteristics Model's accuracy in predicting various outcomes (c.f., Thomas & Velthouse, 1990)? This research implies that the predictions of the Job Characteristics Model will hold most reliably in contexts where competence and impact are not relevant. Furthermore, by combining meaning and self-determination with competence and impact we are able to predict outcomes not predicted by the Job Characteristics Model. For example, where the Job Characteristics Model focused on predicting employee motivation and job satisfaction, the empowerment dimensions predict innovative behavior. Further, the analysis in this

paper suggests that the four dimensions, studied singularly or in pairs in previous research, combine to create a new empirically validated construct (i.e., the second order "gestalt" of empowerment). Thus, this study makes a contribution to the literature by integrating concepts from different frameworks that have been studied in isolation from one another. In each of these ways, this paper makes a useful contribution to theory and research on empowerment.

This research also has implications for managerial practice. In the popular literature and in organizations, empowerment has been primarily defined in terms of the dimension self-determination. In organizations, workers are typically assumed to be empowered if they have limited freedom to make decisions regarding their work. The second order confirmatory factor analysis supports the importance of self-determination in feeling empowered (i.e., self-determination had the strongest loading on the second order empowerment factor). However, the conceptualization and analyses suggest that self-determination is a necessary though not sufficient component of empowerment.

In this study, the other three dimensions of empowerment, meaning, competence, and impact, are also found to be critical components of empowerment. For example, if individuals believe they have autonomy regarding how they do their job, yet if their jobs don't provide any meaning to them, if they don't care about their work, then they will not feel empowered. Likewise, if individuals feel a sense of self-determination, but if they don't believe they have the requisite skills and abilities to do their work well, if they don't feel competent, they will not feel empowered. Finally, if individuals experience a sense of self-determination, but do not feel that their work makes a difference to the effective functioning of their work unit, if they don't believe they can have an impact, then they will not feel empowered. This conceptualization suggests that empowerment is multifaceted and that its essence cannot be captured by a single dimension. If organizations, in their efforts to empower employees, focus exclusively on the single dimension of self-determination, they are likely to have, at best, limited success because the other three dimensions of empowerment have been neglected. Though organizations may experience some initial success in focusing on enhancing employee feelings of self-determination, in order to achieve sustained empowerment, all four dimensions must be experienced by employees over time. Thus, this conceptualization suggests that organizations must create more complex empowerment interventions: in

addition to providing autonomy to facilitate *self-determination*, organizations must create an organizational culture and jobs that provide personal *meaning*, provide training and development to enhance *competence*, and allow employees to have an *impact* in their work unit through involvement in strategic goal setting and shared governance.

Limitations and Future Directions

Future research must address a number of limitations inherent in this study. First, though the four dimensional conceptualization of empowerment was developed without regard to a specific sample, it has been validated on a sample of middle managers in one organization. Future research, must address issues of generalizability across other levels of the organization hierarchy (e.g., line workers, top management). For example, the dimensions may have different weightings for individuals at different levels of the organizational hierarchy. It may be that first line supervisors need less of a sense of impact than middle managers in order to feel empowered due to their location in the hierarchy. The generalizability of the validation must also be assessed in more demographically diverse samples. As with many middle managerial samples, this sample was dominated by white males. Notions of empowerment must be further explored in samples with higher proportions of women and minorities, particularly because some research suggests that women (Mainiero, 1986) and minorities may feel less empowered than white males. The generalizability of the validation must also be addressed in different organizational contexts (Zimmerman, 1991). This research was conducted in diverse units of a global, Fortune 50 organization. Further validation research must be conducted in diverse organizational settings such as not-for-profit organizations, volunteer organizations, and government bureaucracies.

Second, the study of predictive validity was limited to an analysis of innovative behaviors. Research on other behavioral and organizational consequences of empowerment is necessary for understanding the nomological network of empowerment. For example, previous theorizing on empowerment has hypothesized that empowerment is related to a host of other behavioral outcomes. Conger and Kanungo (1988) hypothesize that empowerment leads to greater initiation and persistence of behavior. Thomas and Velthouse (1990) posit a positive relationship between empowerment and action,

concentration of energy, flexibility, initiation of new tasks, and resiliency. Many organizations are interested in empowerment because of expectations regarding enhanced effectiveness, performance, commitment, and job satisfaction (Block, 1987). In the popular literature, employee empowerment has been linked to processes of total quality management. Future research must examine the relationship between psychological empowerment and these individual and organizational outcomes. Moderators of the linkages between empowerment and these outcomes also need to be explored. For example, the relationship between psychological empowerment and effectiveness may be moderated by individual difference variables such as need for achievement (McClelland, 1961) and/or organizational variables such as leadership, alignment with organizational vision, or job security.

Third, future research should also focus on the macro-micro linkages relevant to empowerment, particularly the relationship between organization antecedents such as social structure and individual empowerment. As Zimmerman suggests, an overly individualistic conception of empowerment may limit our 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). Social structural variables to be examined in future research include organic versus mechanistic designs, span of control, organizational culture, and high involvement practices such as self-managing teams. Thomas and Velthouse (1990) suggest that leadership, job design, and reward systems are other social-structural variables of interest. Such research will facilitate theory development with regard to organization design and development for workforce empowerment in organizations as well as further understanding of the nomological network of empowerment. In addition, research on the organizational antecedents will guide practitioners in their efforts at developing employee empowerment. Competitive, global pressures on organizations require organizational forms which liberate individual behavior rather than constrain it. At present, many organizations are struggling to understand how to effectively implement programs and structures which facilitate employee empowerment (e.g., Corning Glass, Ford Motor Company, Square D). Because of the nascency of the current conceptualization and limited substantive understanding of empowerment, many organizational efforts at empowerment have met with limited success and even dysfunctional consequences. Research on the

organizational antecedents of psychological empowerment will aid organizations in diagnosing their attempts at facilitating employee empowerment.

Fourth, longitudinal research designs are now clearly needed to assess the strength and duration of the relationship between empowerment and various outcomes. Longitudinal efforts might also examine which dimensions of empowerment are associated with different outcomes and at different points in time. It may be, for example, that self-determination and impact are more important in predicting quality products or services and that meaning is more important in predicting job satisfaction or commitment. Longitudinal research might also help untangle some of the development aspects of the dimensions of empowerment. It may be, for example, that in becoming empowered, individuals must first develop a sense of competence in their skills and abilities. Meaning may also be critical in initial stages of empowerment to help individuals get "hooked in" or energized. After building competence and developing meaning, individuals may then begin to seek greater control over their own jobs thereby enhancing feelings of self-efficacy. And once they feel some control over their own jobs, then they are likely to venture into larger scale efforts which impact their department or even the organization. In this way, the dimensions of empowerment may have a developmental progression. Longitudinal research designs can help explore the differential effects and developmental aspects of empowerment.

Finally, although the data presented offer support for this measure of empowerment, this research provides little evidence regarding the discriminant validity of empowerment from other related constructs. In completing the nomological network, to establish discriminant validity, it must be shown that empowerment correlates with other theoretically related constructs, but also that it is not highly correlated with variables in which it is supposed to differ. Future research should incorporate measures of the propensity to give socially desirable responses (Jackson, 1967) or of self-esteem (Brockner, 1988) in order to demonstrate that empowerment is indeed separable from those constructs. Thus, while this study clearly extends previous research on empowerment, further research efforts to refine this conceptualization of empowerment, its associated instrument, and its nomological network are warranted.

REFERENCES

- Adler, A. 1927. The theory and practice of individual psychology. New York: Harcourt.
- Aktouf, O. 1992. Management and theories of organizations in the 1990s. Academy of Management Review, 17(3): 407-431.
- *Alinsky, S.D. 1971. Rules for radicals. New York: Vintage Books.
- Ashford, S., & Tsui, A. 1991. Self-regulation for managerial effectiveness: The role of active feedback seeking. Academy of Management Journal, 34: 251-280.
- *Ashforth, B.E. 1989. The experience of powerlessness in organizations. Organizational Behavior and Human Decision Processes, 43: 207-242.
- Bagozzi, R.P. 1991. On the neglect of volition in consumer research: A critique and proposal. Working Paper. The University of Michigan.
- Bagozzi, R.P., Yi, Y., & Phillips, L.W. 1991. Assessing construct validity in organizational research. Administrative Science Quarterly, 36: 421-458.
- Bagozzi, R.P., & Yi, Y. 1988. On the evaluation of structural equation models. Journal of the Academy of Marketing Science, 16: 74-94.
- *Balcazar, F.E., Seekins, T. Fawcett, S.B., & Hopkins, B.L. 1990. Empowering people with physical disabilities through advocacy skills training. American Journal of Community Psychology, 18: 281-296.
- Bandura, A. 1989. Human agency in social cognitive theory. American Psychologist. september: 1175-84.
- Bandura, A. 1986. Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.
- *Barton, R. 1984. Cognitive and developmental aspects of empowerment: An empirical comparison between citizen leaders and non-leaders (attributions of self-efficacy). Unpublished doctoral dissertation. University of Oregon.
- Bazerman, M.H. 1982. Impact of personal control on performance: Is added control always beneficial? Journal of Applied Psychology, 67: 472-479.
- *Belasco, J.A. 1989. Masters of empowerment. Executive Excellence, March: 11-12.
- Bell, N.E., & Stav, B.M. 1989. People as sculptors versus sculpture. In M.B. Arthur, D.T. Hall, and B.S. Lawrence (eds.) Handbook of Career Theory. New York: Cambridge University Press.
- *Bennis, W., & Nanus, B. 1985. Leaders: The strategies for taking charge. New York: Harper and Row.
- *Berger, P.L., & Neuhaus, R.J. 1977. To empower people: The role of mediating structures in public policy. Washington, D.C.: American Enterprise Institute for Public Policy Research.
- *Binstock, R.H., & Ely, K. 1971. The politics of the powerless. Cambridge, MA: Winthrop Publishers.
- *Blau, J.R., & Alba, R.D. 1982. Empowering nets of participation. Administrative Science Quarterly, 27: 363-379.

Blauner, R. 1964. Alienation and freedom: The factory worker and his industry. Chicago: The University of Chicago Press.

*Block, P. 1987. The empowered manager: Positive political skills at work. San Francisco: Jossey-Bass.

*Boyte, H.C. & Riessman, F. 1986. The new populism: The politics of empowerment. Philadelphia: Temple University Press.

*Boff, L. 1988. When theology listens to the poor. San Francisco: Harper and Row.

*Boff, L., & Boff, C. 1986. Liberation Theology: From Dialogue to Confrontation. San Francisco: Harper and Row.

*Bolin, F.S. 1989. Empowering leadership. Teachers College Record, 91(1): 81-96.

*Bookman, A., & Morgan, S. 1988. Women and the politics of empowerment. Philadelphia: Temple University Press.

Bowen, D., & Lawler, E. 1992. The empowerment of service workers: What, why, how, and when? Sloan Management Review, Spring.

*Boyte, H.C., & Riessman, F. 1986. The new populism: The politics of empowerment. Philadelphia: Temple University Press.

*Bradshaw-Cambell, P. 1990. Organizational development and the radical humanist paradigm: Exploring the implications. Paper presented at the National Academy of Management Meetings, San Francisco.

*Bramucci, R. 1977. A factorial examination of the self-empowerment construct. Unpublished doctoral dissertation. University of Oregon.

Brief, A.P., & Nord, W.R. 1990. Meanings of Occupational Work. Lexington, MA: Lexington Books.

Brockner, J. 1988. Self-Esteem at Work. Lexington, MA: Lexington Books.

*Burke, W.W.. 1986. Leadership as empowering others. In Srivastva, Suresh and Associates' Executive power. San Francisco: Jossey-Bass.

Burrell, G., & Morgan, G. 1979. Sociological paradigms and organizational analysis. London: Heinemann.

Byham, W.C. 1988. Zapp! The lighting of empowerment. New York: Harmony Books.

Campbell, D.T., & Fiske, D.W. 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 56: 81-105.

*Chavis, D.M., & Wandermans, A. 1990. Sense of community in the urban environment: A catalyst for participation and community development. American Journal of Community Psychology, 18: 55-82.

*Conger, J.A. 1989 Leadership: The art of empowering others. Academy of Management Executive, 3(1): 17-24.

*Conger, J.A. & Kanungo, R.N. 1988 The empowerment process: Integrating theory and practice. Academy of Management Review, 13(3): 471-482.

- Cotton, J.L., Vollarth, D.A., Froggart, K.L., Lengnick-Hall, M.L., & Jennings, K.R. 1988. Employee participation: Diverse forms and different outcomes. Academy of Management Review, 73: 103-112.
- Deci, E.L. 1975. Intrinsic Motivation. New York: Plenum Press.
- Deci, E.L., Connell, J.P., & Ryan, R.M. 1989. Self-determination in a work organization. Journal of Applied Psychology, 74: 580-590.
- Deci, E.L., & Ryan, R.M. 1987. The support of autonomy and the control of behavior. Journal of Personality and Social Psychology, 53: 1024-1037.
- Deci, E.L. 1975. Intrinsic Motivation. New York: Plenum.
- Denison, D.R., Hooijberg, R., & Quinn, R.E. 1991. Analyzing the structure of paradox: A test of the competing values model of leadership roles. Working paper. The University of Michigan School of Business Administration.
- Drucker, P.F. 1988. The coming of the new organization. Harvard Business Review, January-February.
- *Ellis, M., & Maduro, O. 1989. The future of liberation theology: Essays in Honor of Gustavo Gutierrez. New York: Maryknoll.
- Felson, R.B. 1981. Ambiguity and bias in self-concept. Social Psychology Quarterly, 44: 64-69.
- Fisher, A.B. 1991. Morale Crisis. Fortune. November, 18: 70-80.
- Frone, M.R., Adams, J.A., Rice, R.W., & Instone-Noonan, D. 1986. Halo error: A field study comparison of self and subordinate evaluations of leadership process and leader effectiveness. Personality and Social Psychology Bulletin, 12: 454-461.
- *Freire, P. 1970. Pedagogy of the oppressed. New York: The Seabury Press.
- *Freire, P., & Faundez, A. 1989. Learning to question: A pedagogy of liberation. New York: The Continuum Publishing Company.
- *Gecas, V. 1989. The social psychology of self-efficacy. Annual Review of Sociology, 15: 291-316.
- Gist, M.. 1987. Self-efficacy: Implications for organizational behavior and human resource management. Academy of Management Review, 12(3): 472-485.
- *Goldfried, M.R., & Merbaum, M. 1973. Behavior change through self-control. New York: Holt, Rinehart, and Winston.
- Greenberger, D.B., & Strasser, S. 1986. Development and application of a model of personal control in organizations. Academy of Management Review, 11: 164-177.
- *Gruber, J. & Trickett, E.J. 1987. Can we empower others? The paradox of empowerment in the governing of an alternative public school. American Journal of Community Psychology, 15(3): 353-371.
- *Gutierrez, L. 1990. Working with women of color: An empowerment perspective. Social Work, March: 149-153.
- Hackman, J.R., & Oldham, G.R. 1980. Work redesign. Reading, MA: Addison-Wesley

- *Halliday, T.C. 1987. Beyond monopoly: Lawyers, state crisis, and professional empowerment. Chicago: University of Chicago Press.
- *Hoffman, C. 1978. Empowerment movements and mental health: Locus of control and commitment to the United Farm Workers. Journal of Community Psychology, 6: 216-221.
- *Horton, M., & Freire, P. 1990. We make the road by walking: Conversations on education and social change. Philadelphia: Temple University Press.
- Jackson, D.N. 1967. Personality research form manual. Goshen, NY: Research Psychological Press.
- Jones, G.R. 1986. Socialization tactics, self-efficacy, and newcomer's adjustments to organizations. Academy of Management Journal, 29: 262-279.
- Kahn, W.A. 1990. Psychological conditions of personal engagement and disengagement at work. Academy of Management Journal, 33: 692-724.
- Kanter, R.M. 1989. The New Managerial Work. Harvard Business Review, November-December: 85-92.
- *Kanter, R.M. 1983. The change masters. New York: Simon and Schuster.
- *Kee, A. 1990. Marx and the failure of liberation theology. Philadelphia: Trinity Press.
- Kerlinger, F.N. 1986. Foundations of behavioral research. 3rd Edition. New York: Holt, Rinehart, and Winston.
- *Kieffer, C. 1986. The emergence of empowerment: The development of participatory competence among individuals in citizen organizations. Unpublished doctoral dissertation, The University of Michigan.
- *King, P.G., Maynard, K., & Woodyard, D.O. 1988. Risking liberation: Middle class powerlessness and social heroism. Atlanta: John Knox Press.
- *Kizilos, P. 1990. Crazy about empowerment. Training. December, 1990: 47-56.
- Kohn, M.L., & Schooler, C. 1978. Occupational experience and psychological functioning: An assessment and reciprocal effects. American Sociological Review: 38: 97-118.
- *Kouzes, J., & Posner, B.Z. 1987. The leadership challenge: How to get extraordinary things done in organizations. San Francisco: Jossey-Bass.
- Lawler, E.E. 1988. Strategies for involvement. Academy of Management Executive, 2.
- Long, J.S. 1983. Confirmatory factor analysis: A preface to LISREL. Sage University Paper Series on Quantitative Applications in the Social Sciences, series no. 07-033. Beverly Hills: Sage Publications.
- *Macher, K. 1988. Empowerment & the Bureaucracy. Training & Development Journal, September, 1988.
- *Mahoney, M.J., & Thoresen, C.E. 1974. Self-control: Power to the person. Monterey, CA: Brooks/Cole Publishing Company.
- *Mainiero, L.A. 1986. Coping with powerlessness: The relationship of gender and job dependency to empowerment-strategy usage. Administrative Science Quarterly, 31: 633-653.

*Manz, C.C., & Sims, H. 1989. Super-leadership: Teaching others to lead themselves. New York: Prentice Hall.

Martinko, M.J., & Gardner, W.L. 1982. Learned helplessness: An alternative explanation for performance deficits. Academy of Management Review, 7: 195-204.

*Matza, B.R. 1990. Empowerment: The key management skill of the 1990s. Retail Control, 58: 20-23.

McClelland, D.C. 1961. The achieving society. Princeton, NJ: D. Van Nostrand.

*McGovern, A.F. 1989. Liberation theology and its critics. New York: Maryknoll.

*Neilsen, E.H. 1986. Empowerment strategies: Balancing authority and responsibility. In Srivastva, Suresh and Associates'. Executive power. San Francisco: Jossey-Bass.

*Ngau, P.M. 1987. Tensions in empowerment: The experience of the *Harambee* (Self-help) movement in Kenya. Economic Development and Cultural Change, 523-538.

Nunnally, J. 1978. Psychometric theory. 2nd edition. New York: McGraw Hill.

O'Reilly, B. 1992. Preparing for leaner times. Fortune, January 27: 40-47.

*Ozer, E.M., & Bandura A. 1990. Mechanisms governing empowerment effects: A self-efficacy analysis. Journal of Personality and Social Psychology, 58: 472-486.

*Parenti, M. 1978. Power and the powerless. New York: St. Martin's Press.

Pascale, R.T. 1990. Managing on the edge: How the smartest companies use conflict to stay ahead. New York: Simon and Schuster.

*Peters, T. 1987. Thriving on chaos: Handbook for management revolution. New York: Alfred Knopf.

*Pinderhughes, E.B. 1983. Empowerment for our clients and for ourselves. Social Casework, June.

Quinn, R.E. 1988. Beyond Rational Management: Mastering the paradoxes and competing demands of high performance. San Francisco: Jossey-Bass.

*Rappaport, J. 1987. Terms of empowerment/exemplars of prevention: Toward a theory of community psychology. American Journal of Community Psychology, 15: 121-148.

*Rappaport, J., Swift, C., & Hess, R. 1984. Studies in empowerment: Steps toward understanding and action. New York: The Haworth Press.

*Rose, S.M., & Black, B.L. 1985. Advocacy and empowerment: Mental health care in the community. Boston: Routledge & Kegan Paul.

Seeman, M. 1959. On the meaning of alienation. American Sociological Review, 24: 783-791.

*Shor, I., & Freire, P. 1987. A pedagogy for liberation: Dialogues on transforming education. Massachusetts: Bergin & Gravey Publishers, Inc.

*Sigmund, P.E. 1990. Liberation Theology at the Crossroads: Democracy or Revolution. New York: Oxford University Press.

- *Soloman, B.B. 1976. Black Empowerment: Social Work In Oppressed Communities. New York: Columbia University Press.
- Spector, P.E. 1986. Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. Human Relations, 39: 1005-1016.
- *Staples, L.H. 1990. Powerful ideas about empowerment. Administration in Social Work, 14: 29-42.
- *Szivos, S.E., & Travers, E. 1988. Consciousness raising among mentally handicapped people: A critique of the implications for normalization. Human Relations, 41: 641-653.
- *Thier, M. 1989. Have you been empowered? Journal for Quality and Participation, June: 10-11.
- *Thomas, K.W. & Velthouse, B.A. 1990. Cognitive elements of empowerment. Academy of Management Review, 15: 666-681.
- *Torbert, W.R. 1991. The power of balance: Transforming self, society, and scientific inquiry. Newbury Park, CA: Sage.
- *Torre, D. Empowerment: Structured conceptualization and instrument development. Unpublished doctoral dissertation. Cornell University.
- *Tymon, W.G., Jr. 1988. An empirical investigation of a cognitive model of empowerment. Unpublished doctoral dissertation, Temple University.
- Useem, B., & Zald, M.N. 1982. From pressure group to social movement. Social Problems, 30: 144-156
- *Vanderslice, V.J. 1987. Empowerment: A definition of process. Human Ecology.
- *Vogt, J.F. & Murrell, K.L. 1990. Empowerment in organizations. San Diego: University Associates.
- *Westley, F. 1990. Middle managers and strategy: Microdynamics of inclusion. Strategic Management Journal, 11.
- White, R.W. 1959. Motivation reconsidered: The concept of competence. Psychological Review, 66: 297-333.
- *Zimmerman, M.A. 1992. Empowerment: Forging new perspectives in mental health. In J. Rappaport and E. Seidman (Eds.) Handbook of community psychology. New York: Plenum Press.
- *Zimmerman, M.A. 1991. The measurement of psychological empowerment: Issues and strategies. Working paper.
- *Zimmerman, M.A. 1990a. Taking aim on empowerment research: On the distinction between individual and psychological conceptions. American Journal of Community Psychology, 18: 169-177.
- *Zimmerman, M.A. 1990b. Toward a theory of learned hopefulness: A structural model analysis of participation and empowerment. Journal of Research in Personality, 24: 71-86.
- *Zimmerman, M.A., & Zahniser, J.H. 1991. Refinements of sphere-specific measure of perceived control: Development of a sociopolitical control scale. Journal of Community Psychology, 19: 189-204.
- *Zimmerman, M.A., & Rappaport, J. 1988. Citizen participation, perceived control, and psychological empowerment. American Journal of Community Psychology, 16: 725-750.

APPENDIX Measures

All items were measured on a seven-point Likert scale.

Empowerment Dimension Items

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).

Innovative Behavior Items

- Comes up with inventive ideas (Innovator 1).
- Experiments with new concepts and procedures (Innovator 2).
- Does problem solving in clever, creative ways (Innovator 3).
- Searches for innovations and potential improvements (Innovator 4).

Table 1
Integration of Interdisciplinary Literature on Empowerment

	Meaning	Competence	Self-Determination	Impact
General Description	A sense of meaning	A belief in one's competence and mastery	An orientation toward choice and volition	An orientation toward making a difference/change
Organization Studies	<ul style="list-style-type: none"> • meaningfulness (Thomas and Velthouse, 1990) • intrinsic motivation (Conger and Kanungo, 1988; Vogt and Murrell, 1990) • personal significance (Bennis and Nanus, 1985) • underlying purpose (Block, 1987; Manz and Sims, 1989) • integrity and identity (Block, 1987; Byham, 1988; Bennis and Nanus, 1985) • self-worth (Neilsen, 1986) 	<ul style="list-style-type: none"> • self-efficacy (Conger and Kanungo, 1988) • competence (Thomas and Velthouse, 1990; Bennis and Nanus, 1985; Manz and Sims, 1989; Macher, 1988) • mastery (Vogt and Murrell, 1990; Block, 1987) • confidence in ability (Vogt and Murrell, 1990; Byham, 1988) 	<ul style="list-style-type: none"> • choice, self-determination (Thomas and Velthouse, 1990; Conger and Kanungo, 1988) • proactive orientation (Macher, 1988) • initiation (Block, 1987; Vogt and Murrell) • self-leadership (Manz and Sims, 1989) • take ownership (Byham, 1987; Bennis and Nanus, 1985) • involvement (Blau and Alba, 1982) • autonomy (Nelsen, 1986; Burke, 1986) 	<ul style="list-style-type: none"> • impact (Kanter, 1983, 1989; Peters, 1987; Thomas and Velthouse, 1990) • personal control (Manz and Sims, 1989; Byham, 1988) • making a difference (Macher, 1988; Block, 1987; Bennis and Nanus, 1985) • have an effect on the envt. (Vogt and Murrell, 1990) • change reality (Campbell, 1990)
Psychology	<ul style="list-style-type: none"> • purpose, excitement, passion (Bramucci, 1977) • intrinsic motivation (Deci and Ryan, 1987) • consciousness-raising (Szivos and Travers, 1988) • personal meaning (Gutierrez, 1990) • spiritual meaning (Rappaport, 1981, 1987) • concern for personal connectedness (Zimmerman, 1990a, b) 	<ul style="list-style-type: none"> • self-efficacy (Gecas, 1989; Gist, 1987; Ozer and Bandura, 1990; Zimmerman, 1988, 1990) • mastery (Zimmerman, 1988, 1990; Rappaport, 1981, 1987) • strengthened ego functioning (Gutierrez, 1990) • competence (Kieffer, 1984; Bramucci, 1977; Balcazar, et al, 1990) • self-confidence (Barton, 1984; Vanderslice, 1989) 	<ul style="list-style-type: none"> • experience of self-determination, self as originator (Gecas, 1989) • proactive orientation (Kieffer, 1986) • democratic partic. in life (Rappaport, et al, 1984; Rappaport, 1981, 1987; Zimmerman, 1990, 1988; Rose and Black, 1985) • self-determination, self-control (Rappaport, 1986; Kieffer, 1986; Mahoney and Thorensen, 1974; Pemitutter, 1979) 	<ul style="list-style-type: none"> • desire to control the environment (Zimmerman, 1988, 1990) • having causal impact (Kieffer, 1984; Barton, 1984) • making a difference (Gutierrez, 1990) • controlling one's destiny (Pinderhughes, 1983; Mikulincer, 1988) • sense of personal control; not learned helplessness (Rappaport, 1981, 1986) • influence one's environment (Vanderslice, 1989; Bramucci, 1977)

Table 1
Integration of Interdisciplinary Literature on Empowerment

	Meaning	Competence	Self-Determination	Impact
Psychology (Related Concepts)	<ul style="list-style-type: none"> • intrinsic motivation (Deci, Connell and Ryan, 1989) 	<ul style="list-style-type: none"> • effectance motivation (Harter, 1978) • competence (Deci, 1975) • mastery motivation (Adler, 1972) 	<ul style="list-style-type: none"> • self-determination (Deci and Ryan, 1987) • alienation (Seeman, 1959) • strive to encounter challenges (Harter, 1978) 	<ul style="list-style-type: none"> • exp. self as causal agent; explanatory, creative playful (White, 1959)
Religion	<p>liberation theology</p> <ul style="list-style-type: none"> • raising individual consciousness, personal identity (Friere, 1970; Ellis and Maduro, 1989; Kee, 1990) 	<p>liberation theology</p> <ul style="list-style-type: none"> • belief in capacity of self (Friere, 1970; Boff, 1988; Boff and Boff, 1986; Horton and Friere, 1990; Shor and Friere, 1987) 	<p>liberation theology</p> <ul style="list-style-type: none"> • take personal responsibility • be proactive • become a subject, not object • active participant in life (Friere, 1970; Friere and Faundez, 1989; McGovern, 1989; Sigmund, 1990) 	<ul style="list-style-type: none"> • control of one's own destiny (Friere, 1970) • have impact on world (Shor and Faundez, 1987) • coping with and altering an oppressing environment (Torre, 1986) • question and change status quo (Friere and Faundez, 1989; King, Maynard, and Woodyard, 1988)
Sociology	<ul style="list-style-type: none"> • alienation loss of meaning (Seeman, 1959; Boyte and Riessman, 1987) • overcoming disillusionment; having purpose (Alinsky, 1971; King, Maynard and Woodyear, 1988) • raise personal consciousness (Boyte and Riessman, 1986; Halliday, 1987) 	<ul style="list-style-type: none"> • develop feelings of competency and confidence (Soloman, 1976) • develop personal worth (Torre, 1986) • competent leadership (Bolin, 1989) 	<ul style="list-style-type: none"> • acting at own initiative; taking personal action (Alinsky, 1972) • populism; grass roots power (Boyte and Riessman, 1986) • changing mindsets about role of self (Ryan, 1971) • taking charge of self; autonomy (Hoffman, 1975) • responsibility (Berger and Neuhaus, 1977) 	<ul style="list-style-type: none"> • powerlessness (Marx, 1944; Blauner, 1964; Seeman, 1959; Parenti, 1978; Binstock and Eli, 1971) • being a realistic radical (Alinsky, 1971) • social change (Bookman and Morgan, 1988; Boyte and Reiss, 1986; Solomon, 1976; Torre, 1986) • changing org. systems (Gruber and Trickert, 1987) • social movements (Useem and Zald, 1982)

TABLE 2
Univariate Statistics
Empowerment Items
N=393

<u>Item</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Minimum</u>	<u>Maximum</u>
Meaning1	5.97	.85	3	7
Meaning2	5.79	.90	3	7
Meaning3	5.90	.87	2	7
Competence1	5.37	1.14	2	7
Competence2	5.61	.93	1	7
Competence3	6.08	.87	1	7
Self-Determination1	5.44	1.03	1	7
Self-Determination2	5.50	1.01	2	7
Self-Determination3	5.60	.96	2	7
Impact1	5.33	1.06	1	7
Impact2	5.55	1.03	2	7
Impact3	5.69	.96	2	7
Innovator1	4.83	.88	2	7
Innovator2	4.82	.95	1	7
Innovator3	4.80	1.07	1	7
Innovator4	4.83	.92	2	7

TABLE 3
Pearson Correlations*
N=393

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Meaning																
1. Meaning1	1.00															
2. Meaning2	.66	1.00														
3. Meaning3	.66	.76	1.00													
Competence																
4. Competence1	.30	.22	.32	1.00												
5. Competence2	.30	.31	.36	.68	1.00											
6. Competence3	.11	.15	.20	.52	.59	1.00										
Self-Determination																
7. Self-Determination1	.22	.29	.29	.23	.33	.21	1.00									
8. Self-Determination2	.22	.29	.34	.27	.36	.33	.54	1.00								
9. Self-Determination3	.25	.30	.31	.18	.39	.15	.60	.47	1.00							
Impact																
10. Impact1	.32	.38	.33	.23	.28	.17	.40	.31	.39	1.00						
11. Impact2	.32	.42	.43	.21	.24	.19	.42	.42	.41	.61	1.00					
12. Impact3	.29	.35	.39	.23	.30	.19	.41	.40	.45	.66	.78	1.00				
Innovative Behavior																
13. Innovator1	.15	.18	.15	.18	.19	.18	.08	.09	.12	.14	.14	.09	1.00			
14. Innovator2	.15	.15	.14	.13	.15	.13	.10	.08	.14	.16	.09	.12	.65	1.00		
15. Innovator3	.10	.12	.12	.17	.15	.19	.13	.09	.09	.10	.13	.13	.63	.55	1.00	
16. Innovator4	.11	.11	.12	.14	.14	.15	.10	.13	.12	.20	.16	.16	.67	.69	.63	1.00

* All correlations above .10 significant at the .05 level, above .13 significant at the .01 level, above .17 significant at the .001 level

Figure 1
Confirmatory Factor Analysis Full Model

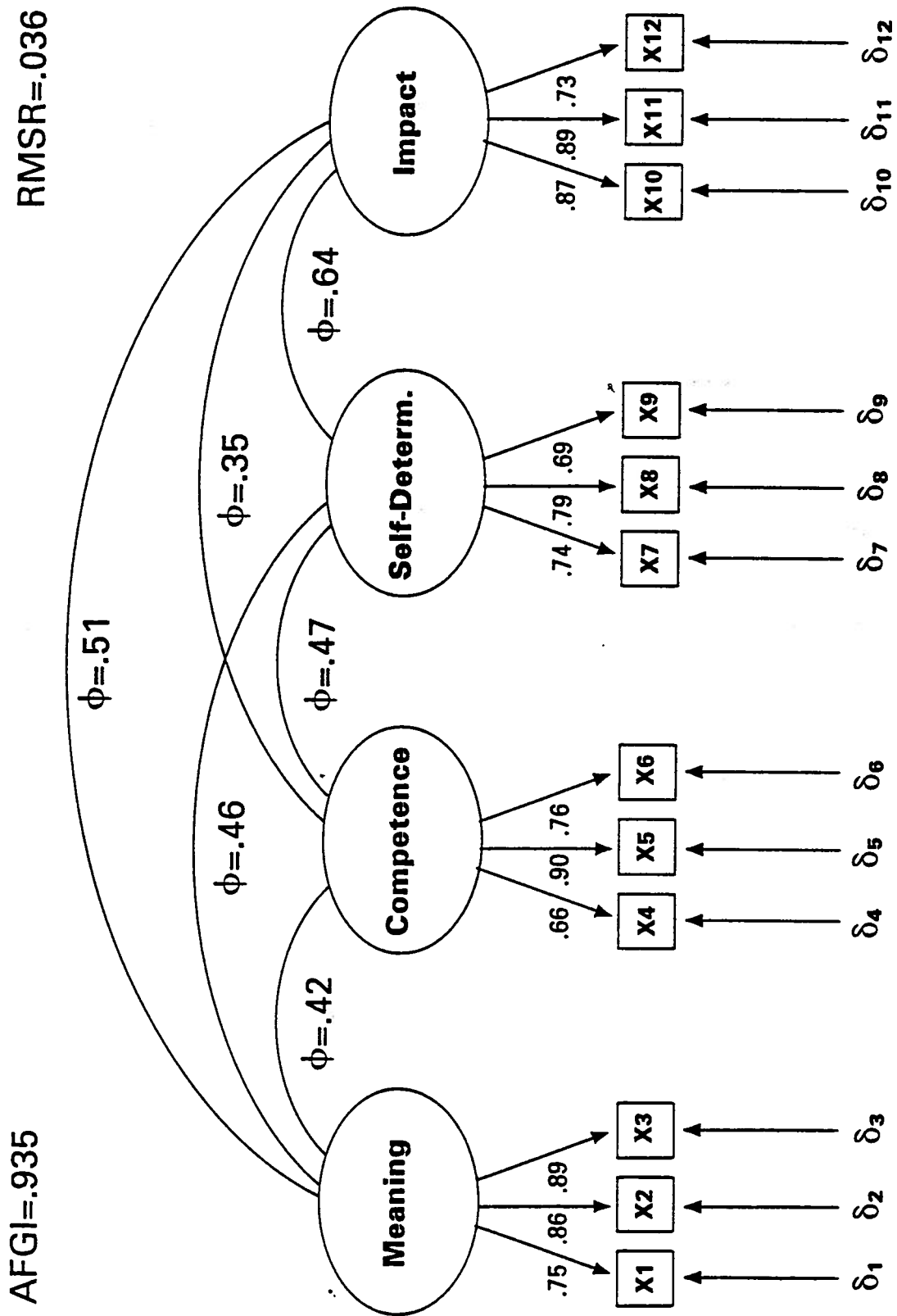


Figure 2
Second Order Confirmatory Factor Analysis

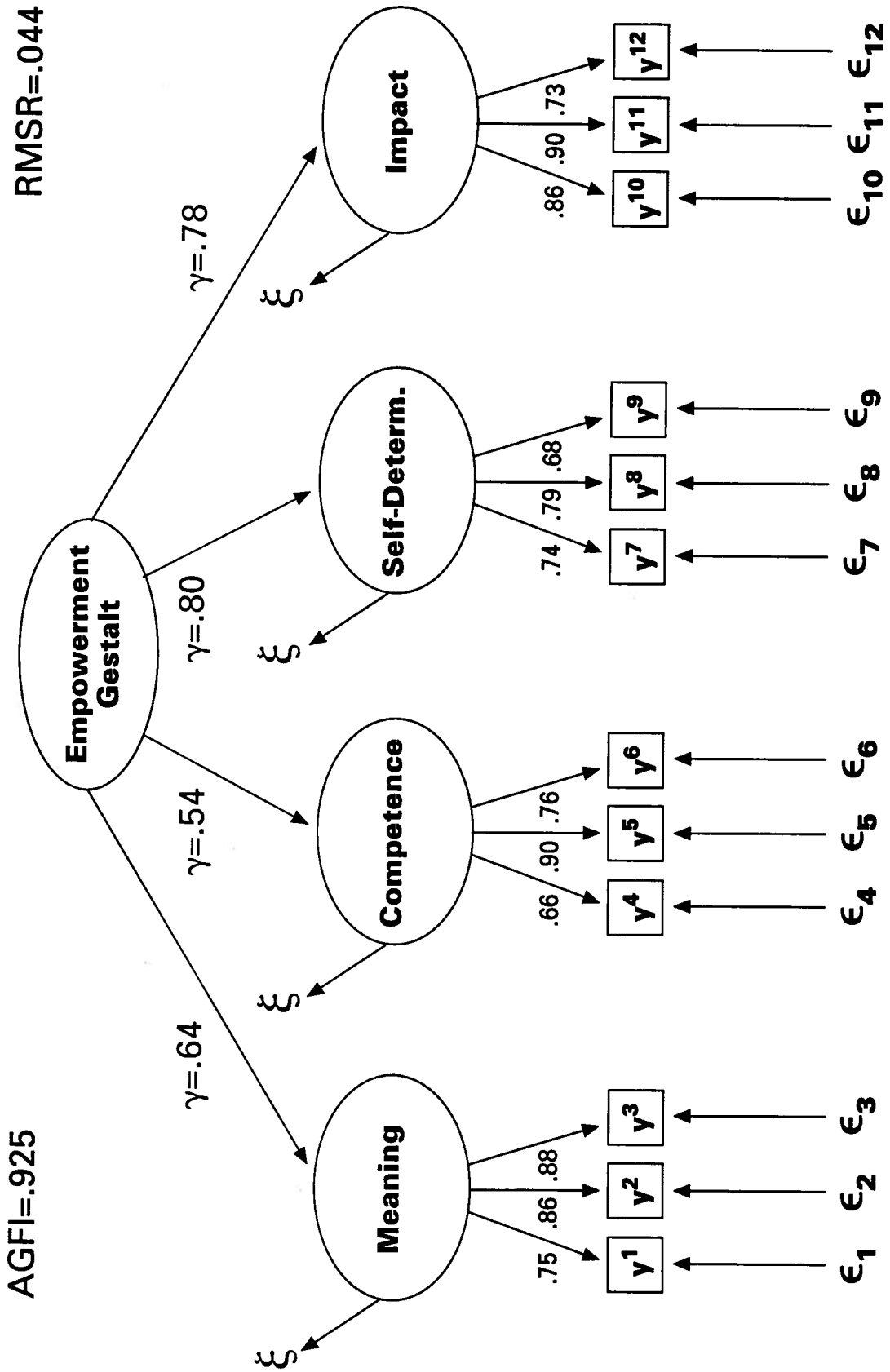


Figure 3

Empowerment/Innovative Behavior Structural Model

