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Implicit Theories, Interdependence, and Power-sharing:

Mindsets as a Barrier to Empowerment

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Organizations world-wide are seeking to empower their employees in order to improve the pace and efficiency of problem-solving, increase job satisfaction and commitment, and better compete in a demanding global marketplace (Deming, 1993; Kirkman & Rosen, 1999). In response, research on employee empowerment has proliferated (Appelbaum, Hebert, & Leroux, 1999). Despite this, there has been little detailed discussion of the problems employers experience implementing empowerment strategies, or the conditions which are necessary for such approaches to be successful (Wilkinson, 1998). One central problem facing such initiatives is the unwillingness of those with power in organizations to share it (Agyris & Schon, 1996; 1978; Jesaitis & Day, 1992; O'Toole, 1995, Stewart & Manz, 1997). Resistance to empowerment from managers or supervisors may be due, in part, to the beliefs and assumptions about power and authority that they bring with them to their work, or that are unwittingly cultivated in many organizations (Agyris & Schon, 1996, Coleman, 2004; Tjosvold, Coleman, & Sun, 2003).

This article presents a model that depicts manager's implicit theories of power in organizations as promoting a mindset within which interdependence between managers and employees is interpreted and acted upon. The model identifies two theories of organizational power that managers can hold: a limited-power theory that portrays power as a scarce resource which triggers a competitive orientation, and an expandable-power theory that views power as an expandable resource and fosters a more cooperative orientation. Limited-power theories are hypothesized to be associated with less power-sharing (information sharing and support) than expandable power-theories. An experiment is presented which investigated the relationship of implicit power theories to perceptions of manager-employee interdependence and to managers' willingness to share information with and offer support to employees.

Empowerment and Power-sharing

Empowering job designs, supervisory relationships, reward systems, and cultures have long been regarded as key solutions to the problem of Taylorized, bureaucratic workplaces which alienate employees and stifle creativity and innovation (Follet, 1973; Likert, 1967; Wilkinson, 1998). To date, countless companies have invested in empowerment initiatives such as structural decentralization and self-managing

teams (Cohen & Ledford, 1994). For instance, a poll sponsored by Office Team, a national staffing service, revealed that 93 % of 150 top managers from large companies favored self-managed work teams (Weiss, 2002).

Accordingly, the research on organizational empowerment initiatives is growing. Higher levels of empowerment have been found to motivate employees to engage in more innovative work behavior (Janssen, Schoonebeek, & van Looy, 1997), to display more customer-oriented behavior (Peccei & Rosenthal, 2001), and to boost productivity and corporate competitiveness (Weiss, 2002). Empowerment has also been found to increase organizational attachment, leading to less voluntary turnover (Spreitzer & Mishra, 2002; Kim, 2002). In addition, researchers in both public and private sectors agree that participative management practices improve employee job satisfaction (Kim, 2002), and can be beneficial to worker's mental health (Spector, 1986, Miller and Monge, 1986; Fisher, 1989). However, research has not uniformly supported the value of empowerment initiatives (see Latham, Winters, & Locke, 1994; Leana, Ahlbrandt, & Murrell, 1992; Leana, Locke, Schweiger, Cotton, Vollrath, Lengnick-Hall, & Froggatt, 1990; Locke & Schweiger, 1979). Contradictory findings seem based in part upon the lack of clarity regarding the conditions necessary for employees to have the ability and motivation to participate in solving organizational problems (Glew, Griffin, & Van Fleet, 1995; Tjosvold, 1987), and in part to the tensions which can arise in organizations between needs for efficiency (typically achieved through hierarchical control) and the values of employee participation (Coleman & Voronov, 2003).

While employee empowerment is a complex phenomenon consisting of various sub-dimensions (see Spreitzer & Mishra, 2002), which are determined by a variety of organizational and psychological factors (see Appelbaum, Hebert, & Leroux, 1999; Yukl, 1994), in essence it involves the redistribution and sharing of power (Leana, 1987). Working from a general definition of power proposed by Salancik and Pfeffer (1977) as "the ability to bring about desired outcomes" (p. 3), we define power sharing as *activities which enhance, support, or facilitate another's ability to bring about outcomes he or she desires* (Coleman, 2004). In organizations, power sharing can manifest in a variety of forms such as redistributing decision-making, goal-setting and policy-making authority; establishing collective forms of leadership; information-sharing; and sharing of rewards, profits, time, attention, and other valued resources. While some of these

activities directly re-distribute power, others establish the necessary conditions for empowerment initiatives to flourish.

The willingness to share power with others is a common theme in the profile of successful managers and organizations studied by Waterman (see Bogner, 2002) and O'Toole (1995). Yet, supervisors frequently resist sharing power with subordinates, thereby hindering empowerment programs (Agyris & Schon, 1996; 1978; Jesaitis & Day, 1992; O'Toole, 1995, Stewart & Manz, 1997). Resistance to organizational change projects promoting employee empowerment has been found to be partially accounted for by the constraints posed by well established, ingrained schemas (Labianca, Gray, & Brass, 2000). Thus, one key to addressing this resistance may lie in altering the cognitive structures of supervisors (Stewart & Manz, 1997). A variety of studies have investigated the affects of power and status on social information processing (see Rodriguez-Bailon, Moya, & Yzerbyt, 2000; Georgeson & Harris, 2000; Stevens & Fiske, 2000; Goodwin, Gubin, Fiske, & Yzerbyt, 2000), yet little work has been conducted on how beliefs about the nature of power may affect organizational behavior. The study presented in this article builds on previous research on implicit theories to investigate this relationship.

Implicit Theories

The cognitive architectures of organizational supervisors are composed of a variety of elements, including the *implicit theories* or unarticulated assumptions and beliefs which they hold about central aspects of themselves, others, and the world of work (Dweck, 1996, 2006; McConnell, 2001; Ross, 1989). Our tendency to rely on these theories was first proposed by Kelly (1955) and Heider (1958) who noted that people formulate naïve theories about their social world, which in turn influence the way they construe events. These structures are referred to as implicit theories because unlike most scientific theories, they are rarely explicitly articulated. Essentially, these theories set up an interpretive frame with regard to a specific phenomenon (such as organizational power and authority), which creates a motivational framework -- orienting people toward particular goals, strategies, reactions, and a particular interpretation of events (Dweck, 1996; Chiu, Hong & Dweck, 1997). They are thought to be domain-specific (Dweck, Chi-yue, and Ying-yi Hong, 1995) and to be derived from a person's personal history of social interaction and experience with certain types of behavior within that domain (Offerman, Kennedy & Wirtz, 1994). For example, a person may closely associate organizational power with coercion and control due to formative

experiences with abusive supervisors, but believe it to be of a very different character in his or her personal relations (see Adorno, Brunswick, Levinson, & Sanford, 1950). In recent years, there has been a renewed interest in how such lay theories play a pivotal role in the understanding of an array of work-related constructs including leadership (Offerman, Kennedy & Wirtz, 1994; Dastmalchian, Javidan, & Alam, 2001), organizational performance (Schleicher & Day, 1998), ability (Levy, Plaks & Dweck, 1999; Gervey, Chiu, Hong & Dweck, 1999), creativity and wisdom (Sternberg, 1985), and affirmative action (Nacoste, 1996).

Implicit Theories of Organizational Power

Although managers' core assumptions about organizational power remain mostly unstated and untested (Hollander & Offermann, 1990), scholars contend that most managers hold traditional, win-lose views of power (Agyris & Schon, 1996, 1978; Bennis & Nanus, 1985; Burke, 1986; Follett, 1973; Kanter, 1979; Tjosvold, 1981). This view holds that power and authority relations between people in organizations are intrinsically competitive; the more power A has the less power available for B. In fact, even the idea of "power sharing" seems to imply the need to carve-up and distribute some entity of power to others when empowering them. Such a theory can set-up a competition for power between supervisors and employees, and lead to politicking, power-hording, and a reliance on compliance strategies of influence which increase the need for continuous scrutiny and control of subordinates.

A basic assumption underlying the competitive view of organizational power is that power is a fixed-pie (Coleman & Voronov, 2003; Coleman, forthcoming; Deutsch, 1973). If managers believe organizational power to be limited, they are more likely to view the sharing of power as a loss to their own slice of the pie. This, in turn, triggers a win-lose competition for power, with its ensuing competitive dynamics. However, Mary Parker Follett (1924) suggested an alternative view of organizational power as a type of power that can be grown and mutually developed. If managers view power as a resource that can be developed and enhanced in cooperation with employees, they will be more likely to share power and support employee empowerment. Thus, the belief that organizational power is a limited-entity vs. an expandable resource would be associated with competitive vs. cooperative relations between managers and their employees, and lead to an increased withholding of power by individuals in work settings.

Implicit Theories and Interdependence

Following the reasoning outlined above, we suggest that viewing organizational power as a limited-resource will lead to an increased sense of competitive interdependence between managers and employees (see also Whetten & Cameron, 1986; Kets de Vries, 1980; Jesaitis & Day, 1992). The considerable body of research on cooperative and competitive interdependence (see Deutsch, 1973; Johnson & Johnson, 1989, for an overview) has regularly demonstrated their contrasting effects on people's attitudes and behaviors in social relations, including the tendency for competition to foster "attempts to enhance the power differences between oneself and the other" (Deutsch, 1973, p. 30). A variety of other studies have demonstrated the critical role of perceived cooperative interdependence in fostering constructive power dynamics between employees and managers (Tjosvold, 1981; 1985a, 1985b, Tjosvold, Johnson & Johnson, 1984).

Implicit theories and Power-sharing

Empirical support for the link between competitive assumptions regarding power and resistance to power sharing was found in two recent studies. The first study (Coleman, 2004) proposed that chronic differences in the competitiveness of implicit power theories would affect managers' decisions to share or withhold resources, as well as their decisions regarding the involvement of employees in decision-making processes. Subliminal priming (of competitive vs. cooperative words) was predicted to temporarily enhance the accessibility of these differences in implicit power theories, thereby fostering or inhibiting spontaneous decisions to share power. Results indicated that the priming of competitive (win-lose) words negatively influenced manager's immediate, spontaneous decisions to share resources and involve employees in decisions, whereas chronic differences in the competitiveness of their implicit theories similarly affected their more deliberate, systematic decisions to share power. While an important first study of the relationship between implicit power theories (IPTs) and power-sharing, it involved several components of IPTs (ideals and beliefs regarding autocracy and competition) and the impact of IPTs on actual behaviors was not measured.

In a separate study (Tjosvold, Coleman, & Sun, 2003), the relationship between organizational-level norms regarding limited vs. expandable power and power-sharing behaviors was investigated. In this study conducted in China, participants portraying managers in an organizational simulation were found to

share more power (information and assistance) with subordinates when they were led to believe that their (simulated) organization had a history of approaching organizational power as an expandable process than when it was portrayed as traditionally viewing and approaching power as a limited entity. Here, we begin to see a more direct link between perceptions of limited vs. expandable power (operationalized as shared organizational norms) and important power-sharing behaviors. However to date, the relationships between implicit power theories (limited vs. expandable), interdependence, and power-sharing behaviors have yet to be tested.

The Present Research

To summarize, we hold that openness by managers to share power with employees is critical to establishing the conditions necessary for employee empowerment initiatives to flourish in organizations. However, many managers resist sharing power, due in part to the assumptions about organizational power that they hold, and that are cultivated in many companies. In the present research, we propose that differences in implicit power theories--the belief that organizational power is a limited resource vs. an expandable resource--will predict competitive vs. cooperative orientations between managers and employees and affect managers' willingness to share information and offer support to their employees.

On the basis of this reasoning, the following hypotheses will be tested:

Hypothesis 1: Individuals who are primed to view power as an expandable resource will view their relationships with their employees as more cooperative and less competitive than individuals primed to view power as a limited-entity.

Hypothesis 2: Individuals who are primed to view power as an expandable resource will use their authority and informational power to support and encourage their employees more than individuals primed to view power as a limited-entity.

Method

An experiment was designed to test the above hypotheses. In the study, the implicit power theories of participants were experimentally manipulated through priming, prior to engaging participants as managers in an organizational simulation.

Research Design. This was a between-subjects experimental study where participants were randomly assigned to one of two implicit theory conditions (limited-power or expandable-power). It used

the “unrelated study” paradigm to prime implicit theories prior to engaging the participants in an organizational simulation (see Bergen, 1991; Hong, Chiu, Dweck, Lin, & Wan, 1999). Participants were recruited to take part in a study on “problem-solving and communication in an organizational context”. The study had three parts. First, each participant was asked to read and complete an “English reading comprehension task”, during which their implicit theories of organizational power were induced by means of reading passages (see below). Then, the participants were asked to take part in a “separate study”, a role play between a manager and an employee. A confederate, posing as a study participant, always played the employee role, while the participant always played the role of manager. Finally, the participants completed a questionnaire regarding their experience of the role play and were fully debriefed.

Participants. Sixty graduate students (44 females and 16 males) majoring in management or organizational psychology at two universities in the Northeastern U.S. participated in this study. All participants were recruited from college courses and received extra-credit in a course for volunteering for the study. Additionally, they all received at least one chance at winning a cash lottery for \$250 (see description below). Participants ranged in age from 18 to 50 years with an average age of 28 and an average of 5.4 years work experience.

Procedure. One participant and one confederate were scheduled at each session. An experimenter began each session by greeting the participant and the confederate, and informing them that there had been a slight change in plans: they would be asked to participate in two separate studies. The experimenter explained that he would be conducting the first study investigating various psychological aspects of university students’ performance in reading comprehension, and that another researcher would be conducting the second study, an “organizational simulation between a manager and an employee.” The experimenter explained that the two studies were unrelated, but, for the sake of efficiency, participants were being asked to participate in both. No participants reported suspecting a link between the two studies.

After providing this overview, the experimenter escorted the participant and the confederate into separate rooms. The participant was asked to fill out an informed consent form and then complete the reading comprehension task (see below). The experimenter then left the room to prepare the other participant (the confederate) for the same task. After the participant completed the reading comprehension task and returned the materials to the experimenter, they were debriefed and thanked for their participation.

A second experimenter then entered the room, escorted the participant to a separate room, and asked him/her to fill out a second informed consent form. The experimenter then explained that for the second study, the participant and the confederate would be participating in an organizational simulation between a manager and an employee. The participant was reminded that the simulation was focused on “problem solving and communication in organizations”.

The experimenter told the participants that roles (manager or employee) would be assigned by random drawing. The experimenter presented the participant with two pieces of paper, folded in half, and asked the participant to select one. While it appeared that roles were randomly assigned, the word “manager” was written on the inside of both pieces of paper. No subjects reported questioning the random drawing or suspecting the confederate.

The participant was then left to read a set of instructions while the experimenter prepared the other participant. The instructions explained that the participant was to play the role of a manager in a management consulting company that specializes in solving problems brought to them by other companies. Their department would be given two problems which they would have 20 minutes to solve. As the manager, he/she would be asked to solve a set of math problems while the employee worked at solving a logic problem. They were informed that for every three math problems that they themselves correctly answered, they would receive an additional one chance in the \$250.00 lottery drawing. The instructions also stated that the manager could only communicate with the employee through written messages; oral communication was prohibited during the role play. The participant was to read the written instructions and then review them with the experimenter in order to clarify his/her understanding of the situation and of his/her role.

To make the participants feel that they had power in their role as manager, they received an additional information sheet with the employee problem: four hints that would help the employee solve the complex problem, as well as a detailed diagram and explanation of the final solution. Participants were told that, while they could help the employee in any way they chose, they could not give the correct answer; none did. Participants were expected to believe they had power in that they had resources and information that the employees would value as facilitating their task and affecting their outcomes (Fiske, 1993; Goodwin, et al., 1998; Thibaut & Kelley, 1959).

After the participant finished reading the instructions, the experimenter returned to make sure that the participant understood his/her role and the solution to the employee's problem. Then they were asked to complete a short questionnaire. Three questions checked their preparation. Participants indicated on a 7-point scale that they were involved in the situation ($M= 5.0$), felt prepared ($M= 4.6$), and were ready to perform their role ($M= 4.7$). As expected, there were no statistically significant differences across the conditions. These results suggest that participants felt that they were adequately prepared for their role.

To begin the role play, the experimenter brought the confederate into the room and sat the confederate at a table across from the participant. The experimenter reminded the participant and the confederate that they had 20 minutes to work on their problems and to communicate through written messages only. A pad of paper and pencil was provided. The experimenter then left the room. After 20 minutes, the experimenter returned, ended the role play, and asked the participant and the confederate to complete the questionnaire. The participant was then fully debriefed, thanked, and asked not to discuss his/her experience with other participants.

Tasks. The confederates in the role of employees were given the Joe Doodlebug problem which requires an examination of basic assumptions and creative thinking to solve (Rokeach, 1968). Joe Doodlebug can only jump in prescribed ways to get to his food. The task for the employees was to explain why he needs four jumps in the particular situation described in the problem.

When employees were working on this problem, participants had their own task to complete, which was 16 math questions taken from college textbooks. The participants were informed that the more math problems they completed correctly, the more chances they would receive in the lottery drawing.

Confederates. Four graduate students participated as confederates. They were given 4 hours of training and were blind to condition. The confederates were observed piloting two participants each to ensure their competence in fulfilling the confederate's role.

Implicit-Theory Manipulation. In previous studies (Bergen, 1991; Hong, Chiu, Dweck, Lin, & Wan, 1999), different implicit theories have been experimentally manipulated using reading passages. During the "reading comprehension" task, participants were provided with a *Social Science Weekly* article that had been developed for this study and that convincingly presented either the limited or expandable theory of power. The articles were illustrated with citations from false research reports purporting to

document the theory. For example, one section in the limited-power article entitled “*The Nature of Power: Researchers Claim it’s a Limited Entity*” read:

The major finding emerging from the report is that researchers across disciplines are finding data to suggest that power is a limited resource in social systems, and as a result, that only a few people in any group or organization can wield power. This may not come as a surprise to those of us who work in groups or organizations, for the few number of people holding positions of power in these systems is evidence of its limited nature. However, this is the first time that hard data from both experimental laboratory research and observational research in the field have supported this notion. The findings suggest that the only way that people with low power can gain power in social systems is when powerholders chose or are compelled to relinquish some of their power.

The same section in the expandable-power article, entitled “*The Nature of Power: Researchers Claim it’s an Expandable Process*” read:

The major finding emerging from the report is that researchers across disciplines are finding data to suggest that power is a resource that can be created and enhanced in social systems, and as a result, that many members of groups or organizations can expand their power. This may not come as a surprise to those of us who work in groups or organizations, for the increasing number of people participating in all areas of decision-making, goal-setting, and planned change in these systems is evidence of its expandable nature. However, this is the first time that hard data from both experimental laboratory research and observational research in the field have supported this notion. The findings suggest that the only time that power does not expand is when powerholders who guard and protect their power out of fear of losing it restrict it.

The rationale for this manipulation was that although people may have chronic preferences for one implicit theory or another, both theories may represent basic modes of thought that are accessible to most individuals (see Dweck et al, 1995, Hong, Chiu, Dweck, Lin, & Wan, 1999). Therefore, after reading persuasive arguments supporting a limited-power or expandable-power theory, participants can be led to temporarily adopt that mode of thought.

Participants were randomly assigned to read either the limited-power or expandable-power article, under the cover of an “English reading comprehension task.” To check their understanding, we asked the participants to: (a) summarize the theme of the article in one sentence, and (b) state the evidence they thought was the most convincing. Participants indicated on a 10-point scale that they found the essays to be sufficiently understandable ($M = 8.9$), credible ($M = 6.6$), and persuasive ($M = 6.6$). All subjects were found to have adequately summarized the main points of the essays (thus, following their reasoning) with no significant differences found between conditions. When the participants completed the comprehension task, the second part of the study began.

Dependent Variables. There were two sets of dependent variables in this study. The first set involved perceptions of manager-employee interdependence (see Appendix). Participants completed the post-interaction questionnaire, which contained a series of questions on interdependence with 7-point Likert-type scales with *not at all* and *to a great extent* as anchors. They were asked to respond to the questions carefully to provide accurate information regarding how they experienced their work with their employee. The items for the different scales were presented randomly.

Three scales measured the participants' perceptions of interdependence (see Appendix). Participants rated the extent to which they developed a *team relationship* with the employee in 3 items ($\alpha = .57$), the extent to which they felt *responsible* for assisting the employee with their work in 3 items ($\alpha = .44$), and the degree to which they viewed *power* in the simulation in cooperative or competitive terms (7 items, $\alpha = .86$). These items and scales were based on others which had demonstrated sufficient reliability in previous experimental and field studies (Alper, Tjosvold, & Law, 1998; Tjosvold, 1981; Tjosvold, Coleman, & Sun, 2003).

The second set of dependent measures assessed power-sharing behaviors. Three measures: assistance, support, and encouragement were coded from the written messages, based on prior research on power-sharing behaviors in organizations (Tjosvold, 1981, 1985a, 1985b; Tjosvold, Coleman, & Sun, 2003). To measure *assistance*, the number of hints the participants wrote to the employee during the work simulation were counted. Two trained raters, unaware of the hypotheses or the experimental conditions, coded the participants' written messages. They first independently identified the number of clues the participants sent that would help the employee solve the problem. The raters agreed on 107 cases out of 115. They then discussed the disputed cases and their agreed upon ratings were used in the analyses.

Support was also measured through the participants' written messages. The same raters counted the total number of words written by each participant while supervising his/her "employee" on the logic task. This was based on the assumption that time was a scarce commodity during the simulation, and that higher quantities of words written were a measure of the time spent actively supporting the employee. The two raters agreed on 100% of the word-count ratings for support and their ratings were used in the analyses.

In addition, *encouragement* was measured through the participants' written messages. Comments that expressed confidence in the employee were identified as supportive and were scored as three. Neutral

messages were deemed not to have any appreciable positive or negative impact on the employee's confidence, motivation, or performance and were scored as two. Discouragement was operationalized as comments that undermined or interfered with the employee's performance and were scored as one. The raters studied this definition and applied it to the written messages. Two raters agreed on 97 cases of the 115 on these ratings. They then discussed the disagreed cases and their agreed upon ratings were used in the analyses.

Results

Correlations were first computed to identify the relationships among the dependent measures (see Table 1). A multivariate analysis of variance (MANOVA) was then conducted on the data, which yielded a main effect for implicit theory condition ($F(5, 52) = 2.35, p < .05$). Then ANOVAs were conducted on the dependent measures (see Table 2).

MANOVA and ANOVA results supported Hypothesis 1 in that differences in implicit power theories were found to affect the competitive vs. cooperative nature of the participants' perceptions of interdependence with their employees. In other words, when participant's limited-power theories were induced, it was predicted that they would tend to view their relationship with their employee in more win-lose competitive terms, take less responsibility for their success or failure, and view the power dynamic between them as more competitive. Whereas when expandable-power theories were induced, it was predicted that participants would view their relationship with their employee as a member of their team, take more responsibility for their outcomes, and view the power dynamic between them as more cooperative and mutually-beneficial. Participants' in the expandable-power condition indicated that they felt more like a team with the employee ($M = 5.42$) than did the participants in the limited-power condition ($M = 4.85, p < .05$), reported that they felt more responsibility to assist the employee ($M = 5.42$) than limited-power participants ($M = 4.93, p < .05$), and described their power dynamics with their employee in more cooperative and less competitive terms ($M = 5.35$) than the limited-power theory participants ($M = 4.64, p < .05$).

The findings also supported Hypothesis 2, which predicted that differences in implicit power theories would affect levels of managerial power-sharing (see Table 2). Specifically, participants' whose expandable theories of organizational power were induced provided more assistance to their employees in

the form of informational hints given ($M = 6.76$) than those whose limited theories were made salient ($M = 5.58$, $p < .05$), and offered more support to their employees (as measured by higher quantity word-counts, $M = 91.93$), than participants in the fixed-entity condition ($M = 71.03$, $p < .05$). Expandable-power participants were only slightly more encouraging with their employees ($M = 2.44$) than limited-power power participants ($M = 2.33$), at a level nearing significance ($p < .08$).

Discussion

The results from this study supports the reasoning that fundamental differences in how managers view power in organizations can impact both their orientation toward their relationships with their employees, as well as their willingness to share power in the form of important organizational resources such as information, attention, and support. Results showed that operating off of the simple, basic assumption that organizational power is a limited-resource, can shape how managers interpret their supervisory relationships; influencing their sense of interdependence, responsibility, power dynamics, and ultimately their willingness to make the behavioral changes required of them when instituting programs of employee empowerment.

It is interesting to note that these results were found, even under the somewhat competitive conditions of the simulation. The structured interdependence of the simulation was mixed-motive in nature (both cooperative and competitive goals), although skewed somewhat toward the competitive (which is not unlike a typical structure found in many organizations). Although the role of manager of a department specializing in problem-solving implies a form of cooperative interdependence with employees, the tasks were independent in nature and the rewards (additional chances in the lottery) were implicitly competitive (the fewer chances others have, the higher the chances of winning). In addition, because time was scarce (20 minutes), any time the participant offered to their employee diminished the amount of time available to accomplish their own task and increase their own rewards. Given this structure, it is notable that expandable-power theories were associated with perceptions of cooperative interdependence, and that they resulted in an increase in power-sharing behaviors.

Results from these studies were consistent with prior research on cooperative and competitive interdependence and manager/employee power dynamics, but extend it in important ways. In a series of studies on power and goal interdependence, (Tjosvold, 1981; Tjosvold, Johnson & Johnson, 1984;

Tjosvold, 1985a, 1985b) researchers found that differences in actual and perceived goal interdependence (task, reward, and outcome goals) affected the likelihood of the constructive use of power between high- and low-power persons. Cooperative goals, when compared to competitive and independent goals, were found to induce “higher expectations of assistance, more assistance, greater support, more persuasion and less coercion and more trusting and friendly attitudes” between superiors and subordinates (Tjosvold, 1997, p. 297).

Similar effects have been found with members of top management teams. In a study with 378 executives from 105 organizations in China, perceived cooperative goals were found to reinforce mutually enhancing interactions and promote team recognition of abilities, which in turn resulted in a strategic advantage for the company (Tjosvold, Chen, and Liu, 2001). The main contribution of the current research however, is in its identification of a primary assumption (limited vs. expandable power) which can orient managers in either a cooperative or competitive direction regarding their relations with their employees. This is particularly so because this distinction relates to power, an aspect of our lives which is closely associated with our sense of control and efficacy in the world (see Fiske, 1993; Bandura, 1999).

Implications

The findings from this research not only speak to the potential causal role of implicit power theories in shaping managers responses to empowerment initiatives, but it emphasizes the critical part that the organizational context plays in triggering and fostering differences in implicit theories. In this study, the different theories were induced by the messages presented in the reading passages. Thus, organizational structures, organizational norms and climate around empowerment, as well as more informal influences such as myths and legends regarding preferred ways of working, may be formative and go a long way in providing a context of meaning through which to interpret the value of empowerment. If competition over power and resources is consistently emphasized in a system; tasks are structured competitively and outcomes distributed accordingly, “command and control” leadership is modeled from above, and the general climate stresses territorialism, then limited-power theories will be made chronically more accessible. Equally problematic are organizations where empowerment initiatives are officially championed, but where informal stories and practices reinforce the traditional limited-entity mindset of win-lose power relations.

Limitations

The findings from this study are limited by the sample, operationalizations, and scales employed. The graduate student sample, which may have little experience supervising employees, was only somewhat representative of professional managers. Participants were asked to take roles in an organizational simulation with a very short time perspective and minimal tangible outcomes. Although we contend that the studies were able to effectively induce in the participants a sense of experimental realism with regard to the key variables (power and interdependence), they remain limited in their mundane realism (see Berkowitz & Donnerstein, 1982). In addition, the reliability estimates of the interdependence scales, although having displayed sufficient reliability in previous studies, were low, even for scales with so few items. Hence, we must interpret these findings with caution. Although the studies had statistically significant results, they, like other laboratory experiments, do not provide direct evidence of the practical significance of the relationships between the variables. Thus, it would be useful to provide additional experimental and quasi-experimental verification of the model in actual organizational settings.

Conclusion

Kurt Lewin once said that “everyone understands authority, but democracy is a learned behavior”. If organizational scholars are correct, the vast majority of managers in the U.S. and abroad assume power to be a limited-resource. This is consistent with Lewin’s claim. However, our findings suggest that this assumption is not universal, and is likely to be driven by aspects of social structures and relations that are amenable to change. If this be the case, our attempts to move organizations from the stoic, top-down hierarchies of yesterday towards the flexible, adaptive network structures of tomorrow will be difficult, but possible. They will require fairly substantial changes in structures, norms, practices, and mindsets. But, ultimately, such transitions will involve power. And our images of power may, in turn, determine their success.

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Appendix
Interdependence Scales and Items

- Team membership .57
1. To what extent did you and the employee help each other as team members?
 2. To what extent did you think that the employee was not a person with whom you could work with together? ®
 3. To what extent did you feel that you and the other belonged to the same team?
- Responsibility .44
1. As a manager, how much did you believe you had a responsibility to help the employee solve the problem?
 2. As a manager how much did you believe you had a responsibility to give hints to the employee?
 3. To what extent was it your responsibility to solve your problem and the employee's responsibility to solve his or her problem? ®
- Cooperative/competitive power .86
1. Would you agree that in order for you to gain power in this work environment, the employee had to lose power? ®
 2. Would you agree that when you delegated time and attention to your employee in this situation you tended to lose some power? ®
 3. Would you agree that there is only so much power to go around in this organization? ®
 4. Did you feel that assisting your employee would undermine your power in this situation? ®
 5. Would you agree that there are infinite and expandable resources for power available to everyone in this organization?
 6. Would you agree that power in this work environment is extremely expandable, and therefore, both of you could expand your power?
 7. Would you agree that both you and the employee could increase your power greatly in this situation without negatively affecting the others power?

Table 1

Study Variable Intercorrelations

Variable	1	2	3	4	5	6
1. Assistance	--	.770**	.309*	.178	.205	.008
2. Wordcount		--	.269*	.117	.219	.007
3. Encouragement			--	.256	.154	.381*
4. Team membership				--	.478**	.499**
5. Responsibility					--	.466**
6. Cooperative power						--

* p<.05

**p<.01

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Table 2

Study 2 Dependent Variable Means by Implicit Theory Condition

Group Statistics

	Condition	N	Mean	Std. Deviation	F	Sig.
Assistance	expandable-power	30	6.76	2.66	4.01	.05
	limited-power	29	5.58	1.76		
Wordcount	expandable-power	30	91.93	45.01	4.20	.05
	limited-power	29	71.03	32.03		
Encouragement	expandable-power	30	2.44	.24	3.20	.08
	limited-power	29	2.32	.24		
Team membership	expandable-power	30	5.42	.23	5.18	.05
	limited-power	29	4.85	.20		
Responsibility	expandable-power	30	5.41	.83	4.93	.05
	limited-power	29	4.93	.87		
Cooperative power	expandable-power	30	5.35	.96	5.58	.05
	Limited-power	29	4.64	1.32		

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