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Abusive Supervision in Work Organizations: Review, Synthesis, and Research Agenda†

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A growing literature explores abusive supervision, nonphysical forms of hostility perpetrated by managers against their direct reports. However, researchers have used different terminology to explore phenomena that overlap with abusive supervision, and extant research does not devolve from a unifying theoretical framework. These problems have the potential to undermine the development of knowledge in this important research domain. The author therefore provides a review of the literature that summarizes what is known about the antecedents and consequences of abusive supervision, provides the basis for an emergent model that integrates extant empirical work, and suggests directions for future research.

Keywords: *abusive supervision; workplace hostility; leadership behavior; employee deviance*

The topic of supervisory leadership holds an important place in the management literature. Literally thousands of studies have explored how supervisors interact with their subordinates and the consequences associated with using various supervisor behaviors (Bass, 1990; Yukl, 1998). For the most part, this research has been motivated by a desire to understand the makings of supervisor effectiveness—to identify the supervisor characteristics and behaviors that are associated with favorable outcomes (e.g., high motivation, high individual and group performance, and favorable attitudes toward the job, organization, and leader) and to develop recommendations for improving management practice.

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However, within the past 15 years, researchers have turned their attention to the dark or destructive side of supervisory behavior such as sexual harassment, physical violence, and nonphysical hostility. This work suggests that the most common manifestation of destructive supervisor behavior involves nonphysical actions such as angry outbursts, public ridiculing, taking credit for subordinates' successes, and scapegoating subordinates (Keashly, Trott, & MacLean, 1994). Researchers have used several different labels to refer to these kinds of behaviors including *petty tyranny* (Ashforth, 1997), *supervisor aggression* (Schat, Desmarais, & Kelloway, 2006), and *supervisor undermining* (Duffy, Ganster, & Pagon, 2002), but most of the work conducted to date has employed the term *abusive supervision* (Tepper, 2000).

Abusive supervision affects an estimated 13.6% of U.S. workers, yet these behaviors incur substantial costs; the victims of nonphysical managerial hostility report diminished well-being and quality of work life that can spill over to their lives away from work (Schat, Frone, & Kelloway, 2006). The cost to U.S. corporations of abusive supervision (in terms of absenteeism, health care costs, and lost productivity) has been estimated at $23.8 billion annually (Tepper, Duffy, Henle, & Lambert, 2006). Moreover, recent developments in the legal arena may make behavior of this sort an actionable offense for which employers could have significant liability (Yamada, 2004).[1] Hence, abusive supervisory behavior is a significant social problem that warrants continued scholarly inquiry.

However, the literature that addresses abusive supervision may be characterized as fragmented and poorly integrated. Researchers have used different terminology and corresponding measures to investigate phenomena that overlap to varying degrees with abusive supervision, and extant research does not devolve from a unifying theoretical framework. These problems have the potential to undermine the development of knowledge in this very important area of research. With approximately 20 published and unpublished articles on the topic (to date), this area of inquiry may be characterized as nascent, but quickly developing. Consequently, this is an opportune time to appraise the knowledge base. I therefore provide a qualitative review of the literature, which is organized as follows. I begin by reviewing the conceptual and operational definitions of constructs that capture nonphysical supervisor hostility, beginning with abusive supervision. The goals of this analysis are to clarify how these constructs overlap with abusive supervision and to provide the basis for determining what studies should be included in a review of the empirical literature. I then review empirical studies of the antecedents and consequences of abusive supervision. Last, I use this analysis to frame an emergent model of abusive supervision and to make recommendations for future inquiry.

Constructs That Capture Nonphysical Supervisor Hostility

Table 1 lists and defines the constructs that researchers have used in studies of nonphysical supervisory hostility and evaluates each construct along the following dimensions: (a) whether the construct focuses exclusively on hostility perpetrated by supervisors against specific subordinate targets, (b) whether the construct definition excludes other forms of hostility (e.g., physical and sexual), (c) whether the construct's content domain captures nonhostile behavior, and (d) the role that intention plays in the conceptual definition of the construct. I employ these dimensions because they clarify how each construct overlaps with, and

Table 1
Constructs That Capture Nonphysical, Supervisor Hostility

Construct	Definition	Directed Downward	Excludes Physical Hostility	Encompasses Content Other Than Hostility	Definition Includes Reference to Intended Outcomes
Abusive Supervision	"Subordinates' perceptions of the extent to which their supervisors engage in the sustained display of hostile verbal and non-verbal behaviors, excluding physical contact" (Tepper, 2000: 178).	Yes	Yes	No	No
Generalized hierarchical abuse	Exposure to hostility perpetrated by hierarchically superior coworkers.	Yes	No	No	No
Petty tyranny	Managers' use of power and authority oppressively, capriciously, and vindictively (Ashforth, 1987, 1994, 1997).	Yes	Yes	Yes	No
Victimization	"The individual's self-perception of having been exposed, either momentarily or repeatedly, to aggressive actions emanating from one or more other persons" (Aquino, 2000: 172).	Not necessarily	No	No	Yes
Workplace bullying	Occurs when "one or several individuals over a period of time perceive themselves to be on the receiving end of negative actions from one or several persons, in a situation where the target of bullying has difficulty in defending him or herself against these actions" (Hoel & Cooper, 2001: 4).	Not necessarily	Yes	No	Yes

(continued)

Table 1 (continued)

Construct	Definition	Directed Downward	Excludes Physical Hostility	Encompasses Content Other Than Hostility	Definition Includes Reference to Intended Outcomes
Supervisor aggression	Supervisor behavior "that is intended to physically or psychologically harm a worker or workers in a work-related context" (Schat, Desmarais, et al., 2006).	Yes[a]	No	No	Yes
Supervisor undermining	Supervisor "behavior intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation" (Duffy, Ganster, & Pagon, 2002: 332).	Yes[a]	Yes	No	Yes
Negative mentoring experiences	"Specific incidents that occur between mentors and protégés or mentors' characteristics that limit their ability to effectively provide guidance to protégés" (Eby, McManus, Simon, & Russell, 2000: 3).	Yes[a]	Yes	Yes	No

a. These works also explore non-physical, hostile behavior perpetrated by individuals other than supervisors (against subordinates).

diverges from, abusive supervision and clarifies what research should and should not be included in the review of empirical research that follows.

Abusive Supervision

Tepper defined abusive supervision as "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (2000: 178). There are several important features of this definition. First, abusive supervision is a *subjective* assessment subordinates make on the basis of their observations of their supervisors' behavior. This assessment may be colored by characteristics

of the observer and/or subordinate (e.g., personality, demographic profile) and of the context in which the assessment is made (e.g., the work environment, coworker perceptions). Second, abusive supervision refers to *sustained* displays of nonphysical hostility. Abusive supervision involves continuing exposure to hierarchical mistreatment—a boss who has a bad day and takes it out on his or her subordinates by exploding at them would not be considered an abusive supervisor unless such behavior became a regular feature of his or her repertoire.

A final point about Tepper's (2000) conceptualization is that abusive supervision falls within the domain of willful behavior, meaning that supervisors perpetrate abusive behavior for a purpose; however, he does not define abusive supervision in terms of the perpetrator's intended outcomes (e.g., to cause harm). Abusive supervisors may mistreat their subordinates to accomplish objectives other than causing injury. For example, a supervisor may mistreat subordinates to elicit high performance or to send the message that mistakes will not be tolerated. Behavior of this sort falls within the domain of abusive supervision, but the perpetrator's proximate or immediate intent is not to cause harm. Possibilities of this sort mean that some manifestations of abusive supervision do not fall under the umbrella of "aggression" as it is traditionally defined (Baron & Richardson, 1994; Bushman & Anderson, 2001). As we will see, this notion sets abusive supervision apart from constructs that are conceptualized as forms of workplace aggression and that involve deliberate attempts to cause injury.

Generalized Hierarchical Abuse

Since the late 1980s, researchers have explored exposure to what may be termed *generalized hierarchical abuse*, the experience of having been mistreated by superiors in general (as opposed to one supervisor in particular; Rospenda, 2002; Rospenda, Richman, Ehmke, & Zlapoter, 2005; Rospenda, Richman, Wislar, & Flaherty, 2000; Wislar, Richman, Fendrich, & Flaherty, 2002). Much of this work, which has been published in medical journals, focuses on nurses and medical students' experiences of abusive behavior perpetrated by physicians (e.g., Daugherty, Baldwin, & Rowley, 1998; Richman, Flaherty, & Rospenda, 1996; Richman, Flaherty, Rospenda, & Christensen, 1992). Although this work explores hierarchical behaviors that dovetail with the abusive supervision content domain (e.g., being yelled or sworn at), these studies depart from abusive supervision research in several respects. First, and most obviously, these studies do not emphasize abusive behavior perpetrated by specific supervisors against their direct reports. Second, in some cases, the researchers do not distinguish between nonphysical hostility and physical hostility or sex-linked harassment and discrimination. Third, many of these studies explore employees' *subjective* assessment of the relationship between abusive behavior and its correlates. To clarify, in a recent study, Rosenstein and O'Daniel (2005) investigated the link between gender and abusive physician behavior by asking nurses to respond to the questions: "Do you think that gender influences the tendency to exhibit disruptive behavior?" and "Which gender do you think has a greater tendency to exhibit disruptive behavior?" Similar methods have been used to explore the relationships between abusive physician behavior and future interaction with the abuser, the target's psychological health, the adequacy of care provided, individual and unit morale, and turnover (Cox, 1987, 1991; Diaz & McMillin, 1991; Manderino & Berkey, 1997; Rosenstein & O'Daniel, 2006). Although studies of this sort provide useful information as to what health

care workers *perceive* to be the outcomes of hierarchical abuse experiences (i.e., their mental models vis-à-vis generalized abuse), they do not speak to whether there are *substantive* relationships between abusive supervision and important outcomes.

Petty Tyranny

Abusive supervision shares content with what Blake Ashforth (1987, 1994) referred to as petty tyranny, superior's use of power "oppressively, capriciously, and perhaps vindictively" (1997: 126). Ashforth conceives of petty tyranny as comprising six subdimensions: arbitrariness and self-aggrandizement, belittling subordinates, lack of consideration, a forcing style of conflict resolution, discouraging initiative, and noncontingent punishment. Like abusive supervision, petty tyranny captures hostile acts perpetrated by hierarchically superior agents. However, although there is some convergence between the abusive supervision and petty tyranny content domains (e.g., belittling subordinates), petty tyranny captures behaviors that may not necessarily be viewed as hostile. For example, a manager would not be perceived as hostile simply because he or she is not friendly or approachable or because he or she does not do little things to make things pleasant for group members (i.e., display low levels of consideration). Although researchers typically report strong negative correlations between conflictive supervisor behavior and supportive supervisor behavior, they nevertheless appear to form separate factors in exploratory factor analyses (e.g., Schriesheim, House, & Kerr, 1976; Schriesheim & Stogdill, 1975) and demonstrate independent effects on target attitudes and well-being (Yagil, 2006). Furthermore, there is evidence to suggest that managers may combine consideration and abusive behavior and that doing so produces more deleterious outcomes compared to abusive behavior alone (Duffy et al., 2002). Hence, although consideration and abusive supervision are negatively related, withholding consideration cannot be construed as the opposite or absence of abusive supervision.

Similar arguments may be made for the *discouraging initiative* dimension of petty tyranny, which Ashforth (1997) operationalized by reverse-scoring items like, "encourages subordinates to participate in important decisions," "trains subordinates to take on more authority," and "encourages initiative in the group members." Managers may appropriately discourage initiative in crisis situations, in routine jobs where the organization's goals are most efficiently achieved through close adherence to standard operating procedures, or when subordinates lack the requisite skills and background to participate in decision making (Bass, 1990). Certainly managers can discourage initiative in an abusive way (e.g., "I'm not interested in your stupid suggestions"), but discouraging initiative in and of itself does not constitute abusive behavior. More generally, it may be argued that petty tyranny, as it is conceptualized and operationalized, is a broader concept than abusive supervision in that some of its subdimensions do not capture downward hostility.

Workplace Victimization

In a series of pioneering studies, Karl Aquino and his colleagues (Aquino, 2000; Aquino & Bradfield, 2000; Aquino & Byron, 2002; Aquino, Grover, Bradfield, & Allen, 1999) have investigated

the general research question, "What kinds of people under what conditions are likely to become targets of coworkers' aggressive actions?" (Aquino et al., 1999: 260). To address this question, Aquino's research group invoked the concept of victimization from the sociology and criminology literatures. This research attempts to identify communalities among *victims*, individuals who perceive that they have "been exposed, either momentarily or repeatedly, to aggressive actions emanating from one or more other persons" (Aquino, 2000: 172).

Aquino and colleagues' line of work has produced important findings that speak to the situational and individual factors antecedent to supervisory hostility. That said, the victimization and abusive supervision constructs diverge in three ways. First, workplace victimization research is not restricted to downward hostility—victimization studies investigate mistreatment perpetrated laterally (coworker on coworker) and upwardly (subordinate on superior), although the work to date suggests that downward victimization occurs more frequently than the other forms. The second way in which this work departs from abusive supervision is that the victimization content domain includes manifestations of physical hostility: "threw something at you," "pushed or punched you," and "threatened you with physical harm" (Aquino, 2000: 180). A third point of divergence is that victimization is defined as the perception that one has been exposed to *aggressive* actions, interpersonal behaviors that are designed to inflict harm or injury (Buss, 1961). This definitional feature sets victimization apart from abusive supervision, which, as discussed earlier, does not ascribe intention to the actor. With these caveats in mind, I devote a section of this article to the workplace victimization literature later, when I review the work that speaks to the antecedents of abusive supervision.

Workplace Bullying

Since the late 1980s, European researchers have investigated the phenomenon of workplace bullying, which occurs when

> one or several individuals over a period of time perceive themselves to be on the receiving end of negative actions from one or several persons, in a situation where the target of bullying has difficulty in defending him or herself against these actions. (Hoel & Cooper, 2001: 4)

Like abusive supervision, bullying involves repeated exposure to hostile actions at work (Hoel, Rayner, & Cooper, 1999). However, although the research to date suggests that 75% of incidents of workplace bullying are perpetrated by hierarchically superior agents against subordinate targets (Hoel & Cooper, 2000), bullying (as conceptualized and operationalized) is not confined to hierarchical hostility. Bullying is usually assessed by asking survey respondents to report their level of exposure to such things as open attacks, abuse, social isolation, and slander (e.g., Einarsen & Raknes, 1997; Matthiesen & Einarsen, 2001; Mikkelsen & Einarsen, 2002). However, although researchers often ask respondents to report the source of bullying (i.e., supervisor, peer, or subordinate), these studies typically do not separate out the effects of hostile actions perpetrated by supervisors. Because these studies cannot be used to ascertain the effects of supervisor bullying per se, I exclude them from my review of the empirical literature.

Supervisor Aggression and Supervisor Undermining

During the past 10 years, management researchers have invoked the aggression literature to investigate workplace aggression, individual behavior intended to cause harm to others at work (Neuman & Baron, 1998). Like the victimization and bullying constructs, the definition of workplace aggression is not restricted to hierarchical displays; indeed, much of the research conducted to date has focused on aggressive acts perpetrated by coworkers and by organizational outsiders (e.g., customers; Herschovis & Barling, 2006; Raver & Barling, in press). That said, in a small number of studies, researchers have explicitly modeled and measured supervisor aggression independent of other sources of aggression (e.g., Grandey & Kern, 2004; Grandey, Kern, & Frone, 2007; Schat, Desmarais, et al., 2006). Moreover, these researchers have operationalized supervisor aggression using items that capture content that is similar to measures of abusive supervision (e.g., "How often does your supervisor yell at you?").

Closely related to the work that investigates supervisor aggression is research by Duffy et al. (2002), who invoked the concept of social undermining from the social psychology literature to explore the occurrence at work of supervisor "behavior intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation" (p. 332). Like the work on supervisor aggression, Duffy et al. exclude physical hostility from the conceptual definition of social undermining, measure supervisor undermining (apart from undermining perpetrated by coworkers) using items that overlap with those that have been used to measure abusive supervision, and define supervisor undermining as behavior that is undertaken to cause injury. From a conceptual and operational standpoint, abusive supervision aligns more closely with supervisor aggression and supervisor undermining than the other constructs listed in Table 1. Consequently, I include these studies in my review of empirical research that follows.

Negative Mentoring Experiences

Mentoring theory and research focus on the development of intense interpersonal relationships between inexperienced junior colleagues (i.e., protégés) and more experienced senior colleagues (i.e., mentors). Most studies of the consequences of mentoring have emphasized the benefits afforded protégés compared with nonprotégés (e.g., career advancement and salary growth; Allen, Eby, Poteet, Lima, & Lentz, 2004). However, this body of work also recognizes that some mentoring relationships are dysfunctional (Scandura, 1998) and that many protégés report having negative mentoring experiences, "specific incidents that occur between mentors and protégés, or mentors' characteristics that limit their ability to effectively provide guidance to protégés" (Eby, McManus, Simon, & Russell, 2000: 3). Examples of negative mentoring experiences include mismatched values and work styles, lack of mentor expertise, and bad attitudes on the part of the mentor (Eby, Butts, Lockwood, & Simon, 2004). Of relevance to the current article is the evidence suggesting that a substantial percentage of protégés report that their immediate supervisor is their mentor *and* that the negative mentoring experiences reported by protégés include actions that overlap with abusive supervision such as deception, sabotage of the protégé's career, and tyrannical behavior

(Eby et al., 2004). However, because the work on negative mentoring experiences does not separate out the effects of mentoring received from different sources (bosses versus other senior colleagues), I exclude this research from the review that follows.

Review of the Empirical Literature

Having mapped the domain of abusive supervision and other constructs that capture downward hostility, I turn my attention to a review of empirical studies that have investigated the antecedents and consequences of abusive supervision. Table 2 summarizes this body of research. I restrict the scope of my review by focusing on research that addresses nonphysical hostility perpetrated by supervisors on subordinate targets. Hence, I exclude studies of hostile work behavior that do not specify whether the source of those actions is the target person's immediate superior (e.g., the studies of generalized hierarchical abuse, the considerable body of work on workplace bullying, and the studies of negative mentoring experiences). One exception is that I include in the review the studies of workplace victimization because this work focuses on antecedents to abusive behavior, which as shown in Table 2, is an underrepresented theme in extant abusive supervision research.

Antecedents of Abusive Supervision

As shown in Table 2, three studies have investigated the antecedents of abusive supervision. Moreover, in all three studies, the researchers have framed abusive supervision as displaced aggression, hostility that is directed against convenient and innocent targets when retaliation against the source of one's frustration is not possible or feasible (Bushman, Bonacci, Pedersen, Vasquez, & Miller, 2005; Pedersen, Gonzales, & Miller, 2000).

Tepper et al. (2006) found that supervisors' depression mediated the relationship between supervisors' experience of procedural injustice (i.e., the perception that one's employer has rendered allocation decisions using unfair decision-making processes) and abusive supervision and that this mediated effect emerged only when subordinates were high in negative affectivity (i.e., those with a dispositional tendency to experience negative thoughts and emotions). The authors argued that supervisors who are prone to hostility (because they have experienced mistreatment) will express their resentment against targets other than the provoking agent (i.e., the organization) out of fear that doing so may evoke further mistreatment. Specifically, supervisors who are inclined to abuse subordinates will express their hostility on high-negative-affectivity subordinates, those who present themselves as weak, vulnerable, and unwilling or unable to defend themselves. In other words, abusive supervision may be characterized as displaced aggression against "safe" targets, in this case the supervisors' direct reports.

In another study that provides support for a displaced aggression explanation for the occurrence of abusive supervision, Hoobler and Brass (2006) found that supervisors who experienced psychological contract breach (i.e., the perception that what they received from their employer fell short of what had been promised) were more abusive toward their subordinates, and that this effect was stronger among supervisors who held a hostile attribution

(text continues on p. 273)

Table 2
Summary of Studies of the Antecedents and Consequences of Abusive Supervision

Study	Research Design	Antecedents	Consequences	Moderators
Tepper (2000)	341 supervised employees, two-wave (6 months), single source		Organizational justice Work attitudes Psychological distress Work-family conflict	Job mobility
Tepper, Duffy, & Shaw (2001)	See Tepper (2000)		Resistance	Conscientiousness Agreeableness
Duffy, Ganster, & Pagon (2002)[a]	685 Slovenian police officers, cross-sectional, multisource		Work attitudes Counterproductive behavior Somatic health complaints	Supervisor support
Zellars, Tepper, & Duffy (2002)	373 Air National Guard, cross-sectional, two-source (i.e., supervisor-subordinate dyads)		Procedural justice Citizenship behavior	Citizenship role definitions
Tepper, Duffy, Hoobler, & Ensley (2004)	173 supervised employees, two-wave (7 months), single source 95 municipal workers, cross-sectional, single source		Job satisfaction	
Schaubhut, Adams, & Jex (2004)	211 working adults, cross-sectional, single source		Deviance	Self-esteem
Grandey & Kern (2004)[b]	103 customer-service employees, cross-sectional, single source		Emotional exhaustion	Occupational power
Inness, Barling, & Turner (2005)	105 moonlighters, cross-sectional, single source		Supervisor-directed aggression	History of aggression
Harris, Kacmar, & Boonthanum (2005)	175 supervisor-subordinate dyads, cross-sectional, multisource		Job strain	
Tepper & Lockhart (2005)	See Tepper (2000)		Psychological distress	Upward maintenance communication

Bamberger & Bacharach (2006)	1,473 blue-collar workers from 55 work units, cross-sectional, multisource (i.e., abuse aggregated to the unit)		Problem drinking	Conscientiousness Agreeableness
Tepper, Duffy, Henle, & Lambert (2006)	See Zellars et al. (2002)	Supervisors' procedural justice Subordinates' negative affectivity		
Dupre, Inness, Connelly, Barling, & Hoption (2006)	119 teenage, part-time, Canadian employees, cross-sectional, single source		Supervisor-directed aggression	Reasons for working (financial and personal fulfillment)
Hoobler & Brass (2006)	210 subordinate, supervisor, family member triads, cross-sectional, multisource	Supervisors' perceived contract violation	Family-directed aggression	Supervisor hostile attribution bias
Aryee, Chen, Sun, & Debrah (2007)	178 Chinese telecommunication employees and their supervisors, cross-sectional, multisource	Supervisors' interactional justice Supervisors' authoritarianism	Interactional justice, affective commitment, and citizenship	
Thau & Mitchell (2006)	43 Norwegian police department employees 71 Norwegian working adults 229 U.S. working adults All cross-sectional, single source		Deviance	Validation seeking
Yagil (2006)	249 Israeli workers, cross-sectional, single source		Psychological distress	
Grandey, Kern, & Frone (2007)[b]	2,446 U.S. employees and 121 customer service employees, cross-sectional, single source		Emotional exhaustion	

(continued)

Table 2 (continued)

Study	Research Design	Antecedents	Consequences	Moderators
Harvey, Stoner, Hochwarter, & Kacmar (in press)	715 working people, cross-sectional, single source		Psychological distress	Negative affectivity Ingratiation behavior
Harris, Kacmar, & Zivnuska (in press)	204 automotive employees, cross-sectional, multisource		Performance	Meaning of work
Schat, Desmarais, & Kelloway (2006)[b]	478 Canadian college students, cross-sectional, single source		Satisfaction Organizational commitment Psychological and physical health Coworker-directed aggression Irritation Fear of future aggression	
Mitchell & Ambrose (in press)	427 supervised employees, cross-sectional, single source		Deviance (directed at the supervisor, other coworkers, and the organization)	Norm of reciprocity

Note: Unless otherwise noted, data were collected in the United States and antecedents and outcomes refer to subordinate reports and/or experiences.
a. Investigated supervisor undermining.
b. Investigated supervisor aggression.

bias, the dispositional tendency to project hostile intent onto others' behavior. The authors reason that the combination of psychological contract breach and a tendency to interpret frustrating events as purposeful evokes resentment that supervisors express against controllable and less powerful targets (i.e., subordinates).

In a recent study, Aryee, Chen, Sun, and Debrah (2007) found that supervisors who themselves experienced interactional injustice (i.e., unfavorable interpersonal treatment; Bies & Moag, 1986) were more abusive toward their subordinates. The researchers also found that supervisors' authoritarianism, defined as the extent to which people embrace dominance and control as legitimate forms of leadership, moderated the relationship between supervisors' interactional justice and abusive supervision; the relationship was stronger when supervisors were higher in authoritarianism. The authors explain that interactional injustice evokes frustration and resentment that may be displaced against targets other than the source of injustice (i.e., subordinates), but that this is more likely to occur when supervisors hold a firm belief that subordinates should demonstrate unquestioning obedience to authority figures.

As I noted earlier, the workplace victimization literature addresses predictors of the perception that one has been the target of aggressive acts. Although this body of work has not investigated the target's hierarchical position relative to the agent, it nevertheless provides clues as to the factors that lead to the perception that one has been the target of behavior akin to abusive supervision. Moreover, victimization research implicitly provides an alternative to the displaced aggression perspective in suggesting that some supervisors abuse their subordinates because they find them provocative and difficult to deal with.

Aquino et al. (1999) found that subordinates' negative affectivity and self-determination were related to both indirect victimization (i.e., duplicitous acts such as talking about people behind their back, which are undertaken to cause injury while avoiding detection) and direct victimization (i.e., more overt acts such as cursing at the target). Aquino et al. argue that high-negative-affectivity people report greater victimization because they provoke others to behave aggressively toward them and because they come across as weak, vulnerable, and unable to defend themselves when they are targeted, and that people who are high in self-determination do a better job of controlling their interactions with others, including potential victimizers.

Aquino (2000) found that the perception that one has been the target of direct victimization was positively related to individuals' use of an avoiding style of handling conflict (i.e., the tendency to resolve conflict by ignoring it). The use of an integrating style of handling conflict (i.e., the tendency to use cooperative discussion that reflects the interests of both parties to interpersonal conflict) was associated with indirect victimization and with direct victimization when the target was situated lower in the organizational hierarchy. As in the earlier study, Aquino interpreted the findings as providing support for the thesis that people who present themselves as weak and unwilling to fight back are more likely to be victimized. In addition, it appears that lower level targets experience both covert and overt forms of victimization.

Aquino and Bradfield (2000) found that aggressiveness (i.e., the dispositional tendency to aggress or attack in response to environmental cues) was positively related to both direct and indirect victimization and that negative affectivity was positively related to indirect victimization. The authors argue that the findings provide evidence for the existence in the workplace

of two kinds of victims who have been identified in observations of schoolyard bullying: victims who are perceived to be weak and submissive and those who are provocative and unlikable (Olweus, 1978).

Aquino and Bommer (2003) found that organizational citizenship behavior (i.e., discretionary actions that benefit the organization) was negatively related to perceived victimization, but that this relationship only emerged for White versus African American employees and for employees who were situated lower in the organizational hierarchy versus those who were higher. The authors reason that performing discretionary behaviors that benefit the organization deflects mistreatment by others, but that this effect depends on one's status.

Aquino and Byron (2002) investigated the relationship between dominating behavior (i.e., the extent to which people make forceful efforts to influence others, express opinions, and control their environment) and victimization. The researchers hypothesized that dominating behavior would be curvilinearly related to victimization, reasoning that low dominators would present themselves as weak and exploitable and that high dominators would be more likely to violate social norms and to therefore invite retaliatory responses (i.e., victimization would be high when domination is low and when domination is high, and victimization would be low for individuals who are moderate on the domination scale). Regression results provided support for the researchers' predictions, but only for male targets (for women, domination was unrelated to victimization). The authors invoke the "chivalry bias" to explain their findings, arguing that women may experience low levels of victimization (across levels of dominating behavior) because of the stereotypical belief that women should be accorded more sympathy, protection, and leniency.

Consequences of Abusive Supervision

Even a cursory review of Table 2 reveals that most of the research in this domain has investigated the consequences of abusive supervision. I organize my review of the consequences of abusive supervision by grouping extant research according to the following themes: work-related attitudes, resistance behavior, antisocial and deviant behavior, performance consequences (including both in-role performance contributions and extra-role or citizenship performance), psychological well-being, and family well-being.

Abusive Supervision and Subordinates' Work-Related Attitudes

Extant research suggests that abusive supervision is negatively related to job satisfaction (Tepper, 2000; Tepper, Duffy, Hoobler, & Ensley, 2004; Schat, Desmarais, et al., 2006) and organizational commitment (Duffy et al., 2002; Schat, Desmarais, et al., 2006; Tepper, 2000), and positively related to intentions to quit (Schat, Desmarais, et al., 2006; Tepper, 2000). Some of this work has investigated the mediating mechanisms that explain how abusive supervision produces unfavorable attitudes. Tepper (2000) found that perceived injustice mediated the effects of abusive supervision on subordinates' attitudes, and Schat, Desmarais, et al. (2006) found that the experience of irritation and the fear of future aggression explained these effects.

This work also addresses the circumstances under which abusive supervision is related to unfavorable attitudes. Tepper (2000) found that the effects of abusive supervision on work-related attitudes were stronger among those who had less job mobility. Tepper attributed this to the notion that abused subordinates who have fewer attractive job alternatives will feel trapped and unable to escape from the source of their stress (i.e., their supervisor). Duffy et al. (2002) reported that supervisor support exacerbated the effect of abusive supervision, arguing inconsistent behavior (i.e., combining hostility and supportive behavior) engenders insecurity, diminished control, and low trust and taxes subordinates' coping resources, thereby producing less favorable outcomes (compared to hostility alone). Tepper et al. (2004) found that abusive supervision moderated the relationship between coworkers' organizational citizenship behavior and fellow employees' job satisfaction; the relationship was positive when abusive supervision was lower and negative when abusive supervision was higher. The authors argue that workers respond favorably to their coworkers' performance of pro-social behaviors, but only when the group's supervisor is not abusive. When the supervisor is abusive, employees perceive their coworkers' citizenship to be insincere attempts to curry favor with the abuser—hence, greater citizenship leads to less favorable attitudes.

Abusive Supervision and Subordinates' Resistance Behavior

The results of two studies suggest that exposure to abusive supervision may evoke resistance behavior on the part of subordinates, but that this effect depends on the subordinates' personality. Tepper, Duffy, and Shaw (2001) found that abusive supervision was positively related to subordinates' dysfunctional resistance (i.e., subordinates' refusal to perform supervisors' requests) and that this effect was attenuated when subordinates were high in conscientiousness (i.e., the trait tendency toward responsibility, dependability, responsibility, self-discipline, and industriousness) and agreeableness (i.e., the trait tendency toward altruism, cooperativeness, and trust).

Bamberger and Bacharach (2006) found that abusive supervision was positively related to subordinates' problem drinking and that this effect was attenuated when subordinates were high in conscientiousness and agreeableness. The authors argue that substance abuse, of which problem drinking is one example, can be interpreted as a form of worker resistance that workers partake in to symbolically revolt against their employer. Abused subordinates may problem drink to voice frustration and anger in the wake of abuse experiences (i.e., hoping that such expressions will provoke change). The neutralizing effects of subordinates' personality that emerged in both studies can be taken to mean that not all abused subordinates engage in resistance behavior; abusive supervision translates into resistance behavior when subordinates are both low in conscientiousness (i.e., impulsive, passive-aggressive, and undisciplined) and low in agreeableness (i.e., hostile, argumentative, and unconcerned about evoking conflict).

Abusive Supervision and Subordinates' Aggressive and Deviant Behavior

Three studies have explored relationships between abusive supervision and subordinates' aggressive behavior. Schat, Desmarais, et al. (2006) found that abusive supervision was

positively related to subordinates' irritation, which was in turn related to their level of aggression against coworkers. Inness, Barling, and Turner (2005) found that abusive supervision was positively related to supervisor-targeted aggression and that history of aggression moderated this effect; abusive supervision was more strongly associated with supervisor-directed aggression when the subordinate had a history of being more aggressive. Dupre, Inness, Connelly, Barling, and Hoption (2006) replicated the relationship between abusive supervision and subordinates' supervisor-directed aggression and also found that employees' reasons for working moderated this effect; the relationship between abusive supervision and supervisor-directed aggression was stronger when employees reported higher financial reasons for working and lower personal fulfillment reasons for working.

In two published studies, abusive supervision has been linked with deviant organizational behaviors, actions that violate organizational norms and that threaten the organization and/or its employees (Robinson & Bennett, 1995). In the first such study, Duffy et al. (2002) found that supervisor undermining was positively related to subordinates' performance of counterproductive behaviors and that supportive supervisor behavior exacerbated these effects. Mitchell and Ambrose (in press) found that abusive supervision was positively related to supervisor-directed deviance (e.g., acting rudely toward, or gossiping about, the supervisor), interpersonal deviance (e.g., saying hurtful things about, or playing mean pranks on, others at work), and organization-directed deviance (e.g., stealing from the organization). Moreover, the relationship between abusive supervision and supervisor-directed deviance was stronger among subordinates who subscribed to a negative reciprocity norm, the belief that retribution is an appropriate response to perceived mistreatment. Mitchell and Ambrose interpreted their findings as providing support for a "tit-for-tat" argument (i.e., abused subordinates retaliate directly against the supervisor, the source of their mistreatment) and for a displaced aggression argument (i.e., abused subordinates experience resentment and anger that they take out on their employer and others in the workplace).

Two as yet unpublished works report relationships provide further evidence that abusive supervision evokes dysfunctional subordinate behavior. Schaubhut, Adams, and Jex (2004) found that abusive supervision was related to subordinates' performance of interpersonal and organizational deviance and that the strength of these relationships depended on subordinates' self-esteem, the extent to which individuals have positive views of themselves. The researchers found that among subordinates whose self-esteem was low, abusive supervision was unrelated to subordinates' deviance behavior; however, for subordinates with high self-esteem, abusive supervision was positively related to work deviance. The authors explain that abusive supervision poses more of a threat to the self-image of high-self-esteem subordinates than to low-self-esteem subordinates (whose self-image should be unfavorable irrespective of the treatment afforded by their supervisor). Because threats to esteem evoke hostile reactions (Baumeister & Boden, 1998), abusive supervision produces deviant behavior on the part of high-self-esteem subordinates. In a series of three studies, Thau and Mitchell (2006) found that abusive supervision was positively related to organization-directed deviance and that these relationships were stronger when subordinates were higher in validation seeking, the dispositional motivation to prove and maintain one's self-worth. Thau and Mitchell argue that validation seekers experience a challenge to their self-worth when confronted with threatening interactions (e.g., exposure to abusive supervisors) and

that they respond by performing behaviors that are designed to restore their sense of self. However, because validation seekers are poor self-regulators who focus more on themselves than on the effects their behavior may have on others (Crocker & Park, 2004), they often react to threatening encounters with destructive acts that may be at odds with the needs and values of other people (e.g., deviant behaviors).

Abusive Supervision and Subordinates' Performance Contributions

In a small number of studies, researchers have investigated relationships between abusive supervision and subordinates' performance contributions. Zellars, Tepper, and Duffy (2002) found that subordinates' experiences of procedural justice mediated the relationship between abusive supervision and subordinates' organizational citizenship behaviors (Organ, 1988), performance contributions that benefit the organization but that fall outside the employee's job description and are not formally rewarded (e.g., helping coworkers when doing so is warranted, behaving courteously, and not complaining about trivial problems). More recently, Aryee et al. (2007) found that subordinates' interactional justice mediated the relationships between abusive supervision and subordinates' citizenship behavior. Although neither study investigated relationships with individual or group performance, citizenship behavior has been linked with bottom-line performance indicators (Podsakoff & MacKenzie, 1997), suggesting that abusive supervision may have indirect influences on unit performance through its effect on citizenship behavior.

In the only study that has investigated the relationship between abusive supervision and job performance, Harris, Kacmar, and Zivnuska (in press) found that abusive supervision was negatively related to self-rated and leader-rated job performance. Furthermore, these relationships depended on the degree to which subordinates value the work they do; among subordinates for whom work held more meaning, abusive supervision was a better predictor of performance. The authors reasoned that subordinates for whom work holds more meaning are more concerned about their standing in the organization and therefore expend more energy and effort dealing with abusive supervisors.

Abusive Supervision and Subordinates' Psychological Distress

Abusive supervision has been linked with several manifestations of psychological distress including anxiety (Harris, Kacmar, & Boonthanum, 2005; Tepper, 2000), depression (Tepper, 2000), diminished self-efficacy (Duffy et al., 2002), burnout (Grandey et al., 2007; Grandey & Kern, 2004; Tepper, 2000; Yagil, 2006), somatic health complaints (Duffy et al., 2002; Schat, Desmarais, et al., 2006), and job strain (Harvey, Stoner, Hochwarter, & Kacmar, in press). In several of these studies, the researchers identified moderators of the effects of abusive supervision including supervisor behavior (Duffy et al., 2002), subordinates' upward communication (Harvey et al., in press; Tepper & Lockhart, 2005), and subordinates' power (Grandey & Kern, 2004).

With respect to the relationships between abusive supervision and subordinates' self-efficacy and somatic complaints, Duffy et al. (2002) found support for the exacerbation hypothesis

described earlier—that the deleterious effects of supervisor undermining are stronger when supervisors perform more supportive behavior.

Tepper and Lockhart (2005) found that subordinates' use of regulative communication strategies (e.g., strategically avoiding contact with the supervisor) exacerbated the relationship between abusive supervision and psychological distress and that subordinates' use of direct tactics (e.g., pointing out perceived injustices) neutralized the relationship. Tepper and Lockhart also found that abusive supervision was positively related to subordinates' use of regulative tactics and negatively related to subordinates' use of direct tactics; hence, abused subordinates may prefer communication behaviors that exacerbate rather than neutralize the injurious effects of being exposed to an abusive supervisor.

Harvey et al. (in press) found that the positive relationships between abusive supervision and job strain were neutralized when subordinates used ingratiation (i.e., the use of flattery and related tactics to influence the attitudes and behavior of others) with high frequency or when they were high in positive affectivity (i.e., PA; the dispositional tendency to experience positive emotional states and to see oneself and others in a positive light). The authors attributed the neutralizing effects of ingratiation and PA to the idea that ingratiation strategies afford subordinates a sense of control and social support and that high-PA subordinates respond more constructively to stressful circumstances compared with subordinates who are low in PA.

Grandey and Kern (2004) reported that the effect of abusive supervision was buffered when the employee was employed in a *high-power* customer-service occupation (i.e., jobs like physician and professor that are perceived to be cognitively demanding and that society generally holds in high esteem). Grandey and Kern explain that employees in higher power occupations have more financial and social resources compared with low-power employees and therefore experience less threat from supervisor-perpetrated verbal aggression.

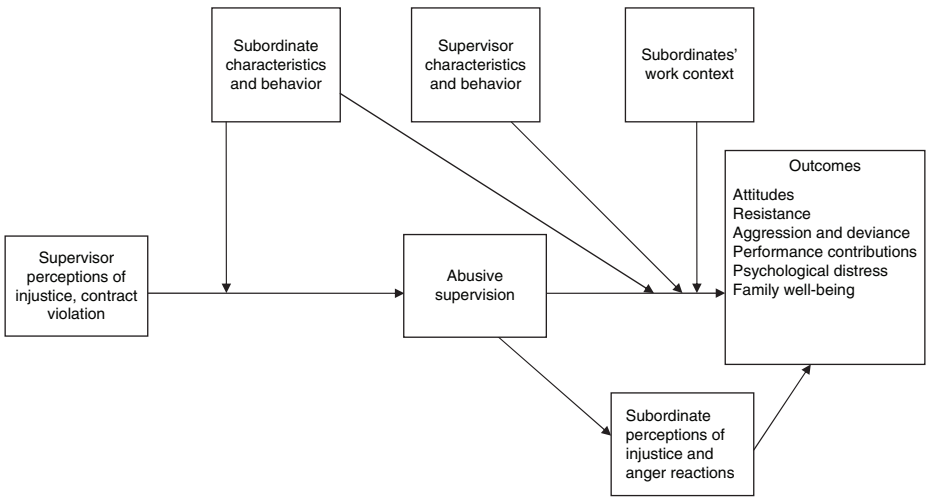
Abusive Supervision and Family Well-Being

There is evidence to suggest that abusive supervision negatively influences employees' lives outside of work. Tepper (2000) found that abusive supervision was negatively related to life satisfaction and positively related to work-family conflict, and Hoobler and Brass (2006) found that abusive supervision was positively related to family undermining, the extent to which employees express work-related resentment against their family members. This research suggests that abusive supervision influences the well-being of targets' immediate families.

Toward an Emergent Model of Abusive Supervision

To summarize and integrate the results of extant empirical work, I present in Figure 1 an emergent model that captures what is known about the causes and consequences of abusive supervision. The linkages depicted by causal paths capture relationships that have emerged in previous research. Hence, consistent with studies reported by Aryee et al. (2007), Hoobler and Brass (2006), and Tepper et al. (2006), the model shows that supervisor perceptions of having been treated unfairly or of having the psychological contract with their employer

Figure 1
An Emergent Model of Abusive Supervision



breached leads to abusive supervision. However, not all supervisors who believe that they have been the victims of mistreatment abuse their subordinates; the relationship between perceived injustice and contract breach is moderated by subordinate characteristics, particularly victim characteristics (i.e., appearing weak, vulnerable, and/or difficult to get along with), as observed by Tepper et al. (2006). This body of work provides support for a displaced-aggression explanation for the occurrence of abusive supervision—mistreated supervisors aggress against innocent and available targets, their own subordinates.

However, the results of workplace victimization research provide an alternative to the displaced-aggression explanation for abusive supervision. The studies by Aquino and Bradfield (2000) and Aquino and Byron (2002) can be interpreted to mean that workplace hostility may be directed against coworkers who are high in aggressiveness and high in domination, respectively. Abuse of subordinates whom supervisors perceive to be provocative and difficult to get along with may be characterized as retaliatory aggression rather than displaced aggression.

Whether it is the result of displaced or provoked aggression, abusive supervision, in turn, is associated with a variety of negative outcomes including subordinates' unfavorable attitudes toward the job and organization (Duffy et al., 2002; Schat, Desmarais, et al., 2006; Tepper, 2000; Tepper et al., 2004), resistance behavior (Bamberger & Bacharach, 2006; Tepper et al., 2001), aggressive and deviant work behavior (Duffy et al., 2002; Dupre et al., 2006; Inness et al., 2005; Mitchell & Ambrose, in press; Schat, Desmarais, et al., 2006; Schaubhut et al., 2004; Thau & Mitchell, 2006), lower performance contributions (Aryee

et al., 2007; Harris et al., in press; Zellars et al., 2002), diminished psychological well-being (Duffy et al., 2002; Grandey & Kern, 2004; Harris et al., 2005; Harvey et al., in press; Schat, Desmarais, et al., 2006; Tepper, 2000; Yagil, 2006), and reduced family well-being (Hoobler & Brass, 2006; Tepper, 2000). The model shows that these outcomes vary in terms of how proximal they are to abusive supervision. Hence, for example, some research suggests that injustice (Aryee et al., 2007; Tepper, 2000; Zellars et al., 2002) and irritation and fear of future aggression (Schat, Desmarais, et al., 2006) may be proximal to abusive supervision and that these experiences explain how abusive supervision influences such things as attitudes toward the organization, deviant behavior, and psychological distress.

Figure 1 also reflects that abusive supervision does not affect all subordinates the same way; a variety of moderating factors have been investigated that qualify the relationships between abusive supervision and outcomes. Identifying unifying themes across this body of work is made difficult by the fact that there is little convergence in terms of the moderating factors that researchers have investigated. Indeed, with few exceptions, each study listed in Table 2 and reviewed here focuses on a unique combination of moderator and outcome variables. With that in mind, and as shown in Figure 1, I classify the moderating variables identified thus far into four broad categories: (a) dispositional characteristics of the subordinate (i.e., personality traits, self-esteem, norm of reciprocity, validation seeking, reasons for working, and meaning of work), (b) subordinates' upward communication behavior (i.e., upward maintenance communication and ingratiation), (c) characteristics and behavior of the supervisor (i.e., hostility and supportive behavior), and (d) characteristics of the subordinate's work context (i.e., mobility, occupational power, and whether citizenship performance is in-role or extra-role behavior).

To briefly summarize the results of moderation analyses, abusive supervision is more strongly related to subordinates' attitudes when subordinates have less job mobility (Tepper, 2000) and the supervisor uses supportive behavior (Duffy et al., 2002). Subordinates' conscientiousness and agreeableness buffer the relationship between abusive supervision and subordinates' resistance behavior (Bamberger & Bacharach, 2006; Tepper et al., 2001). The effect of abusive supervision on subordinates' aggressive and deviant behavior is stronger when the supervisor uses supportive behavior (Duffy et al., 2002) and when the subordinate has (a) a history of aggressive behavior (Inness et al., 2005), (b) stronger financial reasons for working and lower personal fulfillment reasons for working (Dupre et al., 2006), (c) stronger reciprocity norms (Mitchell & Ambrose, in press), (d) higher self-esteem (Schaubhut et al., 2004), and (e) a stronger motivation to seek validation (Thau & Mitchell, 2006). Abusive supervision is more strongly associated with job performance when the work has more meaning for subordinates (Harris et al., in press). Last, the relationship between abusive supervision and psychological distress is exacerbated when supervisors use supportive behavior (Duffy et al., 2002), subordinates use regulative upward communication with higher frequency and direct communication with lower frequency (Tepper & Lockhart, 2005), subordinates use ingratiation with lower frequency (Harvey et al., in press), and when subordinates hold lower power positions (Grandey & Kern, 2004).

From a broader perspective, the causal linkages depicted in Figure 1 together constitute an integrative framework in which abusive supervision plays a mediating role in explaining relationships between the antecedents and consequences identified in previous empirical

research. This framework may be characterized as a "trickle-down" model (Masterson, 2001) in which the injustices supervisors experience trickle down (through abusive supervision) to produce injustice and anger reactions among subordinate targets (Aryee et al., 2007). The chain of mistreatment continues beyond subordinate victims, some of whom may displace their aggression onto family members (Hoobler & Brass, 2006).

A cautionary statement must be made at this point. Figure 1 should be viewed as a summary of where we are today in terms of our understanding of abusive supervision. It may be tempting to infer from the figure and corresponding review of the empirical literature (which suggest that the treatment afforded supervisors triggers abusive behavior) that organizations are largely responsible for the occurrence of abusive supervision. Organizational mistreatment may prove to be the key predictor of abusive supervision, but given that only three studies of the antecedents of abusive supervision have been conducted thus far, it would be premature to render such a conclusion. Much additional research is warranted, and it is to that matter that I now turn.

Directions for Future Research

I frame a future research agenda that addresses the strong likelihood that abusive supervision is a multilevel phenomenon and that the field needs to move beyond individual-level research, which is the predominant approach in extant work, to investigate antecedents and moderators that operate at the level of the supervisor, organization, industry, and national culture.

Supervisor-Level Factors

Within the past 10 years, there has been a revival of interest in the role that personality plays in leadership emergence and effectiveness (Bono & Judge, 2004; Judge & Bono, 2000; Judge, Bono, Ilies, & Gerhardt, 2002). Much of this renewed interest can be attributed to improvement in terms of the way personality is conceptualized and operationalized, the most notable example being the Big-Five model of personality. The Big-Five personality dimensions that may be related to abusive supervision are agreeableness, characterized by such prototypical characteristics as cooperativeness, trust, and tender-mindedness, and neuroticism, the trait tendency to experience negative emotions such as anxiety and anger (Costa & McCrae, 1992). Supervisors who are low in agreeableness should be relatively unconcerned about the effects their behavior may have on the quality of relationships with subordinates (i.e., the possibility that their behavior might be perceived as argumentative, hostile, and conflictive; Costa, McCrae, & Dembrowski, 1989) and should therefore be more likely to behave abusively toward subordinates compared to supervisors who are higher in agreeableness. Supervisors who are high in neuroticism experience greater anger, frustration, and impulsiveness compared with their low-neuroticism counterparts (Costa & McCrae, 1992), and consequently, neuroticism should be positively related to abusive supervision.

Other supervisor-level factors that might be related to abusive supervision include (a) moral disengagement, the inhibition of moral self-sanctions against aggressive behavior,

which has been linked with aggression in other contexts (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996); (b) a history of aggressive behavior, which is related to supervisor-directed aggression (Inness et al., 2005); (c) narcissism, a personality disorder involving a grossly unrealistic sense of entitlement, which has been linked with the level of physical violence that is encouraged by historically notable leaders (e.g., Adolph Hitler, Pol Pot, and Nicolae Ceausescu; O'Connor, Mumford, Clifton, Gessner, & Connelly, 1995); (d) Theory X orientation (i.e., the extent to which supervisors believe that employees are generally lazy, dislike work, resist change, and prefer directive leadership), which Ashforth (1997) found to be related to petty tyranny; and (e) a family history of violent and aggressive behavior, which predicts abuse of domestic partners (Reitzel-Jaffee & Wolfe, 2001).

Organizational-Level Factors

At the organizational level, norms toward hostile and aggressive behavior may have a direct influence on abusive supervision. Norms refer to the informal rules that shape appropriate attitudes, beliefs, and behavior and that prescribe standards against which individuals can evaluate the appropriateness of their actions (Feldman, 1984). Norms devolve from interaction with, and observation of, referent groups (Louis, 1980) and are enforced via sanctions, which can entail rewards for norm adherence and punishment for norm violation (Coleman, 1990). The research to date is consistent with the idea that norms play a powerful role in the occurrence of aggressive organizational behavior—people behave more aggressively when their coworkers behave aggressively (Aquino & Douglas, 2003; Glomb & Liao, 2003), presumably because when referent others perform aggressive behaviors, doing so becomes normative and acceptable. Hence, supervisors may be more likely to abuse their subordinates when they perceive such behavior to be a legitimate means of exercising authority in organizations.

Industry Effects

Abusive supervision research has been conducted with samples representing a variety of industries including the military (Zellars et al., 2002), paramilitary (Duffy et al., 2002; Thau & Mitchell, 2006), telecommunications (Aryee et al. 2007), automotive (Harris et al., in press), and customer service (Grandey et al., 2007; Grandey & Kern, 2004). However, no research has explored whether abusive supervision levels vary by industry. The studies of hierarchical abuse that have been conducted in health care settings offer clues as to industry factors that explain variance in abusive supervision. Although I excluded that work from my review of the empirical literature, it is worth noting that the interest in abusive behavior in the health care industry is not accidental. Richman and her colleagues (Richman et al., 1992; Richman et al., 1996) argue that the health care industry is particularly vulnerable to the occurrence of abusive behavior because workers experience heavy work demands, significant time pressure, and inherent uncertainty (associated with diagnosis and treatment) coupled with high costs of failure.

Another industry that warrants some discussion in this context is the military where it is customary for newcomers to experience divestiture socialization tactics, negative social

communications from insiders that are designed to dismantle the identity of new recruits (Van Maanen & Schein, 1979). In practice, divestiture includes such things as hazing, doing "dirty work," and exposure to humiliating language. The logic associated with these practices is that the process of humbling and stripping away the self-confidence of newcomers sets the stage for strong identification with the organization. For our purposes, it is worth acknowledging that in industries where a primary objective is to remold the identity of new recruits, organizations may sanction the use of hostile behavior on the part of supervisors against their direct reports.

Cultural Factors

Few of the abusive supervision studies reviewed here were conducted outside of the United States. Moreover, in the few studies that have looked at abusive supervision in non-U.S. samples (e.g., Aryee et al. 2007; Duffy et al., 2002; Schat, Desmarais, et al., 2006; Thau & Mitchell, 2006; Yagil, 2006), cross-cultural influences have not been of substantive interest (i.e., researchers have not incorporated national culture in models of abusive supervision). It is conceivable that abusive supervision occurs more frequently in countries with high power distance (e.g., India, Mexico, and Malaysia) where it is more acceptable to have unequal power distributions within social institutions and for organizational representatives to invoke legitimate authority (Hofstede, 2001). Power distance may also influence the occurrence of abusive supervision indirectly through its effect on norms toward abusive behavior (see the preceding discussion of organizational factors). It is also possible that reactions to abusive supervision may be less intense in countries with high power distance compared with countries with low power distance (e.g., Denmark, New Zealand, and Israel), where hierarchy in organizations is perceived to be exploitive. Of course, these are just some of the many possibilities that are worth exploring, but rather than speculating here on the roles that some of the other dimensions of organizational culture might play (i.e., individualism, collectivism, uncertainty avoidance, masculinity, and time-orientation), I recommend here that researchers take up the following general research questions: Does national culture influence abusive supervisory behavior directly, or perhaps indirectly through organizational norms toward abusive supervisory behavior, and do the effects of abusive supervision depend on national culture? At the very least, research should be conducted to evaluate the generalizability of the considerable body of work that has been undertaken with U.S. samples.

Methodological Issues

Before closing, I draw attention to the need for research that addresses two methodological problems in studies of abusive supervision: the operationalization of abusive supervision and unraveling cause-effect relationships.

Operationalization of abusive supervision. Most of the studies reviewed here made use of items from Tepper's (2000) study; however, in several cases, researchers have used shortened

versions of that scale (e.g., Harris et al., in press; Mitchell & Ambrose, in press). For purposes of developing an integrated literature, it is advisable that researchers make use of a common measurement instrument. That said, I am not advocating here that all future work make use of Tepper's (2000) 15-item instrument. Since that scale was developed, there has been virtually no subsequent psychometric assessment or development. Below, I discuss three directions for future psychometric research that emerge from the current review: assessment of the perpetrator's intentions, the dimensionality of abusive supervision, and measurement stability across national cultures.

As I noted earlier, the definition of abusive supervision excludes reference to the perpetrator's objectives, a feature that sets it apart from the construct definitions for victimization, bullying, supervisor aggression, and supervisor undermining. That said, abusive supervision as well as "competing" constructs do not explicitly capture the perpetrator's intentions. Like the measures of abusive supervision, these instruments ask respondents to report whether they have been exposed to hostile supervisor behaviors and do not capture the reasons supervisors perform these behaviors. One promising direction for future research would be to assess subordinates' attributions for their supervisor's abusive behavior to determine whether subordinates distinguish between, and respond differently to, abuse that is intended to cause injury and abuse that is undertaken to accomplish other goals.

A second direction for psychometric research involves investigating whether targets distinguish among subdimensions of abusive supervision. For example, it would be worthwhile to explore the possibility that abusive supervision consists of both direct and indirect dimensions, as is the case with perceived victimization. In a reanalysis of Tepper's (2000) data, Mitchell and Ambrose (in press) found evidence of two highly correlated subdimensions of abusive supervision, which they labeled passive-aggressive abusive behavior (e.g., invades my privacy, breaks promises, lies to me) and active-aggressive abusive behavior (e.g., ridicules me, makes negative comments about me to others, and tells me I'm incompetent). However, Mitchell and Ambrose restricted their analysis to interpersonally abusive behavior and did not investigate whether the subdimensions have unique antecedents and consequences. A related measurement issue that should be investigated is whether abusive supervision may be treated as a subdimension of a broader construct like petty tyranny (Ashforth, 1997).

Third, research is warranted that explores the stability of current and future abusive supervision measures across national cultures. To assess the effect of national culture on abusive supervision (as recommended earlier), researchers will first have to demonstrate measurement equivalence across the cultures under investigation. Measurement equivalence or measurement invariance is achieved when respondents perceive and interpret survey items the same way across samples (Vandenberg & Lance, 2000). It is conceivable that national culture influences how individuals interpret and use abusive supervision items (i.e., what it means to be abused may differ across cultures). A lack of measurement equivalence poses a threat to the validity of cross-cultural comparisons because it creates uncertainty as to whether a common construct is being measured across groups. As a result, it becomes impossible to distinguish meaningful group differences from those that may be attributed to measurement instability (Robert, Lee, & Chan, 2006).

Unraveling cause and effect. With few exceptions, the research conducted to date has made use of cross-sectional research designs and/or single-source data. On the positive side,

common-method bias can be ruled out as an explanation for many of the relationships reviewed here given the evidence of interactive effects that emerged in many of the studies conducted to date (Evans, 1985). However, these research designs, which assume the temporal primacy of abusive supervision relative to subordinate "outcomes," do not permit investigation of reverse or reciprocal causation, possibilities that leadership scholars have warned researchers to be cautious of (Williams & Podsakoff, 1989). A compelling argument for alternatives to the temporal primacy of abusive supervision can be made given evidence from victim-precipitation research, which suggests that variables that have been treated as consequences of abusive supervision (e.g., attitudes, distress, and deviance) may contribute to the occurrence of abusive supervision. Consequently, longitudinal research should be undertaken to ascertain the causal ordering of abusive supervision and the "outcomes" listed in Table 2.

Concluding Comments

Abusive supervision is a serious problem for employers and for employees and their families. It is reasonable to assume that organizational outsiders also pay a price (in terms of higher costs for products and services and insurance premiums) to the extent that abusive supervision translates into higher rates of theft, sabotage, psychological distress, and, possibly, organizational failure. It is therefore reassuring to note that there appears to be no shortage of scholarly interest in abusive supervision. Numerous studies have been conducted on the topic, much of it coming in just the last few years; indeed, many of the articles reviewed here are unpublished works that are now in various stages of the review process. The work to date has tackled fascinating research questions that speak to the antecedent conditions and consequences of abusive supervision. More generally, the abusive supervision literature complements a rich and storied tradition of theory and research that has focused on identifying the leadership behaviors that produce favorable outcomes like high unit morale and performance.

On the downside, however, there is little that ties extant work together beyond the emphasis on abusive supervisory behavior. That is, it is fair to characterize this research stream as more *phenomenon* driven than *theory* driven. This is not to say that the works reviewed here are bereft of a theoretical foundation. Researchers have invoked theories of justice, displaced aggression, stress and coping, and victimization, among others, to investigate the antecedents and consequences of abusive supervision. The problem is that there is little in the way of integrated theory underlying these works. The danger, of course, is that as this literature grows, it could become unwieldy and not particularly useful from a practical perspective. It is hoped that the review and model presented here can provide the first step toward the development of a more integrated approach to the study of abusive supervision.

Note

1. Such is already the case in Europe and Australia. For example, in Sweden, England, and France, extant law provides recourse for victims of workplace psychological harassment. At present, advocates in the United States are lobbying for the passage of the Healthy Workplace Bill, a vehicle through which victims of abusive supervision would have the legal standing to seek redress in civil courts.

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Political Skill in Organizations†

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Political skill is a construct that was introduced more than two decades ago as a necessary competency to possess to be effective in organizations. Unfortunately, despite appeals by organizational scientists to further develop this construct, it lay dormant until very recently. The present article defines and characterizes the construct domain of political skill and embeds it in a cognition–affect–behavior, multilevel, meta-theoretical framework that proposes how political skill operates to exercise effects on both self and others in organizations. Implications of this conceptualization are discussed, as are directions for future research and practical implications.

Keywords: *political skill; social competency; interpersonal style; influence; astuteness*

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Organizational politics has drawn considerable interest from scholars for decades. However, much less is known about the requisite competencies to successfully practice politics in the workplace. In the early 1980s, both Pfeffer (1981) and Mintzberg (1983) advocated political perspectives on organizations, and both suggested that to be effective in political environments, individuals needed to possess political skill. Unfortunately, despite appeals by scholars for more work in this area, research on political skill lay dormant until recently, when Ferris and his colleagues (Ferris et al., 1999; Ferris, Treadway, et al., 2005) developed a measure of the construct and a program of research.

The purpose of the present article is to propose a conceptualization of political skill in organizations that considers the effects on both self and others. Political skill is characterized as a comprehensive pattern of social competencies, with cognitive, affective, and behavioral manifestations, that have both direct effects on outcomes and moderating effects on predictor–outcome relationships.

Characterization of Political Skill

A perspective shared by many academicians is that organizations are inherently political arenas (Mintzberg, 1985). In this regard, it is assumed that although performance, effectiveness, and career success are determined in part by intelligence and hard work, other factors such as social astuteness, positioning, and savvy also play important roles (e.g., Luthans, Hodgetts, & Rosenkrantz, 1988; Mintzberg, 1983). In his articulation of the political perspective on organizations, Pfeffer (1981) was one of the first to use the term *political skill* in the scholarly literature. He suggested that political skill is needed to be successful in organizations, and he called for research that would develop a more informed understanding of the construct. Similarly, Mintzberg (1983) suggested that political skill referred to the exercise of influence through persuasion, manipulation, and negotiation.

Although considerable research has examined organizational politics, a serious omission has been the failure to evaluate the political skill of the influencer, leaving us ill informed about why influence efforts are (or are not) successful. Indeed, theory and research largely have assumed that the mere demonstration of an influence attempt is synonymous with its effectiveness. However, it is not enough to study the particular influence tactics or political behaviors that reflect the "what" of influence. We also need to critically examine the political skill of the influencer to understand the "how" of influence, which addresses the selection of the most situationally appropriate influence tactics and their successful execution (Ferris, Hochwarter, et al., 2002).

Definition and Construct Specification

In an effort to capture the essential nature of the construct as discussed by Ferris et al. (1999), Mintzberg (1983), and others, we define political skill as "the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives" (Ferris, Treadway, et al., 2005: 127). As such, politically skilled individuals combine social astuteness with the capacity to adjust

their behavior to different and changing situational demands in a manner that appears to be sincere, inspires support and trust, and effectively influences and controls the responses of others.

Political skill, then, is about competencies that are manifested in work-relevant situations that reflect both dispositional antecedents and situational variability. Although the variance because of dispositions is more stable, the variance attributable to situations can be affected through training, practice, and experience. As such, individuals benefit from experiences that cultivate the development of political skill, regardless of their inherent political capabilities.

Dimensionality of Political Skill

Careful examination of the organizational politics and political skill literature indicates several important aspects that should be included in any conceptualization of the political skill construct. This examination indicates four critical dimensions of political skill: social astuteness, interpersonal influence, networking ability, and apparent sincerity. Subsequent conceptual and empirical development has lent support to the robustness of this formulation of political skill.

Social astuteness. Individuals possessing political skill are astute observers of others. They understand social interactions well and accurately interpret their behavior and the behavior of others. They are keenly attuned to diverse social settings and have high self-awareness. Pfeffer (1992) referred to this characteristic as being sensitive to others, and he argued that the ability to identify with others is critical to obtaining things for oneself. Socially astute individuals are often seen as ingenious, even clever, in dealing with others.

Interpersonal influence. Politically skilled individuals have an unassuming and convincing personal style that exerts a powerful influence on others around them. Interpersonal influence allows people to adapt and calibrate their behavior to different situations to elicit the desired responses from others. The interpersonal influence dimension captures what Pfeffer (1992) referred to as "flexibility," which involves adapting one's behavior to different targets of influence in different contextual settings to achieve one's goals.

Networking ability. Individuals with political skill are adept at identifying and developing diverse contacts and networks of people. People in these networks tend to hold assets seen as valuable and necessary for successful personal and organizational gains. Because of their typically subtle style, politically skilled individuals easily develop friendships and build strong, beneficial alliances and coalitions. Furthermore, individuals high in networking ability ensure they are well positioned to both create and take advantage of opportunities (Pfeffer, 1992). Finally, they are often highly skilled negotiators and deal makers and are adept at conflict management.

Apparent sincerity. Politically skilled individuals appear to others as having high levels of integrity and as being authentic, sincere, and genuine. They are, or appear to be, honest and forthright. This dimension of political skill is crucial if influence attempts are going to

be successful because it focuses on the perceived intentions of the behavior exhibited. Perceived intentions or motives are important and have been argued to modify the interpretation and labeling of behavior. As noted by Jones (1990), influence attempts will be successful when actors are perceived to possess no ulterior motives. Individuals high in apparent sincerity inspire trust and confidence in and from those around them because their actions are not interpreted as manipulative or coercive.

The four dimensions of political skill (i.e., social astuteness, interpersonal influence, networking ability, and apparent sincerity) are assumed to be related to one another. Although the dimensions are presumed to correlate, they remain distinct constructs.

Construct Validity of Political Skill

Construct validity is perhaps the most important psychometric property a measure can possess, and it reflects evidence in several areas, including the extent to which a measure relates to similar constructs and does not relate to constructs from which it should differ (Schwab, 1980). This section presents information, discussion, and results regarding the constructs to which political skill should be related and the degree of construct overlap expected and found.

Other social competencies. Scholars have argued that political skill naturally somewhat overlaps with some other social competencies. For example, Ferris, Perrewé, and Douglas (2002) suggested that political skill would reflect some similarities with interpersonal acumen, sociopolitical intelligence, functional flexibility, social intelligence, and interpersonal intelligence. However, these authors noted that such overlap would not be expected to reflect more than modest-sized relationships, thereby allowing political skill to retain its distinctiveness as a construct that is sufficiently different from others.

Because of their obvious similarity, political savvy has been examined in light of its relationship to political skill. Political savvy suggests adeptness at the intuitive aspects of politics in organizations. Research by Chao, O'Leary-Kelly, Wolf, Klein, and Gardner (1994) on organizational socialization identified a politics dimension of socialization. Closer inspection of the item content of this dimension reveals that it is actually measuring political savvy or understanding. The item content tended to focus on issues such as learning how things really work in the organization, identifying who are the most influential people in the organization, and developing a sound understanding of the motives behind the actions of people in the organization.

To the extent that political savvy might be driven by a knowledge or understanding component, notions of political savvy make reference to a degree of understanding, which is closely related to the social astuteness dimension. Ferris, Treadway, et al. (2005) provided supportive evidence for these ideas. The political skill composite score was significantly (albeit modestly) related to political savvy ($r = .47$, $p < .01$), and the strongest correlation political savvy demonstrated with the political skill dimensions was with social astuteness ($r = .60$, $p < .01$).

Another social competency construct that Ferris, Treadway, et al. (2005) deemed important to distinguish from political skill is emotional intelligence. For more than a decade, the concept of emotional intelligence has captured widespread interest from a scholarly perspective, but also, and even more noteworthy, from a popular perspective. Attracting considerable

attention in the popular and business press, primarily as a function of Goleman's (1995, 1998) best-selling books, emotional intelligence involves a facility with interpersonal behavior, which suggests that it might somewhat overlap with political skill.

The nature of emotional intelligence appears to predominantly focus on the emotion-based aspects of interpersonal effectiveness, influence, and control. Conversely, political skill is conceptualized as incorporating knowledge and skill that go beyond emotions. Particularly because Goleman tended to develop a very broad characterization of emotional intelligence (i.e., which led Hedlund and Sternberg [2000] to suggest that Goleman viewed emotional intelligence as including everything except IQ), it seems important to demonstrate the construct differentiation between emotional intelligence and political skill. Admittedly, there should be some overlap in constructs, as indicated by a relationship of modest magnitude. Ferris, Treadway, et al. (2005) demonstrated that the political skill composite score was related to emotional intelligence at a modest level ($r = .53$, $p < .01$). Furthermore, the dimensions of political skill demonstrated correlations with emotional intelligence that ranged from .38 to .43.

General mental ability (GMA). Social competency constructs, like political skill, which include cognitive, affective, and behavioral elements, bear the burden of demonstrating that such constructs are not simply driven, and/or subsumed, by GMA. At issue here is really that political skill and GMA are different constructs that tap into different domains. This is reflected in researchers' tendency to distinguish between fluid and crystallized categories of intelligence (Cattell & Horn, 1978). Fluid intelligence tests frequently assess perception, reasoning, and memory, whereas crystallized intelligence measures individuals' common understandings of real-world issues and concerns (Cantor & Kihlstrom, 1987).

Research has shown that crystallized intelligence is maintained and, in some cases, increases throughout life, whereas fluid intelligence tends to decline with age (e.g., Dixon & Baltes, 1986). The rationale for this distinction has its roots in the early work on social intelligence, where it was identified that individuals could be smart in ways that had little relationship to IQ (Thorndike, 1920). Furthermore, Sternberg (1985) identified a "social competence" dimension of intelligence, which he argued was independent of problem-solving and verbal abilities, that is, the abilities most typically associated with IQ.

The foregoing discussion addresses the construct distinctiveness of political skill and GMA; indeed, they are quite different constructs that tap into different domains. However, a different issue, but important for purposes of the political skill conceptualization presented in the article, is the extent to which we might expect GMA to reflect some relationship with political skill. We would expect to see some degree of relationship, albeit modest, between these two constructs given the role that cognition plays in the intrapsychic processes of the meta-theoretical framework.

Strain or anxiety. It has been suggested that political skill generates an increased sense of self-confidence and personal security because politically skilled individuals experience a greater degree of interpersonal control, or control over activities that take place in social interactions at work (Paulhus & Christie, 1981). Furthermore, greater perceptions of control should lead individuals high in political skill to perceive and interpret workplace stressors in different ways, resulting in such individuals experiencing significantly less strain or anxiety

at work (Kanter, 2004; Perrewé, Ferris, Frink, & Anthony, 2000). Indeed, Perrewé and her colleagues (2000) argued that political skill demonstrates an inverse relationship with trait anxiety, which reflects "relatively stable individual differences in anxiety-proneness, that is, to differences between people in the tendency to perceive stressful situations as dangerous or threatening and respond to such situations with elevations in the intensity of their state anxiety (S-Anxiety) reactions" (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983: 4).

In support of these notions, recent research indicates that political skill neutralizes the dysfunctional effects of role conflict on strain for both behavioral and physiological strain measures (Perrewé et al., 2004). Furthermore, Perrewé et al. (2005) found that political skill demonstrated a similar antidote effect, but this time on the role overload–strain reaction relationship. Finally, conceptualizing perceptions of organizational politics as a workplace stressor, Brouer, Ferris, Hochwarter, Laird, and Gilmore (2006) conducted a three-study investigation examining political skill as a moderator of the politics perceptions–strain reaction relationship, where the measure of strain used was employee depressive symptoms. The convergent results across all three studies demonstrated that, for those low in political skill, increases in politics perceptions were associated with increases in depressive symptoms, but for those high in political skill, increases in politics perceptions were associated with decreases in employee depressive symptoms.

Concerning the dimensions of political skill, we argue that interpersonal influence should exhibit the strongest negative relationship with trait anxiety. The heightened sense of personal security is likely to be associated with a perception of greater control over one's work environment, with particular reference to interpersonal control perceptions (e.g., Paulhus & Christie, 1981). Such feelings are likely reflective of the perceptions of greater interpersonal control they derive from past experiential success at exercising interpersonal influence. These increased perceptions of control provide a comfort level that would result in reduced strain or anxiety. Offering empirical support for these notions, Ferris, Treadway, et al. (2005) reported relationships of the Political Skill Inventory (PSI) composite score and trait anxiety of $r = -.27$ and $r = -.31$ ($p < .01$) in two samples. Furthermore, they found that the political skill dimensions demonstrated significant negative correlations with trait anxiety ranging from $r = -.11$ to $r = -.42$ in two samples, with interpersonal influence exhibiting the strongest relationships in both samples (i.e., $r = -.37$, $r = -.42$, $p < .01$).

Dispositional and Developmental Influences on Political Skill

Although political skill has been viewed as a competency that can be substantially shaped or developed through training and socialization (Ferris, Anthony, Kolodinsky, Gilmore, & Harvey, 2002), it is believed to have dispositional and personal ability antecedents. Because political skill is an interpersonal style construct that contributes to effectiveness in interpersonal interactions, the personality antecedents conceptualized are ones that position people to exercise personal influence and appropriately behave in social situations at work.

In an historical review of the personality field, Mayer (2005) argued that the absence of a more informed understanding was because of the approach taken by scholars who introduced particular perspectives but never attempted integration across such views, an approach

he referred to as the "perspective-by-perspective approach to personality." In reaction to this, Mayer proposed an alternative view. He introduced the "systems framework," which refocused personality on the mission originally proposed decades ago, which is the global psychological functioning of the individual. Mayer suggested that the system framework organizes personality into four major subsystems: energy lattice, knowledge works, social actor, and conscious executive.

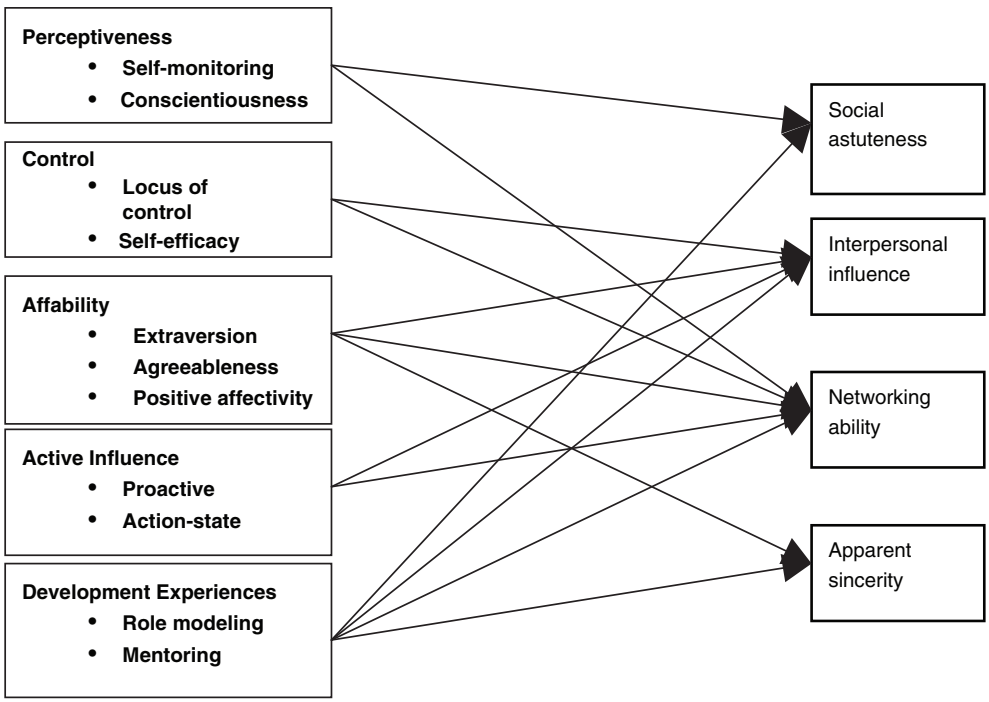
In relation to political skill, the social actor subsystem is most relevant, and Mayer (2005) argued that it "represents the expression of personality in a socially adaptive fashion. It includes social skills, role knowledge, and emotionally preferred expressions" (p. 299). The central traits in the social actor subsystem were extraversion and self-monitoring. Extraversion reflects an affability or sociability theme, and self-monitoring echoes a theme of perceptiveness. The social actor subsystem thus serves as an initial input to the dispositional themes that might serve as antecedents of the social actor–oriented political skill dimensions. The definition and characterization of the political skill construct also would add to this control and action-oriented dispositional themes.

The conceptualization presented in Figure 1 illustrates the characteristic themes reflected by certain dispositional constructs and the particular dimensions of political skill they predict. Perceptiveness, control, affability, and active influence are the dispositional themes we believe serve as antecedents of political skill dimensions, and there are examples of specific constructs under each of these themes.

Perceptiveness. The perceptiveness theme reflects the ability of individuals to monitor and regulate their own behavior. Social astuteness should be most strongly related to conscientiousness and self-monitoring, which are reflective of the perceptiveness dispositional theme. Social astuteness seems to best capture the essence of the self-monitoring construct. High self-monitors tend to "monitor or control the images of the self they project in social interaction to a great extent" (Snyder, 1987: 5), whereas low self-monitors are much less concerned about monitoring their surroundings, and their behavior tends to express how they really feel. Similarly, people high in social astuteness are keen and intuitive observers of their surroundings and others and have an accurate understanding of social situations and their own behavior in these settings. Accordingly, Ferris, Treadway, et al. (2005) reported significant relationships between self-monitoring and social astuteness in two studies (r = .37, r =.32, $p < .01$), and these reflected the highest correlations self-monitoring demonstrated with any of the political skill dimensions.

The attention to detail and, as Pfeffer (1992) stated, the "almost clinical interest in the observation of behavior" (p. 173) suggest that social astuteness relates well to conscientiousness. Because politically skilled individuals are self-confident though not self-absorbed, they tend to maintain their focus outward toward others and the environment rather than inward. This allows such individuals to maintain proper balance and perspective, thus permitting them to keep a healthy gauge on their accountability to both self and others. This accountability perspective for politically skilled individuals suggests that they are conscientious, and, indeed, Ferris, Treadway, et al. (2005) reported significant relationships between conscientiousness and social astuteness (Study 1 r = .31, Study 2 r = .27, $p < .01$), and this was the strongest relationship conscientiousness demonstrated with any of the political skill dimensions.

Figure 1
Dispositional and Personal Ability Antecedents of Political Skill



Control. Locus of control and self-efficacy are reflective of the control dispositional theme, which is concerned with the extent to which individuals perceive control over themselves and/or their environments. Locus of control involves generalized expectancies about the control over rewards and punishments, whereby individuals see that either they control (i.e., internal locus) or that such rewards and punishments are controlled by others or by luck or fate (i.e., external locus; Perrewé & Spector, 2002). Self-efficacy refers to how much individuals believe they have the capabilities to organize and execute particular courses of action that are required to attain certain outcomes, that is, a sense of mastery and control over their environment (Perrewé & Spector, 2002).

Such reflections of the control dispositional theme should have the strongest relationships with interpersonal influence and networking ability. Beliefs that individuals can control their environment, and the people in that environment, should be associated with the capacity to influence others because of the confidence such individuals express both to self and others. Politically skilled individuals exude a calm self-confidence that comes from expecting favorable outcomes from influence attempts toward others, most likely generated from the success experienced in past encounters. Because of such confidence in themselves, individuals

will invest their resources in such influence activities, and this demeanor tends to send signals to others of these individuals' competencies (e.g., Kanter, 2004). The confidence derived from beliefs about personal control should be associated with effective interpersonal influence attempts, positioning and networking with others, and social capital creation.

Affability. The affability dispositional theme reflects an outgoing, likeable, and interpersonally pleasant orientation, and it is represented by such constructs as extraversion, agreeableness, and positive affectivity. Furthermore, this dispositional theme is expected to relate most strongly with the interpersonal influence, networking ability, and apparent sincerity dimensions of political skill. Indeed, significant positive correlations between positive affectivity and political skill have been reported in two studies (Kolodinsky, Hochwarter, & Ferris, 2004). In addition, Liu, Ferris, Zinko, Perrewé, Weitz, and Xu (in press) reported significant correlations of the political skill composite with extraversion ($r = .58$, $p < .01$), and extraversion related most strongly with the interpersonal influence and networking ability dimensions of political skill.

Active influence. This dispositional perspective suggests particular constructs that have a strong action-oriented component. A proactive personality reflects a personal disposition toward proactive behavior, or the extent to which individuals take action to influence their environments (Bateman & Crant, 1993). Crant (1995) suggested that "proactive personalities identify opportunities and act on them; they show initiative, take action, and persevere until they bring about meaningful change" (p. 532), and those individuals are not much affected by situational forces. As those proactively taking initiative to bring about goal-oriented action and accomplishment, proactive personality should be most strongly associated with the interpersonal influence and networking ability dimensions of political skill. Research has indicated that proactive personality is associated with network building (Thompson, 2005). Liu et al. (in press) reported significant relationships between proactive personality and political skill ($r = .38$, $p < .01$). Furthermore, the two strongest relationships found for the political skill dimensions and proactive personality were with the interpersonal influence and networking ability dimensions.

Action-state orientation refers to "individual differences in the ability to properly regulate actions and cognitions to accomplish intentional actions (goals and objectives). . . . An action-oriented person is able to internally regulate behaviors, cognitions, and emotions that are relevant for the accomplishment of volitional actions" (Perrewé & Spector, 2002: 42). As such, action-oriented individuals can effectively screen out irrelevant or competing impulses or thoughts and thus remain focused on activities that facilitate goal accomplishment. Such action-state orientation promotes decisive, goal-directed behavior and therefore should be expected to be most strongly associated with the interpersonal influence and networking dimensions of political skill. That is, action-state orientation would propel individuals to utilize influence tactics and strategies in the pursuit of goal accomplishment and to leverage the social capital that is derived from effective networking and positioning in pursuit of goal attainment.

Developmental experiences. We have examined a number of dispositional antecedents to political skill; however, political skill is not simply trait based. Political skill is also a learned behavior that can be developed. Effective techniques to develop political skill must provide participants with feedback about their social interactions, including their level of awareness

in social situations, about how well they understand such situations, and about multiple behavioral response alternatives. Developmental experiences, such as role modeling and mentoring, can increase the four dimensions of political skill.

Based on Bandura's (1986) social learning theory, and often included as part of overall leadership training, behavioral modeling is perhaps the primary developmental experience used in business today (May & Kahnweiler, 2000), and its efficacy for training effectiveness has been widely validated (e.g., Burke & Day, 1986). In behavioral role modeling, experts demonstrate the proper way to exercise a particular skill, such as political skill. Once the new skill is modeled, effective transfer of training, generalization, and maintenance typically occurs with repeated practice by participants (May & Kahnweiler, 2000). We suggest that the best way to practice influencing others is to use the newly acquired skill in social settings in which an influence situation occurs.

Working with skilled mentors is another important way to develop political skill. Individuals observe professionals in real work situations as they exercise political skill and influence in meetings with their subordinates and peers. The way in which politically skilled mentors use language, facial expressions, body posture, and gestures will convey messages to observers as to how influence is best exercised. The keys are to be sure that individuals are working with talented and politically skilled mentors who have plenty of social influence interactions and are given plenty of opportunities to discuss various social influence interactions encountered. Hence, effective mentors not only engage in politically skilled influence behaviors so that protégés learn by observation but also take time to discuss various social interactions so that protégés can more fully understand how and why mentors act in such a manner.

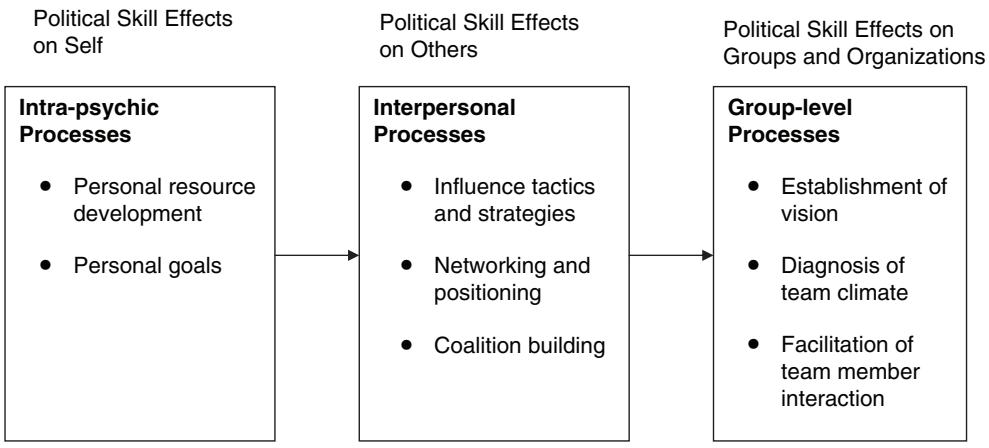
A primary role of a mentor in a mentoring relationship is to help the protégé develop a richer and more informed understanding of the work environment. Because politics and political skill are key considerations in work environments, it has been suggested that a primary content focus of mentoring relationships is the development of political skill in protégés (e.g., Perrewé, Young, & Blass, 2002). Furthermore, it has been found that mentoring relationships are associated with individual learning and that good mentors increase such individual learning, which relates to both the work content and interpersonal competencies (e.g., political skill; Lankau & Scandura, 2002). Ultimately, mentoring involves not only the informal training and development of what to do in the work environment, when, and with whom but also the building of the interpersonal and social effectiveness competencies that round out the concept of political skill.

Collectively, this perspective and associated evidence indicate that dispositional traits and personal abilities that are developed determine the extent to which individuals are politically skilled. Indeed, the syndrome of social competencies we refer to as political skill is substantially grounded in inherent general dispositions and in learned personal skills and abilities.

Meta-Theoretical Framework of Political Skill

As a cognitive-affective-behavioral comprehensive configuration of social competencies, political skill can be understood to incorporate intrapsychic processes, interpersonal processes,

Figure 2
Meta-Theoretical Framework of Political Skill



and group-level processes, as noted in Figure 2. Each of these sets of processes are discussed in the sections that follow.

Intrapsychic Processes

Personal Resource Development

As the definition of political skill noted, the ability to read and understand others is used to accomplish personal and organizational goals. We suggest that political skill is the mechanism through which goal-directed behavior is activated in pursuit of interpersonal objectives and/or outcomes achievement. This line of reasoning was fundamental to early interpretations of influence behavior in organizations. Indeed, Jones (1964) adopted similar reasoning in his classic treatment of ingratiation behavior in organizations. He argued that the ability of personal goals to arouse ingratiatory behavior is the product of three forces: the importance of the goal to the actor, the unique ability of the target to provide the goal, and the perceived disposition of the target toward the action. We extend Jones's ideas of arousal to explain the activation of political skill.

Within the political arena, the acquisition and control of resources is paramount to the possession of power (Mintzberg, 1983; Pfeffer, 1992). As stated by Pfeffer (1992), the golden rule in organizations is that "the person with the gold, makes the rules" (p. 83). As such, the accumulation of valued commodities provides a mechanism through which organizational participants can cultivate interpersonal dependencies within their organization. In turn, these dependencies reflect the manifestation of power within the organizational and social structure.

Theoretically, this discussion of resource acquisition is viewed through the lens of conservation of resources (COR) theory. From this perspective, resources are defined as "those entities that either are centrally valued in their own right (e.g., self-esteem, close attachments, health, and inner peace) or act as means to obtain centrally valued ends (e.g., money, social support, and credit)" (Hobfoll, 2002: 307). Currently, the study of how people gain, use, and deplete their resources has been largely concerned with individual coping strategies to stress and strain (e.g., Grandey & Cropanzano, 1998; Hobfoll, 1989, 2002; Ito & Brotheridge, 2003). However, we assert that the acquisition and protection of resources parallels the motivational goals of the political processes in organizations.

Similar to Pfeffer (1992) and Mintzberg's (1983, 1985) arguments regarding political activity, COR theory suggests that individuals seek to garner, protect, and retain resources (Hobfoll, 1989, 2002). Furthermore, this theory stipulates that stress occurs when resources are lost or threatened or when there is a failure of gain after a significant investment of other resources. According to COR theory, resources can be objects, conditions, personal characteristics, or energies (e.g., Grandey & Cropanzano, 1998). Objects are things such as clothing and other material possessions, conditions encompass things such as material status and organizational tenure, personal characteristics include such things as self-esteem, hardiness, and skills, and they help safeguard individuals from stress, and energy resources include such things as money, time, and knowledge, and they allow the acquisition of other resources (Hobfoll, 2002).

COR theory's framing of resources in this manner appears to present a paradox in relation to political skill. Political skill is quite obviously a personal resource in itself. However, when activated by resource threat or opportunity, political skill serves as a critical internal resource that facilitates the acquisition of valued resources in organizations. This line or reasoning is consistent with COR theorists' arguments that internal resources, those resources "possessed by the self or are within the domain of the self" (Hobfoll, 1998: 57), may assist in the management of external resource pools. As such, politically skilled individuals are in a better position to accumulate and protect scarce organizational resources.

Personal Goals

The likelihood of political skill activation is dependent on the salience of the resource (Jones, 1964). We assert that the salience of any personal or organizational resource is partly the product of the individual motivations of the organizational participant. Therefore, although we have positioned COR theory as an overarching framework for understanding the activation of political skill, we would be remiss if we did not discuss the potential impact of individual differences in motivation on individual perceptions of resource importance. Indeed, these motivational biases serve to explain the likelihood of resource activation.

Political scholars have echoed this assertion. That is, people develop goals, objectives, motivations, and strivings that guide and channel work behavior toward goal accomplishment. Mintzberg (1983, 1985) argued that, to be effective in organizations, individuals needed to possess both political will and political skill. Accordingly, political will represents an individual's willingness to expend energy in pursuit of personal goals (Treadway, Hochwarter, Kacmar, & Ferris, 2005). Despite ample conceptual development, few studies

have assessed the role of motivation in political behavior, and only one study has attempted to operationalize the underlying components of the political will. Specifically, previous research has suggested two components of political will: intrinsic motivation and need for achievement (Treadway et al., 2005).

Congruent with the traditional notions of organizational politics that emphasize the self-serving nature of political activity, intrinsic motivation is goal-directed behavior that motivates individuals to pursue their interests and develop personal competencies (Deci & Ryan, 1985). Furthermore, Treadway et al. (2005) argued that because need for achievement is related to political self-confidence (Tedeschi, Schlenker, & Lindskold, 1972) and heightened levels of political activity (Mowday, 1978), individuals high in need for achievement will be more willing to expend political capital to obtain valued resources.

In extending the framework set forth by Treadway et al. (2005), we argue that need for power is the most intuitively obvious and theoretically grounded addition to this framework. Defined as the need to influence others toward personal or organizational objectives (McClelland & Burnham, 1976), some scholars have suggested that the power motive is closely related to the ability to "detect and quickly identify the motive bases of others and to relate one's power sources in order to rearrange the incentives of the other person's consequences" (Heckhausen, 1991: 322). As such, high need for power should make the activation of political skill more likely.

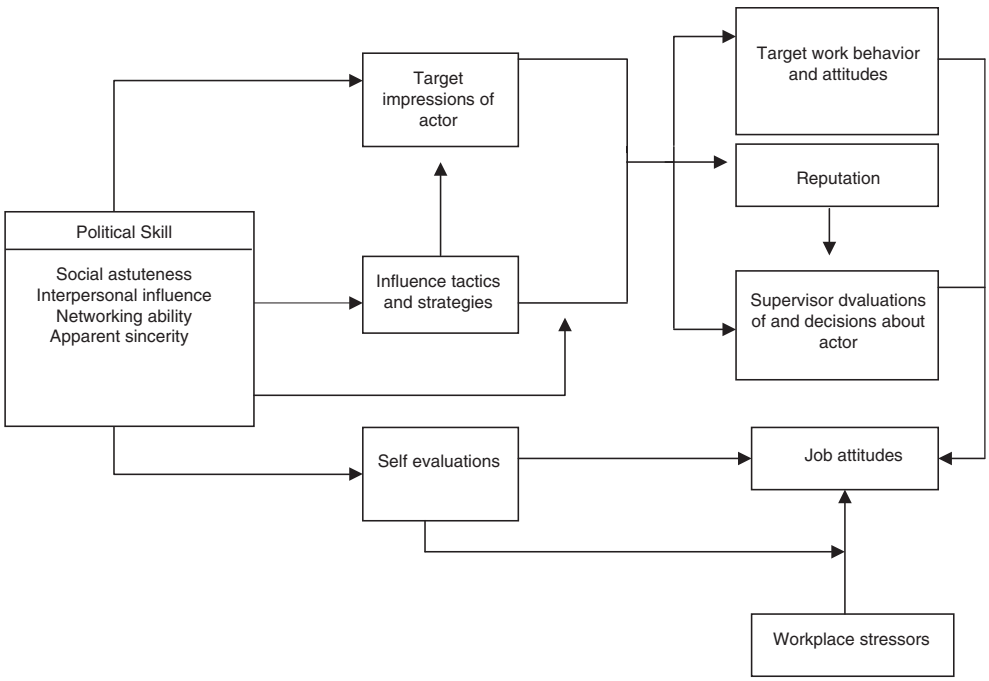
Effects of Political Skill on Self

Political skill is conceptualized to demonstrate effects on both self and others, and we propose a framework that classifies the criterion-related validity studies according to the relationships conceptualized and demonstrated by political skill in organizations in Figure 3, which illustrates such effects. In this section, we examine the specific linkages in this framework that pertain to how political skill works inward on self-reactions and discuss the theoretical dynamics driving the way political skill operates in organizational settings to affect the self.

Political skill effects on self-evaluations. Because of their ability to read people and situations well and act on that knowledge in ways that lead to interpersonal effectiveness, politically skilled individuals develop a personal security that results from favorable evaluations of self. Feedback over time from such successful interpersonal encounters contributes to the experience of control and mastery over others in their work environment, which leads politically skilled individuals to evaluate themselves positively (Ferris, Davidson, & Perrewé, 2005).

Self-evaluation effects on job attitudes. The effects of political skill on job attitudes are not easy to decipher. On one hand, it would make sense to predict a significant negative relationship between political skill and job tension because politically skilled people perceive and interpret stressful environmental stimuli in ways that neutralize their detrimental effects; that is, political skill contributes to a calm self-confidence that makes people experience less strain. However, the relationship between political skill and job attitudes such as satisfaction seem a bit more complex. It makes sense to suspect a positive linear relationship between

Figure 3
Political Skill Effects on Self and Others



political skill and job satisfaction, and such a relationship was reported by Kolodinsky et al. (2004). However, when they added the nonlinear political skill term into the regression equation, it accounted for a significant increment in variance explained, suggesting an inverted *U*-shaped relationship with job satisfaction.

In the context of political skill, several prominent researchers have characterized interpersonal skill-related constructs to be complex (e.g., Riggio, 1986; Schneider, Ackerman, & Kanfer, 1996). In fact, Schneider and colleagues (1996), in their investigation of an interpersonal skill construct that they term social competence, suggested that linear models could be faulty, offering that some social competence dimensions, in fact, might prove to be curvilinear, where higher scores might not be preferable on certain dimensions. They wrote, "More is not necessarily better where certain social competence dimensions are involved" (p. 479). For example, they suggested that when social influence (i.e., one of their social competence dimensions) is extreme, it is likely to be seen as domineering. Moreover, high levels of warmth (i.e., another social competence dimension) might be viewed as too trusting and permissive.

Self-evaluation effects on stressor–strain relationships. Political skill has been argued to demonstrate neutralizing effects on workplace stressors, thus reducing the potentially

dysfunctional effects of stressors on strain reactions. Furthermore, we argue in this model that political skill should demonstrate such effects through the self-evaluations that produce the security and self-confidence that results from the perceived control and mastery politically skilled people have over others and their work environment.

Because political skill gives people a calm self-confidence that comes from a sense of control and personal security, individuals should perceive environmental stressors as less threatening and neutralize their impact on strain reactions. Several studies have demonstrated the moderating and neutralizing effects of political skill on the stressor–strain relationships for role conflict and role overload stressors (Perrewé et al., 2004; Perrewé et al., 2005), for perceptions of organizational politics as a workplace stressor (i.e., Brouer et al., 2006), and for perceived or felt accountability as a source of stress, which affected job performance through job tension (Hochwarter et al., 2007). Psychosocial resources theories would suggest that political skill demonstrates such a neutralizing effect on stressors because the additional resources possessed by those high in political skill render stressors as nonthreats.

Interpersonal Processes

Political skill is also conceptualized to demonstrate effects on others, and in this section, we examine influence tactics and strategies, networking, and positioning (see Figure 2). We also discuss those aspects of the framework in Figure 3 pertaining to the effects of political skill on others.

Influence Tactics and Strategies

Political skill reflects the capacity to effectively exercise influence over others at work. Individuals high in political skill know which particular type of influence tactic or strategy to employ in each situation. These individuals also know precisely how to execute a specific tactic or strategy in just the right way to demonstrate the desired effect, thus ensuring the success of the influence attempt. For example, ingratiation and self-promotion can be quite differently perceived and interpreted based on whether the actor is more, or less, politically skilled.

Ingratiation. Ingratiation refers to behaviors that are designed to get you on the "good" side of others and/or to be liked by them, as either an end in itself or so that you can receive some rewards (Jones, 1990). Ingratiation has been referred to as simply flattery, and defined as

> strategic praise, praise with a purpose. It may be inflated or exaggerated or it may be accurate and truthful, but it is praise that seeks some result, whether it is increased liking or an office with a window. It is a kind of manipulation of reality that uses the enhancement of another for our own self-advantage. It can even be genuine praise. (Stengel, 2000: 14-15)

Because ingratiation is an effort to gain or achieve some outcome, the individual employing it needs to be concerned about how it is perceived, which is a function of how effectively it is presented. Essentially, ingratiation is an attempt to influence others, which must appear

to be sincere for it to work at all. What distinguishes the skilled execution of ingratiation from the perceived manipulative and failed attempt is political skill (Treadway, Ferris, Duke, Adams, & Thatcher, in press).

Self-promotion. Besides ingratiation, another frequently studied (and used) influence tactic is self-promotion, which has the objective of appearing to be competent and involves trying to show how one is accomplished (Jones, 1990). Obviously, self-promotion can be difficult to effectively enact. If too little emphasis is applied, one appears to understate things and fail to impress people, whereas if too much emphasis is made, one appears arrogant, conceited, and self-important, which our society generally finds offensive. Once again, the difference in how self-promotion behavior is interpreted and reacted to depends on the person's political skill. People who have poor political skill are seen as self-promoters who are artificially saying and doing whatever they can just to get ahead. People high in political skill are viewed as genuine, sincere, and authentic.

Taken together, these arguments indicate that political skill affects the way influence tactics are perceived and interpreted, often changing a positive interpretation (i.e., for those high in political skill) to a negative one (i.e., for those low in political skill). Political skill plays a key role in the dynamics of influence tactics and strategies as they are demonstrated and interpreted in the workplace.

Assertiveness. To this point in our formulation, we have suggested that when highly skilled organizational politicians engage in influence tactics, they do so in an effective way. However, this does not imply that they enact a full range of influence tactics. In fact, we argue that those high in political skill might simply avoid some influence tactics in favor of others.

Assertiveness involves demanding, ordering, setting deadlines, and checking up on others to exercise influence (Kipnis, Schmidt, & Wilkinson, 1980). The use of assertiveness, as a way to influence others, can be intricate, and its effects sometimes can be positive and sometimes negative. We suggest that individuals who possess a high degree of networking ability will be well positioned (e.g., by virtue of the connections, alliances, and social capital they control) to employ assertiveness as a successful influence tactic. Furthermore, individuals who are socially astute should be better able to read the temporal and social cues that will determine the limited normative and interpersonal conditions under which assertiveness will be an effective tactic.

Networking and Positioning

Social networks are a source of advantage in organizations. Individuals who possess social networks characterized by open structure, heterogeneous contacts, and structural holes are more likely to develop information asymmetries than peers with densely structured social networks characterized by homogenous contacts and a lack of structural holes (Burt, 1992, 2005). Structural holes are spaces between two otherwise unrelated individuals and/or groups (Burt, 1992). Relationships that bridge structural holes are described as bridging ties,

which provide the opportunity to engage in arbitrage and information brokering between the two parties. Empirical evidence suggests that individuals with a large number of intra- and interorganizational bridging ties in their social networks have higher performance evaluations, are more likely to be promoted, and have higher levels of compensation than do peers with fewer bridging ties (Burt, 2004).

Individual attributes influence how social networks are developed and utilized (Burt, 2005; Burt, Jannotta, & Mahoney, 1998). For example, empirical evidence suggested that high self-monitors obtain network central positions and subsequent high performance evaluations (Mehra, Kilduff, & Brass, 2001). Support has also been found for personality attributes (Burt et al., 1998) and proactive personality (Thompson, 2005) relating to effective social network structure and social capital.

Networking ability and social astuteness are two primary aspects of political skill that influence the degree to which a social network is efficiently structured. As we noted, individuals possessing political skill are astute observers of others and well in touch with a diversity of social situations. Social astuteness allows individuals to comprehend social interactions and accurately interpret their behavior, and that of others, in social settings. Pfeffer (1992) referred to this characteristic as "sensitivity to others," and he argued, "Somewhat ironically, it is this capacity to identify with others that is actually critical in obtaining things for oneself" (p. 173).

Politically skilled individuals are competent at developing and using diverse networks of people. People in these networks are valuable assets, seen as important and necessary for successful personal and organizational functioning. Furthermore, politically skilled individuals possess a subtle style that allows them to easily develop friendships and build strong alliances and coalitions, resulting in social capital that can be leveraged. In addition, individuals high in networking ability use their social astuteness to determine how and where they will position themselves to both create and take advantage of opportunities (Pfeffer, 1992).

Burt (2000) observed that it is not a question of whether to trust but who to trust in competitive environments. Social astuteness is one's ability to identify the nuances of social interaction. Specifically, politically skilled individuals have the ability to perceive how other individuals enhance or diminish social interaction, the motives of others, and subsequently the level of reliability in reciprocating information, resources, and favors. This enables politically skilled individuals to avoid or reduce contact with other social actors who are not valuable members in an actor's social network and to enhance and solidify relationships with valuable, trustworthy social network members.

Coalition Building

Closely related to the ability to establish broad and strong networks is the ability to build and develop coalitions and engage in upward appeals. Kipnis et al. (1980) discussed coalition tactics as mounting coworker or subordinate support to reinforce a position taken or resources requested, counting on a "strength in numbers" approach. Upward appeals involve obtaining the support of individuals higher up in the organizational hierarchy, which, in essence, shares considerable similarities with building coalitions.

It is intuitively obvious that a significant positive relationship should exist between the networking-ability dimension of political skill and the implementation of coalition influence tactics. Perhaps less intuitive is the relationship between networking ability and the use of upward appeals. We argue that networking ability should be a precursor of the upward-appeals, influence-tactic usage. Indeed, strong network ties are necessary to facilitate the enactment of upward-appeal tactics because such linkages allow individuals to operate from a position of greater strength (i.e., through such connections and social capital).

In the recent political skill scale development and construct validation article by Ferris, Treadway, et al. (2005), supportive results were provided, confirming much of the foregoing discussion regarding influence tactics and political skill. For the overall composite political skill score, it related to the upward-appeal and coalition influence tactics, but not to assertiveness, in two samples. Regarding the political skill dimensions, network building was significantly related to coalitions, upward appeals, and assertiveness in two samples. Interestingly, social astuteness also related to all three of these influence tactics in one of the studies but not the other.

Effects of Political Skill on Others

Effects on impressions of others and influence tactic selection. Political skill gives individuals a calm sense of self-confidence that inspires trust and confidence in others and promotes credibility. In Figure 3, the influence of political skill on others directly progresses on others' impressions of trust, confidence, and credibility, which also are indirectly affected through selection and use of situationally appropriate, and effectively executed, influence tactics and strategies.

Politically skilled persons are very adaptable, which is an increasingly important characteristic in organizations today. Indeed, research has noted the importance of individual adaptation as an important predictor of performance across a wide variety of work domains (e.g., Chan, 2000; LePine, Colquitt, & Erez, 2000; Pulakos, Arad, Donovan, & Plamondon, 2000). In addition, research has indicated that individuals possessing social competency are better able to meet the demands of most environments by adjusting and calibrating their actions to the proper level (Cantor & Kihlstrom, 1987).

Individuals high in political skill utilize their social astuteness to strategically select methods of influence and self-presentation that present the most situationally appropriate behavior, or "situated identities" (Alexander & Knight, 1971; Gergen & Taylor, 1969). Furthermore, they employ their interpersonal influence attempts and their capacity for apparent sincerity to appear genuine and authentic in their behavior, with no ulterior motive. Finally, the networking ability of politically skilled individuals allows them to build social capital and leverage it when needed to be even more influential.

Collectively, these aspects of political skill, and the influence tactics selected, combine to shape the impressions formed by the target person or persons of the actor. Specifically, target persons tend to view politically skilled individuals as trustworthy, credible, accountable, and likable. Furthermore, individuals high in political skill are perceived to be charismatic and to attract and inspire others. Finally, politically skilled individuals' behaviors are designed to

influence others' impressions of their competence and similarity and their reputations, which, along with affect or liking, were the intermediate linkages proposed by Ferris and Judge (1991) in their political model of human resources management. Although the Ferris and Judge conceptualization was primarily directed at political or influence behavior, it is implicit that for this to work, the behaviors have to be effectively executed, which requires political skill.

Impressions and influence tactics effects on other outcomes. It is then these increased positive target reactions toward the individual that lead to positive target evaluations of the individual in the form of increased reputation, higher performance ratings, favorable promotion ratings, and job survival decisions. Also, favorable impressions by subordinates of the individual tend to be associated with higher performance and more positive job attitudes. More specifically, politically skilled individuals possess the capacity to control or self-regulate their behavior in ways that influence and manage the reactions and behavior of others. Indeed, politically skilled individuals are better capable of disguising their intentions (Treadway et al., in press).

Political skill main effects on performance and reputation. The research evidence to date examining the effects of political skill on others has been consistent. Ahearn, Ferris, Hochwarter, Douglas, and Ammeter (2004) found leader political skill to be a positive predictor of team performance. Furthermore, Higgins (2000) reported that political skill was significantly related to recruitment interviewer ratings and evaluations of job applicants. Douglas and Ammeter (2004) found leader political skill to be a significant predictor of ratings of leader effectiveness.

Political skill has been found to differentially predict several aspects of job performance. For example, research has shown self-efficacy to be more strongly related to task performance than to contextual performance and political skill to be more strongly related to contextual than to task performance. In addition, political skill appears to be a stronger predictor of contextual performance than self-efficacy, and self-efficacy is a stronger predictor of task performance than political skill (Jawahar, Meurs, Ferris, & Hochwarter, in press). In addition, political skill has been found to explain a significant increment in supervisor ratings of employee job performance beyond self-monitoring and influence tactics (Ferris, Treadway, et al., 2005). Furthermore, social astuteness was the most explanatory dimension of political skill.

The most extensive study to date examining the impact of political skill on job performance distinguished political skill from three social effectiveness measures: self-monitoring, emotional intelligence, and leadership self-efficacy. This study indicated that political skill was both the strongest predictor of managerial performance and a differentiating factor between top performers and others. Interestingly, although emotional intelligence was also a significant predictor of managerial performance, it did not explain significant variance in performance above and beyond political skill. In addition, leadership self-efficacy and self-monitoring were not significant predictors of performance (Semadar, Robins, & Ferris, 2006).

Expanding the domain of job performance, recent research indicated that political skill serves as a key antecedent of both personal reputation (Ferris, Blass, Douglas, Kolodinsky, & Treadway, 2003; Zinko, Ferris, Blass, & Laird, 2006) and leader reputation (Ammeter, Douglas, Gardner, Hochwarter, & Ferris, 2002; Blass & Ferris, 2007; Hall, Blass, Ferris, & Massengale, 2004). Furthermore, research has provided empirical support of this relationship,

with significant correlations reported between political skill and reputation in two studies (r = .35, r = .40, $p < .05$; Liu et al., in press). Also, Liu et al. (in press) found evidence for the mediating role of reputation between political skill and job performance in two studies, detecting full mediation.

The studies linking political skill to performance evaluations, reputation, and other work behaviors and attitudes did not examine the impression of the actor or influence tactics as mediating factors. We argue that the reason political skill affects these outcomes is because political skill affects the target's general impression of the actor, the type of influence tactic chosen, and the way the influence tactic is executed.

Interaction of influence tactics and political skill. We propose that in addition to making the situationally appropriate selection of influence tactics, politically skilled people execute influence attempts in a manner that contributes to their effectiveness. More than 15 years ago, Jones (1990) framed what he essentially viewed as the foundational concern at the root of the influence tactics–outcomes relationships, that is, to understand what it is that explains how and why influence attempts are positively perceived, are successfully executed, and result in positive results. He argued that after many years of research, we know quite a bit about different influence behaviors, but virtually nothing about the style with which individuals execute and deliver influence attempts, which probably explains most of why they are effective.

Political skill represents the type of style construct to which Jones (1990) was referring in his appeal for such research on influence effectiveness. Therefore, we suggest that how the influence behavior of employees is perceived and interpreted by supervisors is a function of employees' political skill, which facilitates the delivery and execution of the influence behavior and becomes the decisive factor in the effectiveness of the influence behavior on the supervisors' reactions. Indeed, prior work has argued that the very same behavior by employees (e.g., ingratiation-type behavior) can be interpreted and classified as either "citizenship behavior" or as "political behavior" based on the intentionality the perceiver assigns to the behavior, which is probably triggered by the employee's style of execution and delivery (Bolino, 1999; Ferris, Bhawuk, Fedor, & Judge, 1995), that is, for example, the employee's political skill.

Treadway et al. (in press) tested the notion that political skill would affect the perception and interpretation of influence tactics and thus would moderate the relationship between employee-reported ingratiation and the reports of the employees' ingratiation provided by supervisors. Also, it was hypothesized that supervisor reports of subordinate ingratiation would be negatively related to supervisor ratings of subordinate interpersonal facilitation. Results provided evidence that subordinates with high political skill were less likely than those low in political skill to have their ingratiation behavior perceived by supervisors as a self-serving or manipulative influence attempt. Furthermore, when employees were perceived by their supervisors to engage in more ingratiation behavior, the employees received lower ratings of interpersonal facilitation from their supervisors.

Similarly, research has evaluated the moderating role of political skill on the relationships between five different impression management tactics (i.e., intimidation, exemplification, ingratiation, self-promotion, and supplication) and supervisor evaluations of employee performance. The results of this research indicated that increases in influence tactic use were associated with increased supervisor evaluations of subordinate performance for those high

in political skill. The opposite results were found when impression management usage was low, whereby individuals low in political skill created a more favorable image than did those high in political skill when they did not use the influence tactics (Harris, Kacmar, Zivnuska, & Shaw, 2007).

Group-Level Processes

Increasingly, organizations are making greater use of team-based organizational structures, and research corroborates the importance of the leader behavior effects on team performance (Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996; Stewart & Manz, 1997). Because successful leaders in contemporary organizations will need to focus their energies toward interpersonal leader attributes such as coaching, coordination, and orchestration (e.g., House, 1995), political skill gives leaders the social astuteness and behavioral flexibility required to address the individual needs and motivations of their employees. Such an individualized, tailored approach by such leaders to the particular perspectives and nuances of each of their employees should lead to favorable effects on employee behavior. We argue that political skill is fundamental to the establishment of vision, diagnosis of team climate, and facilitation of team-member interactions (see Figure 2).

Establishment of Vision

Formulation and articulation of vision. A vision is a symbol of possibilities, an attractive, credible future destination (Nanus, 1992). Targets and goals are important for group success, but a strong, articulated vision allows us to see beyond our immediate needs and onto a new horizon. The power of a vision is that it provides a number of benefits for organizations and their members, creates shared meaning and common identity, energizes and provides a challenge, and brings the future into the present (Nanus, 1992). In establishing an effective vision, both leaders and followers must contribute to the process. Kotter (2001) posited that leaders must create and get employees to buy into the vision, and employees must collectively implement or carry out the vision. Simply put, because of the needed collaboration between leaders and employees, political skill is important to this process.

In formulating a vision, leaders can take the top-down approach or the bottom-up approach, each relying on different interpersonal processes. With the top-down approach, leaders attempt to get others to buy into their vision, and, in doing so, they try to create self-schemas for the followers to match the vision (Sims & Lorenzi, 1992). In this instance, leaders might rely on reputation, networking and positioning, and positive impressions to generate support for their vision. However, in using the bottom-up approach, leaders will establish a vision derived from the collective understanding of what the group or organizational members hope to accomplish (Raelin, 2006), requiring leaders to use influence tactics that support greater involvement and network building.

In either case, the successful implementation of vision requires the careful use of political skill by the person formulating and articulating the vision. It is the social astuteness, combined with a keen sense of self-awareness, possessed by politically skilled individuals that

allows them to see the end result of what they are trying to accomplish. This represents a key initial quality contributing to the successful formulation and implementation of vision.

Vision, charisma, and political skill. The quality we see associated with leadership probably more than any other is charisma, which is variously referred to as a special quality or charm that tends to inspire people to follow a vision or course of action (e.g., Gardner & Avolio, 1998; Khurana, 2002). The leaders of large corporations, for example, used to be selected on the basis of their prior track record of performance, until a couple of decades ago. Khurana (2002: 71), who conducted one of the largest studies of CEO selection, confirmed that you cannot just be a "competent manager" today and be selected to run a *Fortune* 500 company; you must be seen as a "charismatic leader."

Leader charisma has, indeed, been a topic of intense interest. However, it appears that charisma and political skill may be quite similar. If the ability to inspire people to action toward an articulated vision or set of mutually reinforcing and integrative goals is what we generally mean by charisma, then charisma and political skill would appear to be quite closely related. That is, politically skilled leaders are effective because they astutely read contexts, situationally adjust, adapt, and calibrate their behavior to create the desired image, leverage their social capital to further reinforce their image, and do all this in a sincere, authentic, and convincing way (Douglas, Ferris, & Perrewé, 2005). Charismatic people have been argued to easily adjust to different situations, and effectively read others' interests, motivations, and emotions (Greer, 2005).

From this perspective, charisma becomes simply part of the social competency set we call political skill. Indeed, it has been recently suggested that leaders engage in active efforts to manage impressions of their charisma (Gardner & Avolio, 1998). We would agree and emphasize even more that it is political skill that allows them to be successful in doing so. Although some might regard charisma as a separate and totally different concept, others have suggested that charisma is really just well-developed social skill (Riggio, 1986, 1987, 1998). Because of our distinction between social and political skill, we would suggest that political skill and charisma are closely related constructs (see Coole [2006] for a recent empirical examination of the political skill and charisma constructs).

Diagnosis of Team Climate

Research on group dynamics shows climate as a variable of interest affecting team success. At the individual level, climate is the cognitive representation of the immediate environment (James & Sells, 1981), but at the group level, team climate depends on group members having shared experiences (Anderson & West, 1998). The existence of team climate is based on cognitive agreement among team members, and to accurately assess team climate, leaders need good perceptiveness and effective relationships with team members.

Studies have emphasized the importance of the leadership climate relationship and have shown that leadership has a direct impact on team climate (Kozlowski & Doherty, 1989). Furthermore, team climate influences the leadership–performance relationship (Smith-Jentsch, Salas, & Brannick, 2001). Through its reliance on interpersonal processes, political

skill is seen as an aid to understanding, diagnosing, and monitoring team climate. Social astuteness allows leaders to make careful assessments of team members for areas of agreement and shared perceptions. Also, leaders must balance their use of interpersonal influence to foster a sense of continuity, which will enhance cognitive agreement among team members. Furthermore, as leaders attempt to redirect team activities, all dimensions of political skill will aid leaders in changing existing norms, attitudes, and expectations.

Facilitation of Team-Member Interaction

Perhaps best characterized as a social influence process, leadership effectiveness is the extent to which leaders can influence followers to engage in both in-role and extrarole behaviors that contribute to the performance and effectiveness of the unit. We argue that leader political skill is one of the key skills that differentiate effective from ineffective leaders. Furthermore, one way political skill contributes to unit performance and effectiveness is through leaders' ability to coordinate, orchestrate, and facilitate group or team-member interaction in productive ways. Kotter (1985) suggested that a sophisticated type of leader social or political skill is required, one that can both inspire and mobilize people to coordinated action in pursuit of key goal accomplishment.

The coordination of efforts with and through others contributes to leader effectiveness, particularly when used in conjunction with networking, positioning, coalition building, and social capital creation (e.g., Brass, 2001; House, 1995), which are facilitated by political skill, as noted in an earlier section of this article. House (1995) argued that leaders who are networked and well positioned are better able to maximize resource attainment for their units and thus tend to be more valued and appreciated by their teams.

Leaders often need to implement change to enhance unit effectiveness. Furthermore, change implementation cannot be successfully executed alone but typically requires the leveraging of social capital leaders have established through the accumulation of connections, friendships, and alliances. In addition, the networks leaders have accessed, and the positions they occupy in those networks, demonstrate increased reputational benefits for such leaders, which are believed to favorably influence follower reactions (Ammeter et al., 2002).

Politically skilled leaders demonstrate a confident demeanor, expectation of success, and demonstration of efficacy or being in charge, conveyed through both behavior and/or speech, which tend to inspire others to follow and elicits their positive reactions to such leaders. Accordingly, leader political skill has been argued to increase followers' trust in the leader, support of the leader, perceptions of leader competence, and credibility and to favorably influence outcome measures such as increased member job satisfaction and citizenship behavior and reduced intent to turnover (Ahearn et al., 2004; Ammeter et al., 2002; Douglas et al., 2005; Hall et al., 2004; Treadway et al., 2004).

Effects of Political Skill on Groups and Organizations

The syndrome of social competencies that comprise political skill, including the ability to perceive and attend to individual employee interests and needs, can affect group performance.

Furthermore, the specific type of participation that leaders allow and encourage in their teams can demonstrate considerable influence on team performance. Batt and Appelbaum (1995) found that teams where there is "substantive" participation (i.e., participation where leaders relinquish some measure of control to subordinates) generally perform better than teams where subordinate input is limited to "consultative" participation.

At issue here is the degree of control relinquished by leaders, whereby substantive participation suggests increased risk for leaders than using consultative participation because of the less direct leader control with the former type. Because of this, it might be that political skill can be used to effectively constrain certain autonomous subordinates and coordinate their efforts together with others to bring about unit effectiveness. Thus, political skill is used as a subtle means of accomplishing a behavior coordination and control goal in a similar way that group norms can channel and shape behavior in organizationally appropriate directions. Thus, possessing a high degree of political skill would appear to be beneficial if we assume that one critical job of leaders is to eliminate many of the barriers that might derail team effectiveness.

Ahearn et al. (2004) examined the relationship of leader political skill and team performance in a state child welfare system. In that study, team performance was operationalized as "permanency rate," or the successful placement of children in legally final living arrangements, as defined by adoption, successor guardianship, or return to natural parents. After controlling for several contextually important factors (i.e., average caseload, average age of children served, average number of team placements, team-member experience, leader experience, and team empowerment), leader political skill was found to account for a significant proportion of variance in team performance scores. Furthermore, even though the intermediate linkages were not actually measured in that study, Ahearn et al. argued that leader political skill inspired trust, confidence, and support in followers and also that politically skilled leaders effectively orchestrated and facilitated the interaction among case worker team members in ways that promoted team performance.

Discussion

Political skill is characterized as a comprehensive pattern of social competencies, which reflect cognitive, affective, and behavioral manifestations and which demonstrate effects on both self and others. Furthermore, political skill is characterized as being essential for effectiveness at work and in successfully dealing with the political realities of organizations. Political skill has established the boundaries of its construct domain, its construct validity, and initial empirical evidence for criterion-related validity. The conceptualization proposed in this article provides immediate directions for future research, which initially involve testing linkages in the model presented in Figure 3. In addition, there are some other issues in this area that should receive systematic examination in the future, as discussed in the next section.

Directions for Future Research

Psychometric issues. Future research needs to continue to use and validate the 18-item PSI, even though initial tests have produced sound results (Ferris, Treadway, et al., 2005;

Semadar et al., 2006). Also, future research needs to collect measures of political skill from another source, in addition to self-report. Semadar (2004) found that supervisor reports of employee political skill were significantly correlated with employee self-reports. Finally, more precision needs to be developed regarding the dimensions of political skill and how they should be expected to relate to organizational phenomena.

Social construct differentiation. We believe there are other construct validity challenges not only for political skill but also for the broad set of social or interpersonal constructs that have emerged in the literature over the years. Ferris, Perrewé, et al. (2002) discussed this proliferation of social constructs and the need for each to more precisely delineate their individual uniqueness and identity, at the same time acknowledging that there might be some degree of covariation with other constructs. We observe the ongoing development of constructs such as social intelligence, social skill, emotional intelligence, social competence, self-monitoring, and interpersonal acumen, to name but a few, and we see natural overlap among these.

Although each measure does probably maintain an individual identity, they also are likely to share some degree of common construct domain space. Ferris, Perrewé, et al. (2002) argued that many of these constructs shared in common a cognitive understanding or perceptiveness component in addition to a behavioral action component used to act on the former knowledge, and therefore all are reflective of a higher-order construct we might refer to as *social effectiveness*. Hall and Bernieri (2001) made similar arguments about the increase in social constructs, but used the term *interpersonal sensitivity* as the categorical or higher-order term.

The point here is that we need to empirically examine the relationships among some of these constructs. In the case of political skill, it is perhaps most critical to demonstrate that it is indeed different than social skill, primarily because the two sometimes are interchangeably used in discussion. Scholars in this area have argued that social skill and political skill are, in fact, different (Luthans et al., 1988; Peled, 2000).

Peled (2000) argued that social skill refers to "the ease and comfort of communication between leaders and their employees, peers, superiors, and clients" (p. 27). Alternatively, Peled suggested that political skill refers to "the manager's ability to manipulate his/her inter-personal relationships with employees, colleagues, clients, and supervisors to ensure the ultimate success of the project" (p. 27). Future research should empirically validate such claims and demonstrate that although perhaps related at a modest level, social skill and political skill largely are separate and unique constructs.

Interesting work on social skill by Riggio and colleagues (e.g., Riggio, 1986; Riggio & Riggio, 2001) has produced measurement instruments for social skill. Research should examine how such measures relate to political skill as measured by the PSI. Furthermore, it might make good sense to focus further construct differentiation at the underlying dimension level, whereby the dimensions of political skill reflect differentiation from social skill construct dimensions.

Practical Implications

Political skill involves contextually specific knowledge acquisition acquired through work experience, mentoring relationships, and other developmental experiences. Such contextually

specific knowledge is reflected in the types of personal learning discussed by Lankau and Scandura (2002), which, they argued, is transmitted through mentoring relationships. That is, in any work environment, there are numerous stimuli, cues, pieces of information, and tacit knowledge bits available for consumption. However, because individuals are finite information processors, and because all this contextual information is not equally important for the individuals' effectiveness, there needs to be a mechanism that helps to select out, and make salient, the important information and disregard the rest.

The guidance provided by experienced mentors can target and make salient particularly important pieces of contextual information and provide the experiential development that will build political skill in individuals. Therefore, we would expect political skill to increase somewhat over time as one gains additional experience and contextual knowledge, and so mentoring and developmental experiences like this should provide useful ways to increase and build political skill.

Conclusion

The political perspective on organizations has become an important one, and, as such, we need to be able to appropriately characterize the attitudes, behavior, and effectiveness of individuals working in such environments. Mintzberg (1983, 1985) viewed organizations as political arenas, and he suggested that survival and effectiveness in such contexts required political will and political skill. Pfeffer (1981) argued that there is an optimal match between individuals' political skill and their preference for political environments and that a priority for research should be to learn much more about the political skill construct. The present conceptualization of political skill in organizations is an attempt to respond to these earlier appeals, report on contemporary efforts to shed light on this construct, and present a model to guide future research in this important area.

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Emerging Positive Organizational Behavior

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Although the value of positivity has been assumed over the years, only recently has it become a major focus area for theory building, research, and application in psychology and now organizational behavior. This review article examines, in turn, selected representative positive traits (Big Five personality, core self-evaluations, and character strengths and virtues), positive state-like psychological resource capacities (efficacy, hope, optimism, resiliency, and psychological capital), positive organizations (drawn from positive organization scholarship), and positive behaviors (organizational citizenship and courageous principled action). This review concludes with recommendations for future research and effective application.

Keywords: *positive organizational behavior; psychological capital; positive organizational scholarship; hope; efficacy; resilience; optimism*

As positive psychology has gained momentum (e.g., Aspinwall & Straudinger, 2003; Carr, 2004; Compton, 2005; Giacalone, Jurkiewicz, & Dunn, 2005; Keyes & Haidt, 2003; Linley & Joseph, 2004; Lopez & Snyder, 2003; C. Peterson, 2006; C. Peterson & Seligman, 2004; Snyder & Lopez, 2002; see also http://www.positivepsychology.org for a continually updated Web site on this body of knowledge), its implications for the workplace have not gone unnoticed. In particular, several identifiable domains and approaches to positivity in the workplace have recently emerged. These include positive organizational behavior (POB; e.g., see Luthans, 2002a, 2002b, 2003; Nelson & Cooper 2007; T. A. Wright, 2003; Youssef & Luthans, in

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press), positive organizational scholarship (POS; Cameron & Caza, 2004; Cameron, Dutton, & Quinn, 2003; see http://www.bus.umich.edu/Positive/), and, more recently, psychological capital (PsyCap; see Luthans, Avey, & Avolio, 2007; Luthans, Avey, Avolio, Norman, & Combs, 2006; Luthans, Avolio, Avey, & Norman, in press; Luthans, Avolio, Walumbwa, & Li, 2005; Luthans, Luthans, & Luthans, 2004; Luthans & Youssef, 2004; Luthans, Youssef, & Avolio, 2007a, 2007b; see http://www.gli.unl.edu for continual updates). There is a general consensus, even among the few dissenting voices (e.g., see Fineman, 2006), that the world in general, and our workplaces in particular, are in need of a more balanced approach that takes into consideration both the positive and the negative, both building on strengths and trying to correct weaknesses.

In this article, we review positivity in the workplace literature as it relates to organizational behavior, organizational leadership, and human resource management. Following Seligman and Csikszentmihalyi's (2000) initial conceptualization of positive psychology and Roberts's (2006) recent recommendations concerning the study of positivity in organizational behavior, our approach in structuring this review is to examine positive traits, positive state-like psychological resource capacities, positive organizations, and positive behaviors. Moreover, in line with Kilduff's (2006) recent proposed guidelines for analysis and review, we position the emerging stream of positivity-oriented theories and research as being complementary and an alternative perspective rather than as a substitute or replacement to the existing positively oriented and/or negatively oriented organizational behavior body of knowledge. Like positive psychology, the recently emerging POB does not proclaim to represent some new discovery of the importance of positivity but rather emphasizes the need for more focused theory building, research, and effective application of positive traits, states, organizations, and behaviors as represented in this review.

Positivity: Why? Why Not?

The workplace is increasingly becoming a place where survival, let alone success, necessitates higher-than-average performance (Avolio & Luthans, 2006; Sutcliffe & Vogus, 2003). Cutthroat competition and unhindered access to information, on a global scale, have created a world that is "flat" (Friedman, 2005). In flat-world competition, a sustainable edge can no longer be just achieved through raising entry barriers or technological breakthroughs. By the same token, success can also no longer be attained by just trying to fix weaknesses. In today's level playing field, success can be attained by "breaking the rules" (Buckingham & Coffman, 1999) and challenging traditional assumptions and existing paradigms through appreciative inquiry (see Cooperrider & Srivastva, 1987; Thatchenkery & Metzker, 2006) of what is being done right and building on strengths.

Similar to a deficits approach, a positive perspective is far from being simple, straightforward, or risk free (for a comprehensive critique, see Fineman, 2006). For example, a positivity approach may promote a more benevolent view of humans than is truly warranted. This unfortunately was played out in the ethical meltdowns and the dark side of leadership that have recently plagued many of our former corporate icons. To focus only on what is positive may lead to at least implicitly attributing every vice and things that go wrong to the social context within which organizational behavior takes place. However, the social context is largely a

creation of the individuals that make up that context and their interactions. In addition, what is considered positive (or negative) is to a great extent contingent on cultural values. Virtues in one culture may not hold true in another culture. Moreover, there seems to be more loss than gain from trying to separate the positive from the negative when they are so tightly entangled.

We would argue that much can be gained from utilizing approaches that help scholars and practitioners gain insights into both the positive strengths and the negative weaknesses and their interactions and limitations. As examples, overconfidence has been found to hinder subsequent performance (Vancouver, Thompson, Tischner, & Putka, 2002; Vancouver, Thompson, & Williams, 2001), unrealistic optimism can lead to evasion of responsibility (C. Peterson, 2000), and false hope can lead to poor allocation of resources and energies toward ineffective goals, to the detriment of both the individual and the organization (for other potential pitfalls in relation to the various positively oriented capacities, see Luthans, Youssef, et al., 2007a). As Seligman (2002) points out, the absence of psychopathology does not explain optimal functioning, excellence, growth, flourishing, and fulfillment. However, positively oriented human traits, states, organizations, and behaviors may have a substantial positive impact on performance and other desired outcomes beyond what material resources, classic business models, and deficit-oriented approaches can offer (Luthans, Youssef, et al., 2007a). In other words, positive approaches should not be refuted based only on what they may exclude (Roberts, 2006).

This review article, and positivity as a domain of inquiry, does not aim to discourage academic critical thinking or practical prudence. Today's organizations, and their participants, systems, resources, goals, and strategies, constitute positives to be celebrated and accelerated and negatives to be avoided, managed, or learned from. An integrative approach is necessary for a fuller understanding of the dynamics of success and failure in today's flat-world environment. We would argue that much is lost when either the positive or the negative is slighted or forgotten, and each in isolation of the other leaves much to be desired. With this framing of the role and perspective of positivity in the workplace serving as a point of departure, we now turn to a review of positive traits, state-like capacities, organizations, and behaviors.

Positive Traits

The role of enduring, relatively stable, positive traits in enhancing human performance in the workplace has been traditionally studied in the field of organizational behavior. For example, there is substantial support for the significant contribution of general mental ability to human performance across various domains, including the workplace (e.g., J. E. Hunter & Hunter, 1984; Schmidt & Hunter, 2000; Schmidt, Hunter, & Pearlman, 1981). Intelligence is also positively related to leadership, although recent meta-analytic findings show that this relationship may be weaker than traditionally assumed (Judge, Colbert, & Ilies, 2004). In this section, we focus on three more recently emerging research streams of positive traits, namely the Big Five personality traits, core self-evaluations, and positive psychological traits.

The Big Five Personality Traits

The Big Five personality traits of conscientiousness, emotional stability, extroversion, agreeableness, and openness to experience have been shown to strongly relate to performance

(Barrick & Mount, 1991). In addition, conscientiousness has been found to be the strongest and most generalizable predictor of these personality traits (Mount & Barrick, 1995). The Big Five traits have been found to be related to individual-level outcomes such as happiness, physical and psychological health, spirituality, and identity; interpersonal-level outcomes such as quality of relationships with peers, family, and romantic others; and organizational- or social-level outcomes such as occupational choice, satisfaction, performance, community involvement, criminal activity, and political ideology (for a comprehensive review, see Ozer & Benet-Martínez, 2006). These personality traits have also been found to be positively related to entrepreneurship (Zhao & Seibert, 2006), cultural intelligence (Ang, Van Dyne, & Koh, 2006), and satisfaction with teams (Peeters, Rutte, van Tuijl, & Reymen, 2006) and negatively associated with undesirable outcomes such as burnout (Bakker, van der Zee, Lewig, & Dollard, 2006).

Further contribution to the prediction of job performance beyond each of the global Big Five personality traits has recently been attributed to the "narrow traits" that constitute those traits (Dudley, Orvis, Lebiecki, & Cortina, 2006). A recent promising trend in personality research has also been to study the interactions between the Big Five personality traits and more transient states or situational factors that can enhance or dampen their impact on various work-related outcomes (Ilies, Scott, & Judge, 2006; G. L. Stewart & Nandkeolyar, 2006).

Core Self-Evaluations

Another classification of positive traits that have an effect on work-related outcomes comes from Judge and colleagues' research on the four core self-evaluations of self-esteem, generalized self-efficacy, locus of control, and emotional stability. These traits, both independently and when combined into one higher order construct, have been shown to be significant positive predictors of goal setting, motivation, performance, job and life satisfaction, and other desirable outcomes (Erez & Judge, 2001; Judge & Bono, 2001; Judge, Bono, & Locke, 2000; Judge, Locke, Durham, & Kluger, 1998; Judge, Van Vianen, & De Pater, 2004). In essence, the higher an individual's self-evaluations, the more positive the person's self-regard and the more goal self-concordance is expected to be experienced. Those with goal self-concordance are intrinsically motivated to pursue their goals for their intrinsic value. Because of the value congruence of the goals, they generate higher intrinsic motivation and trigger higher performance and satisfaction (Judge, Bono, Erez, & Locke, 2005). Higher self-evaluations are also negatively associated with undesirable outcomes such as burnout (Best, Stapleton, & Downey, 2005).

Positive Psychological Traits

More than ever before, as part of the positive psychology movement, the past several years have witnessed a substantial amount of research on positive psychological traits, enduring character strengths, and virtues and values that are held in the highest regard by many societies and cultures. Because of their stability and development over one's lifespan, rather than through brief interventions or one-time events, positive psychological traits can

serve as a strong foundation for the development of more transient states. For example, although hope has been supported as being state like and thus open for development and improvement (Luthans, Youssef, et al., 2007a; Snyder et al., 1996), it also has a more stable trait-like baseline that can enhance or limit the level and range for one's state hope. Repeated initiatives to enhance state hope can in turn contribute to building trait hope over time and across situations (Snyder, 2000).

Several classification systems supported by theory, measurement, and research have recently emerged for systematically organizing the broad spectrum of positive psychological traits. For example, C. Peterson and Seligman (2004) classify 24 character strengths into six broad virtue categories. The first category is wisdom and knowledge, which includes the strengths of creativity, curiosity, open-mindedness, love of learning, and perspective. The second category is the virtue of courage, which includes the strengths of bravery, persistence, integrity, and vitality. The third category is the virtue of humanity and includes the traits of love, kindness, and social intelligence. The fourth category is the virtue of justice and includes the traits of citizenship, fairness, and leadership. The fifth category is the virtue of temperance and includes forgiveness and mercy, humility and modesty, prudence, and self-regulation. The sixth and final category is transcendence and includes the traits of appreciation of beauty and excellence, gratitude, hope, humor, and spirituality.

The focus of those who study character strengths is on reaching a consensual definition for each strength, tracking the theoretical traditions for its historical development, assessing its existing measures, taking inventory of its correlates and consequences, and outlining the factors and approaches that can contribute to its development or inhibition over the life span. Two of the primary criteria for character strengths are, first, that they should be trait like or stable over time and generalizable across situations and, second, that they should be valuable in their own right, not necessarily through the desirable outcomes they are capable of predicting or explaining (C. Peterson & Seligman, 2004). Although the first of these two criteria may have some relevance to the workplace, especially in terms of selection, the second criterion may be viewed as less applicable in today's bottom line–oriented organizational culture.

Another classification system is offered by Snyder and Lopez (2002). They conceptualize and classify positive psychological approaches as emotion focused (e.g., subjective or psychological well-being, flow), cognitive focused (e.g., self-efficacy, goal setting, wisdom), self based (e.g., authenticity, humility), interpersonal (e.g., forgiveness, gratitude, empathy), biological (e.g., toughness), and coping approaches (e.g., humor, meditation, spirituality). This classification system is also in line with recent applications of positive psychology to the workplace (for a comprehensive review, see Luthans, Youssef, et al., 2007a).

C. Peterson and Seligman (2004) contend that, unlike a scientific taxonomy emphasizing an underlying structure based on established theory, a classification system better serves an emerging field such as positive psychology through establishing some working boundaries for its research and practice to develop and grow. Therefore, any classification system for positive psychological traits should not be viewed as fully comprehensive, exhaustive, or exclusive of others. We are in agreement with C. Peterson and Seligman's (2004) argument that the utilization of flexible classification systems is more relevant than that of rigid taxonomies given the current status of positivity research in general, not just in relation to positive psychological traits. Thus, the positive traits, states, organizations, and behaviors presented in this

review article, and in the supporting references cited throughout, should be thought of as serving as representative examples and anchor points rather than as exhaustive lists. Exploration of uncharted territories of untapped human potential is far from having been concluded.

Positive State-Like Capacities

Unlike positive traits, which are characterized by relative stability over time and applicable across situations, positive state-like capacities are relatively more malleable and thus are open to change and development (Luthans, 2002a, 2002b; Luthans, Youssef, et al., 2007a). This developmental characteristic of positive psychological resource capacities is particularly relevant to today's workplace, in which swiftness and flexibility in growth and development have to match the realities of a fast-paced, unpredictable environment. Consequently, positive psychological capacities open to investment and development (Luthans, Avey, et al., 2006; Luthans, Youssef, et al., 2007a, 2007b) may provide organizations with an unprecedented potential source of competitive advantage through their people. This newly recognized resource draws its competitive advantage from its potential for development and performance impact.

We have deliberately used the term *state like* when referring to positive capacities in POB to recognize they lie along a continuum with traits (Avolio & Luthans, 2006; Luthans, 2002a, 2002b; Luthans et al., in press; Luthans, Youssef, et al., 2007a; Youssef & Luthans, in press). Specifically, on one extreme of the continuum depicted by Luthans, Youssef, and colleagues (2007a) would be positive states that are very changeable representing momentary feelings (e.g., pleasure, positive moods, and many lay definitions of happiness). Next along the continuum would be the state-like positive psychological resource capacities that are still relatively malleable and open to development (e.g., efficacy, hope, optimism, and resilience). These state-like capacities are followed on the continuum by the trait-like constructs that are relatively stable and difficult to change (e.g., Big Five personality dimensions, core self-evaluations, and character strengths and virtues). On the other extreme end of this continuum would be positive traits that are very stable, fixed, very difficult to change, and commonly referred to as being "hard wired" (e.g., intelligence, talents, and positive heritable characteristics). In other words, at least in the short run, the state-like psychological capacities may be somewhat stable and not change with each momentary situation, as would the more "pure" states such as positive moods. By the same token, however, the term *state like* also infers to being relatively less fixed than personality or self-evaluation traits.

The state-like positive psychological resource capacities are more malleable and thus open to change and development than are trait-like personality and self-evaluation constructs. Allied support for this conceptualization of being state like can be found in the research of Conley (1984). He found almost perfect test–retest correlations for recognized traits such as intelligence and personality, whereas self-opinions also revealed high test–retest correlation but still significantly lower than for the traits. In other words, the self-opinions were relatively less stable than the more fixed traits. There is also preliminary test–retest empirical evidence that the conscientiousness personality trait and core self-evaluation traits are relatively more stable across time than are the identified state-like psychological capacities of efficacy, hope, optimism, and resilience (Luthans et al., in press).

To further support the proposed distinction between trait-like and state-like psychological constructs, a number of years ago George (1991) found positive mood as an affective state, but not the more stable trait of positive affectivity, to be predictive of both extrarole and in-role prosocial behaviors and sales performance 1 month later. She argued that although positive traits are predictive of more transient positive states, organizational behaviors tend to be spontaneous and interactively induced by both personality and situational factors. Indeed, recent research supports such interactive mechanisms (e.g., see Ilies et al., 2006), with positive states, but not necessarily positive traits, having significant main effects on performance and other desirable work-related outcomes. These empirical findings and others led T. A. Wright (1997, 2007) to introduce the importance of time as a main effect variable in organizational behavior research, with stability during 6 months as a proposed operationalization of the temporal demarcation between traits and states.

Recent conceptual theory building has also helped distinguish the trait-like versus state-like nature of traditionally recognized positive constructs. For example, contrasting various operationalizations of happiness, T. A. Wright (2005) makes the case for a trait-like measure of positive psychological well-being as more reflective of the happiness construct. He argues that this is especially true in relation to the happy worker–productive worker thesis, compared to other operationalizations, including (a) dispositional (trait-like) ones such as extraversion, emotional stability, positive affectivity, or negative affectivity; (b) transient ones (states) such as positive mood or lack of emotional exhaustion; and (c) highly contextualized ones such as job satisfaction. We now turn to a review of the POB resource capacities, which includes being state-like as one of the primary inclusion criteria.

POB

Because POB is not the only positively oriented approach to organizational studies that has been stimulated and supported by positive psychology, it is important to identify its unique distinguishing characteristics. Luthans (2002b) first defined POB as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace" (p. 59). More specifically, for a positive psychological capacity to qualify for inclusion in POB, it must be positive and must have extensive theory and research foundations and valid measures. Moreover, as described above, it must be state like, which would make it open to development and manageable for performance improvement. Finally, positive states that meet the POB definitional criteria are primarily researched, measured, developed, and managed at the individual, micro level (Luthans, 2002a, 2002b).

In its emphasis on theoretical grounding, valid measurement, and rigorous research, POB stands in stark contrast to the exponentially expanding body of popular best sellers, which share its positivity but lack theory, measurement, and empirical support. A notable exception is the Gallup Organization's research-based consulting practice and its steady stream of publications documenting the outcomes through measurement and research (Buckingham & Clifton, 2001; Buckingham & Coffman, 1999; Harter, Schmidt, & Hayes, 2002). The state-like criterion distinguishes POB from other positive approaches that focus on positive traits

(discussed previously), whereas its emphasis on micro, individual-level constructs separates it from positive perspectives that address positive organizations and their related macro-level variables and measures (discussed next under positive organizations). Meeting the inclusion criteria for POB are the state-like psychological resource capacities of self-efficacy, hope, optimism, and resiliency and, when combined, the underlying higher-order, core construct of PsyCap (Luthans, Youssef, et al., 2007a).

Self-Efficacy as a State-Like Psychological Resource Capacity

Building on Bandura's (1986, 1997, 2001) social cognitive theory and extensive empirical research, Stajkovic and Luthans (1998b) define self-efficacy in the workplace as "one's conviction (or confidence) about his or her abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context" (p. 66). Among the POB criteria-meeting capacities selected for inclusion, self-efficacy represents the best fit with all the criteria (Luthans, 2002a). Several factors are unique to self-efficacy and make it particularly relevant to POB.

First, self-efficacy has the most established theoretical foundation and the most extensive research support. Second, although hope, optimism, and resiliency have been conceptualized, measured, and tested both as traits and as states, self-efficacy has been primarily supported (Bandura, 1997) and measured (e.g., Maurer & Pierce, 1998; Parker, 1998) as a state. Its state-like nature is manifested not only in its developmental nature over time but also in its domain specificity. Having efficacy in one domain is not necessarily transferable to other domains, whereas lacking efficacy in some contexts does not preclude being efficacious in others (Bandura, 1997).

Third, the relationship between self-efficacy and numerous work-related performance dimensions is highly established. These desirable outcomes include work attitudes across cultures (Luthans, Zhu, & Avolio, 2006), leadership effectiveness (Chemers, Watson, & May, 2000; Luthans, Luthans, Hodgetts, & Luthans, 2001), moral or ethical decision making (May, Chan, Hodges, & Avolio, 2003; Youssef & Luthans, 2005a), creativity (Tierney & Farmer, 2002), participation (Lam, Chen, & Schaubroeck, 2002), career decision making (Nilsson, Schmidt, & Meek, 2002), learning (Ramakrishna, 2002), and entrepreneurship (Boyd & Vozikis, 1994; Chandler & Jansen, 1997; C. C. Chen, Greene, & Crick, 1998; Luthans & Ibrayeva, 2006; Neck, Neck, Manz, & Godwin, 1999). Meta-analytical findings (e.g., Bandura & Locke, 2003; Stajkovic & Luthans, 1998a) also support that self-efficacy is strongly related to work-related performance.

Often associated with confidence (e.g., Kanter, 2004; Stajkovic, 2006), self-efficacy is operationalized in terms of challenging self-set goals, self-selection into difficult tasks, self-motivation, generous effort investment and mobilization toward task mastery and goal accomplishment, and perseverance when faced with obstacles (Stajkovic & Luthans, 1998a, 1998b). Such self-directed initiatives reflect proactive discrepancy creation, rather than reactive discrepancy reduction, which less-confident people may passively display as they respond to challenges that are imposed on them by their external environments. Consequently, less-efficacious individuals are more prone to failure, despair, and losing confidence when faced

with negative feedback, social disapproval, obstacles and setbacks, or even self-created challenges such as self-doubt, skepticism, or negative perceptions and attributions (Bandura & Locke, 2003).

On the other hand, confident individuals employ cognitive capacities such as symbolizing, forethought, observation, self-regulation, and self-reflection toward the accomplishment of their goals (Bandura, 1997; Stajkovic & Luthans, 1998b). Symbolizing (e.g., creating mental pictures of products, processes, and outcomes that would be of interest to important stakeholders) can facilitate preparation for critical and challenging encounters. Forethought (e.g., anticipating proximal and distal milestones, accomplishments and potential obstacles) can enhance contingency planning, prioritization, and self-motivation when one takes a temporary emotional dive. Observation can facilitate learning from others, saving some of the time and energy involved in trial-and-error experiences. Self-regulation provides the initiative, proactiveness, and self-discipline necessary for confidence to materialize into actual productive behaviors that would lead to goal accomplishment, even when extrinsic motivators are lacking. Finally, self-reflection magnifies the positive impact of past experiences in terms of learning valuable lessons and applying them to future opportunities and challenges (for comprehensive descriptions, see Bandura, 1986, 1997, 2001; for practical examples of these cognitive processes, see Luthans, Youssef, et al., 2007a).

Self-efficacy, and its facilitating cognitive processes, can be developed and nurtured through mastery experiences, vicarious learning and modeling, social persuasion, and psychological and physiological arousal (Bandura, 1997, 2000; Maddux, 2002; Stajkovic & Luthans, 1998a, 1998b). Mastery experiences can occur through on-the-job training and similar hands-on approaches, with tasks gradually increasing in their level of difficulty to allow for more frequent opportunities for practice and success. However, where actual experiences of success are risky, costly, or unavailable, self-efficacy can be developed through modeling and vicarious learning from others' successful experiences. Formal training programs, and informal approaches such as mentoring or coaching, are very effective for building efficacy, especially when the trainee can perceive similarities and relevance with the role model and when the observed task is as similar as possible to the actual tasks to be mastered.

In addition to mastery and vicarious experiences, social persuasion through positive feedback, group support and encouragement, respect, and trust can develop efficacy. This can directly occur through the impact of these positive social influences in creating a can-do attitude and indirectly occur through causing psychological arousal, which in turn would promote positive cognitions and emotions that can broaden one's range of possible actions and help build intellectual, physical, social, and psychological resources (Fredrickson, 2001, 2003b). Physical well-being, which can be accomplished through adequate work–life balance, preventive health care, diet and exercise, and psychological well-being and happiness, has been found to be related to productive work (Quick & Quick, 2004; T. A. Wright, 2006; T. A. Wright & Cropanzano, 2000, 2004) and also self-efficacy. Thus, the development of self-efficacy can take place in training interventions and programs (e.g., Luthans, Avey, et al., 2006; Luthans, Avey, et al., 2007) and through simple, informal factors such as a supportive organizational culture and even through the incremental accumulation of unplanned life events (Avolio & Luthans, 2006; Luthans & Avolio, 2003) and their impact on one's experiences, physical health, and psychological well-being.

Hope as a State-Like Psychological Resource Capacity

Snyder, Irving, and Anderson (1991) define hope as "a positive motivational state that is based on an interactively derived sense of successful (1) agency (goal-directed energy) and (2) pathways (planning to meet goals)" (p. 287). Similar to self-efficacy, hope capitalizes on an individual's self-initiated, goal-directed motivations and behaviors. However, hope focuses on a different set of mechanisms through which goals are accomplished. One of these mechanisms or ingredients of hope is the sense of agency or internalized control that creates the determination and motivation (willpower) to accomplish one's goals.

A second component, unique to hope, is the process through which alternative pathways and contingency plans are created and adapted to achieve goals and overcome obstacles (waypower). Finally, hope involves the quality of goals being set and the mechanisms through which increasingly challenging goals are selected, approached, accomplished, and changed if necessary in light of additional evidence and new realities of the situation (Snyder, 1993, 1994, 1995a, 2000, 2002; Snyder, Ilardi, Michael, & Cheavens, 2000; Snyder, Rand, & Sigmon, 2002).

Critical to hope as a POB capacity is its state-like nature, which has been supported in its openness to development through recognized interventions. These interventions include goal-setting training, including stretch-goaling (setting challenging goals that are slightly beyond current reach), stepping (graduated mastery), and regoaling to avoid false hope (Snyder, 2000). Organizational cultures and initiatives that also encourage participation, creativity, contingency planning, and "out-of-the-box" thinking can enhance their participants' hope, especially their pathways thinking. On the other hand, when resources are limited, pathways can be restricted as well. Resources include not only financial allocations but also authority, empowerment, information, communication channels, and trust (Luthans & Jensen, 2002; Snyder, 1995a, 1995b; Snyder, Tran, et al., 2000; Veninga, 2000; Youssef & Luthans, 2006; for a comprehensive review, see, Youssef, Luthans et al., 2007a; for a highly focused micro-intervention strategy, see Luthans, Avey, et al., 2006). Valid and reliable measures of hope as a state have also been established (Snyder et al., 1996).

Finally, emerging research supports the relevance of hope to the workplace and its impact on performance outcomes. For example, recent empirical studies support a positive relationship between employee hope and performance and work attitudes (Youssef & Luthans, in press) and organizational profitability (Adams et al., 2002), between entrepreneurs' hope and their satisfaction with business ownership (Jensen & Luthans, 2002), between organizational leaders' hope and the profitability of their units and the satisfaction and retention of their employees (S. J. Peterson & Luthans, 2003), and between Chinese factory workers' hope and their supervisor rated performance and merit salary (Luthans et al., 2005). More generally, hope has been found to relate to performance in various domains, including academic and athletic achievement, physical and mental health, survival and coping beliefs and skills, and other desirable positive life and well-being outcomes (Curry, Snyder, Cook, Ruby, & Rehm, 1997; Kwon, 2000; Onwuegbuzie & Snyder, 2000; Range & Pentin, 1994; Scioli et al., 1997; Snyder, 2000). Theory building also continues to emerge regarding the performance impact of hope (Luthans, 2002a, 2002b; Luthans, Youssef, et al., 2007a; Luthans & Youssef, 2004; Youssef & Luthans, 2003) and its cross-cultural applications (Luthans et al., 2005; Luthans, Van Wyk, & Walumbwa, 2004; Youssef & Luthans, 2006).

Optimism as a State-Like Psychological Resource Capacity

Most often associated with the work of Martin Seligman, the recognized pioneer of the positive psychology movement, optimism can be viewed as an attributional style that explains positive events through personal, permanent, and pervasive causes and negative events through external, temporary, and situation-specific ones. On the other hand, pessimism externalizes positive events and attributes them to temporary and situation-specific causes while internalizing negative events and attributing then to permanent and pervasive ones (C. Peterson & Steen, 2002; Seligman, 1998). As a result of these attributional or explanatory style differences, optimists build positive expectancies that motivate their goal pursuit and approach coping behavior in the future, whereas pessimists are hindered by self-doubt and negative expectancies (Carver & Scheier, 2002).

Similar to self-efficacy and hope, optimism is created, motivated, and developed in relation to the pursuit of personally valuable goals. However, optimism adds an external dimension to what self-efficacy and hope primarily explain through an internalized, agentic perspective (Bandura & Locke, 2003; Snyder, Harris, et al., 1991). For example, the sources of an optimist's positive expectancies that promote a favorable view of the future may be the self, others, or external factors. Similarly, an optimist's interpretation of negative events primarily relies on externalizing and distancing himself or herself from failures. Moreover, unlike self-efficacy, which is domain specific, optimism utilizes generalized attributions, and unlike hope, optimism does not account for the pathways created and utilized for goal accomplishment (Luthans & Jensen, 2002; Scheier & Carver, 1985). In addition, although self-efficacy and hope are primarily cognitive in nature, optimism incorporates cognitive, emotional, and motivational components (C. Peterson, 2000; Seligman & Csikszentmihalyi, 2000). Finally, the discriminant validity of self-efficacy, hope, and optimism has been supported through several empirical studies (Bryant & Cvengros, 2004; Carifio & Rhodes, 2002; Luthans et al., in press; Magaletta & Oliver, 1999).

Optimism has been associated with a broad range of positive outcomes, including physical and psychological health, well-being, coping, and recovery (e.g., C. Peterson, 1999; Scheier & Carver, 1987, 1992; Scheier et al., 1989; Seligman, 2002). On the other hand, pessimism has been related to various negative outcomes such as depression and physical illness (e.g., C. Peterson & Seligman, 1984; C. Peterson, Seligman, & Vaillant, 1988). However, the debate continues regarding the unidimentionality, bipolarity, or independence of optimism and pessimism (e.g., see Peterson & Chang, 2002).

Particularly relevant to the inclusion of optimism in POB is its supported positive relationship with performance in various life domains (e.g., C. Peterson & Barrett, 1987; Prola & Stern, 1984), especially the workplace (Luthans et al., 2005; Luthans et al., in press; Seligman, 1998; Youssef & Luthans, in press). For example, optimistic Metropolitan Life Insurance agents have significantly higher performance than do their more pessimistic counterparts (Seligman & Schulman, 1986). Optimism has also been found to predict higher performance in sales, leadership, and others (e.g., Chemers et al., 2000; Schulman, 1999; Wunderley, Reddy, & Dember, 1998).

Also integral to the POB inclusion criteria is the developmental nature of optimism. Similar to hope, optimism may have a dispositional baseline (Scheier & Carver, 1987).

However, in the same way that helplessness (a conceptual opposite of an optimistic explanatory style) can be learned, an optimistic explanatory style can also be learned and developed (Seligman, 1998) through focused interventions (Carver & Scheier, 2002; Luthans, Avey, et al., 2006; Luthans, Avey, et al., 2007). A pessimistic explanatory style may develop over time because of either distorted or actual pessimistic attributions. These two types of pessimists can learn optimism in slightly different ways. For example, pessimists may habitually assume responsibility for unfavorable situations that are beyond their control or give credit to someone (or something) else for their own accomplishments. This type of pessimism can be refuted by identifying and challenging its underlying destructive assumptions and beliefs and replacing them with more positive and productive ones, which would result in a more realistic type of optimism (Schneider, 2001; Schulman, 1999). On the other hand, some people turn themselves into pessimists by setting unrealistic expectations and unattainable goals, thus positioning themselves where they would experience more failures than successes. This group can become more optimistic through learning more effective goal-setting strategies (Carver & Scheier, 2002).

It is also important to note that optimism may not always be an effective explanatory style, and pessimism should not necessarily be negatively viewed. In situations that require prudence, contingency planning, preventive measures, and redundant systems, which are typical of many organizational settings, it is necessary for participants to be able to adapt their style, alternating between optimistic and pessimistic explanatory styles, or what is referred to as "flexible optimism" (C. Peterson, 2000; Schulman, 1999). Realistic, flexible optimism simultaneously allows recognition of positive achievements in oneself and others and accountability and acceptance of responsibility for challenges and difficult situations.

Resiliency as a State-Like Psychological Resource Capacity

Luthans (2002a) defines resiliency as "the capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibility" (p. 702). Unlike traditional conceptualizations of resiliency as an extraordinary capacity that can only be observed and admired in highly unique individuals, the positive psychology and POB perspective on resilience is that it is a learnable capacity that can be developed in the most ordinary of people (Masten, 2001; Masten & Reed, 2002) and measured as state like (Luthans et al., in press; Wagnild & Young, 1993).

Instead of only portraying resilient individuals as exceptional case studies of those who somehow defy the laws of gravity associated with adversity, Coutu (2002) describes them as those who accept reality, strongly hold onto meaningful and stable values and beliefs, and possess effective adaptive mechanisms that allow them to flexibly improvise in response to unexpected situations. Similarly, Wolin and Wolin (2006) challenge the "damage model" and its underlying "risk paradigm," which establish preconceived notions based on a person's "at-risk" classification. These labels, and consequently the ways in which the person is treated by mentors and peers, can become self-fulfilling prophecies that can set that person up for success or failure, independently of the person's real ability to cope, adapt, and bounce back.

Despite its extensive theory building and applications in the clinical and developmental psychology literature (Block & Kremen, 1996; Bonanno, 2004, 2005; Cowan, Cowan, & Schulz, 1996; Huey & Weisz, 1997; A. J. Hunter & Chandler, 1999; Johnson et al., 1998; Kirby & Fraser, 1997; Masten, 2001; Masten & Reed, 2002; Richardson, 2002; Sandau-Beckler, Devall, & de la Rosa, 2002; Smith & Carlson, 1997; M. Stewart, Reid, & Mangham, 1997), resiliency is just emerging in the management literature. As a POB capacity, resiliency draws from these rich theoretical and clinical research and practice foundations, extrapolating where common themes exist and adapting where warranted by the discontinuities across contextual differences.

For example, there are established approaches for developing resiliency that have been recently shown to be applicable to the workplace. Masten (2001; Masten & Reed, 2002) outlines asset-focused strategies, risk-focused strategies, and process-focused strategies as effective approaches for building resiliency. Masten and Reed (2002) define an asset as "a measurable characteristic in a group of individuals or their situation that predicts a positive outcome in the future on a specific outcome criterion" (p. 76). Assets that are relevant to the workplace may include knowledge, skills, abilities, personality traits, and social relationships and support, all of which are predictive of higher performance. Asset-focused strategies emphasize building resiliency through enhancing one's asset inventories, thus increasing the probability of success.

On the other hand, risks or "vulnerability factors" (Kirby & Fraser, 1997) are those that cause an "elevated probability of an undesirable outcome" (Masten & Reed, 2002, p. 76). Work-related examples of risk factors may include stress, conflict, job insecurity, lack of communication and feedback, ineffective leadership, or counterproductive group dynamics. Risk-focused strategies decrease the probability of failure by eliminating or reducing as many risk factors as possible.

However, in line with the recognized developmental psychology literature (Egeland, Carlson, & Sroufe, 1993), POB resiliency is primarily viewed as a process rather than an outcome. In this process, assets and risks are combined in a nonlinear fashion. Rather than focusing on the variety, frequency, and intensity of assets and risk factors that one possesses, the adaptive employment of assets to effectively deal with risk factors and the accumulation, interaction, and sequence of risks being faced and assets being created, developed, and deployed become the determining factors for the outcomes of the resiliency process (Sandau-Beckler et al., 2002). Process-focused strategies attempt to enhance resilience by building effective coping mechanisms that can facilitate the utilization of various assets to overcome adversity.

On the other hand, several additional perspectives and adaptations of the developmental psychology conceptualizations of resiliency have made it even more relevant and applicable to the workplace. For example, although Masten and Reed (2002) define resiliency as "a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk" (p. 75), the POB definition also takes into account the need to bounce back even from positive but potentially overwhelming events such as greatly increased responsibility and accountability. These challenges may be viewed as threats by those who lack resiliency but as challenging opportunities by those who possess considerable resiliency.

Moreover, the primary emphasis of the established clinical psychology applications of resiliency is bringing individuals back to their normal level of performance. On the other hand, in today's competitive workplace, progress from deficient to average performance is rarely sufficient (Sutcliffe & Vogus, 2003). POB offers an expanded perspective on resiliency

that incorporates "bouncing back and beyond" so that adversities and setbacks become opportunities for learning, development, and flourishing (Bonanno, 2004; Reivich & Shatte, 2002; Ryff & Singer, 2003), or what positive psychologists are investigating as "posttraumatic growth" (e.g., Tedeschi, Park, & Calhoun, 1998).

In addition, although the possession of strong values and beliefs is critical for resiliency, these values and beliefs seem to take on different qualities and serve different functions in different contexts. For example, survival values may promote self-serving behaviors that may be critical in a military combat situation but that may not fit the needs and expectations for effective business leadership (Coutu, 2002). Values and beliefs draw their importance in building and sustaining resiliency from their stability over time. This is as applicable to organizations and their members as it is to individuals and groups in any other context (e.g., Weick, 1993). On the other hand, as a POB capacity, and also in line with the recent positive psychology conceptualizations of resiliency, the ethicality of those values has also been supported as an important dimension of resiliency (Avolio & Luthans, 2006; Luthans & Avolio, 2003; May et al., 2003; Richardson, 2002; Youssef & Luthans, 2005a).

Given the additional perspectives that positive psychology and POB assimilate into resiliency, it becomes evident that resilience cannot be limited to just a reactive capacity that is expressed in times of adversity. POB resiliency also incorporates a proactive dimension that promotes discrepancy creation even in the absence of external threats (Bandura & Locke, 2003). It allows adversities and setbacks to be viewed as opportunities for learning, growth, and development. It engages creative and flexible adaptive mechanisms, guided by ethical values and strong belief systems, toward the achievement of personally and organizationally meaningful goals. This type of resilience has been supported as a predictor of work-related outcomes and shown to be open to development and management in the workplace (Conner, 1993; Harland, Harrison, Jones, & Reiter-Palmon, 2005; LaMarch, 1997; Luthans, Avey, et al., 2006; Luthans, Avey, et al., 2007; Luthans et al., 2005; Luthans et al., in press; Luthans, Vogelgesang, & Lester, 2006; Reivich & Shatte, 2002; Vickers & Kouzmin, 2001; Waite & Richardson, 2004; Waterman, Waterman, & Collard, 1994; Zunz, 1998).

Psychological Capital or PsyCap

POB, with its criteria-meeting capacities of self-efficacy, hope, optimism, and resiliency, presents management researchers and practitioners with a high-potential source of competitive advantage to explore and on which to capitalize (Luthans, Youssef, et al., 2007a). However, recent preliminary and empirical findings across diverse samples support that these four positive psychological capacities may contribute more in combination and interaction in what is called PsyCap (Luthans et al., 2005; Luthans et al., in press). This PsyCap is comprehensively defined as

> an individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success (Luthans, Youssef, et al., 2007a, p. 3).

Several sources of interactive synergy may exist when PsyCap is conceptualized, measured, and developed through this integrated framework.

First, when PsyCap is portrayed as a multidimensional, latent core construct (see Law, Wong & Mobley, 1998), then it can draw from both within and across each psychological resource capacity. As a higher-order core factor, there is an underlying thread or commonality running through PsyCap that represents one's positive appraisal of the particular situation, the physical and personal resources available, and the probability of succeeding based on personal effort, upward striving, and perseverance (Luthans et al., in press). Allied support for this conceptualization of PsyCap as a higher-order core construct can be drawn from the psychological resource theories (see Hobfoll, 2002, for a comprehensive review). For example, multiple-component resource theories support build-out and contagion effects within the internal dimensions of constructs such as hope, efficacy, optimism, and/or resiliency (e.g., Antonovsky, 1979; Kobasa, 1979), whereas key resource theories also support interactive effects across such constructs (Cozzarelli, 1993; Rini, Dunkel-Schetter, Wadhwa, & Sandman, 1999; Thoits, 1994).

Empirical support for PsyCap as a core construct is emerging through testing the convergent and discriminant validity of two or more of PsyCap's constituent psychological capacities (Bryant & Cvengros, 2004; Carifio & Rhodes, 2002; Magaletta & Oliver, 1999) and specified models of PsyCap as a higher-order, core construct that underlies the four capacities that constitute it (Luthans et al., 2005; Luthans et al., in press). Such an approach is also consistent with the core self-evaluations model for four positive traits developed by Judge and colleagues (Judge & Bono, 2001; Judge et al., 2005), the four dimensions that make up the core of transformational leadership (Avolio, Bass, & Jung, 1999), and an empowerment core also comprised of four elements (Spreitzer, 1995).

Second, the contribution of PsyCap as a core construct is being conceptually supported by building out from the notions of traditional economic/financial capital and, more recent, human and social capital (Adler & Kwon, 2002; Coleman, 1988; Luthans, Luthans, et al., 2004; Luthans & Youssef, 2004; R. M. Wright & Snell, 1999). Through this perspective, PsyCap is proposed to build-out and add value to what you already have (e.g., financial capital), what you know (human capital), who you know (social capital), and challenging and promoting the development of who you are today (the actual self) into what you can become in the future (the possible self). Preliminary research has found, at least as related to work attitudes, that PsyCap does add value to both human and social capital (Larson & Luthans, 2006).

To date, a 24-item measure of PsyCap has been developed (Luthans, Youssef, et al., 2007a) and is being tested for its psychometric properties and nomological network for validity (Luthans et al., in press). In addition, a highly focused PsyCap development intervention has been designed and tested and was found to significantly increase managers' and employees' PsyCap levels in a variety of samples (Luthans, Avey, et al., 2006; Luthans, Youssef, et al., 2007a). Importantly, preliminary research also shows that PsyCap development interventions may have performance impact on the participants (Luthans, Avey, et al., 2007), and manipulating perceptions of leaders' PsyCap can result in other desirable outcomes such as increased trust and higher evaluations of leadership effectiveness (Norman, Avolio, & Luthans, 2007).

Besides efficacy, hope, optimism, and resilience, several other high-potential positive psychological capacities have also been considered for inclusion in PsyCap (Luthans, Youssef,

et al., 2007a). The inclusion criteria of being theory and research based, measurable, developmental, and manageable for performance impact in the workplace are again the primary determining factors for whether a specific positive capacity qualifies for potential inclusion in this version of POB and PsyCap. The cognitive capacities of creativity and wisdom, the affective capacities of subjective well-being, flow, and humor, and the higher-order capacity of authenticity seem to meet most of the PsyCap inclusion criteria (Luthans, Youssef, et al., 2007a). In addition, the more social positive capacities of gratitude, forgiveness, and emotional intelligence and the higher-order capacities of spirituality and courage are still being explored regarding their fit with the inclusion criteria (Luthans, Youssef, et al., 2007a). Similar to our previous discussion and how C. Peterson and Seligman (2004) treat their classification of characteristics and virtues in positive psychology, this categorization of POB and PsyCap is considered open for further development and inclusion of still other criteria-meeting positive capacities rather than being a closed taxonomy (Luthans, Youssef, et al., 2007a).

Finally, despite only emerging, PsyCap research already spans a variety of settings, contributing to its external validity. Specifically, preliminary research has found that PsyCap is related to performance and satisfaction in both high-tech manufacturing and service employee samples (e.g., Luthans et al., in press). Some cross-cultural PsyCap research has also taken place in China (Luthans et al., 2005), in addition to the efficacy component in Southeast Asia (Luthans, Zhu, et al., 2006) and Central Asia (Luthans & Ibrayeva, 2006). Also, the implications for PsyCap have been analyzed with diverse populations such as immigrant entrepreneurs (Youssef & Luthans, 2003), in addition to the hope component of organizational leaders in Africa (Luthans, Van Wyk, et al., 2004) and the Middle East (Youssef & Luthans, 2006).

Positive Organizations

A positive approach to selection, development, and management of human resources in organizations has been emphasized by both scholars and professionals over the years. A wide variety of positively oriented high-performance work practices in placement, compensation, and motivation and their underlying strategies, structures, and cultures have also been extensively studied and supported for their contributions to organizational performance and competitiveness (e.g., Huselid, 1995; Pfeffer, 1998).

Research and consulting by the Gallup Organization also supports the importance of positive, strength-based organizational cultures and human resource practices (Buckingham & Clifton, 2001; Buckingham & Coffman, 1999; Wagner & Harter, 2006). For example, factors such as effective selection and placement practices that capitalize on employees' talents, clear and aligned goals and expectations, social support and recognition, and opportunities for growth, development, and self-actualization have been found to significantly contribute to employee engagement, customer satisfaction, and ultimately organizational profitability and growth (Harter et al., 2002; Harter, Schmidt, & Keyes, 2003).

On the academic side, the positive organizational scholarship or POS movement has been instrumental in providing macro-level scholars with a conceptual framework for organizing and integrating their research on positive organizations (Cameron et al., 2003). In this framework, POS is defined as

> the study of that which is positive, flourishing, and life-giving in organizations. Positive refers to the elevating processes and outcomes in organizations. Organizational refers to the interpersonal and structural dynamics activated in and through organizations, specifically taking into account the context in which positive phenomena occur. Scholarship refers to the scientific, theoretically derived, and rigorous investigation of that which is positive in organizational settings (Cameron & Caza, 2004, p. 731).

Thus, as seen in this definition, POS is in line with other positive approaches such as positive psychology, POB, and PsyCap in its positivity and scientific rigor but is distinguished from these other positive approaches in its more organization-level orientation. Also unique to POS is its utilization of diverse qualitative and quantitative research methodologies. Similar to POB and PsyCap, but different from positive psychology, the primary emphasis of POS is the workplace and the accomplishment of work-related outcomes.

Several characteristics of positive organizations stem from the positivity of the participants (i.e., their traits, states, and/or behaviors). However, a group of positive individuals may not necessarily add up to a positive team, operating unit, or organization. For example, Kanov et al. (2004) argue that although organizational compassion shares many of the characteristics of individual compassion, including noticing, feeling, and responding to the pain of others, in organizational compassion these processes become collective in nature. These collective cognitions, emotions, and actions are legitimated, promoted, and coordinated by factors (e.g., values, norms, policies, and practices) that exist in the organizational context in which they take place. These collective cognitions and factors cause them to be manifested in ways that are different from isolated incidents of individual compassion (Kanov et al., 2004).

Parallel distinctions can be made between several seemingly similar organizational- and individual-level constructs. For example, organizational virtuousness can facilitate, enable, and even engender individual level virtuousness. This is accomplished through factors beyond the individual members' actions, to include "collective activities, cultural attributes, or processes that enable dissemination and perpetuation of virtuousness in an organization" (Cameron, Bright, & Caza, 2004, p. 768). Importantly, this virtuousness has been found to relate to organizational performance (Cameron et al., 2004). Likewise, organizational resiliency may be promoted through organizational-level asset-focused strategies, risk-focused strategies, process-focused strategies, and values that can meaningfully guide and trickle down to enhance unit and individual resiliency (Youssef & Luthans, 2005b). A humanistic work ideology, including compassion, virtuousness, resiliency, and other similar positive characteristics, can equip organizations with the dynamic capabilities necessary for adaptability and responsiveness to environmental changes using strategies that would add value through human capital (Wooten & Crane, 2004).

To further elaborate on the contributions of positive organizations being beyond those of their individual members, collective efficacy can be used as a case in point. Unlike self-efficacy, collective efficacy does not necessitate perceptions and beliefs of personal mastery for a given task and context but rather the "group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments" (Bandura, 1997, p.477). The integrated team is the referent for such collective efficacy. Thus, it is becoming evident that in today's work environment, characterized by interdependence and

teamwork, positive organizations are critical in building the necessary context for positive traits to be selected, for positive states to be developed and managed, and for positive behaviors to be exhibited, recognized, and promoted. We now give attention to these positive behaviors.

Resultant Positive Behaviors

Given the competitiveness of today's environment, it is essential for the impact of positive traits, states, and organizations to manifest themselves in terms of tangible, measurable behaviors that can have direct performance impact. In this final section, we review several representative emerging types of positive behaviors that can be predicted and explained by actual and potential intersections between positive individual traits and states and positive organizational characteristics. Many of these positive behaviors can be grouped under the umbrella of "positive deviance," which Spreitzer and Sonenshein (2004) define through a normative approach as "intentional behaviors that depart from the norms of a referent group in honorable ways" (p. 832). Related to although somewhat distinct from this construct of positive deviance are representative positive behaviors such as organizational citizenship behavior (OCB) and courageous principled action.

OCB can be defined as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988, p. 4). Dimensions of OCB include altruism, conscientiousness, civic virtue, sportsmanship, and courtesy (Brief & Motowidlo, 1986; Podsakoff, MacKenzie, Moorman, & Fetter, 1990; for a critical meta-analytical review, see also LePine, Erez, & Johnson, 2002). OCB can be predicted through positive personality traits, positive attitudes, and motivation (Organ & Ryan, 1995) and positive institutional characteristics such as organizational support and procedural justice (Moorman, Blakely, & Niehoff, 1998). Recent empirical studies support the interaction between individual-level positive personality traits and states in predicting both the frequency and consistency of engaging in OCBs (Ilies et al., 2006).

Courageous principled action occurs "when people must draw upon their intuitive, emotional, interpersonal, and cognitive resources in order to undertake actions in line with the highest goals of the organization but not part of the accepted routine or status quo" (Worline & Quinn, 2003, p. 145). In addition to the contributions of individual traits and states, various organizational factors such as the form or design have been proposed as enablers or constraints of courageous principled action. For example, the dominant values and emphasis of organizations in market economies on ambition, competition, efficiency, and initiative may necessitate courageous principled action that challenges the status quo by promoting values such as loyalty, trust, honesty, and integrity. Whistle-blowing is an example of courageous principled action that seeks the organization's long-term interests of maintaining a positive reputation but that may challenge the organization's status quo in the short-run, exposing the courageous actor to many immediate risks such as social disapproval or job loss (Miceli & Near, 2005).

In addition to specific resultant behaviors such as OCBs and courageous principled actions, several mechanisms through which positivity can affect observable behaviors have also been recently proposed. For example, in Fredrickson's (2001) broaden-and-build model,

positive emotions help build intellectual, physical, social, and psychological resources. Especially the psychological resources can expand one's potential courses of action and help build a cushion and buffering mechanisms that can facilitate resilient bouncing back in times of adversity and when negative emotions are experienced in the future. In addition, positive emotions can exhibit upward spirals, contagion effects, and individual-organizational exchanges. This positivity has been found to expand these effects beyond the individual level to the group and organizational levels and the behavioral intentions and activated instrumental behaviors that result (Bagozzi, 2003; Fredrickson, 2003a).

Recent empirical studies also support this increasing contribution of positivity to desirable work-related outcomes. For example, using Fredrickson's broaden-and-build model, T. A. Wright, Cropanzano, and Bonett (in press) found that psychological well-being moderates the relation between job satisfaction and job performance. This finding may account for the inconsistent results of previous studies solely focusing on the job satisfaction–job performance relationship to explain the happy–productive worker thesis. More specifically, job performance was highest when employees reported high scores on both psychological well-being and job satisfaction. In another study, based on Hobfoll's (2002) conservation of resources model, management personnel were found to be most likely to turn over when both their psychological well-being and their job satisfaction were low (T. A. Wright & Bonett, in press), providing further support for the nonadditive contribution of those two factors to work-related outcomes.

Similarly, in the emerging authentic leadership development literature, authentic leaders are developed through the concerted contributions of life experiences and stable personality traits, positive psychological states, and a supportive, developmental organizational climate. Authentic leaders in turn engage in behaviors that build their associates' authentic leadership and followership capacities and that are transparent, moral, ethical, and future oriented (Avolio & Luthans, 2006; Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Luthans & Avolio, 2003; Luthans, Norman, & Hughes, 2006; May et al., 2003). For example, authentic leaders' self-transcendent values, positive cognitions, and positive other-directed emotion may interactively promote positive, self-transcendent organizational behaviors. This perspective stands in stark contrast to traditional negative views of emotions in leadership as manipulative or counterproductive (Michie & Gooty, 2005). However, a leader's authenticity and ability to exhibit self-transcendent behaviors are also deeply rooted in self-awareness, person-role congruence, and self-concordant goals and the ability to authentically articulate such a perspective in ways that are inspiring and constructive to oneself and others (Shamir & Eilam, 2005; Sparrowe, 2005). In other words, authentic leadership and its development can offer another untapped positive resource that can result in upward spirals of positive change across various organizational levels.

Conclusions and Future Directions

As reflected in the title of this review article, the current status of the theory, research, and practice of POB is still emerging. However, as indicated, significant progress is being made. As with any new domain of inquiry, only through further theory building and research can

POB be better understood and fully utilized for performance impact. In our concluding comments, we propose a roadmap for further progress in the journey of better understanding and effective application of POB.

First, as discussed at different points throughout this review article, an integrated theoretical framework, along with a comprehensive, but open, classification of positive traits, state-like capacities, organizations, and behaviors should be the ultimate goal. This comprehensive approach necessitates studies that concurrently test the relative contributions of each of those influences and the interactions among them (e.g., see G. Chen, Gully, Whiteman, & Kilcullen, 2000; Ilies et al., 2006). This proposed positivity framework would also require the investigation, application, and integration of nontraditional or understudied positive psychological capacities and a multidisciplinary approach to draw from the relevant literature in other fields of study. This suggestion could follow the approach adopted in POB, POS, and PsyCap in relation to resiliency (Youssef & Luthans, 2005b). Including the characteristics of positive organizations in such a framework would also pose challenges that are common to multilevel research, such as small sample sizes, methodological complexities, and rater-induced biases (e.g., see Klein & Kozlowski, 2000; LeBreton, James, & Lindell, 2005).

Second, because valid and reliable measurement represents the core and prerequisite of scientific inquiry, it is necessary to continually refine existing measures of positive constructs, and to develop others that are specific and valid for the workplace. Our recently developed 24-item PsyCap Questionnaire may serve as an example for such measurement (Luthans, Youssef, et al., 2007a; Luthans et al., in press). However, as more positive capacities are added to PsyCap, and as the integrated perspective described above is developed over time, more comprehensive and elaborate measures will be necessary. These measures may also need to integrate both quantitative and qualitative methodologies to capture some of the promising constructs and mechanisms that may be difficult to assess through traditional survey measures.

Third, the external validity of POB constructs should be tested in a wide variety of settings. Comparisons can facilitate extrapolations from existing findings and further understanding of these positive constructs' contextual applicability and situational limitations. For example, PsyCap constructs have been found applicable in cross-cultural (Luthans et al., 2005; Luthans & Ibrayeva, 2006; Luthans, Zhu, et al., 2006) and entrepreneurial settings (Jensen & Luthans, 2006; Luthans & Ibrayeva, 2006). To date, many questions remain unanswered regarding the applicability of POB to other contexts such as organizations of various sizes, in a variety of industries, and in virtual business environments.

Fourth, positivity researchers and practitioners should not take for granted the common but often mistaken assumption that related positive and negative constructs are extreme ends of a continuum. For example, C. Peterson and Chang (2002) argue against the linear unidimensionality of optimism and pessimism despite their negative correlation. They contend that to assert whether optimism and pessimism are unidimensional, bipolar, or independent, more comprehensive studies are needed, in which a wider range of positive and negative outcomes can be investigated. Similarly, Lee and Allen (2002) report only a moderate negative correlation between OCB and negative deviance. A more comprehensive approach is needed. Specifically, both positive and negative constructs and their broad spectrum of outcomes need to be studied. This can result not only in a broader perspective and better understanding of

various positive constructs but also may facilitate the development and refinement of their measures and uncover potential nonlinear and interactive mechanisms.

Finally, a challenge that faces not only positivity research but also organizational behavior research in general is the accurate, objective and comprehensive measurement of performance and performance change (Dess & Robinson, 1984). Several approaches have been suggested to help overcome this challenge, the most common of which is integrating a broader range of performance-related attitudinal outcomes (Chakravarthy, 1986). This broadening with attitudinal outcomes has been supported as a more effective approach to holistically capture overall performance and effectiveness (Harter et al., 2002; Harter et al., 2003), and its relevance to positivity research has been recently highlighted (Roberts, 2006; Youssef & Luthans, in press). Others have suggested incorporating a variety of subjective, self-reported, and other-reported measures, with varying degrees of success (for a comprehensive review of potential problems and remedies for this approach, see Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This performance measurement challenge is far from being resolved. Creativity and comprehensiveness in collecting and integrating multiple measures should help bring researchers closer to accurately and validly measuring a variety of outcomes of interest in organizational behavior in general and positive research in particular.

In total, the POB journey does seem to be off to a good start. The vision of the destination of unique competitive advantage through people seems worth a long and arduous trip through more theory building, research, and effective application.

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Careers: Mobility, Embeddedness, and Success

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This article proposes refinements of the constructs of career mobility and career embeddedness and reviews the array of factors that have been found to energize (discourage) employees to change jobs, organizations, and/or occupations. The article also reviews the literature on career success and identifies which types of mobility (and embeddedness) are most likely to lead to objective career success (e.g., promotions) and subjective career success (e.g., career satisfaction). In the final section, the article revisits the utility of viewing careers as "boundaryless" and suggests alternative frameworks for future research on these topics.

Keywords: *careers; mobility; embeddedness; career success; boundaryless careers; job change; career change; career development; career management*

During the past decade, careers researchers have paid a great deal of attention to the topic of career mobility (Ng, Eby, Sorensen, & Feldman, 2005). To a considerable extent, this research emerged in response to a confluence of major changes in global and local labor markets (Sullivan, 1999). Increased competition from emerging economies with cheaper labor and raw materials resulted in more "off-shoring" of operations. Rapid increases in health insurance costs and pension liabilities created incentives for companies to replace full-time, permanent workers with temporary or part-time employees. The employment security of managers in large corporations declined in response to a lengthy period of mergers, acquisitions, and downsizings in major industries (Hirsch & Shanley, 1996). Moreover, as the shape of nuclear families changed, employees sought out new employment opportunities

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that better fit their changing personal circumstances (Kirchmeyer, 2006). In *The Boundaryless Career* (1996), Arthur and Rousseau not only synthesized the previous decade's research on the changing career landscape but also urged researchers to pay more attention to these new labor market realities in the future.

Several trends in careers research emerged during the past 10 years as a result of this focus on boundaryless careers. Careers research has concentrated much more heavily on career transitions than on career stability (Eby, Butts, & Lockwood, 2003; Lee, Mitchell, Sablynski, Burton, & Holtom, 2004). In addition, careers researchers have explored attitudes toward mobility and perceptions of mobility opportunities in more depth than actual mobility itself. Furthermore, during the past decade, careers researchers have concentrated much more on the inevitability of career change and its benefits than on its infrequency and its drawbacks (Eby, 2001; Feldman, 2002b). The aim of this article, then, is to reawaken interest in alternative perspectives on the role of career mobility in career success. Specifically, the present article has four goals.

First, we seek to clarify and refine the constructs of career mobility and career embeddedness. It is often unclear in the literature how much of a change in employment status is needed to qualify as a "career change." Along similar lines, the embeddedness literature is sometimes unclear because of level-of-analysis problems, as some levels of embeddedness (such as occupational embeddedness) may subsume others levels of embeddedness as well (such as job embeddedness).

Second, we review the literature on the forces that contribute to career mobility. Here, we examine the research on labor market, occupational-level, organization-level, group-level, personal life, and individual-difference factors that contribute to employee mobility. We also examine the differential effects these factors have on job embeddedness, organizational embeddedness, and occupational embeddedness.

Third, we review the recent research on the relationships between career mobility/career stability and career success. The term *career success* has become a catchall signifier for widely disparate measures of achievement, ranging from very specific measures of salary increases to very general measures of psychological well-being (Hall, 1976; Ng et al., 2005). Here, we synthesize previous work on how different types of mobility (and different types of embeddedness) influence *objective* measures of career success (such as pay raises) and *subjective* measures of career success (such as job satisfaction or job involvement).

In the fourth and final section of the article, we reconsider the construct of boundaryless careers and suggest ways in which the construct can be refined to make it more useful in future empirical research. Indeed, the term *boundaryless careers* has been used in so many ways in so many different contexts that it is now difficult to determine whether the term refers to the permeability of labor markets, the degree of actual mobility in individuals' careers, or individuals' perceptions and attitudes toward mobility. In addition, we highlight avenues for future research and potential implications of mobility/embeddedness research for management practice.

Refining Key Constructs

Mobility

The construct *career mobility* has been used in multiple ways by multiple authors to include everything from changing jobs to changing organizations to changing occupations.

By subsuming so many kinds of changes within one construct, important differences (e.g., individuals' motivation to change, ability to change, and adjustment to change) often get overlooked. Here, we suggest that it would be more constructive to focus on specific differences among job change, organizational change, and occupational change.

Job change refers to any substantial changes in work responsibilities, hierarchical levels, or titles within an organization. It includes internal promotions, transfers, and demotions.

In contrast, *organizational change* refers to any change in the employing firm. Organizational changes can be independent of job changes (i.e., an employee can go from selling Hondas to selling Toyotas) or involve job changes, too (i.e., an employee goes from selling cars for Honda to sales management for Toyota). For this reason, then, it is critical to specify whether or not organizational changes also entail job changes (Schniper, 2005).

Because the term *career mobility* has been used generically to refer to almost any kind of change in job duties, the degree of change across job transitions has been hard to track. Here, we argue that the term *occupational change* should be used to refer to transitions that require fundamentally new skills, routines, and work environments and require fundamentally new training, education, or vocational preparation (Feldman, 2002a). The connotations of the term *career change* in popular parlance imply major shifts in training required, job responsibilities, and work environments, but the term in scholarly writing includes changes both large and small. Hence, use of the term *occupational change* more precisely conveys when a *major* transition in career paths occurs.

Embeddedness

As we noted earlier, only recently have researchers begun to pay more attention to questions about why people stay in their jobs, organizations, and occupations even when other (and better) opportunities are available elsewhere. Beginning largely with the work of Mitchell, Holtom, Lee, Sablynski, and Erez (2001), there is now increased interest in the construct of embeddedness, namely, the totality of forces that keep people in their current employment situations.

Mitchell, Holtom, Lee, Sablynski, et al. (2001) suggested that the forces toward *job embeddedness* are threefold: fit, links, and sacrifice. Fit is the extent to which a person's job meshes with, or complements, other areas of his or her life. Links refer to the extent of an individual's ties with other people and activities at work. Sacrifice refers to the ease with which these links can be broken (i.e., what people would have to give up if they left their current positions). The greater the fit, the number of links, and the degree of sacrifice, the greater the forces toward job embeddedness will be (Holtom & O'Neill, 2004).

In the embeddedness literature, there has been some ambiguity between the constructs of job embeddedness and *organizational embeddedness*. Because embeddedness in a particular job essentially embeds an individual in the current organization, too, Mitchell, Holtom, Lee, Sablynski, et al. (2001) did not differentiate job embeddedness from organizational embeddedness in much detail. Ng and Feldman (in press) note, though, that whereas job embeddedness implies organizational embeddedness, organizational embeddedness does not necessarily imply job embeddedness; certainly, interjob mobility within an organization is possible, too. Thus, although there is often overlap between job and organizational embeddedness in practice, they are conceptually different constructs.

We suggest here that there is also a third type of embeddedness that has largely been overlooked in the literature, namely, *occupational embeddedness***.** We define this term as the totality of forces that keep people in their present occupations. As with job embeddedness, the forces toward occupational embeddedness are fit, links, and sacrifice. Fit refers to the extent to which people's occupations are similar to (or complement) other aspects of their lives. Links refer to the extent to which individuals have ties to other people and activities in the occupation. Sacrifice is the ease with which links can be broken—what people would have to give up if they changed occupations.

In sum, then, just as there are different degrees of mobility, there are different degrees of embeddedness as well. Individuals can be enmeshed in their present occupations without being embedded in any particular organization, and individuals can be enmeshed in their present organizations without being embedded in any particular job.

Career Success

Over time, researchers on careers success have consistently differentiated the "objective career" from the "subjective career" (Ng et al., 2005). Measures of *objective career success* are typically external indicators of career advancement or the accumulation of extrinsic rewards. They include the highest level of education or hierarchical level attained, highest salary earned, rate of movement up an organizational ladder, and badges of accomplishment (e.g., professional honors) (Seibert, Kraimer, & Liden, 2001). Measures of *subjective career success* are typically attitudes, emotions, and perceptions of how individuals feel about their accomplishments rather than the objective amount of achievement. Here, researchers have examined such variables as job satisfaction, organizational commitment, and professional identification (Hall, 1976; Judge, Cable, Boudreau, & Bretz, 1995).

As we will discuss in the next sections, different types of mobility and embeddedness are related to different types of career success. For example, occupational mobility can be positively related to subjective career success (like job satisfaction) but be negatively related to objective career success (because changing occupations often entails starting over at a lower hierarchical or salary level). Likewise, frequent organizational mobility may result in faster promotions and greater compensation but is less likely to result in deep organizational commitment.

Six Perspectives on Mobility and Embeddedness

In the previous research on mobility and embeddedness, six perspectives have been used to discover which factors motivate employees to seek out new employment opportunities and/or tether employees to their current career paths (Ng, Sorensen, Eby, & Feldman, in press). From the most macro to the most micro level of analysis, these perspectives consider the roles of (a) structural labor market factors, (b) occupational labor market factors, (c) organizational policies and procedures, (d) work group-level factors, (e) personal life factors, and (f) personality and personal style differences.

Structural Perspective

The structural perspective suggests that employees' mobility or embeddedness is largely determined by structural factors in the labor market. Sociologists have long suggested that mobility is vacancy-driven; that is, mobility at the individual level is motivated (or discouraged) by the quantity and quality of the jobs available in the overall labor market (DiPrete, De Graaf, Luijkx, Tahlin, & Blossfeld, 1997; Fujiwara-Greve & Greve, 2000; Haveman & Cohen, 1994). Here we focus on the two dominant groups of structural factors that have been posited as major influences on the labor market, namely, macroeconomic conditions and the social and legal environment.

Macroeconomic conditions. Economic conditions influence the expansion or downsizing of firms (DiPrete, 1993; DiPrete & Nonnemaker, 1997). In a growing economy, firms are likely to expand both vertically and horizontally, thereby creating more opportunities for both promotions and internal transfers to new units (Inkson, 1995). There are also differences in the level of regional economic development that create geographic disparities in mobility opportunities. Because of more conducive climates or more plentiful natural resources, some regions experience greater economic development than others (VanHam, Mulder, & Hooimeijer, 2001). In addition, for a variety of political reasons, governments sometimes choose to devote greater resources to the economic development of particular cities or areas. Thus, regions with either historical economic advantages or government-supported initiatives (e.g., free trade zones) generate more opportunities for mobility as well.

Economic conditions may also influence people's attitudes toward mobility and their perceptions of mobility opportunities. For instance, Feldman (2002c) suggested that perceptions of favorable economic conditions increase young adults' aspirations for more fulfilling work and their parents' willingness to pay for more schooling. On the other hand, a weak economy may make individuals more risk-averse and unwilling to leave whatever jobs they do have, even if those jobs are unsatisfying (Leana & Feldman, 1994).

Social and legal environment. There are numerous examples of how the social environment can affect individuals' career mobility. For instance, Rosenfeld (1992) observed that the implementation of diversity programs led to increased upward mobility for female and racial minority employees in the public sector. In the private sector, promotion of diversity has also been positively associated with greater mobility for minority group members (Fujiwara-Greve & Greve, 2000).

Public policies affect opportunities for job mobility (DiPrete et al., 1997; Kruger, Eck, & Vermeulen, 2001), too. For example, those that strengthen the solvency of company pension plans tend to reduce mobility to other firms (Buchmueller & Valletta, 1996). On the other hand, benevolent policies toward the unemployed (e.g., extended unemployment subsidies) may contribute to individuals' being more selective about which jobs they will accept and more willing to experience long unemployment to find the best available jobs for themselves in the labor market.

Occupational Perspective

Gender composition. As Rosenfeld noted, "Differences among types of firms, industries, and occupations in their job rewards, career ladders, and employment relationships should affect the job shifts underlying careers" (1992:48). A prime example of this phenomenon is occupational segmentation by gender (e.g., Bygren, 2004). For example, women are overrepresented in jobs that are clerical and service-oriented in nature but are underrepresented in engineering and the physical sciences. Furthermore, the gender distribution *within* an industry also influences mobility opportunities. Maume (1999) observed that women who work in male-dominated occupations also have more difficulty moving up the hierarchy, presumably because of gender bias. In addition, in male-dominated occupations, women may also have less access to opportunities for job development and mentoring (Lai, Lin, & Leung, 1998; Ohlott, Ruderman, & McCauley, 1994).

Wage levels. Hachen (1992) performed a comprehensive study of the relationships between wage level and job mobility. He found that quit rates, intrafirm mobility rates, and upward mobility rates were lower in high-wage industries. Hachen reasoned that, because interfirm wage differences in high-wage industries are relatively small, the gain from external mobility would be minimal. Along similar lines, Hammida (2004) found that workers earning high wages change jobs less frequently than workers earning low wages.

Labor intensity. Leana and Feldman (1994) observed that labor-intensive industries (e.g., steel production) have higher involuntary exit rates and lower intrafirm mobility rates. In labor-intensive industries, reduction of labor costs is a major concern, and companies aggressively pursue cutting those costs by layoffs and plant closings. Also, in declining labor-intensive industries (like auto manufacturing), even opportunities to engage in intrafirm mobility tend to be lower.

Industry growth. Hachen (1992) found that the effects of industry growth on job mobility depended on whether growth occurred through the emergence of new firms or the growth of existing firms. The emergence of new firms increases external mobility because individuals have more alternatives in the labor market. When industry growth is fueled by increases in firm size, greater opportunities for upward internal mobility increase. As more units and departments are added, additional layers in the organizational structure (and hence more opportunities for hierarchical advancement) are added, too (Schniper, 2005).

*Degree of change in occupational responsibilities***.** In occupations that have experienced a high degree of change in activities and routines over time, individuals' disenchantment with, and their willingness to exit from, their current occupations is likely to be stronger. For example, many young adults became high school teachers in the 1960s and 1970s because of their enthusiasm for working with children and sharing their knowledge. Over the years, many of them left teaching because they worked in buildings with metal detectors, were alarmed by violence in their schools, and were hamstrung by state and federal regulations on how and what they could teach (Feldman, 2002a, 2002b). The relationship between degree

of change in routines and mobility can also be explained from an embeddedness perspective. Specifically, in occupations where activities and routines have changed substantially over time, the initial equilibrium of fit, links, and sacrifice is disrupted as well.

Human capital investments. Investments in generalizable occupational skills (skills that are easily transferable across organizations within an industry) tend to increase individuals' job mobility within the same occupation or industry (Fulgate, Kinicki, & Ashforth, 2004). On the other hand, generalizable skill investment may decrease job mobility across occupations because developing skills for a new occupation would entail a considerable sacrifice of time and money invested in training for the previous career (Ng & Feldman, in press). The amount of human capital investment in an occupation, then, is likely to be positively associated with mobility within an occupation but negatively related to mobility to different occupations. It is for this reason, for example, that we see greater occupational out-migration from public-school teachers than from university professors, but greater organizational mobility among professors than among public-school teachers.

Occupational networks. Social ties within occupational networks may also embed individuals in their current vocations. Individuals often seek to establish their self-concepts by identifying heavily with those whom they see as similar to themselves (Stryker & Burke, 2000). During the initial period of occupational socialization, new entrants have numerous opportunities to interact intensely with groups of colleagues who have interests and values similar to their own. Once individuals come to identify with others in an occupation and their self-concepts are defined, there is more psychological resistance to changing career paths (Allen, 2006). Moreover, because occupational networks often span multiple organizations (De Janasz & Sullivan, 2004), an individual's ties to an occupation are likely to be stronger (and therefore more embedding) than his or her ties to a particular organization.

Rigidity and permeability of occupational mobility structures. Finally, whether the occupation is characterized by rigid or permeable mobility structures can also influence individuals' mobility or embeddedness. Some occupations have higher barriers to entry than others (e.g., surgery and professional sports). Consequently, in-migration to these occupations is difficult even under favorable macroeconomic conditions. In contrast, other occupations are much easier to leave and reenter independent of societal trends. For example, in the latest available labor statistics on occupational mobility, Schniper (2005) reported that food service workers had the highest levels of occupational mobility, whereas architects, engineers, and lawyers had the lowest incidence of occupational mobility.

Organizational Perspective

There are many determinants of employees' mobility or embeddedness that operate at the organizational level (Malos & Campion, 2000). Below, we focus on the factors most frequently investigated in this literature: organizational staffing and compensation policies, the structure of pension and insurance benefits, intraorganizational networks, and socialization practices.

Organizational staffing and compensation policies. Sonnenfeld and Peiperl (1988) suggested that the staffing policies chosen by an organization partially determine the availability of internal mobility options for its employees. They propose that organizations' staffing policies may be arrayed along two major dimensions: openness of internal labor markets and internal cohort competition. Those organizations high on *openness of internal labor market* actively recruit from outside the firm to fill positions. Conversely, those low on this dimension focus on internal job postings. Organizations high on *cohort competition* emphasize internal, merit-based competitions for promotions. In contrast, organizations without such an emphasis are likely to use seniority as a criterion instead. On the basis of these two dimensions, Sonnenfeld and Peiperl (1988) divided organizations into four generic types: baseball teams, clubs, academies, and fortresses. Some empirical support has been found for this typology using different samples (Baruch & Peiperl, 2003; Sturges, Guest, Conway, & Davey, 2002).

Along the same lines, organizations' compensation policies also affect mobility and embeddedness. For instance, if an organization implements a "winner-takes-all" or "star" reward system, a few high-performing employees may become embedded by spectacular salaries, but others have much lower incentives to stay (Hirsch & Shanley, 1996; Hurley, Wally, Segrest, Scandura, & Sonnenfeld, 2003; Pil & Leana, 2000).

Structure of pension and insurance benefits. The structure of pension and insurance benefits may also act to influence individuals' job mobility or embeddedness, particularly in late career (Kim & Feldman, 1998, 2000). Perceived lack of sufficient retirement benefits embeds individuals in work. Whether that work takes place in the current organization or a different organization, though, depends heavily on the type of pension plan itself. Particularly in firms with fixed-benefit pension plans, continued membership in the current organization is critical to upping monthly pension benefits (via accrual of additional years of service). This observed relationship is also consistent with research on organizational commitment, which suggests that when individuals' "side bets" are high, their intentions to leave their organizations are low (Powell & Meyer, 2004).

Intraorganizational networks. Many organizational researchers have paid attention to how social networks of individuals affect work attitudes and behaviors (Davern & Hachne, 2006). For instance, when individuals begin their careers, they often actively network with colleagues (Ayree, Wyatt, & Stone, 1996; Jokisaari & Nurmi, 2006). Such ties serve as sources of information about norms and expectations, emotional support, and task assistance (Seibert et al., 2001). Productive mentoring relationships serve to provide much the same functions and yield similar benefits (Noe, Greenberger, & Wang, 2002).

Moreover, these early links may help embed individuals in their organizations over extended periods of time (Coyle-Shapiro & Morrow, 2006). Initially superficial relationships can develop into deeper emotional bonds between newcomers and veteran colleagues within the firm (Maertz & Griffeth, 2004). For instance, Nelson and Quick (1991) found that newcomers' frequent interactions with peers were positively related to intentions to stay with the organization. Higgins (2001) also found that the existence of quality social relationships was negatively related to job change. Green and Bauer (1995) found that doctoral students who received greater mentoring from advisors reported greater commitment to their current employers and to their professions.

Organizational socialization practices. Another organizational factor that may affect mobility or embeddedness is the socialization process individuals undergo (Allen, 2006). Organizational socialization is the process through which newcomers become familiar with the values, abilities, and behaviors that are essential for effective job performance (Bauer, Morrison, & Callister, 1998).

The overarching goal of organizational socialization is to promote greater congruence of employees' abilities and values with organizational demands and norms (Allen, 2006; Bauer et al., 1998). For instance, Kammeyer-Muller and Wanberg (2003) found that organizational socialization increased employees' role understanding, which in turn reduced the likelihood of withdrawal from the organization. Thus, successful organizational socialization tends to be associated with greater person-organization fit, which in turn is associated with greater organizational embeddedness.

Work Group Perspective

In this section, we discuss a number of factors related to the work group that may promote mobility or embeddedness. These factors include social capital, social support and group cohesiveness, relational demography, task interdependence, use of virtual work, use of external labor, and complementary versus supplementary person-group fit.

Social capital. The core tenet of social capital theory is that the diversity and uniqueness of ties to individuals in other networks significantly enhances individuals' access to valuable private or confidential information (Burt, 1992; Granovetter, 1985; Lin, 2001; Nahapiet & Ghosal, 1998). On one hand, social ties at work directly strengthen individuals' links with others in the organization and thereby promote job embeddedness (Mitchell, Holtom, & Lee, 2001). On the other hand, social capital can increase the likelihood of external mobility because highly networked employees have greater access to job leads and decision makers in the external labor market (Granovetter, 1985). For instance, Lai et al. (1998) found that people with greater social capital were more likely to find jobs through contacts with higher status people—a strategy that resulted in their obtaining higher status jobs.

The role of social capital with respect to mobility and embeddedness, then, is somewhat unclear. The mixed findings on the influence of social capital on mobility may be partially attributable to whether the social ties are organization based or occupation based (Gersick, Bartunek, & Dutton, 2000). Social ties that are organization based may act to directly increase job embeddedness, whereas social ties that are occupation based may open up more external mobility options for individuals.

Social support and group cohesiveness. It is not only the number of ties but also the emotional intensity of the ties that affects mobility and embeddedness. Specifically, relationships that involve deep affection and positive emotions are likely to reduce individuals' intentions to change jobs or occupations (Ng & Sorensen, in press; Viswesvaran, Sanchez, & Fisher, 1999).

The negative relationship between group cohesiveness and mobility can also be explained from an embeddedness perspective. Group cohesion fosters obligations of reciprocity and, in so doing, increases links among work group members (Taylor, Sherman, Kim, Jarcho,

Takagi, & Dunagan, 2004). Moreover, the emotional energy devoted to the development of work-group relationships may also increase individuals' sense of sacrifice when they consider external job opportunities (Pearce & Randel, 2004).

Relational demography. Researchers have found that when individuals are demographically different from others at work, they are more likely to leave their organizations altogether (Tsui, Egan, & O'Reilly, 1992). The underlying explanation for this phenomenon is that individuals who are demographically different are less likely to identify with their work groups' values and are more likely to have weak emotional attachments to coworkers (Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991). On the other hand, those who are demographically similar to colleagues are less likely to be mobile. That is, those who value the reinforcement they receive from colleagues will be much less likely to leave their workgroup behind.

Task interdependence. Task interdependence is the extent to which coworkers depend on each other to achieve organizational or group goals (Van Der Vegt & Janssen, 2003). When working on tasks that are interdependent in nature, employees may feel a stronger obligation to remain because their leaving would interrupt the productivity of valued coworkers. Another reason why task interdependence may decrease job mobility is because task interdependence promotes stronger commitment to the organization as a whole (Bishop & Scott, 2000).

Virtual work. Advances in technology have changed the structure of work tremendously (Russell, 2003). On one hand, Golden (2006) found that telework was associated with increased organizational commitment and lower turnover intentions. The rationale behind this finding was that, by accommodating individual workers' idiosyncratic scheduling preferences, virtual work arrangements increased individuals' perceptions of person-group fit (Hill, Ferris, & Martinson, 2003). On the other hand, the frequent use of virtual work may accustom individuals to working alone, thereby decreasing their sense of identification with the work group as a whole (Hesketh, 2001). By and large, the effects of virtual work on mobility and embeddedness are still unclear.

Use of external labor. As organizational restructurings became more numerous, there was a concomitant increase in the use of contingent employees (e.g., part-time, temporary, and contract help) (Littler, Wiesner, & Dunford, 2003; White, Hill, Mills, & Smeaton, 2004). Not surprisingly, the contingent labor force is highly mobile across organizations by virtue of their short-term employment contracts (Liden, Wayne, Kraimer, & Sparrow, 2003).

What is perhaps more surprising is that the use of external labor appears to increase the job mobility of "internal" or "core" employees, too. The blending of internal and external labor may result in dysfunctional subgroup conflict (Davis-Blake, Broschak, & George, 2003). Studies have also suggested that social exclusion occurs between these two groups of employees (Connelly & Gallagher, 2004), communication between core and external labor forces is limited or biased (Sias, Kramer, & Jenkins, 1997), and competition for scarce work and resources between the groups is sometimes intense (Barnett & Miner, 1992; Pearce, 1993). Davis-Blake et al. (2003) also found that extensive use of externalized labor resulted in worsening relationships between core employees and management, decreased organizational loyalty among core employees, and increased turnover intentions.

*Complementary versus supplementary person-group fit***.** Researchers differentiate between two types of person-group fit: complementary and supplementary (Kristof, 1996; Ostroff, Shin, & Feinberg, 2002). Complementary fit occurs when individuals' skills and interests add value to, or "complete," those of other group members. In contrast, supplementary fit occurs when an individual's skills and values are the same as those of coworkers; it is the type of fit typically envisioned by the attraction-selection-attrition (ASA) model (Schneider, Goldstein, & Smith, 1995). Complementary and supplementary person-group fit may act to influence job embeddedness in different ways.

Where there is supplementary fit, communication among group members is more likely to be effective and identification with the group is more likely to be reinforced. Consequently, the links among individual members of the group may be strong—but an individual wanting to leave the group could be confident his or her work would be handled successfully by remaining teammates. In contrast, where there is complementary fit, individuals who "complete" the group may have fewer links to the group but may feel more obligated to stay put because their responsibilities could not be readily assumed by others. The effects of different types of person-group fit on mobility, then, deserve much more empirical attention.

Personal Life Perspective

The personal life perspective on job mobility suggests that individuals' mobility is determined, in part, by factors in their personal lives rather than in their professional lives. Researchers approaching the question of embeddedness from this perspective have studied three major factors in particular: (a) amount and predictability of time demands, (b) support in resolving work-life conflicts, and (c) family and friendship networks.

Amount and predictability of time demands. Time demands of personal life activities may elicit either mobility or embeddedness. If individuals cannot satisfy the time demands from work, they are more likely to leave for jobs that allow for greater flexibility, lower workload, or more predictable work hours (Fernet, Guay, & Senecal, 2004; O'Driscoll, Ilgen, & Hildreth, 1992). The underlying process presumed to drive this external mobility is burnout in the current job (Kossek & Ozeki, 1998).

It should be noted that amount and predictability of time demands at home also influence individuals' mobility or embeddedness. Doering and Rhodes (1989) observed that when individuals do not have a family to support, they are more likely to make job changes. The theory of conservation of resources also supports this rationale (Grandey & Cropanzano, 1999).

Support in resolving work-life conflict. Individuals faced with a high degree of work-life conflict typically experience a lower quality of life (Kossek & Ozeki, 1998; Ng, Sorensen, & Eby, in press). To reduce this conflict, individuals are likely to either switch to another organization that provides greater time flexibility or withdraw totally from the labor force. On the other hand, organizational programs aimed at relieving these conflicts (e.g., on-site child care) may increase the sense of fit and the magnitude of sacrifice individuals would feel if they left their positions (Casper & Buffardi, 2004).

Family and friendship networks. Family and friendship networks also influence mobility and embeddedness (Dette & Dalbert, 2005). Because an individual's mobility decisions affect close family and friends, too, an employee is likely to take them into consideration when making important job decisions. In early career, the main effect of families appears to be embedding individuals in their initial occupational choices (Feldman, 2002c; Maertz & Griffeth, 2004). For instance, new college graduates may feel the need to remain in occupations related to their college majors because their parents expect them to (Vignoli, Croity-Belz, Chapeland, de Fillipis, & Martine, 2005).

For older individuals who are married and have started their own families, mobility decisions may be influenced by the relative earning power of spouses, with primary wage earners having a proportionately greater influence on mobility decisions (Eby, Allen, & Douthitt, 1999; Van Ommeren, Rietveld, & Nijkamp, 2002). By and large, individuals who care deeply about work-family balance tend to have a preference for stable home lives and community environments (Lee & Maurer, 1999). For instance, Kirchmeyer (2006) observed that married individuals fear that any major changes they made in their organizations or occupations could also have major (and/or negative) consequences for their families and significant others by disrupting their friendship and social ties.

Personality and Personal Style Perspective

The last set of factors we consider deal with individuals' stable predispositions. In particular, we focus on the four that have received the most attention in the mobility literature, namely, attachment styles, personality traits, career interests, and intelligence.

Attachment styles. Attachment has been defined as "the propensity of human beings to make strong affectional bonds to particular others" (Bowlby, 1977: 201). Individuals can be classified into four categories of attachment styles based on two dimensions: *self-view* and *others-view* (Bartholomew & Horowitz, 1991; Collins, 1996). Those with positive self-view and positive others-view have *secure* attachment styles. Those with positive self-view and negative others-view have *dismissive* attachment styles. Those with negative self-view but positive others-view have *preoccupied* attachment styles. Finally, those with negative self-view and negative others-view have *fearful* attachment styles.

Attachment style can have a major impact on mobility and embeddedness. Those who have *secure* attachment styles may experience more internal-upward job transitions. As Blustein, Prezioso, and Schultheiss (1995) noted, these individuals tend to have a positive view of others, which in turn may increase managers' evaluations of their promotability (Shore, Barksdale, & Shore, 1995). Those with *preoccupied* attachment styles may feel favorably toward their employers and be predisposed to be organizationally stable. However, because preoccupieds do not have positive self-concepts, they may be less likely to apply for internal promotions (Boudreau, Boswell, & Judge, 2001; Judge, Higgins, Thoresen, & Barrick, 1999). Individuals with *fearful* attachment styles do not have favorable views of others and are more likely to frequently switch employers as a way to avoid committing themselves to work relationships and organizations (Corcoran & Mallinckrodt, 2000; Wolfe &

Betz, 2004). Those with *dismissive* attachment styles have a positive view of themselves, but not of others; they, too, tend to change employers more frequently (Wooten, Timmerman, & Folger, 1999).

Big 5 personality traits. Personality traits have long been investigated as important influences on job mobility. Here we focus on the "Big Five" (neuroticism, extraversion, conscientiousness, agreeableness, and openness to experience) because this taxonomy is the most widely used one in this research area (Costa & McCrae, 1992; Van Vianen, Feij, Krausz, & Taris, 2003; Watson & Clark, 1992).

Neuroticism appears particularly relevant in predicting different types of job mobility. Because people high on neuroticism consistently demonstrate nervousness and anxiety, they may not be seen as desirable candidates for internal transfers or promotions (Ng et al., 2005). However, those scoring high on neuroticism may frequently seek out external-lateral mobility options because they have low self-esteem and tend to search for positive affirmation elsewhere (Judge & Bono, 2001). *Extraversion* and *openness to experience* may be related to greater upward mobility (both internal and external to the firm) because individuals with these traits tend to be more active and skillful in seeking out new job opportunities (Judge, Bono, Illies, & Gerhardt, 2002; Watson & Clark, 1992).

Given that *conscientiousness* is consistently related to job performance (Barrick & Mount, 1991), people who are high on conscientiousness should have more opportunities for upward mobility (Tharenou, 1997). However, because conscientiousness is also associated with dutifulness, responsibility, and dependability, highly conscientious individuals may be more likely to have greater internal mobility than external mobility. To date, *agreeableness* has not been clearly demonstrated to be related to any particular kind of job mobility.

Locus of control. Another personality trait that has been examined in the mobility literature is locus of control. Rotter (1966) differentiated between individuals with internal and external locus of control. Internals are those who believe that they are the masters of their own fate and are typically confident in their abilities to manage their environments. Externals, on the other hand, are those who believe that they do not have much control over their lives and perceive themselves in passive roles with regard to mastering their environments.

Because internals are often more successful in their careers (Ng et al., 2005), they are likely to have more mobility options, both internally and externally. For instance, Phillips and Bedeian (1994) observed that internals were more likely to be "spotted" by senior employees and to achieve greater hierarchical advancement. On the other hand, because externals do not believe they can gain active control over their careers, they are disinclined to explore new career opportunities, either laterally or vertically (Ng, Sorensen, & Eby, in press).

Career interests. Researchers have theorized that individuals' specific career interests also affect mobility and embeddedness (e.g., Lent, Brown, & Gail, 1994; Oleski & Subich, 1996). Because Holland's (1985) typology of career interests is the model most commonly adopted and validated in the careers literature (Larson, Rottinghaus, & Borgen, 2002; Prediger, 2000), we discuss the potential relationships between the six interest areas in this typology and job mobility.

Individuals with *social* career interests are more likely to experience mobility because they are more comfortable exploring new jobs in both internal and external labor markets (Larson et al., 2002). In contrast, individuals with *conventional* career interests may have the least amount of external mobility because they prefer routine and predictability in their jobs (Douce & Hansen, 1990).

Individuals with *investigative, enterprising,* and *artistic* career interests may be more likely to experience mobility than stability, but for different reasons. Individuals with investigative interests tend to be similar to those high on openness to experience and therefore are more likely to welcome new job opportunities (Larson et al., 2002). Those with enterprising career interests are especially motivated to move upward and externally because they have a greater need to manage others (Chan, Rounds, & Drasgow, 2000). Because individuals with artistic career interests are concerned with self-expression and creativity, they may have a greater desire to seek out self-employment instead of organization-based employment. (To date, there has been little empirical evidence of the relationship between *realistic* career interests and job mobility.)

Types of intelligence. Both Hunter (1986) and Kanfer and Ackerman (2004) made an important distinction between fluid intellectual abilities (Gf) and crystallized intellectual abilities (Gc). *Fluid intellectual abilities* refer to the capacity of working memory, level of abstract reasoning, and ability to pay attention and process new information. The weight of the evidence suggests that maximum levels of Gf are usually reached in the early twenties and decline thereafter, although certainly not at the same speed for all individuals. Consequently, the cognitive "cost" of exerting effort to learn new material is greater for middle-aged and older adults than it is for young adults (Kanfer & Ackerman, 2004), and occupational embeddedness is likely to increase with age (Feldman & Ng, in press).

Crystallized intellectual abilities are associated with greater general knowledge, vocabulary, and verbal comprehension (Cattell, 1987). They encompass both vocational knowledge (about work topics) and avocational knowledge (about culture, for instance). In contrast to Gf, Gc appears to grow well into middle age and beyond (Kanfer & Ackerman, 2004). Kanfer and Ackerman (2004) also suggested that, as Gf declines, individuals compensate by moving into work roles that place high demands on Gc and low demands on Gf (Baltes & Baltes, 1990). For this reason, older workers are more likely to seek out internal opportunities for managerial jobs but are less likely to seek out external mobility options for technical jobs.

Mobility, Embeddedness, and Career Success

Having reviewed the literature on factors leading to mobility and embeddedness, we now turn to two other related questions. First, which sets of factors are most closely associated with different types of job, organizational, and occupational mobility (and embeddedness)? Second, which types of mobility and embeddedness are most closely associated with different kinds of career success?

Although there have been numerous studies of how the various factors identified earlier relate to job mobility and job attitudes (cf. Ng et al., 2005), there have been very few empirical

studies of the factors associated with embeddedness, particularly organizational and occupational embeddedness. Similarly, as noted above, there are very few studies that empirically link different levels of embeddedness (job, organizational, and occupation) to either subjective or career success. As a result, there is not a sufficiently large empirical base on which to make strong statements about the relative effect sizes of different factors on types of mobility and embeddedness or about the relative effect sizes of different levels of mobility and embeddedness on various outcome variables.

At the same time, though, some preliminary patterns of results are emerging. Below, we provide our qualitative assessments of the state of the literature on relationships among career mobility, career embeddedness, and career success.

Strongest Influences on Embeddedness and Mobility

Aggregate amount of mobility. In general, the structural factors (such as macroeconomic conditions) appear to have their greatest impact on the aggregate amount of mobility in the working population—across jobs, across organizations, and across occupations (DiPrete, 1993; Doeringer, 1990; Hachen, 1992). Poor economic conditions make it financially more difficult for individuals to accumulate enough resources to invest in new occupational training. In addition, poor economic conditions also decrease the number of new positions within firms and the number of new firms created. Poor economic conditions also increase job insecurity, thereby making individuals less likely to give up any longevity-based employment security or compensation benefits accrued in their current firms.

Mobility of historically disadvantaged groups. The social and legal environment factors appear to have their greatest impact on the aggregate mobility of populations that have been historically disadvantaged (Fujiwara-Greve & Greve, 2000; Rosenfeld, 1992). During the past 50 years, changes in social policy have increased educational and employment opportunities for these employees by either reducing barriers to entry (e.g., affirmative action legislation) or by providing resources for entry (e.g., Job Partnership Training Act). Even government set-asides for particular geographic locations have been typically targeted at areas that have been economically distressed for considerable periods of time. For the population in general, though, social and legal policies have had only modest effects on employee mobility and/or embeddedness (DiPrete & Nonnemaker, 1997).

Occupational mobility and embeddedness. The factors that seem to be particularly salient for occupational mobility are the permeability of occupational mobility structures and industry growth. Permeability of occupational mobility structures and high industry growth rates not only reduce barriers to entry but also increase workers' expectations that they can successfully shift into a particular new career path (Arnold, Loan-Clarke, Coombs, Wilkinson, Park, & Preton, in press; Ng, Sorensen, Eby, & Feldman, in press). On the other hand, the factor that seems to embed individuals in their current occupations most strongly is level of human capital investment (Fulgate et al., 2004; Wayne, Liden, Kraimer, & Graf, 1999). Both the economics and management literature suggest that individuals are reluctant to give up on "sunk costs," particularly when those sunk costs are high and are unlikely to be recoverable in the near term.

Organizational mobility and embeddedness. The literature to date suggests that the structure of pension and insurance benefits has the strongest effect on embedding employees in their current organizations (Kim & Feldman, 1998, 2000). Using the same logic as above, individuals are reluctant to give up on sunk costs, particularly when those sunk costs are high. It is interesting to note here that pension and insurance benefits are not typically high on the factors individuals consider when choosing organizations but tend to be more important in decisions about leaving organizations (Buchmueller & Valletta, 1996).

The effects of compensation policies on organizational change and embeddedness are complex. For example, although it is true that high salaries can embed employees with golden handcuffs, true stars are often able to extract equally high or higher salaries in the external labor market (Pil & Leana, 2000). In general, wage differences across organizations are positively related to external mobility decisions (Hammida, 2004), but the interactions between wages and longevity-based benefits on mobility decisions have not yet been explored in much depth.

Job mobility and embeddedness. Here, we need to consider the differences between job change within organizations and external job change separately. In terms of internal job changes, the factors that appear to be the most embedding are social capital and social support. Even for individuals who feel the need for new job challenges, high social capital and high social support appear to focus employees' search for new positions within their current firms (De Janasz & Sullivan, 2004).

On the other hand, the factors that appear to lead to more external job mobility are predictability of time demands and support in resolving work-life conflict (Ng & Sorensen, in press). Guidelines regarding predictability of time demands and support for work-life conflict are more likely to be set at the organizational level than at the unit level. That is, it is relatively uncommon for some units, but not others, to have flextime and day care facilities. For this reason, then, individuals who like their job responsibilities but cannot function adequately in a particular organizational context are more likely to seek out external job mobility opportunities instead.

Individual mobility and embeddedness. In general, the research on individual differences suggests that these attributes affect decisions to engage in *any* type of mobility rather than any *specific type* of mobility (Judge et al., 2002). For example, although openness to experience has been linked to greater willingness to change positions in general, there is not enough evidence at this point to argue that openness to experience is strongly related to any particular type of mobility (job, organizational, or occupational). Similarly, although individuals with social career interests appear to be more open to mobility in general, there is not much evidence to suggest whether those interests have a greater impact on job, organizational, or occupational mobility (Ng et al., 2005).

Relationships With Career Success

Occupational mobility and embeddedness. In general, there is not much concrete evidence that changing occupations leads to more tangible rewards like salary, certainly in the

short run. Even for individuals who are moving from lower wage occupations to higher wage occupations, workers have to spend money on retraining and incur some loss of income while getting retrained (Arnold et al., in press). Moreover, individuals entering new occupations with long training periods (like medicine) have to forego multiple years of earnings to make career changes. It is likely (but not inevitable) that occupational mobility leads to greater objective career success in the long run, because we would expect more moves into higher paying occupations than into lower paying ones (Hachen, 1992; Schniper, 2005).

On the other hand, the relationship between occupational change and subjective career success may be higher for a variety of reasons (Hall & Chandler, 2005; Hill et al., 2003; King, Burke, & Pemberton, 2005). First and foremost, individuals usually only make these dramatic changes when their affect toward new occupations is significantly more positive than their affect toward their current occupations. Second, individuals often enter new careers with high positive expectations of job satisfaction, and those expectations can become self-fulfilling prophecies. Third, through processes of cognitive dissonance, individuals may raise their evaluations of their new occupations to justify the sacrifices incurring in leaving their prior vocations. Thus, subjective career success (e.g., job satisfaction) is likely to be positively associated with occupational mobility (Feldman, 2002a).

To date, there has not been a great deal of research on the relationship between occupational embeddedness and subjective career success. Using the attraction-selection-attrition paradigm (Schneider et al., 1995), we would predict that individuals who are most unhappy with their occupations would drop out of those occupations over time. As a result, individuals who are embedded in their occupations over a long period of time are likely to be generally satisfied with their vocations. However, the link between occupational embeddedness and objective career success is more tenuous and depends, to a large extent, on the wage levels within an occupation (Feldman, 2002a; Ng & Feldman, in press). For example, librarians may be highly embedded in their occupations, but typically there are relatively low wages and limited upward mobility opportunities in that career path.

Organizational mobility and embeddedness. The relationships between organizational mobility and objective measures of career success are frequently opposite those we observe with occupational mobility. Interorganizational mobility tends to bid up wages in the labor market (Lam & Dreher, 2004), because individuals are reluctant to change jobs unless a noticeable pay raise is part of the package. In addition, many individuals who are unsuccessful in getting promoted internally seek out opportunities for promotions in the external market and frequently take them when offered. Thus, all things being equal, organizational mobility tends to be positively related to objective career success.

On the other hand, the influence of interorganizational mobility on subjective career success may depend on whether the mobility is sought from an "approach" or "avoidance" motivation (Kondratuk, Hausdorf, Korabik, & Rosin, 2004). When individuals change organizations voluntarily (e.g., to take advantage of significant promotion opportunities), feelings of subjective career success are likely to be higher (Arthur, Khapova, & Wilderom, 2005). However, if mobility is sought out primarily to escape highly stressful environments, then individuals might hurriedly accept jobs in other organizations that are only marginally superior to their present positions. In these cases, we would not expect any significant increase in subjective career success. Moreover, there is some evidence that individuals carry

over poor job attitudes in one organization to the next (Hochwarter, Perrewé, Ferris, & Bryner, 1999).

The evidence on the relationships between organizational embeddedness and career success is mixed. There are reasons to expect that organizational embeddedness may be associated with greater subjective career success. Individuals who are terribly unhappy are most likely to self-select out early in their tenure with an organization, and so the remaining, long-term employees tend to be relatively satisfied (Schneider et al., 1995). Moreover, long-term embeddedness in an organization is likely to be associated with greater feelings of security and financial well-being in retirement (Kim & Feldman, 1998, 2000).

However, long-term organizational embeddedness may not be significantly related to objective career success. Because external wages typically get bid up faster than internal wages, employees who have spent their whole careers in one firm may end up making lower wages than their more mobile counterparts (Hammida, 2004; Haveman & Cohen, 1994). Also, particularly at the higher levels of organizations, it is hard to get promoted internally into top management positions. Consequently, external mobility might be more strongly related to ultimate hierarchical level attained than embeddedness is (Baruch & Peiperl, 2003).

Job mobility and embeddedness. Like organizational mobility, external job mobility often enhances objective career success because individuals typically accrue new skills or a broader range of skills in such moves. These enhanced skill sets tend to raise individuals' salaries and/or their promotion prospects in the labor market (Bird, 1996; Eby et al., 2003). In addition, because wages in the external labor market tend to increase more quickly than internal wages, external job mobility is more likely to lead to greater objective career success than internal job mobility does (Feldman, 2002a).

Here, too, the relationship between job mobility and subjective career success is influenced by whether individuals engage in external job mobility to approach better opportunities or to escape bad job situations. When individuals change jobs to take advantage of more interesting and involving duties and responsibilities, external job mobility is likely to be associated with greater subjective perceptions of career success (Hall & Chandler, 2005). In contrast, when turnover is motivated by a desire to escape the present job rather than from any genuine interest in the new position, there is no reason to expect that feelings of subjective career success will be any higher (Maertz & Griffeth, 2004). In addition, the relationship between job changes and subjective career success is influenced by whether the job moves entail upward, lateral, or downward mobility. Subjective career success is highly likely with promotions and highly unlikely with demotions.

Discussion

In this final section, we revisit the construct of *boundaryless careers* and suggest some ways in which it can be more thoughtfully used in future careers research. We also identify additional avenues for future research and implications for career development in practice.

Reconsidering the Construct of Boundaryless Careers

Although the term *boundaryless career* has been used extensively in the careers literature, the construct is somewhat imprecise. In their original formulation, Arthur and Rousseau (1996: 6) enumerated at least six different connotations of the term. These include changes in employers, external validation of market worth from outside employers, connectedness to external networks, nonhierarchical reporting relationships, refusal to take employer-offered job changes, and flexibility (or constraints) on mobility because of personal circumstances.

Consequently, it has sometimes been unclear as to whether the term *boundaryless careers* refers to the nature of the environment in which career mobility takes place, the actual trajectories of workers themselves, or even geographic mobility (Sullivan & Arthur, 2006). It is also sometimes unclear whether the term refers to *objective* measures of mobility (e.g., the frequency with which people change jobs) or to *subjective* measures of mobility (e.g., employees' perceptions of the desirability or instrumentality of increased mobility). Ironically, during the past decade, the construct of boundaryless careers has become somewhat boundaryless itself.

Here, we suggest that there are two major components of the boundaryless career construct. The first is the *permeability* of institutional labor markets. From an institutional perspective, permeability refers to the number of alternative jobs, organizations, and occupations available to employees and the ease or difficulty of entry into them (Belous, 1990; Doeringer, 1990). The second is the *plasticity* of individuals' career paths. At the individual level, plasticity refers to the frequency and degree of change (in jobs, organizations, and occupations) across a person's work history (cf. Nicholson & West, 1988). We believe it is critical to distinguish boundarylessness as an attribute of the environment from boundarylessness as an attribute of an individual's own work history.

We also propose a specification that clearly differentiates objective from subjective boundarylessness, much as we currently distinguish objective career success from subjective career success (Hall, 1976; Ng et al., 2005). For instance, there are both objective barriers to entry (e.g., years of education required) and subjective measures of permeability (e.g., employees' perceptions of labor market opportunities). Similarly, there are both objective indicators of plasticity of career paths (e.g., the ratio of job changes to years in the workforce) and subjective indicators of plasticity (e.g., attitudes toward the desirability of job mobility).

Furthermore, we suggest that some original elements of the "boundaryless career" construct—particularly, networking outside the firm, getting external validation of wages from outside employers, and refusal to accept job changes from the current employer—be considered as *career tactics* instead (Cappelli, 1999; Pil & Leana, 2000). Although these tactics can certainly be instrumental in terms of increasing mobility and/or career success, they are not systematically aligned with boundarylessness per se. For example, individuals may seek out external validation from the market not so they can *move* but rather so they can *stay* in their current firm but with a higher salary.

It is also important to reconsider whether the construct *boundaryless career* should retain all the positive connotations it has acquired during the past decade. The term has commonly been used to convey notions of unbounded, limitless, or infinite possibilities. However, boundaryless careers are hardly cost-free. For example, Eby (2001) found that among dual-earner

married couples, the interfirm upward mobility of one spouse was often accompanied by downward mobility of the other.

In sum, then, the utility of the construct of boundaryless careers has decreased over time as the number of attributes associated with the term has increased. Going forward from here, a more precise, value-neutral specification of that term will be needed for serious research to accumulate in meaningful ways. Indeed, as King et al. (2005) noted, it might be just as fair to use the term *bounded career* as *boundaryless career*.

Directions for Future Research

Consistent with the discussion above, then, it is critical that researchers start taking a finer grained look at career mobility, career embeddedness, and career success. By lumping all kinds of mobility together, we increase the likelihood of spurious (and suppressor) relationships with indicators of career success. Equally critically, we may draw overstated inferences about the degree of mobility in the population. It has now become almost an urban myth that the average graduate today will have five to seven careers throughout his or her life, but that figure is totally inconsistent with objective data on occupational change (Schniper, 2005). We owe it to other scholars, and to the public at large, to be more precise with our data and our inferences from those data.

Although careers researchers draw on a wide variety of theoretical perspectives in their research, careers research has been dominated by a few paradigms in particular: valence-instrumentality-expectancy models (Kim & Feldman, 2000), the stress-coping paradigm (Kammeyer-Mueller & Wanberg, 2003), role theory (Eby et al., 1999), and network theory (Green & Bauer, 1995). Two additional perspectives, in particular, might be fruitfully brought to bear on questions about mobility and embeddedness.

One research perspective that warrants greater attention is cognitive decision processes. With numerous advances in cognitive psychology during the past decade, it is time to reconsider how decision-making heuristics and biases play into mobility and/or stability decisions. Furthermore, to the extent that these biases have been studied in previous research on mobility, they have primarily been explored in the context of decisions about first jobs out of school. However, individuals' cognitive processing capacities change over time. Thus, we need to investigate how decision-making biases influence mobility and/or stability decisions across the entire career (Feldman & Ng, in press; Kanfer & Ackerman, 2004).

Another theoretical approach to mobility and embeddedness that might prove useful is one grounded in emotions research (Grandey & Cropanzano, 1999). That is, we have relatively little evidence about how individuals' emotions, rather than their cognitions, affect decisions to leave or stay. Also, research on emotional contagion might help us understand the dynamics that underlie widespread exits from a firm—exits that are not explainable by individuals' personal circumstances alone.

Like several other fields in the organizational sciences, careers researchers have often focused their investigations on one level of analysis (e.g., the structural perspective, the family perspective, or the individual-differences perspective). Although no research study could reasonably be expected to investigate all factors related to mobility and embeddedness, the

lack of attention to labor market dynamics in particular (cf. DiPrete et al., 1997) has been a major methodological shortcoming in careers research. The economic context in which mobility or embeddedness occurs significantly influences how individuals perceive the possibility or desirability of changing jobs; in some senses, labor markets become the "strong" or "weak" situations that allow (or prevent) individual employees from acting in ways consistent with their true preferences. Moreover, labor market dynamics might interact with individual differences to help explain mobility and/or stability behavior. For instance, the relationship between locus of control and the decision to leave might be moderated by the robustness of the labor market, with internal locus of control influencing mobility decisions only in growing economies but not in stagnant ones.

As noted earlier, there has been much more research on intentions to move than on actual mobility behavior (Ng et al., 2005). It is easy to see why this is the case, given the difficulty of collecting actual mobility data over time. Nonetheless, the relative lack of attention to actual mobility in academic disciplines besides economics has resulted in a situation in which we know much more about willingness to move than actual mobility itself. From a methodological perspective, then, much more longitudinal research on actual mobility is clearly needed.

Implications for Practice

The research on mobility and embeddedness has some implications for how organizations and individuals pursue career development activities. For example, the common practice of making employees generate outside offers to justify requests for pay raises has several unintended negative consequences. It signals employees that they should be frequently job hunting—despite the evidence that intention to search is an excellent predictor of turnover and that it is the best employees who will be able to generate the most external offers (Maertz & Griffeth, 2004). At the same time, employees who generate these offers often feel boxed into accepting them, even if they are not excited about them, simply to save face if their current employers do not "counter" (Pil & Leana, 2000).

For organizations, the decisions about whether to encourage mobility or embeddedness should be tied closely to corporate strategy. Mobility and embeddedness are not ends in and of themselves but rather means of linking HR practices to overall corporate goals. In quickly growing units or functional areas, more organizational embeddedness is likely to be encouraged. In contrast, in business units and functional areas experiencing decline, firms may be more willing to live with higher levels of turnover and external job mobility. In addition, firms can use longevity-based benefits (like pensions) and family-friendly practices (like on-site child care) to increase/decrease organizational embeddedness as needed.

From the perspective of individual employees, decisions about mobility and embeddedness are complex and appear to depend heavily on career stage and life stage considerations (Feldman, 2002a). The evidence suggests that, in early career, the benefits of both job and organizational mobility are numerous: They each build human and social capital at a stage in life where the returns on these investments can accumulate. Moreover, for young adults who came out of school with little specific (or the wrong kind of) training, the ability to engage in occupational mobility and yet recoup the costs of retraining is still high.

In contrast, as individuals enter middle age, the forces toward occupational embeddedness become stronger; employees become both more time-involved with, and financially committed, to family responsibilities (Kondratuk et al., 2004). That does not mean middle-aged or mid-career employees cannot, or should not, be occupationally mobile. Rather, such moves require a very high degree of investment in one's career (relative to one's personal life) and sacrifices from one's family and friends as well as from oneself. Job and organizational mobility at mid-career can still be generally beneficial, both to avoid career plateauing and to increase one's standard of living.

Finally, in late career, the degrees of freedom for older workers are often greater. Older workers' career concerns shift from the accumulation of assets to a greater desire for close relationships and socially meaningful work (Hall, 1976). Thus, many earlier constraints on mobility are relaxed (Kim & Feldman, 2000). Moreover, late-career and older workers typically have fewer embedding forces related to children and parents and thus experience less pull to keep them on their current trajectories. It is perhaps quite fitting that, after long careers marked by countless obligations to employers and families, older workers should have the most opportunities for genuinely boundaryless careers. Thus, as highlighted throughout the article, for scholars and practitioners alike who are concerned with issues of mobility and embeddedness, it is critical to explore the different constellations of mobility opportunities, embeddedness constraints, and definitions of career success across the entire life span.

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Ain't Misbehavin: Workplace Deviance as Organizational Resistance†

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Although organizational control and power are often designed to diminish workplace deviance, they also have the capacity to incite it. This is because enactments of power that confront organizational members in their daily work lives can create frustration that is expressed in acts of deviance. In this article, the authors examine why power provokes workplace deviance in organizations and, specifically, how types of power affect the form that workplace deviance takes.

Keywords: *deviance; power; resistance; organization*

The prevalence and costs of misconduct or deviance in the workplace make its study imperative. In an earlier survey, it was found that 33% to 75% of workers have engaged in behaviors such as vandalism, sabotage, unwarranted absenteeism, and theft (Harper, 1990). Recent research suggests that the increasing tension in corporations that has resulted from economic changes, increasing global competitiveness, and trends toward downsizing and restructuring has led to significant levels of misconduct. Americans experience 1.7 million violent victimizations at work annually (U. S. Department of Justice, 2000). Nearly 11% of

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British workers report having been bullied at work in the prior 6 months (Rayner, Hoel & Cooper, 2002). The organizational costs of such behavior are staggering. U.S. retailers lose $15.1 billion per year in internal theft, and the rate of such theft is increasing each year (Hollinger & Davis, 2003). In Australia alone, fraud committed by organizational members costs an average of $2.1 million for each fraud incident an organization experiences (KPMG Forensic, 2004) Along with these hard costs, the negative impact of workplace deviance on productivity and performance has been found to be substantial (Dunlop & Lee, 2004).

With organizational deviance at such a high level and costing organizations so much, it is imperative that we understand its underlying causes. In this article, we examine workplace deviance as a form of resistance to organizational power. Deviance has often been recognized as a reaction to frustrating organizational stressors, such as financial, social, and working conditions (Robinson & Bennett, 1997). The episodes and systems of power used by organizational members to control, motivate, organize, and direct others, however, have not yet been systematically examined as a potential and important cause of workplace deviance.

We argue that the enactment of power in organizations, regardless of purpose or intent, can be perceived negatively by those it affects. In brief, we argue that instances of power can lead to a loss of autonomy and identity, and to perceptions of injustice, which together can provoke feelings of frustration, which in turn may motivate deviant behavior (J. W. Brehm, 1966; S. S. Brehm & Brehm, 1981). We will further argue that *how* power is enacted will influence how likely it will be to provoke deviant behavior and the form that deviant behavior might take. We are not suggesting that all enactments of power will necessarily provoke resistance or that all resistance occurs in the form of misconduct. Rather, we believe that organizational power has the potential to incite workplace deviance and that this relationship has been underexplored. This article therefore seeks to create a theory of the relationship between organizational power and workplace deviance.

This article may offer several potential contributions. First, it integrates the well-established literatures on power and resistance in organizations with the newer research domain of workplace deviance and negative organizational behaviors. These literatures have developed in relative isolation from one another, despite their shared foci. Such behaviors as absenteeism, shirking, sabotage, gossip, and physical violence have been addressed in the literatures on both deviance and resistance, and yet the cross-fertilization between these research areas has been relatively modest. Bringing these two areas together, however, may expand our understanding of each.

A second potential contribution of this article is that it may help to contextualize the study of workplace deviance. Although harmful organizational behavior is inherently perceived as dysfunctional and counterproductive by definition (Robinson & Greenberg, 1999), more recent theorizing has noted that such behavior may also have functional aspects (e.g., Spreitzer & Sonenshein, 2004; Warren, 2003). Although deviant actions may be perceived as dysfunctional by the organization itself, they may be functional to those engaging in them because, as we will argue, they serve to maintain and protect their needs for autonomy and sense of self-respect and fairness.

Finally, our theory may provide a useful counterbalance to the accepted but untested causal relationship between managerial actions and employee deviance (Robinson & Greenberg, 1999). A long history of agency theory (cf. Eisenhardt, 1989) suggests that organizations can

and should increase managerial control to ensure employees act in the interest of the firm. In contrast, our theory would suggest that managerial attempts to control and limit dysfunctional workplace behavior may increase such behavior, rather than reduce it.

We present our argument in three main sections. First, we discuss how power in general leads to frustration, which in turn affects workplace deviance as resistance to that power. Next, we drill down in our analysis to explore how specific dimensions and types of power can produce specific forms of workplace deviance. In the final section, we discuss the implications of our model for theory and practice.

The Primary Relationship Between Power and Workplace Deviance

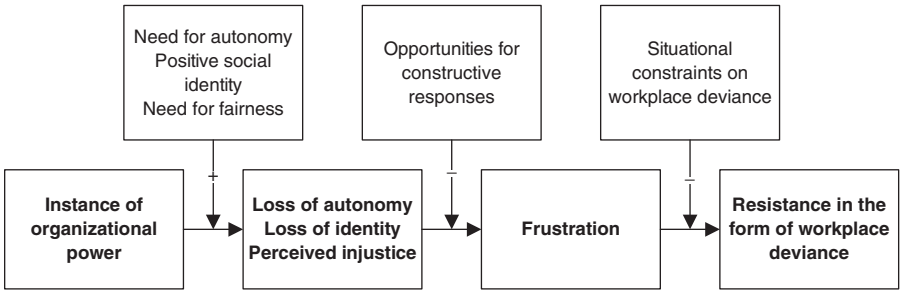
Organizational power reflects actions of any individual or organizational system that controls the behavior or beliefs of an organizational member. We contend that such enactments of power provoke workplace deviance, defined here as voluntary behavior that violates significant organizational norms and thus is perceived as threatening the well-being of the organization or its members (Robinson & Bennett, 1997). When power provokes workplace deviance, it is a form of organizational resistance: Resistance involves an action, inaction, or process whereby individuals within a power structure engage in behaviors stemming from their opposition to, or frustration with, enactments of power (Collinson, 1999; Knights & McCabe, 1999). Deviant behavior is only one of many forms of resistance identified in the literature.

Workplace deviance as organizational resistance is important and widespread because all organizations are sites of power and resistance (Clegg, 1989; Mintzberg, 1983; Pfeffer, 1981). The structures, systems, and cultures of organizations act as circuits of power that control the actions of organizational members (Townley, 1993). Organizational structures provide the basis of legitimate authority (Pfeffer, 1981), whereas cultures and systems control members through rewards and sanctions and the articulation of what is understood as normal and desirable (Clegg, 1989; Townley, 1993). Within these cultures and structures, organizational actors regularly enact power in attempts to influence, persuade, or otherwise motivate organizational members to act in particular ways (Yukl & Falbe, 1990).

Workplace deviance is driven by provocations (Hollinger & Clark, 1982; Robinson & Bennett, 1997). Such provocations come from perceived disparities between a current state and some ideal state, need, or desire, which creates frustration (Robinson & Bennett, 1997). The frustration stemming from these provocations may motivate deviant behavior that is either instrumental or expressive in nature (Sheppard, Lewicki, & Minton, 1992). We argue that organizational power has the potential to create at least three forms of perceived disparity that produce frustration: (a) disparity between the need for autonomy and an experienced loss of freedom, (b) disparity between one's social identity and threats to that identity, and (c) disparity between a need for justice and experiences of unfairness. (See Figure 1.)

Need for autonomy. Reactance theory argues that the enactment of power can create a feeling of reduced autonomy on the part of employees, and this threat in turn motivates those employees to restore it by engaging in the restricted behaviors, or behaviors similar to them

Figure 1
The Primary Relationship Between power and Deviance



(J. W. Brehm, 1966; S. S. Brehm & Brehm, 1981; Wicklund, 1974). Enactments of power have the potential to thwart basic needs of employees, such as their sense of autonomy and self-control (Adler, 1930). Although individuals vary in their need for autonomy, such needs are critical to individuals because they believe that they can control their own destinies; it is only through the freedom to make decisions and choose actions that they can maximize their own satisfaction (J. W. Brehm, 1966; Wicklund, 1974). In terms of our model, we posit that enactments of power reduce autonomy, and the ensuing frustration can lead to deviant behaviors that are intended to resist that loss of autonomy.

Proposition 1: Instances of organizational power are more likely to lead to the frustration that underpins workplace deviance as resistance either when it significantly reduces the autonomy of individuals and/or when the targets of that power have a high need for autonomy.

Social identity. A second psychological mechanism through which power can lead to frustration and thus to deviant behavior involves the potential threat to an employee's social face, or desired identity. Social face refers to an interplay of attributes and social identities that the employee would like to project in a given social environment (Erez & Earley, 1993). Enactments of power in organizations can undermine or threaten one's identity in the organization as a strong, independent, equal individual. Such a threatened or damaged identity potentially provides the frustration that can lead to deviant behavior (Averill, 1982; Berkowitz, 1993; Tedeschi & Felson, 1994): When individuals' identities or social face are threatened, they tend to engage in defensive self-presentation (Schlenker, 1980) and are more likely to act with aggression (Tedeschi & Felson, 1994; Morrill, 1992) or seek revenge (Bies & Tripp, 1995; Bies, Tripp, & Kramer, 1997). As Andersson and Pearson (1999) argued, revenge is a way for individuals to demonstrate that they have socially valued attributes and are deserving of respectful behavior: Revengeful behavior may help to reestablish one's lowered sense of self or build up one's identity (Kim & Smith, 1993). Following our general model, acts of power undermine one's social identity, which in turn causes frustration and

leads to a variety of deviant behavior intended to either seek revenge or restore that threatened loss of social face.

Proposition 2: Instances of organizational power are more likely to lead to the frustration that underpins workplace deviance as resistance either when it significantly threatens the identities of targeted individuals and/or when the targets of that power have a high need to protect their identities.

Justice. Organizational power may also create disparity between desires for justice and perceptions of unfair treatment. Employees who are equity sensitive or who possess a high need for justice will be more likely to sense such disparities. The enactment of power may produce a sense of unfairness by those who are the recipients of it (Collinson, 1992). Although organizational members are often affected by decisions, systems, and processes that are counter to their self-interest (Mintzberg, 1983), research on procedural justice shows that individuals are more likely to consider acts of power as legitimate when they perceive the underlying processes as fair (Tyler, 2000). Thus, when organizational members perceive processes as unfair, such perceptions can engender frustration and motivate them to seek retribution, potentially by reciprocating the perceived unfair act (Ambrose, Seabright, & Schminke, 2002; Skarlicki & Folger, 1997). Consequently, feelings of injustice generated by organizational power can lead to the frustration that underpins workplace deviance intended to release those feelings or achieve some sort of retribution.

Proposition 3: Instances of organizational power are more likely to lead to the frustration that underpins workplace deviance as resistance either when it significantly undermines perceptions of justice on the part of targeted individuals and/or when the targets of that power have a high need for organizational justice.

Factors That Moderate the Link to Frustration

We have argued that enactments of organizational power have the potential to create disparities between individuals' needs for autonomy and their experienced loss of freedom, their social identity and threats to that identity, and between a need for justice and experiences of unfairness. Even when this is the case, however, we contend that opportunities in the environment for more constructive forms of resistance will moderate the link between these perceived disparities and individuals' frustration.

When opportunities for alternative responses are available, the likelihood of frustration in response to instances of power is decreased. One opportunity is afforded by the availability of channels through which individuals can gain voice, such as through complaint channels, unions, or other mechanisms to constructively resolve disputes. Other opportunities for alternative responses may include the attractiveness and availability of alternative jobs and organizations, enabling some to exit the organization rather than engage in workplace deviance (Withey & Cooper, 1989). Together, these and other opportunities for alternative responses to enactments of power may decrease the frustration experienced by individuals in response to instances of power.

Proposition 4: Opportunities for alternative responses will moderate the relationship between enactments of power and the frustration that underpins workplace deviance, such that the presence of those opportunities weakens the relationship.

Thus far, we have shown the general relationship between organizational power and workplace deviance, as mediated by frustration of fundamental needs. In so doing, we have treated enactments of power and workplace deviance as unitary constructs. However, as we will explore in the next section, particular types of power may produce particular types of workplace deviance.

Dimensions of Power and Workplace Deviance

In this section, we drill down in our preceding analysis to examine relationships between dimensions of power and dimensions of workplace deviance. Research shows that organizational resistance can take many forms and that its strength, influence, and intensity are likely to be variable and to change over time (Brown, 1992). The type of resistance in which one engages depends on the particular context and content of what is being resisted (Jermier, Knights & Nord, 1994). Whatever form resistance takes is intertwined with the systems of power exhibited within the organization (Collinson, 1994). Therefore, the nature of deviance as a form of resistance depends on the nature of the power that provokes it.

To explore this issue, we first articulate the nature of power with a two-dimensional typology, and the nature of workplace deviance, with a similar typology. Next we examine how the nature of power affects the particular nature of deviance that emerges.

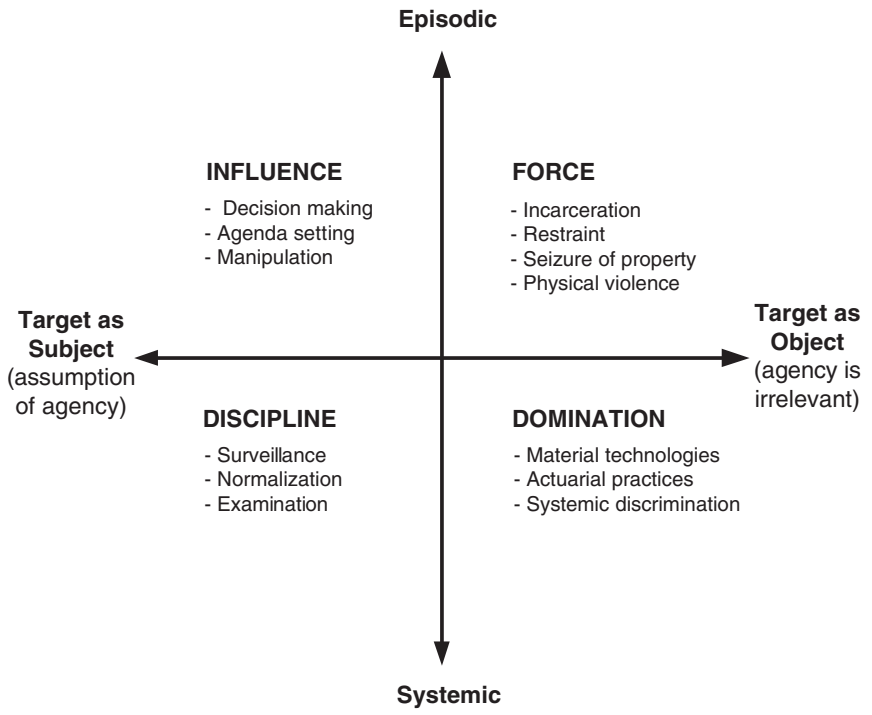
The Dimensions of Power

We begin our analysis with an examination of the nature of power and its dimensions. To do so, we rely on Lawrence, Winn, and Jennings's (2001) conceptualization and typology of power. This typology is well suited for our model because it encompasses a wide array of potential provocations that are rooted in organizational power. The breadth of the typology stems from the two dimensions on which it is based: (a) degree of objectification and (b) the mode of power (Figure 2).

Objectification of power. Some forms of power treat the target as a "subject," by which we mean an individual who is seen as having agency or choice. Influence, for example, involves attempts to negotiate, exclude, or manipulate a target (Porter, Allen, & Angle, 1981), which assumes agency on the part of the target. Without an assumption of agency, efforts to influence would be nonsensical.

In contrast, other forms of power treat the target as an "object," one whose agency is irrelevant to the exercise of power. A wide variety of objectifying forms of power have been examined in organizational contexts, including physical violence (Hearn, 1994), material

Figure 2
Forms of Organizational Power



technologies (Shaiken, 1984), and even actuarial practices (Simon, 1988). Each of these practices involve enacting power over individuals directly, without having to compel or convince the targets to "do" anything.

Mode of power. The second dimension of power is the "mode" of power, which describes the basic manner in which power operates. There are two distinct modes of power: "episodic" and "systemic" (Lawrence et al., 2001). Episodic power refers to that which is enacted in relatively discrete, strategic events that are initiated by self-interested actors (Clegg, 1989; Hardy & Clegg, 1996). This mode of power has dominated the study of power in organizations and has been approached from a wide variety of perspectives (Mintzberg, 1983; Pfeffer, 1981).

In contrast to episodic power, systemic forms of power work through the routine, ongoing practices of organizations to advantage particular groups without those groups being obviously or clearly connected to the establishment or maintenance of those practices (Foucault, 1979; Laclau & Mouffe, 1985). Some examples of systemic power include organizational socialization processes (Covaleski, Dirsmith, Heian, & Samuel, 1998), technological systems

such as manufacturing and information systems (Shaiken, 1984), and human resource training and testing systems (Townley, 1993). All of these systems can dramatically affect the lives of organizational members without being tied to specific agents or episodes of power.

Combining these dimensions of power, four specific types emerge. Episodic and nonobjectifying forms of power are labeled *influence* and reflect actions such as moral suasion, negotiation, rational persuasion, ingratiation, and exchange (Clegg, 1989; Lawrence et al., 2001; Maslyn, Farmer, & Fedor, 1996). Episodic power that treats employees as objects is termed *force*, and it includes moving, restraining, or directing employees in ways they have no choice. An example might include relocating an employee or dismissal. Systemic forms of power that do not objectify the individual are referred to as *discipline* and involve such practices as socialization, compensation, training, teamwork, and surveillance (Sewell, 1998; Townley, 1993). Finally, systemic and objectifying forms of power, called *domination*, include power that is reflected in things ranging from the technology used in a manufacturing plant (Shaiken, 1984) to pay systems that discriminate (Falkenberg, 1997).

The Dimensions of Workplace Deviance

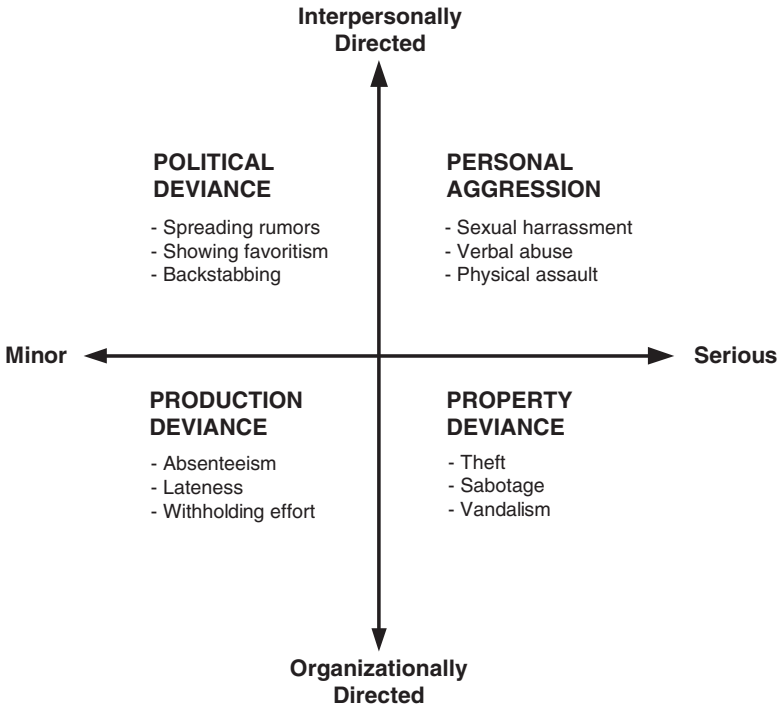
Workplace deviance is enacted in a wide variety of forms that can vary from context to context (Hollinger & Clark, 1982; Redeker, 1989). Robinson and Bennett (1995), using multidimensional scaling analysis, identified two dimensions that capture the full domain of workplace deviance: severity and target (Figure 3).

Severity. The dimension of severity refers to the extent to which the deviant act violates important organizational norms and thus is perceived as more potentially harmful to the organization or its members. Relatively minor forms of deviance include such behaviors as social loafing and unjustified absenteeism, whereas more severe forms might involve physical aggression or theft.

Target. The target dimension reflects whether the deviance is directed at the organization or organizational members. Organization-directed deviance might include, for example, vandalism, theft, or sabotage. In contrast, individual-directed deviance might include gossip, scapegoating, or physical assault. Although a given act of deviance may harm both targets, organizational members will tend to direct their deviant actions at primarily an individual or an organizational target.

These two dimensions of workplace deviance create four specific types of deviance. Less severe behavior that is targeted at individuals reflects "political behavior," the engagement in social interaction that puts other individuals at a personal or political disadvantage (Robinson & Bennett, 1995: 566) and includes things such as gossip, rumor spreading, scapegoating, or favoritism. More severe forms of behavior targeted at individuals, labeled *personal aggression*, include behavior such as harassment, verbal attacks, and threats to cause physical harm. Deviance that is less severe and directed at the organization reflects "production deviance" (Robinson & Bennett, 1995, 1997) and includes taking excessive breaks, calling in sick, intentionally working slow, and generally violating norms regarding the minimal quality and quantity of work to be accomplished. And finally, severe deviance targeting the organization

Figure 3
A Typology of Workplace Deviance



reflects "property deviance" and includes behaviors such as theft from the organization, insubordination, intentional mistakes, and sabotaging machinery or equipment.

The Relationship Between Dimensions of Power and Dimensions of Deviance

In this section, using the dimensions discussed above, we posit that the nature of power along each of its dimensions will affect the nature of the deviance that emerges.

Impact of objectification on severity of deviance. We argue that the targets' perceptions of whether power treats them as subjects or as objects will lead to greater frustration, which in turn will create motivation to resist with deviance. Objectifying forms of power will tend to lead to greater levels of frustration than do those that treat targets as subjects, because objectifying forms of power entail a greater loss of autonomy, pose more serious threats to organizational members' identities, and may be perceived as less procedurally just. The greater threats that emanate from objectifying forms of power, in contrast to other forms of power, will tend to

elicit stronger behavioral resistance. Greater frustration leads to more severe acts of workplace deviance (Andersson & Pearon, 1999), which can be understood from the "effect/danger ratio" (Baron & Neuman, 1996). More severe forms of deviance are likely to be more effective, but they also carry the risk of consequences for those who engage in them (Hollinger & Clark, 1982). Thus, one needs greater motivation to offset concern for the increased risks. We argue that motivation is greatest when individuals are subject to objectifying forms of power, and the degree of frustration is greatest. Together, these arguments suggest the following:

Proposition 5: The greater the degree of objectification involved in the enactment of power, the greater the frustration and hence, the more likely deviance will be severe.

Impact of mode on target of deviance. We argue that the perceived mode in which power operates—episodic or systemic—will affect where deviant actions are targeted. When individuals experience negative outcomes, such as those producing frustration, they will seek to attribute blame or responsibility for them (Harvey, Ickes, & Kidd, 1981). Episodic forms of power involve the enactment of power in specific, discrete actions (Clegg, 1989; Lawrence et al., 2001): Regardless of whether the episode is driven by individual or organizational interests, there will usually be a specific, identifiable actor that can be readily observed as responsible (Mintzberg, 1983; Pfeffer, 1981). Thus, the appearance of identifiable individual agents in episodic power will lead the targets of that power to hold a particular actor accountable. In contrast, systemic power is enacted within routines that are more obviously attached to the organization as a whole than to a specific organizational member. Consequently, under systemic power, the employee is much more likely to hold the organization responsible, rather than specific individual agents or managers.

Targets of power will tend to direct their acts of resistance at the perceived source of the frustration (Robinson & Bennett, 1997). Given that deviance as resistance serves in part to cause harm to, or wreak revenge on, the entity perceived responsible for enacting the power, the actions perceived as maximizing effectiveness will be those directed at the source of the power. Thus, if the costs of directing deviant behavior toward different targets are the same, individuals will tend to target the perceived source when possible. A variety of prior literature is consistent with this argument. Research on aggression finds that when such behavior is triggered by aversion treatment, the source blamed for the treatment becomes the target (Allen & Lucero, 1996; Berkowitz, 1993; O'Leary-Kelly, Griffin, & Glew, 1996).

Proposition 6a: Enactments of episodic power will be positively related to individual-directed deviance.
Proposition 6b: Enactments of systemic power in organizations will be positively related to organization-directed deviance.

The Relationship Between Specific Types of Power and Deviance

The relationships between dimensions of power and dimensions of workplace deviance discussed above form the foundation for understanding the links between *specific* forms of power and *specific* types of deviance. As illustrated in Figure 4, we contend that specific

Figure 4
The Impact of the Form of Power on Types of Workplace Deviance

Form of Organizational Power		Type of Deviance Most Likely to Result
Influence	⇨	Political Deviance
Force	⇨	Personal Aggression
Discipline	⇨	Production Deviance
Domination	⇨	Property Deviance

forms of power are likely to provoke one of four types of workplace deviance. We now discuss each of these links in turn.

Influence and political behavior. Influence, an episodic and nonobjectifying form of power, occurs as specific acts of power in which one actor attempts to persuade another actor to do something he or she would not otherwise do (Clegg, 1989; Porter et al., 1981). Thus, influence may provoke deviant behavior when the target of power feels frustration or outrage, perhaps because moral suasion feels like undue pressure, a negotiation appears one-sided, or ingratiation feels insincere and manipulative. In reaction to these negative feelings, an individual might seek to express his or her frustration or outrage, or to attempt to correct the situation in some way.

Influence is episodic in nature (Porter et al., 1981) and therefore will encourage workplace deviance that is directed at the perceived source. Because episodes of influence treat the employee as a subject rather than an object, the severity of the deviance provoked by it will likely be relatively mild: The target's relatively small loss of autonomy and greater sense of procedural fairness will lead the employee to resist through less severe acts of deviance. Thus, episodes of influence are likely to engender workplace deviance that is targeted at the individual and low in severity; what Robinson and Bennett (1995) referred to as "political behavior."

Proposition 7: Acts of workplace deviance that are provoked by an episode of influence will tend to occur in the form of political deviance.

Force and personal aggression. The use of force involves episodes of power where organizational members are treated as objects (Hearn, 1994). An extreme but common form of force involves firing organizational members, but there are a range of other actions that effectively remove an employee's sense of agency: moving an employee to a different shift or to a different location; taking away a resource, such as access to information; compelling behavior through extreme coercion. What is critical with respect to understanding the link between force and workplace deviance is the lack of agency as perceived by the target. Episodes of force can produce feelings of intense frustration and outrage, because one's autonomy has been stripped, one's identity threatened, and the act itself is perceived as procedurally unfair.

The episodic nature of force will lead to forms of deviance that are targeted at the individual perceived responsible. Because a specific individual is seen as accountable for the episode, the target individual will direct his or her frustration and outrage at that person. In contrast to influence, however, force is likely to lead to more destructive or severe forms of deviance. This is because force creates a greater perceived loss of autonomy and sense of procedural unfairness. Thus, it evokes stronger frustration and thus more severe deviant behavior. These arguments taken together suggest that force will be more strongly associated with deviance directed at individuals and that is more severe in nature, what Robinson and Bennett (1995, 1997) referred to as "personal aggression."

Proposition 8: Acts of workplace deviance that are provoked by an episode of force will tend to occur in the form of personal aggression.

Discipline and production deviance. Discipline involves organizational systems or routines, rather than episodes of power, that treat individuals as subjects who have volition or choice with regard to their behavior (Clegg, 1989; Foucault, 1979; Lawrence et al., 2001). Whereas the use of influence assumes that targets of power have stable identities that will lead them to react in predictable ways to certain inducements, the power of discipline is in its capacity to shape the identities of targets and consequently lead them to act in particular ways without specific inducements (Covaleski et al., 1998; Knights, 1992).

When discipline provokes deviance as a form of resistance, it is likely to evoke less serious forms because organizational members are treated as subjects within systems of discipline, and thus their sense of autonomy will be less restricted, their identities will be less threatened, and their sense of justice will be less disturbed. In addition, the systemic nature of disciplinary power suggests that any workplace deviance that it provokes will likely be targeted at the organization rather than an individual. Disciplinary systems are typically routinized and embedded in the organization as a whole, and so no specific individual is likely to be identifiable as responsible. Together, these dynamics suggest that discipline will tend to provoke deviance that is less severe and directed at the organization, what is referred to as "production deviance" (Robinson & Bennett, 1995, 1997).

Proposition 9: Acts of workplace deviance that are provoked by systems of discipline will tend to occur in the form of production deviance.

Domination and property deviance. Domination is a form of power that is systemic and treats its target as an object. It involves systems of organized, routine practices that do not require agency or choice on part of those targeted (Lawrence et al., 2001). These systems of power all have the ability to support patterns of social action in an ongoing way without the complicity of those on whom they act (Lawrence et al., 2001). Assembly-line technologies, for example, can routinely determine the actions of individuals without any episodic intervention or action on the part of management.

Like force, domination strips its targets of their sense of autonomy and agency, which is likely to lead to high levels of frustration. At the same time, the sense of procedural unfairness can be high. As such, the deviance it provokes will be more severe in nature. The direction of this relatively severe workplace deviance is likely to be toward the organization as a whole, rather than an individual member; because power is embedded in organizational systems and routines, targets of power will find it difficult to attribute it to any individual. Together, these two elements suggest that domination as a form of organizational power will encourage organizational members to engage in organizationally directed deviance that is severe in nature—what Robinson and Bennett (1995, 1997) referred to as "property deviance."

Proposition 10: Acts of workplace deviance that are provoked by systems of domination will tend to occur in the form of property deviance.

Constraints on Workplace Deviance

Although we argue that each form of power is most likely to lead to a specific type of workplace deviance, these relationships are likely to be moderated by the existence of constraints on individual behavior. Constraints are ubiquitous in organizations and essential to their existence (Katz & Kahn, 1978). Not surprisingly, behavior in organizations is often dictated by constraints (Johns, 1991), which are defined here as barriers to action or environmentally induced limitations on behavior (Rosse & Miller, 1984). Typical constraints on workplace deviance include surveillance and sanctions. To the extent that employees are monitored and audited, the opportunity to engage in destructive behavior is limited (Baum & Youngblood, 1975; Dalton & Perry, 1981; Mobley, 1982). The likelihood of sanctions and the severity of those sanctions may thwart workplace deviance (Hollinger & Clark, 1982). Moreover, informal sanctions by coworkers can also regulate deviance such as theft (Siehl, 1987). These constraints increase costs of deviant behaviors, and we know that employees weigh the costs of engaging in alternative responses before choosing one (Adams, 1965; Hirschman, 1970; Rusbult, Farrell, Rogers, & Mainous, 1988). This suggests that situational constraints on workplace deviance will decrease our ability to predict the exact type of deviance that any given form of power will engender.

Proposition 11: Situational constraints will moderate the relationship between the forms of power and the specific types of workplace deviance, such that to the extent that there is monitoring of and sanctions against deviant behavior, the relationships will be weaker.

Conclusion

In this article, we have developed a theory of workplace deviance as a form of resistance to organizational power. We have argued that workplace deviance is often sparked by the systems and episodes of organizational power that lead organizational members to feel frustration, which in turn motivates them to resist, potentially with deviant behaviors. We further argued that different forms of power will prompt specific types of workplace deviance. Forms of power that are systemic (discipline or domination) will tend to incite deviance directed at the organization, whereas episodic power (influence or force) will tend to provoke deviance targeted at individual organizational members. Power that objectifies the employee (force or domination) will tend to encourage relatively severe deviant responses, whereas power that relies on the target's agency (influence or discipline) will tend to incite less severe deviance.

An important implication of this theoretical model for the study of workplace deviance is that it highlights the degree to which deviant behavior can involve any organizational members and stem from routine organizational contexts. Feelings of frustration or outrage by the exertion of power are not uncommon in organizational life, and the reactions to power we address here are not atypical employee behaviors (Collinson, 1992, 1999; Jackall, 1988). By conceptualizing deviance as a form of organizational resistance, we can move the study of deviance away from the notion that there are unique "deviant" organizational members. Furthermore, the forms of power we have discussed here are not necessarily aberrant or abusive: Influence, discipline, domination, and force are all ordinary, legitimate mechanisms of control in contemporary organizational life (Clegg, 1989; Lawrence et al., 2001; Simon, 1988; Townley, 1993). By suggesting that workplace deviance may stem from a reaction to organizational forms of power, we do not want to romanticize deviance and demonize power. We believe that organizational members who enact forms of power typically do so without any intention of abusing or mistreating other organizational members. This, however, makes the link between organizational power and workplace deviance even more important. If power incited deviance only when it was intentionally or obviously unreasonable, then this would be a relatively minor issue and one that could justifiably be ignored in most deviance research. However, because the link between power and deviance is based on the perceptions of individuals who will have widely varying interpretations of the reasonableness of organizational power, we believe it is critical for research on deviance to include these employee perceptions in their studies. Indeed, what might be considered reasonable by organizational members enacting the power may well be considered unreasonable by the members who are its targets.

For those interested in understanding and managing workplace deviance, an important implication is that organizational power and workplace deviance may constitute an interlocking system of actions, interpretations, and reactions in which all organizational members are implicated. For those seeking to curb workplace deviance, our model may be helpful for illuminating the potential roots of deviance, including the episodes and systems of power that

are intended to control deviant behavior. Only by understanding the actual causes of deviance can effective solutions be identified.

We hope that this article will encourage empirical investigation of the relationships we have proposed in our model. An important next step for research on power and deviance in organizations would be to empirically establish the general relationship between power and deviance we have suggested, as well as to test the specific relationships between forms of power and types of workplace deviance. More generally, we believe that these relationships may provide a broad foundation for future empirical research exploring the relationship between these two domains of study. The injection of power as a concept could open up scholarly examinations of workplace deviance such that they become more critical in terms of the role of management in provoking deviant behavior and more practical by providing explanations of deviance that address issues of structure, authority, and control. In return, incorporating issues of workplace deviance into studies of power could lend considerable insight into the relationship between episodes and systems of power and the forms of resistance they can engender.

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Boundaries of the Firm: Insights From International Entry Mode Research†

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Deciding on the boundaries of a firm as it expands abroad is a critical decision for managers. Despite the rapid growth in research addressing this issue, many questions remain unanswered. In this article, the authors review the international entry mode choice literature, identify weaknesses and shortcomings, and provide suggestions on how researchers can add to the knowledge of mode choice and help managers make better international boundary decisions.

Keywords: *transaction cost; resource-based view; institutional theory; entry mode choice; strategic decision making*

As the forces of globalization drive firms to expand outside their home market, a primary issue of concern is in establishing effective boundaries for the firm. International entry mode research deals with this issue by exploring the form of operation firms use to enter foreign markets. Specifically, we will review whether firms enter foreign markets through contracts (with distributors, resource suppliers, licensees and franchisees) or by extending the firm abroad, setting up sales or manufacturing subsidiaries and, should they decide to set up such

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affiliates, whether they will share the ownership of such affiliates with other firms (an equity joint venture [JV]) or decide to keep full ownership (a wholly owned subsidiary [WOS]). International entry mode research is important because setting the correct boundaries of the firm has significant performance implications (K. D. Brouthers, 2002; K. D. Brouthers, Brouthers, & Werner, 2003). In addition, research indicates that entry modes, once established, are difficult to change or correct, suggesting long-term consequences for the firm (Pedersen, Petersen, & Benito, 2002).

International entry mode research is relatively new. Early studies such as Stopford and Wells (1972) examined what modes firms used internationally but did not provide a theoretical explanation for mode choice. In the late 1980s and early 1990s, several scholars began using transaction cost theory to both theoretically and empirically look at the mode-choice decision (Gatignon & Anderson, 1988; Gomes-Casseres, 1989; Hennart, 1988a, 1989, 1991). But it has only been in the past 15 years that international entry mode research has gained momentum, with about 100 empirical studies published during this period.

Our objectives in this study are twofold. First, we summarize the state of the field. Second, we recommend a way forward by identifying opportunities to fill gaps in our knowledge of this critically important strategic decision. To that end, we reviewed empirical articles published in academic journals that deal with the choice between contracts and equity and between full and partial equity (i.e., what we will call the entry mode choice). We did not review book chapters, unpublished papers, or theoretical articles such as Hennart (1988a, 1989). Every attempt was made to identify and review as many published articles as possible to help make the review as complete as possible, yet resource restrictions influenced our ability to identify and evaluate every article. Space limitations also prevented us from including all the articles reviewed in the final version of this article. Hence, we offer our apologies to those authors who were not directly cited but who have made important contributions to our knowledge of international entry mode choice.

This article is structured as follows. First, we review and define what we mean by entry mode and differentiate entry mode choice from other structural alternatives such as establishment mode choice. We then proceed to examine the empirical literature on the four most commonly employed theoretical perspectives on entry mode selection: transaction cost, resource-based view, institutional theory, and Dunning's eclectic framework. Then we look at entry mode research relating to multinational enterprise (MNE) strategy, country effects, and industry and firm effects and finally explore the impact of mode choice on performance. Following this review of existing research, we provide directions for future research, focusing on the need to deepen existing theories and to apply alternative theories that account for the impact of managers, and make suggestions about how to improve the methodology of this research stream.

Background

Although no complete listing of mode structures exists, our review of the literature indicates that a large number of individual mode structures have been examined. The most commonly explored choice is that between WOSs and JVs. Some articles have also investigated the choice between contracts and equity (e.g., distribution contracts vs. sales subsidiaries, licensing contracts vs. production subsidiaries, franchising contracts vs. company-owned

outlets, managing contracts vs. production subsidiaries). In total, we identified 16 different mode types that have been included in previous studies.[1]

Unfortunately, there is no consensus in the field as to the precise relationship among the three main modes of market entry, namely contracts, WOSs, and JVs, on one hand, and among these three entry modes and entry through the establishment of greenfield ventures versus acquisitions, on the other. It is therefore crucial, before we embark on a detailed review of the literature, to discuss the position we take on these two issues.

There appear to be two main views in the literature on the meaning of entry modes and the differences among contractual, JV, and wholly owned organizational structures. The first, articulated by a number of authors (e.g., Anderson & Gatignon, 1986; Erramilli & Rao, 1990; Hill, Hwang, & Kim, 1990), arranges contracts (e.g., licensing), JVs, and WOSs along a continuum of increasing control, commitment, and risk, with WOS chosen when firms want maximum control and are willing to make maximum commitment and take on maximum risk. Based on this simple premise, a number of scholars have offered typologies of entry mode types. For example, Anderson and Gatignon (1986) identified 17 different mode structures ranging from WOSs to small shareholder (one partner) organizations, whereas Erramilli and Rao (1990) list 11 mode types ranging from greenfield WOS venture to licensing and franchising. From this point of view, the choice between licensing and WOS, and that between JV and WOS, is determined by the same variables, for example, asset specificity, with licensing being chosen when asset specificity is low, JVs when it is at intermediate levels, and WOSs when it is high.

The second perspective is articulated by Hennart (1988a, 1989, 2000), who does not see JVs as a step in the continuum between contracts and WOS but instead classifies modes of entry into two categories, contracts and equity, with both JVs and WOSs in the equity category. For him, the main difference in entry modes lies in the method chosen to remunerate input providers. The fundamental characteristic of equity, whether shared in a JV or full in a WOS, is that input suppliers are paid ex post from the profits of the venture, in contrast to contracts, where payments are specified ex ante. Paying the contributors of inputs ex post from the proceeds of the business is efficient whenever defining what they must contribute is difficult ex ante and measuring it is costly ex post. The only difference between WOSs and JVs is then that JVs consist in joint internalization, whereas WOSs represent sole internalization.

Hennart (2000) argues that joint internalization through JVs will occur whenever the complementary inputs contributed by two separate firms are more efficiently bundled by giving each input owner a claim on the result of the cooperation than by having one of the input owners pay ex ante for the contribution of the other. For example, in the typical market entry case, a foreign firm bundles its proprietary technology with local inputs, such as land, labor, management, distribution channels, local market knowledge, and so forth. The inputs contributed by the foreign firm and those held locally can sometimes be purchased on the market. This is the case of land offered for sale and of patented technology offered for license. By contrast, other assets are more costly to transact. Tacit technology, for example, is difficult to assess for outsiders, and its transfer is difficult to measure. Likewise, purchasing local factors of production is sometimes difficult (e.g., land where there are no property rights).

If the complementary assets can be purchased on the market, the party with the hard-to-transact assets will integrate into a WOS. For example, an MNE that can easily acquire the local factors that complement its hard-to-transact tacit technology will set up a WOS in the target country (Figure 1, cell 2). Conversely, if the assets held by the MNE can be easily purchased on

Figure 1
Contracts, Wholly Owned Subsidiaries (WOSs), and Equity Joint Ventures (JVs)

		Inputs contributed by MNEs	
		hard to sell	**easy to sell**
Inputs contributed by local firms	**hard to sell**	1. JV between MNE and local firm	3. WOS by local firm (takes license/ franchise from MNE)
	easy to sell	2. WOS by MNE	

Source: Adapted from Hennart (2000).
Note: MNE = multinational enterprise.

the market, a local firm with hard-to-transact assets will license the complementary technology and set up a domestic WOS (cell 3). JVs occur when both the local and foreign assets are hard to transact (cell 1). In that case, it makes sense for both input suppliers to be paid ex post from the profits of the venture (i.e., for both to form a JV to bundle their complementary assets).

This viewpoint has important implications for the classification of modes of entry and for the analysis of their determinants. First, it shows that a JV is not some intermediate form between market and hierarchy but results from joint internalization because of double market failure (Hennart, 1988a). Hence, JVs are firmly in the hierarchy category, and the variables that determine the choice between contracts and equity are not necessarily the same as those that affect the choice between JV and WOS. Second, a JV is, from this point of view, any type of setup where input providers are paid for their inputs through a share of the profits of the venture. Hence, both partial acquisitions (Figure 2, cell 3) and JV greenfields (cell 1) should be categorized as JVs. This is in contrast to some of the literature (e.g., Kogut & Singh, 1988) that has argued, without explicit theoretical justification, that the term *JV*

Figure 2
Modes of Entry

		Establishment mode	
		greenfield	**acquisition**
Ownership mode	**shared**	1. Greenfield JV	3. Partial acquisition
	full	2. Greenfield WOS	4. **Full** acquisition

Note: WOS = wholly owned subsidiary; JV = joint venture.

should be reserved to shared de novo ventures with separate legal personalities. This article will adopt Hennart's (1988a) position that JVs are joint hierarchies and that they include both shared greenfields and partial acquisitions.

In this article, we also make a distinction between the level of ownership (JV vs. WOS) and the establishment mode (greenfield vs. acquisitions) and focus only on the former, in the assumption that these two decisions are basically separate. This is not an established practice. Some authors have used dependent variables that mix these two dimensions. Kogut and Singh (1988), for example, simultaneously studied the categories of JV greenfields (Figure 2, cell 1), full acquisitions (cell 4), and full greenfields (cell 2). However, there are both theoretical reasons and empirical support for the argument that the choice of mode of entry and that of establishment mode are independently made (Hennart, 2000; Hennart & Park, 1993; Padmanabhan & Cho, 1996). Hence, in this article, we do not include research dealing with the so-called establishment mode, that is, the choice between acquisition or greenfield entry (e.g., K. D. Brouthers & Brouthers, 2000; Hennart & Park, 1993), unless it also addresses entry mode choice.

Theoretical Perspectives

A large number of theories have been used to explain the entry mode choice decision. Among the most commonly applied are transaction cost analysis (TCA), the resource-based view, institutional theory, and Dunning's eclectic framework. These four theories are used as the theoretical foundation for almost 90% of the published entry mode studies we reviewed. Other less frequently applied theories include internalization theory (Gronhaug & Kvitastein, 1993), control theory (Pan & Tse, 1996), agency theory (Fladmoe-Lindquist & Jacque, 1995), bargaining power theory (Palenzuela & Bobillo, 1999), and resource dependency theory (Glaister & Buckley, 1996).

Transaction Cost Analysis

TCA (Williamson, 1985) is the most widely used theoretical perspective in international entry mode research and appears in almost half of the studies we reviewed. TCA argues that managers suffer from bounded rationality, whereas potential partners may opportunistically act if given the chance. In Williamson's (1985) TCA framework, three TCA factors are hypothesized to influence decisions: asset specificity, uncertainty (both internal–behavioral and external–market specific), and frequency (Geyskens, Steenkamp, & Kumar, 2006).

A recent meta-analysis of TCA-based entry mode studies identified 38 studies and provided a number of interesting insights (Zhao, Luo, & Suh, 2004). In general, the meta-analysis provided evidence that TCA does a good job of explaining mode choice. Because we used different search criteria, our review identifies 43 studies that included transaction cost theory as either all or part of the theoretical perspective and comes to similar conclusions.

Asset specificity (Williamson, 1985) is a central explanatory variable in most of these studies. Yet past studies have found mixed results pertaining to this critical variable. Several studies have found support for the transaction cost prediction that high asset specificity is related to the use of high control modes (WOS) (K. D. Brouthers & Brouthers, 2003; K. D. Brouthers et al., 2003; Erramilli & Rao, 1993; Gatignon & Anderson, 1988; Hennart & Larimo, 1998; Makino & Neupert, 2000); however, other studies have found the opposite effect (Delios & Beamish, 1999; Palenzuela & Bobillo, 1999). Our review indicates that the majority of transaction cost–based entry mode studies tends to find no significant relationship between asset specificity and entry mode choice (e.g., K. D. Brouthers & Brouthers, 2003; Delios & Beamish, 1999; Gatignon & Anderson, 1988; Hennart, 1991; Hennart & Larimo, 1998; Kim & Hwang, 1992; Taylor, Zou, & Osland, 1998). There may be several reasons for these disparate results.

A common measure of asset specificity has been a firm's R&D and/or advertising intensity (measured by dividing R&D and advertising expenditure by total sales). Other studies have used perceptual measures of asset-specific investments that include physical (service) asset specificity (K. D. Brouthers & Brouthers, 2003; K. D. Brouthers et al., 2003; Erramilli & Rao, 1993; Klein, Frazier, & Roth, 1990; Palenzuela & Bobillo, 1999), technology asset specificity (Palenzuela & Bobillo, 1999; Taylor et al., 1998), human asset specificity (K. D. Brouthers & Brouthers, 2003; K. D. Brouthers et al., 2003; Erramilli & Rao, 1993; Klein et al., 1990; Palenzuela & Bobillo, 1999), and dedicated asset specificity (K. D. Brouthers & Brouthers, 2003; K. D. Brouthers et al., 2003).

It is not clear, however, whether the concept of asset specificity has always been properly applied in the entry mode literature. Williamson (1985) developed this concept to explain vertical investments. Asset specificity occurs when suppliers or customers must make investments that are specific to the buyer. Once made, these investments expose them to having the other party opportunistically alter the price of the product, a situation called holdup. To avoid holdup, the parties will draft a contract that specifies the price of the product for the useful life of transaction-specific investments. This contractual solution typically fails when there is nonindexable uncertainty. In that case hierarchical coordination (through WOS or JV) is the optimal solution (Williamson, 1985). A good deal of empirical evidence supports this view. In the aluminum industry, Stuckey (1983) has shown that, in the presence of asset specificity, interdependent parties will sign long-term contracts but that these contracts are vulnerable to unpredictable changes in the environment. Asset specificity has also been shown to be a significant determinant of the choice between vertical integration and long-term supply contracts in the tin (Hennart, 1988b) and in the chemical industries (Fan, 2000).

Despite Williamson's (1985) focus on vertical investments, many entry mode scholars have used this concept of asset specificity to explain horizontal investments; that is, investments made to exploit in one market knowledge or reputation developed in another. In the case of knowledge, the choice is between licensing and integration, and the argument has been that licensing is chosen when asset specificity is low and integration is chosen when it is high. Asset specificity is supposed to exist because the technology recipient must, to absorb the technology, make investments that are specific to the technology sender. But it is unclear why this investment would be less specific when the technology is licensed than when it is transferred through WOS or JV.

Some scholars have made the more convincing argument that it is the level of information asymmetry between the buyer and seller of knowledge that explains why MNEs exploit some innovations through licensing and others by integrating into wholly owned or partially owned ventures. They have argued that the basic problem in the exchange of knowledge is that buyers have usually limited knowledge of what they are buying, and, hence, are unlikely to put on it the same valuation as sellers (Arrow, 1962). Patents are a potential solution to this problem because they encourage inventors to make their knowledge public in exchange for legal protection, thus solving the information asymmetry problem. However, as pointed out by scholars such as Hennart (1982, 1989), patents suffer from major limitations as they protect only explicit knowledge and as their enforcement is far from perfect. Whether knowledge will be transferred by contract (licensing) or by equity (WOS or JV) depends on the characteristics of the technology: Newer and more tacit know-how, and know-how available from few sources, will be transferred through equity WOS or JV, whereas older and better known technologies will be licensed (Davidson & McFetridge, 1984).

Davidson and McFetridge (1984) tested these predictions on a sample of 1,376 international transfers of 221 new product innovations and 359 imitations by 32 U.S.-based multinationals. Their results are consistent with an information asymmetry hypothesis, as they find that the probability that an innovation is transferred through licensing is higher the older the innovation and the greater the number of its past transfers. Although Kogut and Zander (1993) do not make reference to TCA to explain their findings that technologies that are codifiable, teachable, and simple are more likely to be licensed, they can be considered supportive of an information asymmetry view. Arora and Fosfuri (2000) also find that chemical

technology that is explicit and available from many potential licensors is more likely to be licensed than transferred through WOS.

The same divergence in the literature occurs when it comes to explaining the choice between full and partial ownership. Some authors have invoked asset specificity to explain this choice. The argument is that JVs are intermediate forms between market and hierarchy, and because greater asset specificity is supposed to lead to more hierarchy, transactions that involve intermediate asset specificity will be efficiently governed by JVs, whereas those characterized by high asset specificity will make use of WOS (Erramilli & Rao, 1993). Another group of scholars, however, does not see JVs as intermediate forms between market and hierarchy but instead as consisting of joint equity (joint hierarchy) (Hennart, 1988a, 1991). For them, what determines the choice between JV and WOS is an MNE's need for complementary resources that are hard to purchase on markets, on one hand, and the potential that a JV offers for free riding and spillovers on the other (Delios & Beamish, 1999; Hennart, 1988a, 1988b, 1991; Padmanabhan & Cho, 1996). Hennart (1991), for example, looked at the choice made by Japanese MNEs between partial and full ownership of their U.S. affiliates. Japanese investors were more likely to use JVs when they had little experience of the U.S. market and when they were venturing in a different industry than their main industry and, hence, wanted to tap partners for local or industry knowledge.

There is therefore reasonable evidence to suggest that although asset specificity accounts for vertical investments, information asymmetry offers a more convincing rationale for horizontal ones. Empirically, this means that researchers need to apply different measures when examining horizontal foreign entry compared with vertical foreign entry. Although Williamson's (1985) asset specificity measures may be applicable to vertical expansions, information asymmetries may be a more appropriate measure for horizontal entries; other factors, such as the need for complementary resources on one hand, and the cost inherent in joint management on the other, may explain the choice between WOS and JV.

Empirically, it is somewhat difficult to separate the explanatory power of the asset specificity and of the information asymmetry explanations of horizontal investment because some of the same variables have been used by both sets of theorists. As we have seen above, R & D intensity has often been used as a measure of asset specificity. This measure has also been used by proponents of the information asymmetry view as a proxy for the stock of knowledge the MNE is exploiting abroad. To the extent that part or all of this stock of knowledge is likely to be tacit, the higher a firm's R&D intensity, the higher a firm's propensity to choose equity over licensing.

Likewise, scholars who see the JV as midway in a continuum between hierarchy and market have argued that the JV is optimal in situations of medium asset specificity and WOS when asset specificity is higher and have used a firm's R&D intensity as a measure of asset specificity. Those who see JVs as joint hierarchy argue that MNEs with a high R&D intensity are likely to transfer significant amounts of knowledge to their foreign affiliates and are thus likely to fear conflicts and potential spillovers if they use JVs (Gatignon & Anderson, 1988). Hence, the disparate results relating to asset specificity tend to indicate that further work is needed to investigate the relative explanatory power of a Williamsonian focus on asset specificity versus a contracting approach that also takes information asymmetry into account.

Our review of transaction cost studies also raises concern with how the second main TCA variable, uncertainty, has been modeled and measured. Uncertainty plays a very specific role in Williamson's model. External uncertainty makes it difficult to specify in advance all possible contingencies in a contract, whereas internal (or behavioral) uncertainty makes it difficult to verify performance later. For Williamson, uncertainty is only problematic when coupled with asset specificity, or high switching costs more generally. It makes contracts inefficient and exposes parties to holdup, thus leading them to opt for vertical integration. If there are many potential buyers and sellers, on the other hand, switching costs are low, and both types of uncertainty will favor the market. In spite of this, most entry mode studies have deviated from the original Williamsonian model and have directly entered uncertainty, usually making the opposite argument that uncertainty encourages firms to maintain flexibility and, hence, to choose market rather than hierarchical governance.

Zhao et al. (2004) suggest that country risk and cultural distance are the two most common constructs for external (market-specific) uncertainty. Yet in our review, we found wide variation in the way country risk and cultural distance were measured. Some studies measured country risk using the Euromoney Country Risk Index (Delios & Beamish, 1999) or Frost & Sullivan Country Risk Guide (Contractor & Kundu, 1998). Other measures of country risk include industry growth (Kim & Hwang, 1992; Luo, 2001; Makino & Neupert, 2000), industry concentration ratio (Kim & Hwang, 1992; Makino & Neupert, 2000), size of market (Contractor & Kundu, 1998; Gomes-Casseres, 1989), perceived measures of target market volatility and diversity (Klein et al., 1990; Luo, 2001), perceived political and economic stability (K. D. Brouthers, 2002; K. D. Brouthers & Brouthers, 2003; K. D. Brouthers et al., 2003; Kim & Hwang, 1992; Luo, 2001), and perceived market potential (K. D. Brouthers, 2002). Similarly, cultural distance is measured in various ways, including the index developed by Kogut and Singh (1988) that combines the four dimensions of culture first identified by Hofstede (1980; Contractor & Kundu, 1998; Erramilli & Rao, 1993; Luo, 2001; Padmanabhan & Cho, 1996), perceived similarity in cultures (K. D. Brouthers, 2002; Kim & Hwang, 1992), and familiarity with country (Gomes-Casseres, 1989). Zhao et al.'s (2004) meta-analysis finds these various measures of country risk to have a statistically significant negative impact on the probability to choose hierarchical (WOS) modes of entry. The impact of cultural distance is also negative, but much weaker. However, no attempt was made to test the strength of the interaction between external uncertainty and asset specificity, the point that Williamson emphasizes as critical to the transaction cost decision.

The second type of uncertainty, internal uncertainty, makes it difficult to ascertain the performance of contracting parties ex post facto. The solution to this problem consists in reducing the incentives trading partners have to cheat by taking them over (i.e., through integration). Internal uncertainty is generally thought to be lower if the MNE has more international experience (Zhao et al., 2004) and is often measured using a variety of constructs such as number of years of worldwide experience (Contractor & Kundu, 1998; Padmanabhan & Cho, 1996), total number of foreign investments (Delios & Beamish, 1999; Gatignon & Anderson, 1988; Gomes-Casseres, 1989), ratio of foreign to total number of investments (Contractor & Kundu, 1998), number of years of presence in the host country (Delios & Beamish, 1999; Hennart, 1991; Luo, 2001; Padmanabhan & Cho, 1996), or number of country-specific ventures (Luo, 2001). Empirical evidence has been mixed, with

some authors (e.g., Gatignon & Anderson, 1988; Hennart, 1991) finding that experienced MNEs were less likely to set up JVs abroad and others (e.g., Gomes-Casseres, 1989; Padmanabhan & Cho, 1996) finding the reverse. But the results of Zhao et al.'s (2004) meta-analysis show that experienced MNEs tend to prefer WOS.

Experience, however, is an indirect way to measure behavioral uncertainty, and other studies have adopted non–experience based measures of internal uncertainty that examine issues of perceived difficulty in partner selection and perceived ability to enforce, monitor, and control contractual agreements (K. D. Brouthers, 2002; K. D. Brouthers & Brouthers, 2003; K. D. Brouthers et al., 2003). Yet their evidence also provides mixed results, with K. D. Brouthers (2002) finding increased behavioral uncertainty related to the choice of WOS, K. D. Brouthers and Brouthers (2003) finding the reverse (for service firms), and both K. D. Brouthers and K. D. Brouthers (2003) for manufacturing firms and Brouthers et al. (2003) finding behavioral uncertainty unrelated to mode choice.

All in all, it would seem that much more thought needs to be given to how different types of uncertainty are measured and how they affect the entry mode choice.

Frequency is the third dimension that Williamson (1985) sees as affecting firm boundary decisions, the choice between using market contracting and integrating transactions within the firm. Although contracts use preexisting enforcement mechanisms, such as the courts, integration requires firms to craft their own enforcement mechanisms. The fixed costs involved in integrating transactions within the firm can thus only be justified if the volume of transactions is large enough, that is, if the transactions are recurrent and/or large (Williamson, 1985). Frequency is thus an important determinant of the choice between contracts and equity, where it has been measured as channel volume (Klein et al., 1990) and as a perceptual activity measure (Taylor et al., 1998), but it is not clear why it should affect the choice between WOSs and JVs (K. D. Brouthers & Brouthers, 2003; Erramilli & Rao, 1993; Kim & Hwang, 1992).

Hence, our review indicates that despite the large number of transaction cost–based studies, there is much room for improving our knowledge and application of TCA to the entry mode choice decision. Studies making better use of TCA concepts and developing measures that more closely correspond to the theoretical precepts included in TCA will help us to gain a better understanding of how transaction costs influence mode choice decisions.

Resource-Based View

The resource-based view (which here also includes knowledge-based and organizational capabilities theories) suggests that firms develop unique resources that they can exploit in foreign markets or use foreign markets as a source for acquiring or developing new resource-based advantages (Luo, 2002; Madhok, 1997; Tsang, 2000). Barney (1991) suggests that firms develop resource-based advantages by developing or acquiring a set of firm-specific resources and capabilities that are valuable, rare and imperfectly imitable and for which there are no commonly available substitutes.

One of the earliest resources to be explored in relationship to entry mode choice was experience. Based originally on internationalization theory (Johanson & Vahlne, 1977) scholars have suggested that over time firms gain experience in foreign markets and

therefore move from simple exporting operations to more complex organizational structures such as JVs and WOSs, suggesting that international experience provides some type of firm-specific advantage. Erramilli's (1991) study of experience and mode choice is a prime example of this line of scholarship. Erramilli examined both the length and scope of international experience and how this experience influenced international entry mode choice. Using a sample of U.S. service firms, he found a *U*-shaped relationship between length and scope of experience and mode choice; low levels of experience and greater experience lead to the use of full control modes, whereas intermediate levels of experience were related to market-based modes. Other scholars have examined the impact of experience-based resource advantages on mode choice finding similar results (e.g., Aulakh & Kotabe, 1997; Cho & Padmanabhan, 2001; Delios & Henisz, 2000).

A few researchers have attempted to identify, measure, and test other resource-based advantages. For example, Ekeledo and Sivakumar (2004) measured firm-specific resources using multi-item perceptual scales for proprietary technology, tacit know-how, firm reputation, and international business experience. Tan, Erramilli, and Liang (2001) examined nine potential firm-specific resources (mostly using single-item scales). Claver and Quer (2005) looked at two measures of experience (general international and country-specific) and three other resource-based variables (firm size, average financial performance, and high- or low-technology industry). Mutinelli and Piscitello (1998) examined a number of firm-specific resources (R&D intensity, skilled workers, and experience) and target-specific measures (diversification, indigestibility).

Erramilli, Agarwal, and Dev (2002) and Dev, Erramilli, and Agarwal (2002) have provided two of the most advanced applications so far of resource-based theory. They examined both the direct and the moderating influence of five perceived organizational resource-based advantages on the choice made by hotel companies between franchising and management contracts. Although their results were mixed, they generally found that the possession of greater resource-based advantages lead to the use of internalized (i.e., management contracts) over market (i.e., franchising) modes of entry.

With the exception of these final articles, resource-based entry mode research appears to be fairly limited. Our knowledge about how resources (knowledge and/or capabilities) influence mode choice may be advanced by studies that develop other measures of resource advantages and that combine the resource-based view with other perspectives such as transaction cost or institutional theory.

Institutional Theory

Institutional theory research suggests that a country's institutional environment affects firm boundary choices because the environment reflects the "rules of the game" by which firms participate in a given market. Research in this area has tended to concentrate on host country institutional environments or differences between home and host country, although Pan (2002) and Erramilli (1996) focus on home country institutional influences. The application of institutional theory to the entry mode choice decision has developed from relatively simple models of host country risk and uncertainty perceptions to more theoretically based research driven by concepts derived from new institutional theory (North, 1990; Scott, 1995).

Early work investigating institutional environments tended to focus on lists of host country risks or uncertainties that might influence mode choice (Ahmed, Mohamad, Tan, & Johnson, 2002; K. D. Brouthers, 1995, 2002; Brouthers, Brouthers, & Werner, 2000, 2002; Delios & Beamish, 1999; Okoroafo, 1989). Typical of this research is K. D. Brouthers et al. (2002). They examined five types of risk or uncertainty: product, government policy, macroeconomic, materials, and competition. They found that each of these risk or uncertainty types was an important determinant of entry mode choice. In addition, several articles have examined host country industry structure as a barrier affecting entry mode choice, providing mixed results (Chen & Hennart, 2002; Elango & Sambharya, 2004; Somlev & Hoshino, 2005).

Although these studies helped develop our understanding of differences in institutional environments between home and host countries and how these differences might influence the mode choice decision, they tend to lack a theoretical basis on which to select the risk factors to be included in each study. Hence, each study seems to use those risk factors that are deemed appropriate (or available) by the authors.

More recently, new institutional theory (NIT) has been adopted by some scholars to help address this earlier shortcoming. NIT suggests that a country's institutional environment is made up of a set of three dimensions: regulatory, cognitive, and normative (Scott, 1995). These three dimensions vary by country and have an influence on the decisions managers make because they influence the way business is conducted in a particular country. Because these influences are relatively uniform in a given host environment, isomorphic pressures tend to bring conformity in the way business is conducted and the structures that are acceptable. Firms that attempt to defy these institutional norms risk loosing legitimacy and, hence, get selected out of the marketplace. Using these concepts, researchers have started to explore the institutional environmental factors that should be considered in entry mode research.

The study by Yiu and Makino (2002) exemplifies this new direction for research on institutional theory and entry mode choice. They examine the impact of regulatory, normative, and cognitive influences on entry mode choice while controlling for transaction cost–based influences. Their results indicate that all three dimensions of the institutional environment have a direct effect on entry mode choice. Other research tends to focus on part of the institutional environment and on creating more refined measures of these specific dimensions. Lu (2002) and Davis, Desai, and Francis (2000), for example, examined the cognitive dimension of the institutional environment and isomorphic pressures for conformity. Although their results were mixed, in general they found that firms tended to conform to isomorphic pressures in mode selection. K. D. Brouthers (2002), Meyer (2001), and Meyer and Nguyen (2005) each examined the regulatory dimension and explored different factors that help create and define the regulatory portion of the institutional environment. Their findings suggest that the regulatory dimension of the institutional environment plays an important role in explaining mode selection. Finally, Uhlenbruck, Rodriguez, Doh, and Eden (2006) examined the impact of host country corruption, finding that corruption had a significant influence on entry mode choice.

Closely related to these studies of institutional influences are studies of national cultural distance. As Yiu and Makino (2002) suggest, cultural distance may reflect differences in normative belief systems between home and host countries. These studies tend to use the cultural distance index of Kogut and Singh (1988) and find that cultural distance plays an important part in explaining mode choice (e.g., Agarwal, 1994; Hennart & Larimo, 1998; Kogut & Singh, 1988).

Other studies examine specific national cultural components and find that cultural components such as power distance and uncertainty avoidance influence mode choice (Barkema & Vermeulen, 1997; Shane, 1993, 1994). In addition, studies by K. D. Brouthers and Brouthers (2001) and Cho and Padmanabhan (2005) tend to suggest and find that although cultural distance is an important component of the institutional environment, its impact on the mode choice decision may be indirect because of investment risk (K. D. Brouthers & Brouthers, 2001) or of decision-specific experience (Cho & Padmanabhan, 2005).

Hence, as recent cultural distance meta-analyses have suggested (Kirkman, Lowe, & Gibson, 2006; Tihanyi, Griffith, & Russell, 2005), the way forward in this area is to examine the interactive effects of institutional factors on other decision-making criteria. For example, which component of the institutional environment moderates the influence of which transaction cost dimension on entry mode choice? How do institutional dimensions influence the ability of firms to exploit specific resource-based advantages? Finally, more work needs to be done to determine if it is perceptions of institutional distance (psychic distance; e.g., O'Grady & Lane, 1996) or actual distance (cultural distance) that influence decisions and decision outcomes such as entry mode choice.

Eclectic Framework

Dunning's (1993) eclectic or OLI (ownership, location, internalization) framework is also among the most frequently applied perspectives in international entry mode choice studies. Although not a theory, this framework brings together concepts that earlier research has shown influence the mode choice decision. The three components of Dunning's framework are ownership or firm-specific advantages, location advantages, and internalization advantages. Originally developed before many of the more popular theories had been fully articulated, Dunning's framework can be conceptualized as a tool that combines insights from resource-based (firm-specific), institutional (location), and transaction cost (internalization) theories.

Agarwal and Ramaswami's (1992) study of U.S. equipment-leasing companies was the earliest and most cited work in this area. As Dunning's framework suggests, they found that ownership, location, and internalization advantages all affected the mode firms used. They also explored a number of interactions among the factors and noted that advantages in one area often offset lack of advantages in other areas.

Other scholars have built on these findings by applying Dunning's framework to other industries and countries and by extending the framework by introducing additional sets of variables. For example, Padmanabhan and Cho (1999) focused on the ownership advantage "decision specific experience" and found that it was significantly associated with mode choice. Erramilli, Agarwal, and Kim (1997) found evidence that ownership advantages may be location-specific (context-specific), thus differently influencing mode choice in different (less developed vs. developed) countries. Anand and Delios (1997) also found some indication of location specificity of advantages and location disadvantages influencing mode choice. Cloninger (2004) found that service intangibility influenced both ownership and internalization advantages for U.S. firms. Finally L. E. Brouthers, Brouthers, and Werner (1999) found that Dunning's framework did a good job of explaining firm performance; firms basing their

mode choice on firm-specific, location-specific and internalization advantages tended to have better subsidiary performance.

Other extensions of Dunning's original work include Tsai and Cheng (2002), who examined Taiwanese investments in the United States and investigated the additional influence of strategic variables (motives for entry) on mode choice. Tatoglu and Glaister (1998) studied investments in Turkey and suggested that the OLI framework may differently affect manufacturing and service entries. In addition, Nakos and Brouthers (2002) and K. D. Brouthers, Brouthers, and Werner (1996) have applied Dunning's framework to small- and medium-sized enterprises (SMEs) and their international entry mode choice decisions.

Thus, it appears that Dunning's eclectic framework may be a good tool for combining insights from the other three popular theories and exploring how these theories interact with each other. Yet past studies of the eclectic framework tend to ignore constructs developed and tested in studies of these other theories. Entry mode research might benefit from studies that use well-tested measures of resource-based, institutional, and transaction cost theories and then further explore how these factors influence each other.

MNE Strategies

One question few entry mode studies address is the reason (motive) for market entry. Theoretically, only resource-based and institutional theories tend to discuss how different entry motives may affect decisions. For example, firms might make very different decisions if they are entering a market to exploit existing resources versus entries used to acquire new knowledge or resources. Likewise, institutional environments may have a different impact on firms pursuing a global strategy versus those pursuing a multidomestic strategy. Most studies do not specify whether entry is made for market-seeking, resource-seeking, globalization, or multidomestic purposes, and the lack of attention to these strategy issues may help explain the disparate results of the entry mode studies outlined above, and particularly the differences in significance and sign of key variables such as asset specificity and uncertainty.

A few scholars have begun exploring these issues. Several corporate strategy topics have been examined in past studies. Kim and Hwang (1992) and Rajan and Pangarkar (2000), for example, examined the impact of global synergies and global strategic motives. They found that both strategy types helped explain mode choice. Aulakh and Kotabe (1997) explored the impact of three specific firm strategy variables: global integration strategy, differentiation strategy, and market position strategy. They found that both global integration strategy and differentiation strategy were significant predictors of mode choice, but market position strategy was not. Hennart and Park (1994) looked at the impact of two important strategic issues: exchange-of-threats and follow-the-leader strategies. No evidence was found for the exchange-of-threats motivation, and only partial support was found for the follow-the-leader strategy. Finally, Domke-Damonte (2000) investigated the impact of the degree of global strategy (vs. multidomestic) on mode choice. She found that degree of global strategy was not directly related to mode choice but had an indirect effect on entry mode choice.

Other researchers have explored the impact of business-level strategy on mode choice. At the business level, firms choose which markets to enter to seek new customers and which to

seek new resources. Erramilli and Rao (1990) first highlighted the impact of two business-level strategies on mode choice: market seeking and client following. They found that client-following firms tended to use significantly different mode types compared to market-seeking firms. Shi, Ho, and Siu (2001) examined export orientation (low-cost labor seeking) and market-seeking strategies, whereas Tsai and Cheng (2002) looked at the business strategies of expanding sales and fighting competitors versus acquiring market knowledge and strengthening relationships with existing customers. Results indicated that the market expansion motive and export-orientation and market-seeking strategies were significantly related to mode choice but that knowledge acquisition was not. Recently Gil, Nakos, Brouthers, and Brouthers (2006) looked at the impact of market-seeking, resource-seeking, and client-following strategies on international entry mode choice. They found that the business strategies of market-seeking and resource-seeking significantly influenced entry mode choice but that the client-following strategy was not related to mode choice.

In sum, research exploring strategic motives for foreign entry suggests that besides rational transaction cost and resource-based and/or institutional influences on mode choice, the motive for entry may also have a significant influence on the organizational structures firms adopt in international markets. Further research in these areas will help us gain a better understanding of how strategic motives interact with other variables such as resources or cultural differences when making international entry mode choices.

Firm Boundary Choice and Country Effects

One enduring theme of entry mode studies has been to test existing theories in countries at different levels of development. Researchers have suggested that theories created to explain international entry mode choice may be more or less applicable depending on the home country of the investing firm or the host country where the investment takes place (Erramilli et al., 2002). Our review found that the main home countries from which international entry has been examined include North America (Agarwal & Ramaswami, 1992; Aulakh & Kotabe, 1997; K. D. Brouthers, 1995; Ekeledo & Sivakumar, 2004; Erramilli, 1991; Erramilli & Rao, 1993; Kim & Hwang, 1992; Shane, 1994), Japan (Cho & Padmanabhan, 2001; Delios & Beamish, 1999; Delios & Henisz, 2000; Hennart, 1991; Hennart & Park, 1994; Hennart & Reddy, 1997; Lu, 2002; Yiu & Makino, 2002), and Western Europe (Barkema & Vermeulen, 1997; K. D. Brouthers, 2002; L. E. Brouthers et al., 1999; Gronhaug & Kvitastein, 1993; Mutinelli & Piscitello, 1998; Nakos & Brouthers, 2002; Palenzuela & Bobillo, 1999). There are also a substantial number of studies that look at firms from all parts of the world and other studies that examine firms from specific countries such as China (Shi et al., 2001), Korea (Erramilli et al., 1997), Singapore (Rajan & Pangarkar, 2000), and South Africa and Egypt (Bhaumik & Gelb, 2005).

A similar pattern can be seen for host countries. The most popular host countries are worldwide (K. D. Brouthers, 2002; Erramilli & Rao, 1993; Mutinelli & Piscitello, 1998), the United States (Hennart, 1991; Hennart & Park, 1994; Hennart & Reddy, 1997; Kim & Hwang, 1992; Kogut & Singh, 1988), China (Chen & Hu, 2002; Pan, 1996; Pan & Chi, 1999), and Central and Eastern Europe (L. E. Brouthers et al., 1999; K. D. Brouthers et al.,

2003; K. D. Brouthers & Nakos, 2004; Meyer, 2001; Nakos & Brouthers, 2002). Yet again, there are more than 20 other host countries considered in published entry mode studies.

Although past research has noted a number of entry mode choice differences depending on the home and/or host country included in the study, for the most part they have found that the theories of entry mode choice originally developed in Western market economies tend to do a good job of explaining mode choice no matter what the origin or destination of the investment. As long as country (institutional) differences are included in the study, mode choices tend to follow the dictates of established entry mode theory. The question confronting researchers is whether identifying other country-level effects adds enough to our knowledge to make it worth pursuing this line of research. In general, we suggest that the marginal improvement in explanatory power is so small that this additional effort is not warranted.

Industries and Firms

Manufacturing Versus Service Industries

It is interesting to note that manufacturing firms were the focus of early studies on mode choice. Yet service firms have not been ignored. Our review of entry mode research showed that about 42% of the published articles examine manufacturing firms, 25% examine service firms, and about 33% include both manufacturing and service firms.

Studies using only manufacturing firms tend to provide support for the main theoretical perspectives discussed above: TCA (Gatignon & Anderson, 1988; Hennart, 1991), resource-based view (Delios & Henisz, 2000), institutional theory (Hennart & Larimo, 1998; Shane, 1994; Yiu & Makino, 2002), and Dunning's eclectic framework (Padmanabhan & Cho, 1999).

Likewise, studies examining only service industry firms also provide support for these theories: TCA (Contractor & Kundu, 1998), resource-based view (Erramilli, 1991; Erramilli et al., 2002), institutional theory (K. D. Brouthers, 1995; Erramilli, 1996), and Dunning's framework (Agarwal & Ramaswami, 1992).

Studies mixing both manufacturing and service industry firms also tend to lend support for the main theories of entry mode choice: TCA (K. D. Brouthers et al., 2003; Luo, 2001), resource-based view (Ekeledo & Sivakumar, 2004), institutional theory (K. D. Brouthers, 2002; Brouthers, Brouthers, & Werner, 2000; Kogut & Singh, 1988), and Dunning's framework (L. E. Brouthers et al., 1999; Erramilli et al., 1997).

Yet mode choice differences do persist based on industry. For example, Erramilli and Rao (1993) suggest that TCA might need to be modified to be applicable to service industry firms. Their study provides some support for this approach. On the other hand, K. D. Brouthers and Brouthers (2003) suggest that TCA may be equally applicable to manufacturing and service firms but that industry might influence the importance and impact of each transaction cost variable. Support is provided for this perspective. Zhao et al.'s (2004) meta-analysis of TCA research tends to provide support for the idea that transaction cost theory is applicable to firms in all industries but that industry effects moderate the relationship between transaction costs and mode choice.

Competitors and Competition

Some entry mode studies have acknowledged the fact that the investing firm's behavior may be affected by other firms in its industry, both its domestic rivals and incumbents in the markets entered (Brouthers et al., 2000, 2002; Luo, 2001; Pan, 1996; Tsai & Cheng, 2002). When the host market is highly concentrated, incumbents may get together and retaliate against the entrant. One way for firms to reduce retaliation is to JV with incumbents.

Kim and Hwang (1992), for example, found that global industry concentration was significantly related to mode choice but found that intensity of competition was not related to mode choice. K. D. Brouthers (1995) examined perceived competitive rivalry in the host market and found it to be significantly related to mode choice. Others have found mixed results when examining the impact of industry concentration ratio in the target market on mode choice (Hennart, 1991; Hennart & Larimo, 1998; Hennart & Park, 1994; Hennart & Reddy, 1997; Tatoglu, Glaister, & Erdul, 2003).

An investor's choice of entry mode may also be influenced by its domestic and foreign counterparts. Yiu and Makino (2002) and Lu (2002) looked at several aspects of mimetic entry: (a) copying competitor entry modes in a foreign market, which was related to entry mode choice; (b) copying other firms in the industry entry mode choice, which was related to entry mode choice; (c) copying only successful firms' entry mode choice, which was not related to mode choice; and (d) copying only successful subsidiary entry mode choices in the target country, which was significantly related to mode selection.

Although the results of these studies are not consistently clear, it does appear that competitors, both domestic and foreign, influence the entry mode choice decision. Market entry is a multilevel phenomenon that involves not only the motivation specific to particular firms (firm level effects) but also interactions of the entering firm and incumbents and the entering firm and other entering firms (industry effects). Industry effects are best modeled using industrial organization economics and, hence, are (or should be) part of any theoretical framework explaining entry modes. Future research focusing on this particular issue will help us gain a better understanding of which dimensions of competition influence mode choice and help managers gain a better understanding of how the actions of competitors influence the success or failure of foreign operations.

SMEs

From its inception, international entry mode research has tended to concentrate on large multinational firms. Early survey studies such as Stopford and Wells (1972) and early theory-testing articles such as Gatignon and Anderson (1988) concentrated on large firms with substantial resource bases. Yet governmental statistics indicate that the majority of firms involved in international business are not large but can be classified as SMEs.

A number of scholars have started to investigate the mode choice decisions of SMEs. Erramilli and D'Souza (1993) compared small and large U.S. service firms, whereas Gronhaug and Kvitastein (1993) examined mode choice for Norwegian SMEs. Following these studies, K. D. Brouthers et al. (1996) examined mode choice for U.S. computer

software SMEs, and Shi et al. (2001) examined mode choice for SMEs from Hong Kong investing in China.

Most recently, studies have used Dunning's eclectic framework and TCA to examine SME mode choice decisions. First, Nakos and Brouthers (2002) found strong support for Dunning's framework but found no significant difference in mode choice (equity vs. nonequity contracts) based on firm size. Second, K. D. Brouthers and Nakos (2004) found strong support for a TCA explanation of mode choice and found that the subsidiaries of SMEs using the entry modes predicted by TCA performed better. Yet they found no relationship between firm size and mode choice.

Besides the general category of SMEs, several studies have looked at the entry modes chosen by "born global" firms. Burgel and Murray (2000) for example looked at young, high-tech U.K. service and manufacturing SMEs. In general, they found that larger new ventures tended to prefer distributors to direct export modes. Shrader (2001) looked at young, high-tech U.S. manufacturing SMEs and found that firm size was significantly related to mode choice (larger new ventures used licensing or JV modes, whereas smaller new ventures preferred exporting or wholly owned modes).

Although there is far less research on SME mode choice decisions than has been undertaken on large firms, it appears that many of the same theories that explain large firm mode decisions are applicable to SMEs and young new venture (born global) firms. These results are encouraging, suggesting that the theories developed to explain international entry mode choice are robust and generalizable.

Firm Boundaries and Performance

One important issue that early work on entry mode choice ignored was the performance implications of making firm boundary choices. Although researchers provided numerous explanations about how firms made this important decision, few studies considered the performance impact.

Early attempts to look at entry mode performance tended to provide simple comparative analysis (Chan, 1995; Nitsch, Beamish, & Makino, 1996; Pan & Chi, 1999; Pan, Li, & Tse, 1999). For example, studies by Woodcock, Beamish, and Makino (1994) and Anand and Delios (1997) examined performance differences among firms using acquisitions, WOS greenfield start-ups, and JV modes. Woodcock et al. found that new ventures (greenfield ventures) performed better than JVs, which performed better than acquisitions. Anand and Delios found that JVs performed better than greenfield ventures and that acquisitions provided the lowest level of performance.

Complicating the issue of entry mode performance is the fact that mode choice is endogenous, that is, it is a choice made by managers. For example, the characteristics of parents that choose JVs may cause them to have affiliates with systematically lower profitability than the subsidiaries of parents that choose WOS, but a parent that chooses full ownership for its affiliate when it should choose a JV will experience lower profitability than if it chose the theoretically right mode of entry (in this case, a JV). Shaver (1998) suggested that because mode decisions are endogenous to the firm, studies examining the performance implications

of mode choice need to take into account not only the mode used but also the theoretically predicted mode. He suggested that firms using the mode predicted by theoretical models should perform better than firms using modes that were misaligned with mode choice models. A number of studies have attempted to build on this idea.

Moving beyond simple mean comparisons, K. D. Brouthers (2002) investigated the performance implications of mode choices made based on transaction cost and institutional theories. He examined mode fit (theoretically predicted modes vs. other modes), controlled for other potential variables, and found that firms using modes predicted by transaction cost and institutional theories performed significantly better (on two dimensions of performance: perceived financial performance and perceived nonfinancial performance) than did firms using modes that did not conform to the theoretical predictions. Other scholars (Aulakh & Kotabe, 1997; L. E. Brouthers et al., 1999; Brouthers et al., 2000) have had similar results.

Despite these advances in examining the issue of mode performance, it appears that only K. D. Brouthers et al. (2003) have controlled for endogeneity using the Heckman method suggested by Shaver (1998). Based on data from large Dutch, German, and British firms entering Central and Eastern European markets, they examined two mode types: wholly owned and JVs. Perceived subsidiary performance was based on a 5-item scale. K. D. Brouthers et al. created a fit variable (firms using theoretically predicted modes vs. those using other modes), but they also included a correction for self-selection variable. Their regression analysis of mode performance indicated that firms using mode choices predicted by transaction cost theory had significantly better performance than did firms using other mode types.

Hence, it appears that mode choice is important; it influences subsidiary performance. Although not all theories have been tested, from the evidence presented so far, it appears that (a) no particular mode type provides superior performance compared to other mode types but that (b) firms using theoretically predicted mode choices obtain better performance than do firms using other mode choices. This suggests that the results of early studies showing that some modes of entry yield consistently better results were because of the neglect of factors beyond the reach of managers (transactional or institutional) and because of a failure to account for endogeneity.

Directions for Future Theory Development and Research

It appears from the literature reviewed that researchers have made substantial progress in understanding firm boundary choices in the international context. Yet our review has disclosed a number of areas where researchers can still make significant contributions to knowledge. As detailed above, past studies of international entry mode choice have tended to focus on several well-acknowledged theoretical frameworks. Studies have included a wide variety of industries and home and host countries and have explored a large number of mode types. The question confronting research scholars is where to go from here. Do we need more transaction cost mode choice research? Do additional cross-sectional studies add to our knowledge of mode choice? What issues still need to be explored? What theories will help us gain further understanding? What types of data are needed, and how should they be applied? Below, we provide some guidance by discussing several new directions for international entry mode

research that we believe will lead to new insights and help further our understanding of how managers can make better mode choice decisions.

Existing Theories Need Deepening

In spite of the considerable volume of empirical studies on entry mode choice, some fundamental theoretical issues have received only superficial attention and continue to hinder progress in the field. One of them, alluded to earlier, is the lack of consensus concerning the nature of JVs. Although some authors see JVs as an intermediate stage between market and hierarchy, others see them as a type of hierarchy and, hence, use different theories to explain the choice between contracts and integration and between JVs and WOSs. Another unsettled point is whether arguments based on asset specificity should be used to explain horizontal, as opposed to vertical, investments. Two other points that deserve further investigation are the usefulness of dichotomizing between asset-exploiting and asset-seeking investments on one hand and the need to consider firm strategies as important contingencies on the other.

A typical argument used to explain why some firms choose WOSs whereas others choose JVs is that firms with substantial exploitable assets choose the former whereas those that seek to acquire assets choose the latter (Mutinelli & Piscitello, 1998). This dichotomy between asset-exploiting and asset-seeking investments seems overdone because, as we have seen, all investments require the bundling of MNE and local assets and, hence, are simultaneously resource exploiting and resource acquiring (Hennart, 2000; Hennart & Park, 1993). This casts doubt on the usefulness of explaining entry mode in terms of asset-seeking or asset-exploiting motives.

Another argument put forward by Barkema, Bell, and Pennings (1996) maintains that JVs with local partners are more likely to fail than wholly owned greenfields because the former involve "double-layered" acculturation. Their argument is that although all firms expanding abroad will have to learn to cope with a foreign culture (a first layer), a firm entering into a JV with a local partner also has to bridge differences in corporate culture (a second layer).

This argument ignores the fact that MNEs that are carrying out multidomestic strategies of adapting their products and processes to local conditions can use JVs to access the country-specific knowledge that is needed to implement such strategies (Stopford & Wells, 1972). To coax such knowledge from their JVs, multidomestic MNEs will grant them considerable autonomy. Because cross-cultural conflicts are likely only to arise when there are repeated interactions between the parent and the JV, granting the JV substantial autonomy will reduce the need to bridge differences in corporate culture (the second layer). Hence, multidomestic MNEs that form JVs with local firms acquire through this strategy the ability to handle the first acculturation layer, whereas the problems of bridging the second layer are mostly solved by leaving the subsidiary considerable autonomy. For such MNEs, a JV may involve fewer cross-cultural problems than a WOS (Slangen & Hennart, 2006).

All in all, this suggests that the present tendency to run regressions on undifferentiated samples of market entries is unwarranted. The costs and benefits of different entry modes are a function of the strategies that MNEs intend to follow with these entries. It will depend on whether the subsidiary is a horizontal or a vertical investment and whether MNE parents follow multidomestic or global strategies.

New and Different Theories

Although international entry mode choice is acknowledged as an important strategic decision, scholars have tended to ignore strategic decision-making (SDM) research in explaining how mode choice decisions are made. Past SDM research indicates that managerial decisions are not completely rational, that other factors influence the choices managers make (Hitt & Tyler, 1990). Contrary to this, entry mode research has almost exclusively focused on rational choice models. Below, we suggest how SDM theories may help us gain a better understanding of mode choice decisions.

SDM research tends to focus on how the attitudes and knowledge of managers influence the decisions that are made. For example, upper echelon theory (Hambrick & Mason, 1984) suggests that decisions are influenced by the managerial background and experience of the decision-making team (Carpenter, Geletkanycz & Sanders, 2004) or of individual decision makers (Brouthers et al., 2000). Yet, with one exception (Herrmann & Datta, 2006), past entry mode research does not consider the manager or management team as decision maker, focusing instead on rational, measurable attributes of the transaction. But other decision-making research has shown that managers matter.

Other aspects of SDM theory explore firm or managerial risk and trust propensity (Chiles & McMackin, 1996) and how risk or trust propensity influences strategic decisions. Rational models of mode choice, such as TCA, assume that managers are risk neutral (Geyskens et al., 2006). Other scholarship notes that managers vary in their risk preferences from risk averse to risk seeking (Sitkin & Pablo, 1992). These scholars also note that differences in risk propensity influence the choices that managers make (Roth, 1992). Although some attempt has been made to look at managerial risk propensity from a national cultural perspective (e.g., K. D. Brouthers & Brouthers, 2003), directly measuring manager-level or firm-level risk propensity and its impact on mode choice has not been considered.

In addition, although much of the scholarship on JVs and strategic alliances has suggested that trust plays an important role both in the formation of these cooperative agreements and in their effective execution (Das & Teng, 1998), few studies examine the impact of managerial- or firm-level trust propensity on entry mode choice. Scholars such as K. D. Brouthers and Brouthers (2003) and Shane (1994) use national cultural proxies for trust propensity, but these measures are crude approximations of individual- or firm-level attitudes toward trust. Hence, the question remains, how does a firm or manager's attitude toward trust influence the international mode choice decision?

A second line of research in SDM suggests that strategic decisions are influenced by the decision-making process (Dean & Sharfman, 1996). This line of research examines the components of this process and how the execution of these components influences the performance of decision outcomes. In general, these studies find that managers who use more formal decision-making processes make better decisions. Although some work has recently been undertaken examining processes and JV postformation performance (K. D. Brouthers & Bamossy, 2006), entry mode choice research has ignored the mode choice decision process. Can process research help us gain a better understanding of both mode choice and mode performance?

An important third line of SDM research focuses on the way managers, departments, and subsidiaries interact with each other (Fincham, 1992). Internal power and politics is an area

of decision-making research that has seen little empirical work but that offers potential insights on how manager–manager interactions influence strategic choices. As in the political arena, intraorganizational power and politics play a role in decision making. Managers with greater power may be in a position to force through their agenda. Internal political activities may influence specific decisions as trade-offs for other decisions (Fincham, 1992). We are unaware of any entry mode choice studies that have examined or even discussed the impact of intraorganizational power and politics, despite the fact that these relationships may have a significant impact on the choices managers make.

SDM theory also suggests that organizational culture may affect the decisions managers make (Simon & Lane, 2004). Organizational culture is the set of beliefs and values shared within an organization that influences what the members of that organization believe to be valid and ethical behavior. Scholars examining international JVs have suggested that differences in organizational cultures may influence their performance (Simon & Lane, 2004). But if organization culture influences managerial beliefs, would it not also influence their mode choice? How do these organizational cultural beliefs influence the mode choice decision? Do differences in organizational cultures make certain mode types easier (more difficult) to effectively adopt and execute?

Finally, the rational models of mode choice examined in previous studies tend to assume a profit maximization ethos in the firm. Yet stakeholder theory suggests that managers might respond to pressures exerted by stakeholders because of power, legitimacy, and urgency considerations (Berman, Wicks, Kotha, & Jones, 1999). Stakeholders include managers, employees, unions, customers, suppliers, governments, and special interest groups. These stakeholders may wish the firm to pursue goals other than profit maximization. Scholars have used stakeholder theory to examine the impact of stakeholders on managerial decisions regarding firm strategic orientation (Arens & Brouthers, 2001; Berman et al., 1999) and management style (Wright, Ferris, Sarin, & Awasthi, 1996). If stakeholders can influence these important strategic decisions, might they also have an impact on international entry mode choice?

In sum, from a SDM and stakeholder theory perspective, the firm boundary decision needs to consider the impact of managers, management teams, and other stakeholders. Only by adding these perspectives to our current rational models of mode choice can we bring a level of realism to our understanding of the international mode choice decision.

New and Different Methodologies

Scholars have noted three major methodological problems with past entry mode research. First, current entry mode studies tend to use samples that are not necessarily appropriate for the questions being examined, underspecify the constructs used in the model, and implicitly ignore the fact that entry mode choice and performance are endogenous. Second, most mode choice studies use cross-sectional data. Because of this, we have little understanding of how changes in the attributes examined influence mode choice or how knowledge accumulation and learning influence mode choice decisions (for an exception, see Barkema et al., 1996). Third, mode choice is usually retrospectively examined. As yet, no studies have measured mode choice when it occurs. Because of their retrospective nature, mode choice studies may suffer from recall

biases (Huber & Power, 1985). Below, we discuss several methodological approaches that future entry mode research should consider employing to help resolve these issues.

As we have argued earlier, foreign market entry is a multilevel phenomenon that plays itself out at the parent, subsidiary, industry, and home and host country levels. Hence, recourse must be made to a variety of theories to explain it. There are two basic ways to simultaneously account for all these influences. The first one is to choose the sample so as to implicitly control for them. The second one is to include specific controls.

One particular set of controls is both crucial and potentially problematic. Almost all models assume that managers are free to choose the most efficient entry mode. It is therefore essential to control for any binding restrictions on that choice imposed by host governments. Controlling for such constraints by entering a dummy variable reflecting official legislation restricting WOS (e.g., K. D. Brouthers et al., 2003; Gomes-Casseres, 1990) is less than satisfactory because the actual stringency of restrictions facing a given investor is often only loosely correlated with legal strictures. Given this, choosing an appropriate sample design is critical.

Scholars interested in the impact of firm resources and strategies on its choice of entry mode can implicitly control for the effect of home and host country conditions (including government barriers) by choosing a sample of firms from a single home country investing in a single host country (Hennart, 1991; Makino & Neupert, 2000; Shi et al., 2001; Tsai & Cheng, 2002). The difficult task of modeling entry barriers can be alleviated by focusing on host countries with low government barriers, such as the United States (Hennart, 1991; Makino & Neupert, 2000). One drawback of this design is that it limits the generalizability of the findings.

Researchers interested in how host country conditions affect entry modes should examine firms from one home country investing in multiple host countries, thus keeping home country influences constant (Agarwal & Ramaswami, 1992; Delios & Beamish, 1999; Gatignon & Anderson, 1988; Kim & Hwang, 1992; Nakos & Brouthers, 2002). Yet there are two potential problems with such a research design. The first one, noted above, is controlling for government restrictions. A second potential problem is that differences in the way host countries define industries make it difficult to include comparable industry-level variables such as the concentration ratio of the industry entered.

When the research question is how an MNE's home country influences its entry mode, it makes sense to keep host country effects constant by looking at MNEs from multiple home countries investing in a single host country (Chen & Hu, 2002; Hennart & Larimo, 1998; Kogut & Singh, 1988; Luo, 2001; Meyer & Nguyen, 2005; Tatoglu & Glaister, 1998). Unfortunately, international differences in accounting rules and reporting requirements usually make it difficult to collect comparable parent data, such as an MNE's technological intensity. The temptation is then to proxy this parent data by the characteristics of the industries entered, as in Kogut and Singh (1988). However, this is likely to lead to biases because theory predicts the technological intensity of foreign investors to be higher than that of comparable host market incumbents.

Existing research has often used large multi-industry samples and therefore has had to make do with crude measures for the underlying constructs. For example, not all types of knowledge suffer from identical appropriability and information asymmetry problems. Hence, firms exploiting patented knowledge may be more willing to use licensing or JVs. Yet the majority of studies have used technological intensity to measure the level of appropriability and information

asymmetry. This is problematic because besides being an input and not an output measure, technological intensity implicitly assumes that all know-how is equally applicable and equally utilized. Focusing on more micro samples, such as specific industries, would make it possible to use finer-grained data and increase our understanding of the impact of different types of knowledge on mode choice decisions.

Finally, with few exceptions (K. D. Brouthers et al., 2003; Shaver, 1998), scholars investigating the impact of entry mode choice on performance have neglected the fact that such choice is endogenous. Managers have a choice as to which mode structure to adopt, and this choice may influence the performance of the subsidiary unit. Studies that look at the performance effects of entry modes should use the well-known statistical tools that correct for such endogeneity.

Another methodological avenue to pursue is to use longitudinal studies that might help us gain additional insights not available though current cross-sectional techniques. For example, most mode choice studies examine the initial mode choice but ignore what happens after a mode is selected (for exceptions, see K. D. Brouthers & Bamossy, 2006; Hennart & Zeng, 2002). Longitudinal studies would help us gain insights into what happens after entry. How do managers make these various modes properly function? When and why do firms change modes? This line of research would emulate the literature on the evolution of JVs (e.g., Hennart & Zeng, 2002).

In addition, both market-seeking and resource-seeking investments require the transfer of knowledge across borders. Longitudinal studies can help us gain a better understanding of how firms transfer knowledge between various types of foreign operations. This research could teach us about the mechanisms needed to transfer knowledge and the facilitations or barriers created by different types of entry mode.

Entry mode studies also appear to have inferred learning from a pattern of past choices, thus making experience a standard variable in mode choice models. Consistency of choice may occur, however, as a response to enduring stimuli and constraints, not necessarily as a consequence of learning. *Post hoc* does not imply *propter hoc*, as too many studies assume. Scholars have also failed to distinguish between favorable and unfavorable experience. If a firm had tried a JV and it did not work out, would this influence their next mode choice? Would the firm continue to use JV modes or try another mode type, one that may prove to be more successful? Longitudinal studies would help us track the success and failure of different mode types and identify links between mode performance and future mode choices.

Finally, it has been widely suggested that JVs are used to learn about new and different national environments and that this need or desire for knowledge influences mode choice. However, little consideration is given to a firm's ability and willingness to learn. Are some firms better at using a particular mode to learn? Are some modes inherently better for learning than others? How does learning influence mode choice and mode changes over time?

The most effective method for studying mode choice decisions is to be present when the choice is being made. Observable influences on mode choice could then be examined, as could the process of decision making. In addition, being present during mode decision making would mean that attitudes, opinions, and beliefs about the decision could be captured at the moment, eliminating the problems created with the passing of time and accumulation of knowledge (Huber & Power, 1985). However, observation cannot disclose the cognitively occurring processes. In addition, observing mode choice decisions is difficult because, like

other strategic decisions, these choices are infrequently made and normally extend over a period.

Experimental design and simulation are two techniques used by researchers to help solve some of the problems encountered with observation and timing. Scholars in alliance formation (Dollinger, Golden, & Saxton, 1997) and SDM (Hitt & Tyler, 1991) have used experimental design and simulation techniques to explore issues such as JV partner attractiveness and acquisition attractiveness. Scholars in marketing and advertising have used these techniques as a means to explore issues such as cultural impact on marketing decisions and advertising content (Feldman, Bearden, & Hardesty, 2006; Tse, Lee, Vertinsky, & Wehrung, 1988). Experimental design is a method of simulating a decision-making event and obtaining measurement and observation. This same simulation process might be used by entry mode researchers to gain better understanding of what occurs when mode choice decisions are actually made.

Conclusions

Although research on the determinants of the choice of international boundaries of the firm has made great strides since the early 1980s, much more work lies ahead. First, there appears to be a lack of consensus as to whether these contracts, JVs, and WOSs are distinctive categories of entry modes that can be arrayed on a single dimension of increasing control, commitment, and risk. There has also been some criticism of the theories used to explain that choice. It is unclear, for example, whether the concept of asset specificity has been correctly used in TCA-based entry mode research. It can also be argued that the current focus on rational models of mode choice needs to be supplemented with more realistic SDM perspectives that take into account the actions, beliefs, and attitudes of the managers who actually make these decisions and those external factors that influence managerial choices.

Developing better and more realistic models of mode choice will help scholars gain a better understanding of how firms can internationally grow and maintain performance. International expansion offers firms opportunities for increased sales and knowledge acquisition and reduction in costs. Yet studies of international performance (geographic diversity) tend to show mixed results. One possible explanation for these mixed results could be differences in the success (failure) of selecting appropriate international entry modes. Our task as researchers is to help managers identify what works and what does not so that more firms can successfully compete in the global marketplace.

Last, it is important to understand that foreign entry is a multilevel phenomenon. It involves a firm based in a given country setting up an operation in an industry of a particular host country. Hence, the form taken by a given foreign market entry (contract vs. equity and, if equity, full or partial control) hinges on the characteristics of the parent firm, on the characteristics of the operation (e.g., its size), on the relationship between the two (the nature of the transaction), on the situation in the industry entered (e.g., the degree of competition and the existence of present or future excess capacity), and on the characteristics of both the country where the MNE is based (its home country) and the country that it is entering (the host country).

One implication of the above is that the choice of foreign entry mode is influenced by a multiplicity of variables driven by complementary theories. When analyzing modes of entry, some researchers have therefore built eclectic models and introduced many variables. As shown above, other researchers have opted for a research design that implicitly controls for some of the effects described above. The fact that entry mode choice is a multilevel phenomenon also implies that it is difficult to study empirically. Although much has been learned about what influences firms to choose equity investment over contracts, greenfield entry over acquisitions, and WOSs over equity JVs, the empirical results obtained by the literature have not been as robust as one would like. Because entry mode choice plays itself out at multiple levels, it presents researchers with significant sample selection and construct measurement challenges providing significant future opportunities to improve our knowledge and understanding of the international entry mode choice decision.

Note

1. Mode types include wholly owned (variously defined as 80%, 95%, and 100% equity), equity joint venture, non–equity joint venture, level of equity ownership, contract, license, agent, majority joint venture, minority joint venture, export, equity, nonequity, management contract, franchise, cooperative (nonequity) ventures, and distributor.

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Cross-National, Cross-Cultural Organizational Behavior Research: Advances, Gaps, and Recommendations†

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The advent of the 21st century has witnessed an increasing interest in developing knowledge of international management to meet the needs of global business development. To take stock of the progress in organizational behavior research with national culture as the major explanatory variable, the authors analyzed 93 empirical studies published in the 16 leading management journals from 1996 to 2005. This analysis shows some advances but also identifies many gaps in both theory and methods. They offer seven recommendations to address these gaps and advance future research.

Keywords: *culture, cross-cultural, cross-national, international, cross-cultural OB*

At the dawn of the 21st century, it is surely a cliché to say, "We live in a global environment." Employees, teams, and organizations are increasingly operating in multicultural,

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multinational contexts. More and more firms are exporting work, not merely goods, to countries across the globe. Physical distance or time differences are no longer barriers to foreign investment. Local firms without venturing abroad are competing with global corporations. It is not surprising that the metaphors of a "flat world" (Friedman, 2005) or a "global village" (Ger, 1999) are fitting descriptions of the contemporary business world. The acceleration of global business development is accompanied by a surging interest in management research across cultures, as evidenced by the increasing presence of international studies in leading journals, along with comprehensive and informative reviews on the status of this research.

Journal of Management has published two major reviews on international management research in recent years. Earley and Gibson (1998) tracked the studies of individualism and collectivism during 100 years. Werner (2002) analyzed recent developments in international management research in 20 top management journals. Kirkman, Lowe, and Gibson (2006), in *Journal of International Business Studies*, reviewed 25 years of empirical research on Hofstede's cultural values framework. Schaffer and Riordan (2003), in an article published in *Organizational Research Methods*, reviewed the methodologies of cross-cultural research. Gelfand, Erez, and Aycan (2007) gave us an update on cross-cultural organizational behavior research in *Annual Review of Psychology*. Even the *Academy of Management Journal* devoted two editorial essays (Eden & Rynes, 2003; Kirkman & Law, 2005) to take stock of the status of international management research published in the *Academy of Management Journal* and expressed pride in its accomplishments. These reviews convey a sense of progress, excitement, and anticipation that the 21st century is certainly going to be, or should be, the century of international management research.

About a decade ago, Lytle, Brett, Barsness, Tinsley, and Janssens (1995) provided a state-of-the-art assessment of cross-cultural research in organizational behavior. Earley and Singh (1995) pointed out that the empirical literature in cross-cultural research is plagued with "confusion concerning the role of culture and national context" (p. 337). Cavusgil and Das (1997) discussed methodological challenges in comparative cross-cultural research in management. These, and the aforementioned recent reviews, identified many conceptual and methodological gaps in the burgeoning literature. They concur that much work remains to build a solid body of knowledge on management or organizational behavior across cultures and offer guidance on how to accomplish this task. Have researchers heeded the good advice of these scholars? The answer is, unfortunately, "Not very often."

Cross-cultural studies in cross-national contexts are more complex than are domestic cross-cultural studies. To begin with, this research requires cross-level theorizing and research methods by relating national level characteristics to individual- or team-level responses. In addition, cross-national data collection introduces issues related to matching samples and construct equivalence. These challenges go beyond those faced by scholars studying cross-cultural differences in a single country or at a single level when cultural values are treated as individual differences variables (e.g., Erez & Earley, 1993). In this article, we focus on cross-national organizational behavior studies with national culture as the major explanatory variable.

To gauge the status of this research, we review articles published in the leading management journals in the most-recent 10-year period. The rationale for focusing on the best work in the past decade is simple: It informs us about major advances and helps us to identify the challenges evident in even the best work on this important and expanding field. The publications

in the high-quality journals should set the benchmarks for theory and methods and provide good examples for future scholars. Through an in-depth and critical review of the best work, we aim to (a) identify the conceptual and analytical treatment of the concept of culture, which relates to construct validity; (b) assess the role of culture in explaining organizational behavior between the nations being compared, which relates to internal validity; (c) evaluate the meaning and generalizability of the knowledge gained to the nations being studied, which relates to external validity; and (d) offer recommendations to further advance this line of research.

We organize this article as follows. In the first section, Journal and Article Identification, we describe the criteria used in selecting the journals and in identifying the articles to include in the review. In the second section, Content Review, we organize the studies into research subject areas and analyze how researchers have treated the construct of culture and how well culture has informed substantive knowledge about organizational behavior. The third section is Method Review, where we address issues such as sample selection, research design, and statistical approaches used to assess measurement validity and testing hypotheses. We also identify the countries covered by these studies and the country profiles of the authors. From this analysis, we identify the methodological issues that may challenge the internal and external validities of the studies. Finally, in the Recommendations section, we call attention to basic work in construct definition and development, theory building that puts culture in the context of other national characteristics, and indigenous or country-specific research to advance knowledge of organizational behavior in different national contexts.

Journal and Article Identification

We relied on Podsakoff, MacKenzie, Bachrach, and Podsakoff (2005) to identify the list of leading management journals. To begin with, we selected journals that publish organizational behavior research. So *Strategic Management Journal* was excluded. We also excluded journals oriented toward practitioners (e.g., *Harvard Business Review*) or that publish only conceptual articles (e.g., *Academy of Management Review*). We supplemented this list with additional journals from Kirkman et al. (2006) and Werner (2002). Altogether, we identified 20 journals.

The article identification was based on our definition of cross-national, cross-cultural organizational behavior. We define cross-national, cross-cultural organizational behavior as the study of individual behavior and team processes in which national cultural characteristics play a major role as independent or moderating variables. Therefore, we exclusively focused on studies that draw samples from at least two nations and excluded studies in the multicultural but domestic settings. For example, Vandenberghe, Stinglhamber, Bentein, and Delhaise (2001) analyzed the generalizability of a multidimensional model of commitment among employees from 12 different nationalities working in the Translation Department of the European Commission. There is a possibility that the results were attenuated by the organizational culture, human resources practices, communication structure, and physical proximity. Another example is the study comparing negotiation behaviors of Americans to those of Japanese managers working in the same U.S. metropolitan city (Brett & Okumura, 1998). Such samples may not provide a true test of cross-national differences. First, expatriate managers may not be representative of managers in their home culture because of the selection process. Second, exposure to a foreign culture may

introduce subtle changes in behavior and attitude among the expatriate managers. We further excluded studies in specific nations outside North America, known as "foreign domestic studies" (Ricks, 1985). For instance, the study of organizational citizenship behavior in Taiwan and comparison of the findings to those in the extant Western literature (Farh, Earley, & Lin, 1997) does not fit our review criteria. The recent reviews of cross-cultural organizational behavior research (e.g., Gelfand et al., 2007; Kirkman et al., 2006) have included both domestic cross-cultural and foreign-domestic studies. We focus on true cross-national studies, in which the samples work and live in their own nations within their indigenous cultures.

Beyond requiring the sample to be cross-national, we considered only the studies that address research questions in organizational settings or issues couched within an organizational context. We further excluded studies that analyze the influence of culture on human resource systems such as compensation (e.g., Schuler & Rogovsky, 1998) or selection practices (e.g., Ryan, McFarland, Baron, & Page, 1999). Studies that validate measurement across cultures (e.g., Gibson, Zellmer-Bruhn, & Schwab, 2003) or differences in cultural values across nations (e.g., Lenartowicz & Johnson, 2003) are also outside the domain of our review.

We identified the articles to be included in our review in the following manner. We read the titles of all the articles published in the 20 journals during the 10-year period, supplemented by a search using the keywords *culture*, *cultural*, *cross-cultural*, *nation*, *national*, *cross-national*, *country*, *compared*, *comparative*, and *across* in the abstracts of the articles. In addition, we checked the references in recent reviews of cross-cultural organizational behavior topics. We then read the short-listed articles. Finally, we identified 93 articles in 16 journals that fit our definition of cross-national, cross-cultural organizational behavior research. Table 1 shows the list of 16 journals and the number of articles in each. Even though we made every effort to be thorough in our search, the possibility remains that we might have missed unintentionally some articles. Hopefully, any omissions would not significantly alter the conclusions of our review.

Content Review

Given that culture is a core construct in all these studies, we first identify the cultural variables used and measured in these studies. We then briefly summarize each article for new knowledge gained in the substantive area and the role of culture in this knowledge.

Cultural Values Used

Most researchers use culture to refer to the fairly stable characteristics of a group that differentiate it from other groups. More than 50 years ago, Kroeber and Kluckhohn (1952) offered a definition of culture that is still widely cited today:

> patterns, explicit and implicit of and for behavior, acquired and transmitted by symbols. . . . The essential core of culture consists of tradition, . . . ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other hand, as conditioning elements of future action. (p. 181)

Table 1
List of Journals and Number of Articles

Journal Name	Number of Articles
Academy of Management Journal (*AMJ*)	9
Administrative Science Quarterly (*ASQ*)	2
Human Relations (*HR*)	6
Journal of Applied Psychology (*JAP*)	16
Journal of Business Research (*JBR*)	4
Journal of Cross-Cultural Psychology (*JCCP*)	9
Journal of International Business Studies (*JIBS*)	16
Journal of Management (*JOM*)	2
Journal of Management Studies (*JMS*)	2
Journal of Occupational and Organizational Psychology (*JOOP*)	2
Journal of Organizational Behavior (*JOB*)	7
Leadership Quarterly (*LQ*)	3
Management International Review (*MIR*)	5
Organization Science (*OS*)	2
Organizational Behavior and Human Decision Processes (*OBHDP*)	5
Personnel Psychology (*PP*)	3
Total	93

Hofstede's (1993) definition of culture also is frequently referenced: "the collective programming of the mind that distinguishes one group or category of people from another" (p. 89). Most recently, the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project defines culture as "shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives that are transmitted across generations" (House, Hanges, Javidan, Dorfman, & Gupta, 2004: 15). These definitions suggest that common experiences and shared meaning are important delimiters of a cultural group. Even though scholars generally agree that variations between groups can exist on multiple dimensions (cognitions, behaviors, and values), cross-cultural research has focused on shared cultural values as the major source of differentiation among national groups.

The definitions of, and assumptions about, culture in the 93 studies are largely consistent, but there is great variation in its measurement. It ranges from using a general concept such as nation (which could represent multiple cultural values or other national characteristics) to focusing on a specific cultural value such as individualism or power distance (PD). Fewer than half (43) of the 93 studies measured the cultural value or values hypothesized to account for the differences in the phenomena analyzed. Table 2 summarizes the cultural values measured and the scales used to measure them in the 43 studies, along with the sources of the scales. Even though 43 studies measured culture, only 33 used the measured cultural value scores for hypotheses testing. Ten studies measured cultural values only to validate sample differences. This means that 60, or about two thirds, of the studies used nation as a proxy for culture.

In Table 2, we group the studies by the name of the scale mentioned in the articles. A total of 32 studies used a version of individualism or collectivism. Ten studies referred to

(text continues on p. 434)

Table 2
Cultural Values Measured in 43 Cross-National Studies

Cultural Value	Studies That Measured the Cultural Value	Source Cited for the Cultural Value Measured
	Variants of individualism/collectivism (32 studies)	
Individualism/collectivism	Chen, Meindl, and Hui (1998)	Perloe (1967)
	Cullen, Parboteeah, and Hoegl (2004)	Hui (1988)
	Earley, Gibson, and Chen (1999)	Trompenaars and Hampden-Turner (1998)
	Elenkov and Manev (2005)	Hofstede (1980, 2001)
	Ensari and Murphy (2003)[a]	Hofstede (1980, 2001)
	Gomez, Kirkman, and Shapiro (2000)	Triandis, Bontempo, Villareal, Asai, and Laccu (1988)
	Huang and Van de Vliert (2003)	Wagner (1995)
	Smith, Peterson, and Schwartz (2002)	Hofstede (1991)
	Spector et al. (2001, 2002)	Hofstede (1994)
	Volkema (2004)	Hofstede (1994)
		Hofstede (1980, 1991)
Individualism	Adair, Okumura, and Brett (2001)[a]	Schwartz (1994)
	Gibson and Zellmer-Bruhn (2001)	Content analysis of interview data
	Lam, Schaubroeck, and Aryee (2002)	Triandis and Gelfand (1998)
	Murphy-Berman and Berman (2002)[a]	Schwartz (1994)
	Tinsley (2001)	Earley (1993)
	Wade-Benzoni et al. (2002)[a]	Markus and Kitayama (1991), Schwartz (1990)
Collectivism	Gibson (1999)	Earley (1993)
	Gelfand and Realo (1999)	Triandis (1994)
	Kirkman and Shapiro (2001a)	Maznevski, DiStefano, Gomez, Noorderhaven, and Wu (1997)
	Kirkman and Shapiro (2001b)	
	Murphy-Berman and Berman (2002)[a]	Maznevski et al. (1997)
	Van de Vliert, Shi, Sanders, Wang, and Huang (2004)	Schwartz (1994)
		Singelis (1994)
Horizontal individualism and Vertical collectivism	Chan and Drasgow (2001)	Singelis, Triandis, Bhawuk, and Gelfand (1995)
	Chen and Li (2005)	Singelis et al. (1995)
	Robert, Probst, Martocchio, Drasgow, and Lawler (2000)[a]	Singelis et al. (1995)
		Singelis et al. (1995)
	Thomas and Au (2002)	Singelis et al. (1995)
	Thomas and Pekerti (2003)[a]	

(continued)

Table 2 (continued)

Cultural Value	Studies That Measured the Cultural Value	Source Cited for the Cultural Value Measured
Horizontal collectivism	Chen and Li (2005)	Singelis et al. (1995)
Vertical individualism	Robert et al. (2000)[a]	Singelis et al. (1995)
In-group collectivism	Fu et al. (2004)	House et al. (1999)
Independent or interdependent self-construal	Brockner, Chen, Mannix, Leung, and Skarlicki (2000)	Singelis et al. (1995)
	Gelfand et al. (2002)[a]	Singelis (1994)
	Murphy-Berman and Berman (2002)[a]	Singelis (1994)
Idiocentrism and allocentrism	Lam, Chen, and Schaubroeck (2002)	Triandis and Gelfand (1998)
	Schaubroeck, Lam and Xie (2000)	Triandis and Gelfand (1998)
	Variants of power distance (18 studies)	
Power distance	Earley (1999)	Earley and Erez (1997)
	Elenkov and Manev (2005)	Hofstede (1980, 2001)
	Gibson and Zellmer-Bruhn (2001)	Content analysis of interview data
	Hofstede, Van Deusen, Mueller, and Charles (2002)	Hofstede (1980, 1991, 2001)
	Huang and Van de Vliert (2003)	Hofstede (1991)
	Hui, Au, and Fock (2004)	Hofstede (1991); Brockner et al. (2001)
	Kirkman and Shapiro (2001a)	Maznevski et al. (1997)
	Kirkman and Shapiro (2001b)	Maznevski et al. (1997)
	Lam, et al. (2002)	Erez and Earley (1987)
	Peterson and Smith (1997)	Hofstede (1991)
	Smith et al. (2002)	Hofstede (1994)
	Van de Vliert and Van Yperen (1996)	Hofstede (1991)
	Volkema (2004)	Hofstede (1980, 1991)
Hierarchy	Adair et al. (2001)[a]	Schwartz (1994)
	Tinsley and Brett (2001)[a]	Schwartz (1994)
Egalitarianism-hierarchy	Glazer and Beehr (2005)[a]	Schwartz (1994)
Hierarchical differentiation	Tinsley (1998)	No source mentioned
	Tinsley (2001)	Erez and Earley (1987)

Other cultural values (16 studies)		
1. Achievement	Cullen et al. (2004)	Trompenaars and Hampden-Turner (1998)
2. Universalism	Morris et al. (1998)	Schwartz (1992, 1994)
3. Conservatism	Glazer and Beehr (2005)[a]	Schwartz (1994)
	Tinsley and Pillutla (1998)[a]	Schwartz (1992)
	Kirkman and Shapiro (2001a)	Maznevski et al. (1997)
4. Determination	Kirkman and Shapiro (2001b)	Maznevski et al. (1997)
5. Doing orientation	Smith et al. (2002)	Smith, Dugan, and Trompenaars (1996)
6. Egalitarian commitment–conservatism		
7. Loyal involvement– utilitarian involvement	Tinsley (1998)	No source mentioned
8. Explicit contracting	Tinsley (2001)	Tinsley (1998)
	Gibson (1999)	Oltman, Raskin, and Witkin (1971)
9. Field independence	Fu et al. (2004)	House et al. (1999)
10. Future orientation	Smith et al. (2002)	Schwartz (1994)
11. Autonomy–embeddedness		
12. Harmony–mastery	Elenkov and Manev (2005)	Hofstede (1980, 2001)
13. Masculinity	Smith et al. (2002)	Hofstede (1994)
	Volkema (2004)	Hofstede (1980, 1991)
	Fischer and Smith (2004)	Schwartz (1992)
14. Openness to change	Morris et al. (1998)	Schwartz (1992, 1994)
15. Self-enhancement	Tinsley and Pillutla (1998)[a]	Schwartz (1992)
16. Self-transcendence	Tinsley (1998)	No source mentioned
17. Polychronicity	Tinsley (2001)	Bluedorn, Kaufman, and Lane (1992)
	Cullen et al. (2004)	Inglehart (1997)
18. Pecuniary materialism	Tinsley and Brett (2001)[a]	Schwartz (1994)
19. Self-direction	Spreitzer, Perttula, and Xin (2005)	Farh, Earley, and Lin (1997)
20. Traditionality	Tinsley and Brett (2001)[a]	Schwartz (1994)
21. Tradition	Elenkov and Manev (2005)	Hofstede (1980, 2001)
22. Uncertainty avoidance	Fu et al. (2004)	House et al. (1999)
	Smith et al. (2002)	Hofstede (1994)
	Volkema (2004)	Hofstede (1980, 1991)

a. Studies that measured the cultural value only for validating sample differences across nations.

individualism/collectivism (I/C) and treated it as a continuum. Six studies used only the term *individualism*, and another six studies used only the term *collectivism*. Five studies employed the measures of horizontal individualism and vertical collectivism. These 32 studies used a total of 15 unique sources for a measurement of this I/C construct. The Hofstede (1980, 1991, 1994, 2001) measures were used in 5 studies, the Singelis (1994, 1995) measures in 11, and the Triandis (1989, 1994, 1998) measures in 5. Two studies used the Earley (1993) scale, but one study (Gibson, 1999) referred to it as *collectivism*, whereas the other (Tinsley, 2001) referred to it as *individualism*. Kirkman and Shapiro (2001a, 2001b) used the Collectivism Scale by Maznevski, DiStefano, Gomez, Noorderhaven, and Wu (1997), whereas Fu et al. (2004) used the House et al. (1999) in-group collectivism measure. The lack of consensus on the measurement for this cultural value is evident, and is a cause for concern in terms of construct validity and accumulation of knowledge.

The next most frequently measured value was PD and its variants, hierarchy, egalitarianism–hierarchy, or hierarchical differentiation, used in 18 studies. Eight studies used the PD Scale from Hofstede (1980, 1991, 2001). Four used the Hierarchy Scale from Schwartz (1994). Two used the scale by Erez and Earley (1987), one referring to it as PD (Lam, Chen, & Schaubroeck, 2002; Lam, Schaubroeck, & Aryee, 2002) and the other as *hierarchical differentiation* (Tinsley, 2001). Kirkman and Shapiro (2001a, 2001b) used the measure by Maznevski et al. (1997). Similar to I/C, there is no information on the convergent validity of these multiple measures.

Beyond I/C and PD, 22 other values were used in 16 studies. The value measures by Schwartz (1992, 1994) seem to be gaining prominence and were used in 9 studies, followed by the Uncertainty Avoidance Scale by Hofstede in 3 studies. Tinsley (1998, 2001) used the scales of polychronicity and explicit contracting, treating them as cultural values even though both refer to a behavioral orientation. The former refers to a preference for multitasking, or simultaneous tasking, and the latter refers to a preference for overt codes and communications over informal indirect arrangements.

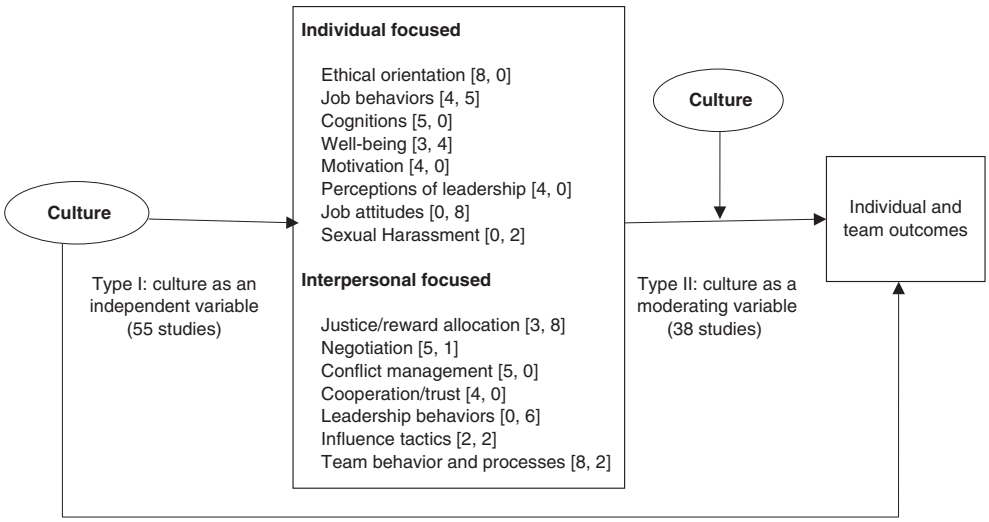
In summary, although the interest in I/C and PD remains strong, recent research has begun to use a variety of other cultural values to examine differences in organizational behavior across national contexts. Also, the culture frameworks of scholars such as Singelis, Triandis, and Schwartz are beginning to supplement the Hofstede conceptualization. The proliferation of values and measurement in recent years is a distinctive feature of this literature. Ironically, this may be a hindrance to progress, a point we will discuss in the Recommendations section.

Next, we analyze the topics and types of theoretical models tested in the 93 studies, paying attention to the specific role of the cultural values.

Topics Studied

As shown in Figure 1, we organize the articles according to the role of culture in the theoretical model either as an independent variable (Type I) or as a moderator (Type II)—a typology suggested by Lytle et al. (1995) and also adopted in Kirkman et al.'s (2006) review. Within each type, we further arrange the articles in terms of the research topic area, such as leadership, job attitudes, and so on. These topic areas are categorized into studies that focus on the individual

Figure 1
Two Types of Cross-National, Cross-Cultural Studies on Individuals and Teams in Organizations



Note: In the brackets are the number of Type I (first number) and Type II (second number) studies.

attributes (individual focused) and those that focus on the relationships between people (interpersonal focused), resulting in a total of 55 Type I and 38 Type II studies.

Type I Studies—Culture as Independent Variable

The most frequent topics in Type I studies are ethical orientation, negotiation, conflict management, and team behavior and processes. Five studies focus on the cognitions of employees or managers in a variety of areas without any systematic relationship among them. We group them loosely under the term *cognition*. The job behaviors category includes two studies on performance feedback and two studies on managerial use of different sources for dealing with work issues. Table 3 shows the 55 Type I studies, organized by research areas. The number of countries studied and journal where the article was published also are indicated.

Ethical orientation. Eight articles focus on country variations in managerial attitudes toward ethics. Cullen, Parboteeah, and Hoegl (2004) conducted a 28-country study on ethically suspect behavior using Durkheim's (1893/1964) institutional anomie theory. They found that cultural values of achievement orientation and individualism negatively related to the managers' willingness to justify ethically suspect behavior, whereas universalism and pecuniary materialism

Table 3
Type I Studies With Culture as an Independent Variable

Individual Focused	Interpersonal Focused
Ethical orientation	**Justice or reward allocation**
1. Cullen, Parboteeah, and Hoegl (2004), *AMJ*—ethical behavior [28]	1. Giacobbe-Miller, Miller, and Victorov (1998), *PP*—reward allocation rules [2]
2. Husted, Dozier, McMahon, and Kattan (1996), *JIBS*—ethical attitudes [3]	2. Giacobbe-Miller, Zhang, Miller, and Victorov (2003), *JIBS*—reward allocation rules [3]
3. Jackson (2000), *JMS*—ethical attitudes [5]	3. Murphy-Berman and Berman (2002), *JCCP*—distributive justice evaluations [2]
4. Jackson (2001), *HR*—ethical attitudes [10]	**Negotiation**
5. Parboteeah, Cullen, Victor, and Sakano (2005), *MIR*—ethical climate [2]	1. Adair and Brett (2005), *OS*—negotiation behavior [8]
6. Robertson, Hoffman, and Hermann (1999), *MIR*—environmental ethics [2]	2. Adair, Okumura, and Brett (2001), *JAP*—negotiation behavior [2]
7. Volkema (1999), *JBR*—ethicality in negotiation [2]	3. Gelfand and Christakopoulou (1999), *OBHDP*—negotiation process [2]
8. Volkema (2004), *JBR*—ethicality in negotiation [9]	4. Gelfand et al. (2002), *JAP*—perception of fairness in negotiations [2, 2, 2, 2]
Job behaviors	5. Tinsley and Pillutla (1998), *JIBS*—negotiation norms [2]
1. Bailey, Chen, and Dou (1997), *JIBS*—feedback preference [3]	**Conflict management**
2. Earley, Gibson, and Chen (1999), *JCCP*—performance feedback use [3]	1. Gelfand et al. (2001), *JAP*—conflict frame [2]
3. Smith, Peterson, and Schwartz (2002), *JCCP*—sources of guidance [47]	2. Morris et al. (1998), *JIBS*—conflict style [4]
4. Smith, Peterson, and Wang (1996), *JIBS*—sources of guidance [3]	3. Tinsley (1998), *JAP*—conflict resolution modes [3]
Cognitions	4. Tinsley (2001), *JAP*—negotiating conflict [3]
1. Abramson, Keating, and Lane (1996), *MIR*—problem-solving style [3]	5. Tinsley and Brett (2001), *OBHDP*—conflict management strategies [2]
2. Chikudate (1997), *MIR*—meaning of organizational life [2]	**Cooperation or trust**
3. DeVoe and Iyengar (2004), *OBHDP*—theories of employee motivation [6]	1. Chen and Li (2005), *JIBS*—cooperative behavior [2]
4. Johns and Xie (1998), *JAP*—view on absences from work [2]	2. Marshall and Boush (2001), *JIBS*—cooperation [2]
5. Lam, Hui, and Law (1999), *JAP*—perspectives on citizenship behavior [4]	3. Huff and Kelley (2003), *OS*—trust in organization [7]
Well-being	4. Huff and Kelley (2005), *JBR*—trust in organization [7]
1. Peterson and Smith (1997), *AMJ*—role stress [32]	**Influence tactics**
2. Spector et al. (2001), *JOB*—locus of control and well-being [24]	1. Fu and Yukl (2000), *LQ*—perceived effectiveness of influence tactics [2]
3. Van de Vliert and Van Yperen (1996), *AMJ*—role stress [21]	2. Ralston et al. (2001), *JCCP*—influence tactic preference [6]
Motivation	
1. Chan and Drasgow (2001), *JAP*—motivation to lead [2]	
2. Hofstede, Van Deusen, Mueller, and Charles (2002), *JIBS*—leaders' business goals [15]	
3. Niles (1999), *HR*—meaning of work [2]	
4. Sagie, Elizur, and Yamauchi (1996), *JOB*—achievement motivation [5]	

Perceptions of leadership

1. Brodbeck et al. (2000), *JOOP*—leadership prototypes [22]
2. Den Hartog, House, Hanges, and Ruiz-Quintanilla (1999), *LQ*—implicit leadership theories [62]
3. Javidan and Carl (2004), *JMS*—leadership profiles [2]
4. Javidan and Carl (2005), *MIR*—leadership attributes [2]

Team behavior and processes

1. Earley (1999), *OBHDP*—collective efficacy [4]
2. Gibson and Zellmer-Bruhn (2001), *ASQ*—teamwork metaphor [4]
3. Gomez, Kirkman, and Shapiro (2000), *AMJ*—team member evaluation [2]
4. Harrison, McKinnon, Wu, and Chow (2000), *JIBS*—teamwork adaptation [2]
5. Kirkman and Shapiro (2001a), *AMJ*—resistance to teams and individual outcomes [4]
6. Kirkman and Shapiro (2001b), *JCCP*—resistance to teams and team outcomes [4]
7. Merritt and Helmreich (1996), *JCCP*—attitude toward team and team leadership [8]
8. Wade-Benzoni et al. (2002), *JAP*—cooperation [2]

Note: $N = 55$. Value in brackets refers to the number of countries in the study. Multiple values means multiple studies reported in the article. See Table 1 for acronym definitions.

positively related to it. The authors further found social institutional factors such as degrees of industrialization, socialism, and family breakdown to be associated with a high likelihood of these managers accepting ethically suspect behavior. Average educational attainment of the society, however, negatively related to this lenient ethical attitude.

The study by Husted, Dozier, McMahon, and Kattan (1996) tested the hypotheses that an MBA education may be a carrier of business ethics and may produce convergence in ethical orientation across nations. Among the samples of MBA students from Mexico, Spain, and the United States, there was substantial agreement on objectionable practices. However, the moral reasoning of the respondents remained divergent across the three nations, with Mexico and the United States being the most different. The author acknowledged the problem of using a translation of an existing moral reasoning scale that may have unknown validity for the comparison cultures.

Jackson (2000) investigated the influence of corporate policy on ethical gray areas on managers' ethical decision making in five countries. He found corporate policy to not play a significant role in ethical decision making attitudes. However, perceived behavior of peers had significant influence on attitudes toward ethics across nations. Also the respondents' perception of top manager beliefs produced some minor national differences. In a 10-nation study, Jackson (2001), using the cultural values of uncertainty avoidance, individualism, and collectivism, hypothesized national differences in ethical judgments. Results based on detailed pairwise analyses largely confirmed the hypothesized differences. In particular, managers from countries high on individualism and low on uncertainty avoidance assigned greater importance to relations with external stakeholders than did managers from countries with other cultural characteristics. However, neither study measured cultural values, and therefore the differences could be because of unmeasured institutional factors such as those considered in the Cullen et al. (2004) study.

Volkema (1999) investigated the perceived ethicality of negotiation, comparing the perceptions of MBA students in the United States and Brazil. Using Hofstede's value dimensions, he reasoned that U.S. respondents would differ from Brazilians on the likely use of five negotiation behaviors. He found the U.S. respondents to report less likelihood of information misrepresentation and bluffing than the Brazilian respondents. Because he did not measure cultural values, many other factors could account for the observed differences. Volkema (2004) extended the research to nine countries and used Hofstede's country scores on the four cultural values, along with two economic indicators (consumer price increase and/or gross domestic product [GDP] per capita). He related them to five categories of negotiation behavior. The results of the study were not very strong, as only 4 out of a possible total of 30 regression coefficients were significant.

The studies by Robertson, Hoffman, and Herrmann (1999) and Parboteeah, Cullen, Victor, and Sakano (2005) compared the United States to Ecuador and Japan, respectively. Robertson et al. (1999) found the Ecuadorian managers to be slightly more ethically oriented toward the environmental concerns (deforestation and overfishing) than the U.S. managers. Parboteeah et al. (2005) used cultural values of individualism and collectivism (bud did not measure them) to hypothesize a higher benevolent ethical climate among accountants in Japan and a higher egoistic and principled ethical climate in the United States. The authors also drew support for their arguments from religious underpinnings—Shintoism and Buddhism—which were argued to

influence the worldview of the Japanese managers. The results were not entirely consistent with the hypotheses. American accountants consistently rated their companies as demonstrating a higher level of ethical climate than did the Japanese accountants. The responses of American participants could have been influenced by the ethical problems that have pervaded the U.S. accounting industry in recent years, posing a threat to the internal validity of the findings.

Job behaviors. Bailey, Chen, and Dou (1997), on the basis of individualism versus collectivism values, argued that U.S. respondents expect success feedback, whereas Japanese and Chinese desire failure feedback. The results supported the hypotheses for the United States and Japan, but there was no difference between the U.S. and Chinese samples in terms of their success-feedback expectations. Another study focused on how individualists and collectivists would react to individual- or group-based feedback in terms of self-efficacy, performance, and job satisfaction (Earley, Gibson, & Chen, 1999). This study used samples from three countries (the United States, China, and Czechoslovakia). Based on both measured cultural values of I/C and the country proxies, the results were inconsistent with the predictions. In particular, collectivists positively reacted to both individual-based and group-based feedback. Smith, Peterson, and Schwartz (2002) studied how managers in 47 countries handled eight specific work events. The study used national culture scores from Hofstede (2001). Results suggested that cultural values predict sources of guidance that managers rely on when they pertain to vertical relationships. However, values are less successful in predicting reliance on peers. Another study, by Smith, Peterson, and Wang (1996), examined managers in China, the United States, and Britain. They found that Western managers rely more on their own experiences, whereas Chinese managers rely more on rules and procedures. The authors used national culture to explain the differences, even though culture was not measured and the country proxy was used in the statistical analyses.

*Cognitions***.** Abramson, Keating, and Lane (1996) compared the decision style preferences of Canadian, American, and Japanese managers using the Myers-Briggs Type Indicator. The findings suggested significant differences between American and Canadian managers. In particular, Canadians seemed to be more imaginative and theoretical, whereas Americans appeared to be more realistic and practical. However, this study did not measure values, leaving open the possibility of alternative explanations. In another study involving comparison of Japanese and U.S. samples, Chikudate (1997) used a method based on linguistic-oriented phenomenology to examine meaning of organizational life among U.S. and Japanese supervisors and subordinates. In interviews, they listed words describing life in the organization. The unique words from the two samples were combined. Participants were then asked to estimate the distance between pairs of words. The multidimensional scaling analysis was applied to the data from the superiors and subordinates separately. The results show important differences in the way Japanese and Americans view authority and power. For example, Japanese managers tend to attach a lot of authority to their hierarchical positions, but American managers do not. However, the author also found that managers and subordinates in both Japan and the United States similarly related harmony and happiness in organizational life. Because this study did not directly measure culture, the results could be influenced by other sample differences as well.

DeVoe and Iyengar (2004) examined cross-cultural differences in how managers perceive motivation among their subordinates. Using samples from six countries in North America, Asia, and Latin America, the authors found that North American managers perceived employees to be more extrinsically than intrinsically motivated. Latin American managers saw their subordinates as more intrinsically motivated than extrinsically motivated. Finally, Asian managers perceived their subordinates to be equally motivated by intrinsic and extrinsic factors. However, there was no cross-cultural difference in terms of how employees viewed themselves—they always saw themselves as more intrinsically than extrinsically motivated. Like DeVoe and Iyengar (2004), Lam, Hui, and Law (1999) examined supervisors' perspectives on their subordinates' roles in four countries. Results suggested that supervisors from all four nations had broader definitions of job roles than did their subordinates. In particular, supervisors from Japan and Hong Kong included many extrarole behaviors as expected parts of their subordinates' jobs. This study neither measured culture nor included any demographic variables as controls, suggesting that alternative explanations abound for the observed differences. Focusing on how behaviors of colleagues are viewed, Johns and Xie (1998) reported that Chinese employees view absences of colleagues from their work group more sympathetically than do Canadians. No cross-cultural difference existed in terms of how the two samples viewed their own absences. This study controlled for individual differences variables but did not measure culture.

Well-being. Two studies examined the role of a nation's ambient temperature, relative to cultural values, for employee experiences of role stress. Van de Vliert and Van Yperen (1996) proposed an alternative explanation to an earlier study by Peterson et al. (1995) on the relationship of PD and role stress. They argued that this correlation could be an artifact of a third variable, the temperature of the nation where the work was performed. Using the original data from Peterson et al. involving 21 nations, they found a positive correlation between temperature and role overload, even after controlling for PD and a host of other economic indicators. Peterson and Smith (1997) pointed out the flaws in the sampling and design of the Van de Vliert and Van Yperen (1996) study. Using an enlarged sample of 32 nations and a more refined temperature measure (from the city where the role-stress measure was obtained), they found PD to relate to both role overload and role ambiguity after controlling for temperature. However, the correlation of temperature and role stress was not significant after controlling for PD. Peterson and Smith (1997) concluded that these correlations do not provide definitive evidence for a causal link between any of these variables. The more important need is to interpret clusters and configuration of variables in international research because of the interdependent presence of multiple contributors to culture. We will elaborate on the configuration approach to cross-national studies in the Recommendations section.

Spector et al. (2001) examined the relationships of individualism to work locus of control and to well-being. Using data from 24 nations, and computing correlations at the nation or territory levels, the authors found I/C to strongly relate to work locus of control, whereas it was unrelated to the measures of well-being. Because the analyses were at the ecological level, their meaning at the individual level is unknown.

Motivation. An interesting study was conducted by Niles (1999), a Sri Lankan by birth working in Australia at the time of the study. She reasoned that Christianity is not the only etiology

of the Protestant work ethic. She refuted the popular pessimistic view of Buddhism and suggested that the Buddha formulated a work ethic encouraging hard work, initiative, striving, persistence, and ethics. She drew a stratified random sample of residents in Darwin, Australia, and Colombo, Sri Lanka. Of the sample from Colombo, 98% were Buddhists, and 68% of the Darwin sample were Christians. She found that the Sri Lankan respondents endorsed a work ethic more strongly than did respondents from the Western culture. The study did not measure any cultural values, and the analysis did not include any other contextual factors. However, the stratified random sample improved the external validity of the study.

Sagie, Elizur, and Yamauchi (1996) compared the achievement motivation of managers in five nations. The results were consistent with the hypotheses that achievement tendency would be highest among U.S. respondents with an individualistic orientation and lowest for the Hungarian and Japanese respondents with collectivistic orientation. However, the authors drew these conclusions without actually measuring the cultural values. Chan and Drasgow (2001) compared the role of personality and cultural values in predicting motivation to lead. Using a sample from Singapore (military recruits and junior college students) and a sample from the United States (undergraduate students), they found the cultural values of individualism and collectivism related to motivation to lead in both countries. Using executive MBA students in 15 countries, Hofstede, Van Deusen, Mueller, and Charles (2002) studied the importance of 21 business goals for tycoons (business leaders) and for the students themselves. Focusing on the rating of perceived goal priorities of the business leaders, the authors found the importance ratings of several business goals to correlate with PD, uncertainty avoidance, individualism, and long-term orientation, attesting to the importance of a nation's cultural values for goal motivation.

Perceptions of leadership. The four articles on this topic sought to verify the cross-cultural generalizability of leadership concepts. Using the GLOBE data set involving 6,052 middle managers from 22 European countries, Brodbeck and coauthors (2000) concluded that concepts regarding outstanding leadership are culturally determined. Also using the GLOBE data set, Den Hartog, House, Hanges, and Ruiz-Quintanilla (1999) examined the universality of charismatic or transformational leadership in 62 nations. Results suggested that aspects of charismatic or transformational leadership as contributors to perceptions of outstanding leadership are universally endorsed. They also found national differences on many other leadership attributes. This research had a careful matched sampling plan across the nations along with rigorous measurement validation, contributing to both internal and external validity. Javidan and Carl (2004) found both Canadian and Iranian samples to describe charismatic leadership in terms of vision, tenacity, intellectual challenge, self-sacrifice, and eloquence. Javidan and Carl (2005) compared Canadian and Taiwanese leadership attributes by asking managers from both countries to assess their immediate supervisors. Terms such as *visionary*, *symbolizer*, *auditor*, and *self-sacrificer* were common across these two cultures. Neither studies measured culture.

Justice or reward allocation. Distributive justice provided the theoretical backdrop for three studies in this area. Giacobbe-Miller, Miller, and Victorov (1998) reported the results of two studies involving American and Russian samples. In a simulation experiment, managers

in both countries emphasized productivity (i.e., the equity rule) over coworker relations and equality as criteria for pay allocation. Similarly, in the second study, both American and Russian students preferred the equity rule. In a later article (Giacobbe-Miller, Miller, Zhang, & Victorov, 2003), these authors found American and Russian managers to emphasize more productivity and less equality than Chinese managers using scenario measures but found no significant differences using a survey scale on "beliefs about inequality" (Kluegel & Smith, 1986). Murphy-Berman and Berman (2002) examined cross-cultural differences in perceptions of distributive justice using samples from Hong Kong and Indonesia, both of which are collectivistic cultures. Results suggested that Hong Kong respondents viewed the use of merit as fairer than the use of need. On the contrary, the Indonesian respondents saw the use of need as fairer than the use of merit. The study thus highlights the need for a nuanced differentiation among nations generally considered to belong to the same cultural cluster. However, the differences also could be due to other nonculture factors since the cultural values measured were for examining sample difference and were not for hypotheses testing.

Negotiation. Adair and Brett (2005) used a creative design to compare the negotiation behavior in high-context and low-context cultures (Hall, 1977) over four stages of the negotiation process. They used samples of negotiation dyads in high-context, low-context, and mixed context from eight nations. Results confirmed the hypothesized differences in the patterns of negotiator behavior across cultures and time. The process research and the use of multiple nations strengthen both the internal and external validity of this study. In another study, Adair, Okumura, and Brett (2001) found the U.S. and Japanese negotiators (representing low- and high-context cultures, respectively) to differ in information exchange and influence behaviors. Also, Japanese negotiators adapted their behavior in intercultural negotiation more than did the U.S. negotiators. In this study, the authors statistically verified that the Japanese valued hierarchy more than did the U.S. negotiators, whereas the U.S. negotiators valued individualism more than did the Japanese participants. However, the hypotheses were tested using nation as a proxy for culture.

Gelfand and Christakopoulou (1999) compared negotiation cognition of people in the United States and Greece. They used a 2-week computer-mediated negotiation simulation for data collection. The results were consistent with the hypothesis that members of an individualistic culture (United States) would commit a fixed-pie error more than would members of a collectivistic culture (Greece). In another study, using samples from the United States and Japan, Gelfand et al. (2002) predicted a self-serving bias of fairness in conflict situations, hypothesizing that the focus on positive attributes among people from individualistic cultures (United States) would be less prevalent in collectivistic cultures (Japan). The hypothesis was supported in four studies using different methodologies (free recall, scenarios, and a laboratory experiment). Successful replication across studies increased both internal and external validity of the study. Tinsley and Pillutla (1998) compared the negotiation norms of U.S. and Hong Kong participants. They hypothesized differences based on the cultural values of self-enhancement, self-transcendence, conservatism, and openness to change, which were measured using the Schwartz (1992) value inventory. Results supported the hypothesized differences, as U.S. negotiators subscribed to self-interest and joint problem-solving norms and Hong Kong negotiators subscribed to an equality norm.

Conflict management. Five studies dealt with this topic, of which two were by Tinsley (1998, 2001) and one was by Tinsley and Brett (2001). In the 1998 study, using the culture dimensions of hierarchical differentiation, explicit contracting, and polychronicity, Tinsley hypothesized that U.S. business managers would prefer integrating mutual interests while resolving conflicts, that Germans would prefer utilizing existing regulations for conflict resolution, and that Japanese would defer to those with high status power. Results confirmed the majority of the hypotheses. In a later study (Tinsley, 2001), four cultural values (individualism, hierarchy, polychronicity, and explicit contracting) predicted differences in the use of different patterns of conflict management strategies among managers from Germany, Japan, and the United States. In a third study, Tinsley and Brett, using the summer intern hiring simulation, compared the conflict resolution norms of Hong Kong and U.S. managers. Based on the differences between these two cultural groups in individualism, egalitarianism, and openness to change, the authors hypothesized that the U.S. managers would be more likely to discuss issues, synthesize mutual interests, and resolve issues than the Hong Kong managers. Hong Kong managers, on the other hand, would be more likely to show concern for authority and collective interests and to send issues to higher management than the U.S. managers. The hypotheses were largely confirmed. Also, to ensure that their sample generalized to American and Hong Kong cultures, the authors collected data on cultural values using a short form of the Schwartz (1994) survey. The results suggested that the samples were representative of their cultures.

Morris et al. (1998) compared the conflict-resolution approaches in the United States, China, India, and the Philippines using MBA students in each country. They confirmed that societal conservatism values positively relate to the use of an avoiding style, whereas self-enhancement and openness to change positively relate to the use of a competing style. Furthermore, Chinese participants reported a greater tendency to use the avoiding style than the participants in the other three countries, whereas the U.S. participants reported a greater tendency to use the competing style relative to the others. Finally, Gelfand et al. (2001) examined the cognitive representation of conflict in the United States and Japan. Using multidimensional scaling analyses, the authors compared U.S. participants' views to Japanese participants' views of U.S. and Japanese conflict episodes. Results suggested the presence of a universal, or etic, dimension of conflict construal. Participants from both cultures construed conflict through a compromise-versus-win frame. There were also unique dimensions of construal within each culture. This study went beyond earlier research that imposed a common conflict frame and examined differences in the common dimensions. It suggests the need to explicate both universal and culture-specific elements of conflict, negotiation, and other behaviors in future research.

Cooperation or trust. Based on the individualism–collectivism argument, Chen and Li (2005) conducted two cross-national experiments comparing cooperative tendency between Hong Kong and Australian respondents. As hypothesized, Hong Kong respondents made fewer cooperative decisions than the Australians did in mixed-motive business situations when dealing with strangers in their home location. However, they were more cooperative with compatriots than with foreigners when they were in a foreign territory. These studies provide robust findings on the lower tendency of collectivists to trust and cooperate with out-group members.

Marshall and Boush (2001), using the I/C framework, examined three decision-making simulations between American and Peruvian export managers. Results indicated an erosion of cultural effects with the passage of time, suggesting the dynamic nature of culture. In particular, they found that personal characteristics and relationship history overrode the influence of culture as the managers got to know each other. Huff and Kelley (2003) examined the differences in trust across seven countries, also using the I/C argument. This study reported higher levels of trust in the United States than in Asian countries. Similar findings were reported in Huff and Kelley (2005), who observed that U.S. managers showed higher levels of trust compared to Asian managers. The two Huff and Kelley (2003, 2005) studies provided further evidence to suggest that people from collectivistic cultures express less trust in out-groups (e.g., suppliers and customers, people outside the organization) than those from the more individualistic cultures.

Influence tactics. Fu and Yukl (2000) examined the perceived effectiveness of influence strategies. The authors reasoned that U.S. and China respondents would differ on such perception because of differences in cultural values of PD, uncertainty avoidance, and short-term versus long-term orientation. They found that U.S. managers rated rational persuasion and exchange as more effective than did Chinese managers. For Chinese managers, coalition tactics, upward appeals, and gifts were viewed as more effective influence tactics.

Ralston et al. (2001) compared views on upward influence strategies across six cultures. Results suggested that there is broad agreement across countries on whether an influence tactic is positively or negatively seen. However, three distinct categories were visible as well. The Dutch and Americans endorsed the use of soft influence strategies (e.g., image management) and disapproved of the use of hard influence strategies (e.g., coercion). Germans and Indians considered soft strategies less acceptable than did the Dutch and Americans. At the same time, they also negatively viewed hard strategies. The Mexican and Hong Kong managers viewed hard strategies as reasonably acceptable, whereas they saw soft strategies as less acceptable than did the Dutch and Americans. Neither the Fu nor the Ralston studies measured culture, introducing ambiguity in the cultural interpretation of the findings.

Team behavior and processes. Earley (1999) examined the influence of PD and member status on team efficacy using an experimental design and senior managers in four nations: the United States, the United Kingdom, France, and Thailand. The first two countries represent low PD, and the latter two represent high PD. The results showed that high-status members (male, older, or better-educated members) had a proportionally larger influence on the collective efficacy and performance of the team in high PD cultures, whereas collective efficacy was tied to the judgments of all group members in low PD cultures. With better controls in an experimental design, this study provided reasonable confidence in the importance of the role of member characteristics that may infer status differential and PD value for effective teamwork.

Harrison, McKinnon, Wu, and Chow (2000) explored the cultural factors that may influence employee adaptation to fluid work groups in Taiwan and Australia, representing countries differing in collectivism and PD. Australian managers reported employees more readily adapting to working in different teams, working under different leaders, and taking on leadership of project teams than the middle managers in Taiwan reported. The two samples were

matched in terms of the functional background of the managers, the size and industries of the firms, and the local firms. These additional controls provided greater confidence in attributing the observed differences to cultural values, even though the values were not measured. Gomez, Kirkman, and Shapiro (2000) analyzed the evaluation of team member behavior by part-time MBA students in the United States and Mexico, representing individualistic and collectivistic cultures, respectively. After controlling for country, collectivism (measured at the individual level) had a positive relationship to the evaluation of a teammate. Furthermore, the evaluation was higher for in-group members among the Mexican respondents than among the U.S. respondents.

Merritt and Helmreich (1996) used samples of flight attendants and pilots from the United States and seven Asian countries (Hong Kong, Japan, Korea, the Philippines, Thailand, Singapore, and Taiwan) to study flight deck teamwork and leadership. A multidimensional scaling analysis produced three dimensions that corresponded to different clusters of cultural values. The responses were similar among the Asian respondents and consistent with high collectivism and high PD orientation. U.S. pilots expressed views that reflected high individualism and low PD values. The authors suggested that the attitudinal similarity among the Asian groups could be because of the monocultural bias of the questionnaire toward the Asian group. However, the differences in sample characteristics (the Asian respondents were much less experienced than the U.S. respondents) could also have accounted for the differences observed.

In a highly creative study, Gibson and Zellmer-Bruhn (2001) compared national differences in teamwork metaphors used by employees in six multinational corporations in four countries: the United States, France, Puerto Rico, and the Philippines. Using content analysis of in-depth interview data, the authors identified five metaphors: military, family, sports, associates, and community. Results confirmed national variations in the use of the five metaphors. Specifically, countries high in individualism (United States and France) tended to use the sports or associates metaphors, whereas countries high in PD (Philippines and Puerto Rico) tended to use the military or family metaphors. Furthermore, PD and collectivistic values were negatively associated with the use of teamwork metaphors that emphasized clear roles and broad scope. These results suggest that the meaning of teamwork may differ across cultures and, in turn, imply potential differences in team norms and team-member behaviors.

Kirkman and Shapiro (2001a, 2001b) conducted two studies using the same data set of 461 members in 81 self-management teams from four countries: Belgium, Finland, the Philippines, and the United States. In one study (Kirkman & Shapiro, 2001a), the focus was on how cultural values influenced employee job attitudes (satisfaction and commitment) by influencing employees' resistance to teams or to self-management. The second study (Kirkman & Shapiro, 2001b) tested the same hypotheses, except the outcome was team effectiveness and empowerment. The authors used the cultural values of collectivism, PD, doing orientation, and determination. The hypotheses were largely supported, as resistance fully mediated the influence of cultural values for team outcomes and partially mediated the influence of cultural values for individual-level outcomes. Further analysis showed culture having a stronger effect on resistance in some countries than in others. For example, determinism was more strongly associated with resistance to self-management among U.S. than among Philippine respondents. Finally, Wade-Benzoni et al. (2002) examined cross-cultural differences in cognitions and behaviors in a social dilemma situation across Japan and U.S. samples. Results indicated that

the Japanese decision makers in teams used the equal allocation rule more and expected others to be more cooperative than did the decision makers in the U.S. teams. This study measured the cultural values to ensure that the samples were representative of their cultures. The culture scores, however, were not used in testing the hypothesis.

It is important to note that among the eight studies focusing on teams, five analyzed outcomes at the individual level. Only Earley (1999), Kirkman and Shapiro (2001b), and Wade-Benzoni et al. (2002) conducted an analysis at the team level. Thus, knowledge about how team behavior or process differs across nations is still limited.

Type II Studies—Culture as Moderating Variable

The topics receiving the most attention in Type II studies are job attitudes, justice and reward allocation, leadership or managerial behavior, and well-being. Studies of employee job performance, responses to job satisfaction, and exchange behavior are loosely grouped under the job behavior topic. Only two studies focused on the moderating effect of culture on teams. The 38 Type II articles, organized according to research areas, are listed in Table 4.

Job attitudes. Glazer and Beehr (2005) examined whether the effect of role stressors (ambiguity, overload, and conflict) on turnover intentions varied across four cultures. Using samples of nurses from Hungary, Italy, the United Kingdom, and the United States and using a multigroup structural equation path analysis, they concluded that stress is largely a culture-general process. The use of participants from similar jobs (nursing) across nations helped authors control for effects of industry and profession. However, effects of other contextual factors, such as government regulation and labor laws governing the nursing profession in each country, could potentially provide alternative explanations as well. Glazer, Daniel, and Short (2004) also used samples of nurses from those same countries. In this study, they examined the relationship between personal values and commitment. Results using mediated regression analysis suggested that values partially mediated the effects of countries on affective commitment.

Grandey, Fisk, and Steiner (2005) examined the moderating role of emotion culture on the relationship between emotion regulation and job satisfaction using samples from France (representing impulsive culture) and the United States (representing institutional culture). Results suggested that the relationship was weaker for French employees than for U.S. employees. However, Grandey et al. did not measure emotion culture. Therefore, one can only indirectly infer that emotion culture played the hypothesized moderating role and that other cultural or institutional factors such as customer service climate did not play a role in the model.

Similar to Grandey et al. (2005), Huang and Van de Vliert (2003) examined the moderating role of culture in the relationship between job characteristics and job satisfaction, using a sample comprising 49 nations. Besides the cultural values, they also included other contextual variables such as national wealth and social security. Although it is not possible to generate hypotheses for all possible cultural or national predictors, like Cullen et al. (2004), these authors ventured beyond the commonly used national culture dimensions. Another important feature of this study was testing a cross-level model. We will return to these two important aspects of this article—multiple national contexts and cross-level modeling—in the Recommendations section.

Table 4
Type II Studies With Culture as a Moderating Variable

Individual Focused	Interpersonal Focused
Job attitudes 1. Glazer and Beehr (2005), *JOB*—role stress and commitment [4] 2. Glazer, Daniel, and Short (2004), *HR*—human value and organizational commitment [4] 3. Grandey, Fisk, and Steiner (2005), *JAP*—emotion and job satisfaction [2] 4. Huang and Van de Vliert (2003), *JOB*—job characteristics and job satisfaction [49] 5. Hui, Au, and Fock (2004), *JIBS*—empowerment, continuous improvement and job satisfaction [33, 2, 2] 6. Money and Graham (1999), *JIBS*—performance, pay and satisfaction [2] 7. Robert, Probst, Martocchio, Drasgow, and Lawler (2000), *JAP*—empowerment and satisfaction [4] 8. Sweeney and McFarlin (2004), *JOOP*—social comparison and income satisfaction [12]	**Justice or reward allocation** 1. Brockner, Chen, Mannix, Leung, and Skarlicki (2000), *ASQ*—procedural fairness and outcome favorableness [2, 2, 1] 2. Chen, Meindl, and Hui (1998), *JOB*—justice and parity [2] 3. Fischer and Smith (2004), *JCCP*—reward allocation and justice perception [2] 4. Lam, Schaubroeck, and Aryee,2002), *JOB*—justice and outcomes [2] 5. Leung, Su and Morris (2001), *HR*—reactions to critical supervisory feedback [2] 6. Mueller, Iverson, and Jo (1999), *HR*—expectations and justice evaluations [2] 7. Van de Vliert, Shi, Sanders, Wang, and Huang (2004), *JCCP*—interpretation of supervisory feedback [2] 8. Zhou and Martocchio (2001), *PP*—reward allocation and employee outcomes [2]
Job behaviors 1. Bagozzi, Verbeke, and Gavino (2003), *JAP*—shame and performance [2] 2. Dubinsky, Kotabe, Lim, and Wagner (1997), *JBR*—performance and commitment [2] 3. Greer and Stephens (2001), *JOM*—escalation of commitment [2] 4. Thomas and Pekerti (2003), *JCCP*—job satisfaction and exchange behavior [2] 5. Thomas and Au (2002), *JIBS*—behavioral response to job dissatisfaction [2]	**Negotiation** 1. Gelfand and Realo (1999), *JAP*—accountability and negotiation outcomes [1, 2]
Well-being 1. Spector et al. (2002), *AMJ*—locus of control and well-being [24] 2. Spector et al. (2004), *PP*—work hours and work-family stress [15] 3. Schaubroeck, Xie, and Lam (2000), *JAP*—control/demand and health symptom and turnover intention [2] 4. Yang Chen, Choi, and Zu (2000), *AMJ*—work-family demand and conflict [2]	**Leadership behaviors** 1. Agarwal, DeCarlo, and Vyas (1999), *JIBS*—leadership and commitment [2] 2. Dorfman et al. (1997), *LQ*—leadership and outcomes [5] 3. Elenkov and Manev (2005), *JOM*—leadership and innovation [12] 4. Ensari and Murphy (2003), *OBHDP*—leadership perception and charismatic attribution [2] 5. Spreitzer, Perttula, and Xin (2005), *JOB*—transformational leadership and effectiveness [2] 6. Pillai, Scandura, and Williams (1999), *JIBS*—leadership and job satisfaction [5]

(continued)

Table 4 (continued)

Individual Focused	Interpersonal Focused
Sexual harassment	**Influence tactics or political behavior**
1. Cortina and Wasti (2005), *JAP*—response to sexual harassment [2]	1. Fu et al. (2004), *JIBS*—perceived effectiveness of influence tactics [12]
2. Wasti, Bergman, Glomb, and Drasgow (2000), *JAP*—model of sexual harassment [2]	2. Vigoda (2001), *HR*—reactions to organizational politics [2]
	Team behavior and processes
	1. Gibson (1999), *AMJ*—group efficacy and group effectiveness [2, 2]
	2. Lam, Chen, and Schaubroeck (2002), *AMJ*—participative decision making and performance (individual and team) [2]

Note: $n = 38$. Value in brackets refers to the number of countries in the study. Multiple values means multiple studies reported in the article. See Table 1 for acronym definitions.

Like Huang and Van de Vliert (2003), Hui, Au, and Fock (2004) also conducted a cross-level study. In particular, they examined the moderating effect of PD on the relationship between empowerment and job satisfaction using three studies. The first is a 33-country study, and it used Hoftstede's PD measure at the nation level and control for national wealth measured by GDP. Study II measured PD at the individual level using samples of Canadian and Chinese hotel frontline employees. Study III, also comparing Canada and China, added causal support to the survey findings in Studies I and II by using an experimental design. The hypothesis on the moderating role of PD was supported in all three studies. The relationship between empowerment and job satisfaction was stronger in low PD cultures than in high PD cultures. Money and Graham (1999) examined whether a model of salesperson performance similarly worked in Japan as it did in the United States. The findings suggested that the financial aspects of a job are more important for the sales personnel in the United States. On the other hand, value congruence played a more important role in driving job satisfaction among Japanese participants. The article suffered from an omission common to many articles in this review—not directly measuring culture. And because neither culture nor other cross-national difference factors were measured, it is difficult to tease out the effects of hypothesized cultural values from other contextual variables.

Similar to Hui et al. (2004), Robert, Probst, Martocchio, Drasgow, and Lawler (2000) examined the moderating role of culture in the relationship between managerial practices (empowerment and continuous improvement) and job satisfaction. Results suggested that continuous improvement was positively associated with satisfaction in all samples (the United States, Mexico, Poland, and India). However, empowerment was negatively associated with satisfaction in India but positively associated in the other three samples. This article measured horizontal and vertical individualism and collectivism to validate sample differences. Interestingly, results suggested that India was not the most vertical culture in the sample as presumed, thereby highlighting the importance of actually measuring cultural values and then including culture scores in statistical analyses. Sweeney and McFarlin (2004) did not directly test the moderating role of culture. They studied the applicability of social comparison theory in 12 nations, expecting differences based on the cultural values of individualism and collectivism. Specifically, the authors argued that samples from individualistic countries will show a stronger effect of pay comparisons on income satisfaction, whereas this effect will be weaker in collectivistic countries. However, in contrast to the predictions, after controlling for actual pay level, three different forms of pay comparison (comparison with compatriots, with those having similar education, and with those in similar jobs) were predictive of income satisfaction in all 12 nations, with minor differences between the Western and other countries in the sample. The authors explained that the similarity in educational level may account for the results, suggesting that culture may not be the only explanation for income satisfaction.

Job behaviors. Bagozzi, Verbeke, and Gavino (2003) examined how sales personnel in an interdependent-based culture (Philippines) and an independent-based culture (the Netherlands) experienced and self-regulated shame, although the article did not directly measure the two forms of self-construal (interdependent and independent). Results suggested that although Filipino and Dutch employees experienced shame in largely similar ways, they responded differently to the experience. Also using a sample of salespeople, Dubinsky, Kotabe, Lim,

and Wagner (1997) reported that the relationships between personal values and job outcomes such as performance are similar across U.S. and Japanese employees. Thomas and Pekerti (2003), however, reported cross-cultural differences in the relationship between job satisfaction and job behaviors. The nationality of the participants (Indonesia representing vertical collectivism and New Zealand representing horizontal individualism) moderated the relationship between job satisfaction and exit, loyalty, and neglect, but not voice. Specifically, high job satisfaction had a stronger effect on reducing exit and neglect for New Zealanders than for Indonesians. The interaction results for loyalty were not clear. This study also validated the cultural profiles of the participants even though they did not use these measured variables in the hypotheses testing.

Thomas and Au (2002) investigated the moderating influence of horizontal individualism and vertical collectivism on the relationship between job satisfaction and quality of job alternatives to behavioral responses in the form of exit, voice, loyalty, and neglect. Results suggested that culture moderated several relationships. For example, the quality of job alternatives had a stronger relationship with exit for those with high horizontal individualism. Unlike Thomas and Pekerti (2003), this study not only verified the cultural values of the samples, it also tested the hypothesized role of culture. Using nation as a proxy, Greer and Stephens (2001) compared the tendency to escalate commitment between Mexican and U.S. decision makers. Consistent with the expectations that people in higher PD had lower tolerance for mistakes, Mexican participants were significantly more likely to escalate and report higher confidence in their decision than were the U.S. participants. Although culture was not measured, this study controlled for a large number of individual differences variables.

Well-being. Spector and colleagues conducted two studies on this topic. In Spector et al. (2002), it was hypothesized that I/C would moderate the relationship between locus of control and well-being. However, data from 24 "geopolitical" entities did not support this hypothesis. This article used Hofstede's national-level I/C measure. In another study, Spector et al. (2004) reported that samples from Anglo (Australia, Canada, England, New Zealand, and United States), as compared to Latino (Argentina, Brazil, Colombia, Ecuador, Mexico, Peru, and Uruguay) and Chinese (Hong Kong, People's Republic of China, and Taiwan) regions, demonstrated a stronger positive relationship between work hours and work–family stressors. The authors explained this finding by arguing that Anglos view working extra hours as taking time from their families and that such thoughts may result in stress and related outcomes. The study based its arguments on cross-cultural differences in terms of I/C. However, this dimension was not measured, throwing open the possibility of other contextual factors affecting the results.

Also investigating work and family demands, Yang, Chen, Choi, and Zou (2000) found that family demand had a stronger effect on work–family conflict in the United States than in China. On the other hand, work demand had a stronger effect on work–family conflict in China than in the United States. The findings of Schaubroeck, Lam, and Xie (2000), on the other hand, suggest that the pattern of a three-way interactive effect of job demands, job control, and efficacy on coping and health may be cross-culturally generalizable. However, the operative theory for efficacy (self vs. group oriented) differs across cultures. This article used

the Idiocentrism and Allocentrism Scale (Triandis & Gelfand, 1998), which represents the individual-level manifestation of I/C. Actual measurement of cultural values in the analyses added to the validity of this study at the individual level, but the role of national culture remains ambiguous.

Sexual harassment. This topic was examined in two studies. Cortina and Wasti (2005) examined cultural implications of coping responses to sexual harassment in the United States and Turkey. Anglo-American women, representing less patriarchal and collectivistic culture, were more likely to use detached coping, trying to forget the stressor or make no coping efforts, whereas Hispanic American and Turkish women, representing more patriarchal and collectivistic cultures, were more likely to use avoidant-negotiating coping, trying to avoid seeing the harasser or negotiate with him. Wasti, Bergman, Glomb, and Drasgow (2000) examined whether the model of sexual harassment proposed by Fitzgerald, Drasgow, Hulin, Gelfand, and Magley (1997) is generalizable to Turkey, a culture that is more patriarchal than the United States. The measurement and structural models showed good fit when estimated separately for the two cultures. However, the invariant simultaneous structural model showed somewhat weaker fit indices compared with the individual models. Overall, the authors concluded that Fitzgerald and colleagues' model is generalizable to Turkey. One weakness of the two studies on sexual harassment is that both studies used nation as a proxy for culture. Therefore, one cannot be sure whether culture played the hypothesized role in the model.

Justice or reward allocation. In an interesting three-study examination of the moderating role of culture, Brockner, Chen, Mannix, Leung, and Skarlicki (2000) found that the relationship between procedural fairness and outcome favorability was stronger among participants with more interdependent forms of self-construal compared to those with independent self-construal. Study 2 of this article involved the actual measurement of self-construal. Fischer and Smith (2004) investigated the role of cultural values, using the Schwartz value survey, in the relationship between reward allocation decisions and perceived justice. The results suggested that self-enhancement versus self-transcendence was a stronger moderator of the relationship than openness to change versus conservation. Specifically, the authors found that those valuing self-enhancement perceive allocation decisions based on work performance or seniority to be fairer than those valuing self-transcendence. In another study on allocation preferences, Chen, Meindl, and Hui (1998) found that Americans and Chinese responded to the situational factors of task interdependence and system goals in a similar manner. Both U.S. and Hong Kong participants preferred the equity rule under low task interdependence, although the equality rule was preferred under high task interdependence. This study included measures of achievement motivation and I/C, thus adding to the validity of results. In another study involving U.S. and Hong Kong samples, Lam, et al. (2002) found that PD, but not individualism, moderated the relationship between perceived justice and satisfaction. That is, the relationship between justice perceptions and work outcomes (e.g., absenteeism and job performance) was stronger for low PD individuals than for high PD individuals. This study measured both PD and individualism.

Leung, Su, and Morris (2001) hypothesized cross-cultural differences in employee reactions to feedback, drawing arguments on the cultural variation in terms of PD between China

and the United States. Results supported the arguments. Chinese respondents reacted less negatively to supervisory criticism compared to the U.S. respondents. However, rather than actually measuring the cultural values, this study used country as a proxy to infer culture. Van de Vliert, Shi, Sanders, Wang, and Huang (2004) also studied employee reactions to feedback using a scenario study with a Chinese and a Dutch sample. They used the argument of person–culture fit. Individualists responded more positively to individual-focused feedback, whereas collectivists responded positively to group-focused feedback. Mixed-mode or mismatched feedback conditions produced the most negative reactions to both positive and negative feedback. The study used the measured culture scores rather than country proxy to test the culture effect.

Mueller, Iverson, and Jo (1999) examined whether there were cross-cultural differences between met expectations and justice perceptions. Their study found that meeting expectations of autonomy was more influential in explaining justice evaluation in the United States compared to Korea, whereas meeting expectations of advancement opportunities played a more salient role in Korea. Cross-cultural differences were found in terms of compensation-award decisions as well. Using samples of executive education participants from China and the United States, Zhou and Martocchio (2001) found that Chinese managers rely more on work performance and personal needs when making monetary decisions but put more emphasis on the relationship with coworkers and managers when deciding on nonmonetary decisions. This article drew cross-cultural difference arguments from the I/C framework, but, like many other studies, it did not measure cultural values.

Negotiation. Only one study, Gelfand and Realo (1999), tested the moderating effect of culture in the negotiation domain. This article argued that accountability, that is, being answerable for one's actions, will have a different impact on negotiation outcomes depending on individualism and collectivism values of the negotiators. The hypotheses were tested using a laboratory study (which used Caucasian and Asian American students in the United States) and a judgment study, which compared U.S. (an individualistic culture) and Estonian (a collectivistic culture) samples. The authors found that, depending on negotiators' collectivism, accountability had differential effects on their psychological states, behaviors, and cooperation and competition. Specifically, in high-accountability situations, negotiators with low levels of collectivism achieved lower outcomes as compared to those with high levels of collectivism. One strong point of this article was that both studies in this article involved measurement of cultural values.

Leadership behaviors. Six studies examined issues related to leadership or managerial behavior. Agarwal, DeCarlo, and Vyas (1999) examined a leadership model connecting leadership style (initiation of structure and consideration) and organizational commitment. The authors concluded that the model worked relatively similarly in the United States and India despite reported differences in various cultural dimensions. This suggested that there are other national-level factors that might negate the prevalent culture-difference arguments. However, unlike Agarwal et al., Dorfman and colleagues (1997) reported mixed results. They found three leader behaviors (supportive, contingent reward, and charismatic) to be universal across five nations. However, directive, participative, and contingent-punishment

behaviors were culture specific in terms of their effect on organizational commitment and job performance, based on a functional equivalence test (i.e., evaluation of equivalence of paths in the causal models).

Ensari and Murphy (2003) similarly found cross-cultural differences in the attribution of charisma. Their study suggested that in an individualistic culture (United States), a leader's prototypical characteristics were more effective in the formation of leadership impression, whereas company performance was more effective in leadership attributions in a collectivistic culture (Turkey). This study used Triandis et al.'s I/C scale to ensure that the two samples fit the cultural assumption about Turkey and the United States. Spreitzer, Perttula, and Xin (2005) similarly reported the moderating effect of the superior's traditionality on the relationship between transformational leadership and leadership effectiveness.

The study by Pillai, Scandura, and Williams (1999) found the quality of the leader–member exchange relationship to be associated with job satisfaction in five countries. However, lack of actual measurement of cultural values and the inclusion of few control variables impose limitations on internal validity of this study. Using data from 12 European countries, Elenkov and Manev (2005) found that culture influenced leadership behavior, which in turn influenced organizational innovation. Culture also moderated the relationship between leadership behavior and innovation in general. This study used country-culture scores from Hofstede.

Influence tactics or political behaviors. Fu and colleagues (2004), based on 12-nation data from the GLOBE project, reported that cultural values moderated the relationship between social beliefs such as cynicism and perceived effectiveness of several influence strategies. This study used hierarchical linear modeling (HLM) analysis because the model was specified at two levels—individual and national. Specifically, in cultures higher on future orientation, in-group collectivism, uncertainty avoidance, and those believing in fate control are more likely to use assertive and relationship based influence strategies. Vigoda (2001) examined cross-national differences between perception of organizational politics and employee behavior. The results suggested that organizational politics affected U.K. employees more strongly than Israelis. Specifically, participants from the United Kingdom displayed higher exit and neglect intentions and expressed lower loyalty and job satisfaction as a result of perceived organizational politics. This study controlled for sample differences but did not measure the hypothesized cultural values.

Team behavior and processes. We found two studies in this research area. Gibson (1999) found support for the moderating influence of collectivism on the relationship between group efficacy and group effectiveness in such a way that when collectivism was high, group efficacy was positively related to group effectiveness. Lam, et al. (2002) also found the moderating role of allocentrism and idiocentrism, individual-level manifestations of the cultural values of collectivism and individualism, respectively. They found that allocentrism moderated the relationship between perceptions of group participative decision-making opportunity and group performance. Similarly, idiocentrism moderated the relationship between perceptions of individual participative decision-making opportunity and individual performance.

Summary and Assessment

The work in these 93 articles published in the leading journals suggests progress in both the topics studied and the cultural values used. Each study was well conceived and executed, providing new insight on various aspects of organizational behavior in the nations studied. The studies used a variety of culture dimensions along with many different measures for the major constructs of individualism and collectivism. However, there are also several issues that have created some difficulty in the interpretation of findings. For example, different names were often used for similar constructs (e.g., hierarchy, egalitarianism, PD). Many studies used country as a proxy for culture. Few studies considered noncultural variables, either theoretically as predictors or empirically as controls. This suggests the possibility of many alternative explanations for the observed differences across the nations studied. The large number of topics, although providing breadth in the coverage of the study domains, also shows a rather fragmented approach without a clear paradigm or a dominant theoretical framework. No major theories of culture, beyond the original thesis of culture as trait (Hofstede, 1991, 2001, 2006), were developed and tested in these organizational behavior topics published in the management-oriented journals. The studies essentially aimed to confirm that work behavior, attitudes, or perceptions differ as functions of specific cultural values with or without measuring them. Although each study makes a contribution to knowledge, as a collection, the issues raised compromise our confidence that the observed similarities or differences in organizational behavior are because of culture.

Method Review

This section provides an overview of issues related to research methods. We begin with a discussion of research design, with attention to the method of data collection and the level at which the data were analyzed. We then discuss issues related to sample characteristics, measurement quality checks, and statistical tools to test the hypotheses. In addition, we present information on the countries studied and the country profiles of the authors of the articles. We report the observations separately for the two types of studies (Type I and Type II). Table 5 summarizes the methodological profile of the 93 studies.

Research Design

The most commonly used research design is questionnaire surveys (63%), followed by simulation experiments (22%) and scenario-based surveys (20%). A large proportion (76%) of Type II studies uses the survey method, whereas simulation experiments are common in Type I studies (25%) on the topics of negotiation, conflict, cooperation, and justice. A few studies use interviews to complement their data collection. For example, Harrison et al. (2000) use both a structured, questionnaire-based survey and open-ended personal interviews. In a laudable, but not easily replicable, data collection exercise, Gibson and Zellmer-Bruhn (2001) interviewed 107 individuals in four countries. Such interviews enabled them to inductively generate metaphor data from the local interviewees' natural mental processes, thereby reducing the bias that may exist if they were to use an existing model in a deductive approach.

Table 5
Method Profile of the 93 Cross-National, Cross-Cultural Studies

	Type 1[a]		Type 2[b]		Total[c]	
	n	%	*n*	%	*n*	%
Research design						
Survey	30	55	29	76	59	63
Simulation experiment	14	25	6	16	20	22
Scenario survey	9	16	10	26	19	20
Interview	3	5	0	0	3	3
Archival data	2	4	0	0	2	2
Level of analysis						
Individual	44	80	34	89	78	84
Groups	2	5	3	8	5	5
Nation	7	13	0	0	7	8
Cross-level	1	2	3	5	4	4
Sample characteristics						
Working employees or managers	35	64	31	82	66	71
MBA or executive students	15	27	6	16	21	23
Undergraduate students	7	13	4	8	11	12
Sample equivalence						
Discussed but not tested	18	35	10	26	28	30
Discussed and tested	12	22	12	32	24	26
Significance differences reported	6	11	8	21	14	15
Controlled for demographics	15	27	12	32	27	29
Measurement equivalence						
Configural equivalence test	8	15	13	34	21	23
Metric equivalence test	7	13	13	34	20	22
Primary statistical tool for hypothesis testing						
Regression/moderated or hierarchical/correlations	25	45	22	58	47	50
ANOVA/MANOVA/ANCOVA/MANCOVA/*t* test	24	44	6	16	30	32
Structural equation modeling	4	7	9	24	13	14
Functional equivalence test	0	0	6	16	6	6
Hierarchical linear modeling	1	4	3	5	4	5
Others (discriminant analysis/cluster analysis/ multidimensional scaling/content analysis)	8	15	1	3	9	10

Note: The total may exceed the *N* because of the use of multiple methods in some studies.
a. $n = 55$.
b. $n = 38$.
c. $n = 93$.

Level of Analysis

We define the level of analysis by the unit of measurement and the level at which the hypotheses are tested. Individual level means both the independent and the dependent variables are measured at the individual level and the hypotheses are tested at that level. Group or national level means that both are measured and that hypotheses are tested at that level. When the dependent variable level is measured at the individual level and the independent

variable is at the group (or national) level, they are cross-level studies. Among the 93 studies, 5 are analyzed at the group level, 7 are at the national level, and 4 are cross-level with culture as the higher level and employee responses as the lower level construct. In other words, 96% of the studies are at the single level—individual, group, or nation. This is truly surprising, given the cross-level nature of the phenomenon, which by definition involves the integration of a macro characteristic (national culture) with micro processes (individual and group behavior at work).

Sample Characteristics

Of the 93 studies, 71% used working employees or manager samples, 23% used MBA or executive students, and 12% used undergraduate students. Not surprisingly, the undergraduate samples were mostly used in negotiation (e.g., Gelfand et al., 2001), justice (e.g., Chen et al., 1998), and cooperation (Chen & Li, 2005) research. The use of working managers and employees is a major strength of this line of research.

Sample Equivalence

Because the purpose of cross-cultural studies is to compare across samples from different populations (cultures or nations), it is important that the sample represent its population and that the characteristics of the comparison samples be as equivalent as possible. Without meeting these requirements, it is difficult to estimate the true effect of culture. Few studies use random samples (except Niles, 1999), but many studies make efforts to ensure that samples from different countries were equivalent. In all, 52 studies (56%) discuss sample equivalence issues, out of which 24 studies also conduct statistical tests of sample demographics. Only 10 studies (11%) finally conclude that there is no significant difference between the samples in terms of the demographic characteristics. Because fewer than one third (29%) of all studies include the respondent demographics as control variables, it is unknown whether, and how many of, the differences observed between nations might be confounded by sample differences.

Measurement Equivalence

Cross-cultural scholars have highlighted the importance of ensuring measurement equivalence before testing theoretical relationships (e.g., Cavusgil & Das, 1997; Riordan & Vandenberg, 1994; Schaffer & Riordan, 2003). The most often used tests are configural and metric equivalence or invariance (Vandenberg & Lance, 2000). Configural invariance refers to the equality of factor structures or equal number of factors and factor patterns. It is achieved by good fit indices on the single-sample confirmatory factor analysis (CFA). Metric invariance is achieved when all factor-loading parameters are equal across groups by using a multigroup CFA and comparing changes in fit indices between the constrained and unconstrained models. In our review, 23% report the configural equivalence test, whereas 22% report the additional

metric equivalence test. Because Type II studies are interested in the equivalence or nonequivalence of a conceptual model between cultures, more studies tested measurement equivalence. Testing for equivalence, however, does not mean achieving it. Parboteeah et al. (2005), for example, performed a metric equivalence test and found the Japanese factor structure of the ethical climate to be different from the U.S. factor structure. The authors selected different items to construct culture-specific factors and performed separate CFAs. This is a procedure not used in any other studies. We will discuss this approach in the Recommendations section.

Almost all the studies used the back-translation procedure, but only a few studies paid attention to the semantic equivalence issue, which concerns the similarity in the meaning of a construct across cultures. Only a few studies used interviews to identify emic measures, such as the conception of organizational life (Chikudate, 1997) or the meaning of teamwork (Gibson & Zellmer-Bruhn, 2001). In general, the idea that measurement equivalence is not sufficient to ascertain construct validity is largely unexplored in the studies reviewed.

Statistical Techniques for Hypothesis Testing

There is growing evidence that cross-cultural researchers have started using more advanced statistical tools for data analyses. Many studies applied multiple statistical techniques for hypothesis testing. The regression method, including hierarchical and moderated regression, is most frequently used (50%). The next most frequently used are the various types of variance tests for evaluating group differences (32%). A number of studies performed the functional equivalence test to compare the equivalence of the structural model between groups (e.g., Mueller et al., 1999) or to test the moderating role of culture using nation as the group variable (e.g., Bagozzi et al., 2003). The four studies with the cross-level design used HLM to test their hypotheses. Several studies adopted the multidimensional scaling method to differentiate culture groups, such as attributing different meaning to organizational life (Chikudate, 1997), leadership (Brodbeck et al., 2000), or conflict frames (Gelfand et al., 2001).

Advances in structural equation modeling have enabled the testing of complex causal or path models and the examination of measurement or model equivalence across cultural groups. The use of HLM is appropriate to test the influence of culture on outcomes of individuals or workgroups embedded within the culture; however, it was used in only four studies. The cross-level issue is an important theme to which we will return in the Recommendations section.

Countries in the 93 Studies

The 93 studies involve a total of 87 nations or geopolitical entities (e.g., treating Hong Kong and Taiwan as separate from mainland China). These 87 entities account for approximately 44% of the nations in the world, covering 76% of the world area and 84% of the world population (Infoplease, 2006). The number of countries in each study ranges from 2 to 62. Table 6 lists all the countries studied, and, as shown, the United States is in 78 studies. Countries in 20 or more studies include Japan, Hong Kong, the People's Republic of China, the United Kingdom, and Germany.

Table 6
Country Profile of the 93 Studies

Country	Number of Studies	%	Country	Number of Studies	%
United States	78	84	Spain	15	16
Japan	30	32	Canada	13	14
Hong Kong	27	29	Brazil	13	14
China	26	28	Hungary	12	13
United Kingdom	24	26	Philippines	11	12
Germany	20	22	Korea	11	12
France	18	19	New Zealand	10	11
India	18	19	Poland	10	11
Mexico	16	17	Russia	10	11
The Netherlands	16	17	Sweden	10	11
Taiwan	15	16	Turkey	10	11
Australia	15	16	Finland	10	11

Note: Countries studied 6 to 9 times each (19 in total): Africa (2): Nigeria, South Africa; Asia (4): Indonesia, Israel, Singapore, Thailand; Europe (12): Austria, Belgium, Bulgaria, Czech Republic, Denmark, Greece, Italy, Norway, Portugal, Romania, Slovenia, Switzerland; South America (1): Argentina. Countries studied 2 to 5 times each (21 in total): Africa (3): Egypt, Uganda, Zimbabwe; Asia (5): Georgia, Iran, Macau, Malaysia, Pakistan; Central America (2): El Salvador, Jamaica; Europe (6): Belarus, Estonia, Iceland, Ireland, Slovakia, Ukraine; South America (5): Chile, Colombia, Ecuador, Peru, Venezuela. Countries studied only once each (23 in total): Africa (5): Kenya, Morocco, Namibia, Tanzania, Zambia; Asia (7): Jordan, Kazakhstan, Kuwait, Lebanon, Qatar, Saudi Arabia, Sri Lanka; Central America (6): Bahamas, Costa Rica, Guatemala, Nicaragua, Panama, Puerto Rico; Europe (3): Albania, Latvia, Lithuania; South America (2): Bolivia, Uruguay. Total number of countries = 87.

About half of the studies (49 of 93) compare two countries, and the United States is in 35 of these 49. Sixteen studies include 10 or more countries, whereas 28 studies compare 3 to 9 countries. The dominance of the United States in these 93 studies is not surprising given that U.S. scholars provided research leadership in most of the investigations. We now turn to the country profile of the authors of these studies.

Country Profile of the Authors in 93 Studies

Cross-national studies are demanding in terms of knowledge of the nations analyzed and data collection in unfamiliar regions. For many reasons, most cross-national studies are likely to involve multiple investigators. As many scholars (Teagarden et al., 1995; Tsui, 2004, 2006; Von Glinow, Shapiro, & Brett, 2004) have stated, the use of local nationals as collaborators is desirable, if not essential, for all phases of international management research (e.g., from conceptualization to designing measures and the interpretation of the results). Therefore, we expected that most of the 93 studies would be the products of cross-national collaboration. Following Kirkman and Law (2005), we use the location of each author's university affiliation at the time of publication to identify the extent of cross-national research teams. We were surprised to find that only 57 studies (61% of 93) involve authors from two or more nations.

Table 7 shows the country breakdown of the authors. There are 365 unique authors (69 first authors and 296 coauthors) coming from 54 nations. About 68% of the first authors and

Table 7
Country Profile of the Authors of the 93 Studies

Country	Number of First Authors	Number of Coauthors	Total Number of Authors
United States	63[a]	125[b]	188
Hong Kong	8	23	31
Canada	5	16	21
China	0	20	20
United Kingdom	4	15	19
Japan	1	16	17
The Netherlands	4	13	17
France	0	13	13
Sweden	0	12	12
Australia	2	10	12
Germany	1	9	10
Taiwan	0	9	9
Slovenia	0	9	9
Spain	0	8	8
Israel	2	6	8
Poland	0	7	7
Russia	0	7	7
New Zealand	1	6	7
Ireland	0	6	6
Turkey	0	6	6
Denmark	0	5	5
South Africa	0	5	5
Singapore	1	2	3
Mexico	1	0	1
Brazil, Georgia, Greece, India, Korea, Philippines, Switzerland (4 each)	0	28	28
Argentina, Costa Rica, Czech Republic, Estonia, Indonesia, Italy, Malaysia (3 each)	0	21	21
Austria, Belgium, Bulgaria, Columbia, Hungary, Kuwait, Nigeria, Portugal, Romania, Thailand, Ukraine (2 each)	0	22	22
Bolivia, Ecuador, Egypt, Morocco, Qatar (1 each)	0	5	5
Total number of authors	93	424	517
Number of unique authors	69	296	365

Note:Total number of countries =54.
a. 68%.
b. 29%.

29% of the coauthors work in universities based in the United States. In other words, 32% of the first authors and 71% of the coauthors work in universities located in other countries, with many of them residing in Hong Kong, Canada, China, the United Kingdom, Japan, the Netherlands, France, Sweden, Australia, and Germany. The profile suggests that cross-national, cross-cultural studies have been primarily conducted under the intellectual leadership of U.S. authors. This characteristic of the country background of the authorship is not

surprising when one considers that most of the 16 leading management journals are U.S. based. North American authors, reviewers, and editors operate within a well-established research paradigm. U.S.-led research may have an advantage for publication in U.S.-based journals over research led by non–U.S. based scholars operating under different research paradigms (March, 2005).

Recommendations

On the basis of the research on cross-cultural organizational behavior published in 16 leading management journals in the past 10 years, progress is evident in many areas. We now know more about negotiation and conflict behavior, ethical orientation, job attitudes, reward-allocation preferences, well-being, and leadership in different nations. The research designs for studies are also becoming more rigorous through the use of methods other than surveys, affording stronger internal validity. More than one third of the studies measure the cultural values and use those values in hypothesis testing. Managerial samples dominate, and only about 10% of the studies use undergraduate students. About one fourth of the studies apply statistical tests to ensure measurement equivalence (either configural or metric equivalence or both).

The progress, however, is overshadowed by several conceptual and methodological issues, some of which are quite basic, to our astonishment. The fundamental concept of culture has not been systematically examined, nor has the proliferation of cultural frameworks with overlapping dimensions and inconsistent measurement. Researchers have ignored the fact that culture is not the only differentiator of nations and may covary with other national characteristics. The inadequate consideration of other factors and lack of control for alternative causes may have compromised the internal validity of many studies. Most researchers ignored the essentially cross-level nature of the phenomena in their theory development and empirical study. These issues have hindered greater progress that could be made by cross-national organizational behavior research. We offer seven recommendations to address these foundational issues with the goal of stimulating major advances in future research. Some of these recommendations are not new (e.g., avoid using nation as a proxy for culture or ensure construct equivalence). Although it is beyond the scope of this article to identify the barriers to progress in these areas, it is important to raise them again to encourage further efforts.

Recommendation 1: Consider the Group Property of the Culture Concept

Without exception, the definitions of culture refer to it as a group-level construct that demarcates one group from another. As discussed by Klein and Kozlowski (2000), a group construct can have one of three types of properties: global, shared, or configural. A global property is a relatively objective, easily observable characteristic that does not emerge or originate from the perceptions of individual group members. Examples of the global property of a nation are population, GDP, or the number of museums per capita. A shared property originates in the common experiences, perceptions, cognitions, or behaviors of the individuals within a group. It represents a consensual or collective aspect of the group. Culture as

it is currently used in the literature assumes a shared property of a nation. A configural property captures the variability of the individual characteristics within a group. Like shared property, configural properties also emerge from characteristics of individual group members. However, these properties, unlike shared properties, are not expected to have a consensual element. Examples of configural property are income disparity or value differences between people in different ethnical groups or regions within a country.

Many scholars (e.g., Earley, 1993; Markus & Kitayama, 1991; Triandis, 1989) have suggested that there is variation in individual experiences of culture, and others have found considerable within-nation variation on many culture dimensions (e.g., Dorfman & Howell, 1988; Strauss & Quinn, 1997; Triandis, 1995). This suggests a configural property. It is curious that culture researchers continue to treat culture as a global property by using nation as a proxy or assume a shared property of culture by using mean scores of culture values. Treating culture as a global construct, especially the use of a proxy for culture, does not provide informative insight into how culture influences employee behaviors in different national contexts. Studies at the country level (e.g., Huang & Van de Vliert, 2003; Peterson & Smith, 1997) often rely on the Hofstede (1991, 1994) scores, which are mean country-level scores aggregated from individual responses, again reflecting an assumption of a shared property of culture. The lack of attention to the potential configural nature of culture is most puzzling.

There is potential for interesting theory development by focusing on the variance of culture held by the individuals in a nation. The idea of tightness or looseness of a culture, first introduced by Pelto (1968) and later elaborated by Triandis (1989), may be relevant for considering the configural property of culture. Gelfand, Nishii, and Raver (2007) define tightness–looseness as the strength of social norms and degree of sanctioning when a member's behavior deviates from the social norms of a society. The implication is that in a context with loose norms, there is more tolerance for variations in individual beliefs and behaviors. Therefore, it is conceivable that cultural values would have a shared property in nations with tight norms and a configural property in nations with loose norms. In other words, the same cultural value (e.g., individualism or PD), may have different properties in the context of a loose or a tight culture. There are opportunities for future scholars to develop new insight on the role of national culture for individual and team behavior in organizations by theorizing on the configural nature of the culture concept.

Recommendation 2: Consolidate Cultural Values—Toward a Configuration Approach

The seminal work by Hofstede offers a cultural framework that has guided cross-cultural research for more than 20 years. However, the field is now rich with many other cultural frameworks (e.g., Triandis, Schwartz, Singelis, Trompenaars). Recently, House et al. (2004), through a 10-year effort, developed a set of nine cultural values relating to both national and organizational culture. This suggests that the field now has more choices in terms of cultural frameworks. But this increased choice is not without its costs. It perpetuates the lack of a paradigm and is a hindrance to accumulation of knowledge. Furthermore, the trait approach, treating cultural values as independent dimensions, continues to dominate current research.

Lack of meaningful progress in measurement also is evident. This review identifies, for individualism and collectivism alone, 15 unique sources of measurement. There are other

measures not represented in the review. For example, Dorfman and Howell (1988) adapted Hofstede's (1980) ecological construct of culture to capture cultural variations at the individual level. Their scales can predict different loci of commitment among culturally diverse employees in the United States (Clugston, Howell, & Dorfman, 2000). We see a critical need for a consolidation of different cultural frameworks and their measurement. Theoretical work is needed to develop a parsimonious categorization of cultural values. Empirical research is necessary to examine the convergent and discriminant validity of the measures for different cultural values with the goal of identifying a set of measures that have high construct validity to guide future research.

In essence, we need to reexamine the construct of culture at its core. Culture is a latent, a hypothetical construct, and most definitions refer to culture as a pattern. It is not a list of independent dimensions but is "the integrated, complex set of interrelated and potentially interactive patterns characteristic of a group of people" (Lytle et al., 1995: 170). Research in organizational culture has shown that a configuration of cultural values differently predicts outcomes from a set of independent culture dimensions (Tsui, Song, & Yan, 2007). Further work on the construct validity of culture should include the development of a configuration model. Lytle et al. (1995) offer a preliminary categorization. They identify more than 70 dimensions grouped into six categories: (a) definition of self, (b) motivational orientation, (c) relation between societal members, (d) pattern of communication, (e) orientation toward time, change, and uncertainty, and (f) pattern of social institutions and social systems. However, a categorization is not a configuration. Future research should identify the interrelationships among the dimensions and develop patterns that may describe a particular nation or groups of nations. For example, synthesizing the results of eight empirical studies, Ronen and Shenkar (1987) clustered countries based on similarity in employee work attitudes. Hofstede's (1980) original framework identifies countries with similar profiles on cultural values. Subsequent empirical research has not followed up on this profile approach. In general, the abundance of culture dimensions and corresponding measures does not necessarily advance our knowledge on culture. We need consolidation of cultural values and development of configuration models to improve its conceptual clarity and to advance future research. Theory and research can compare the predictive validity of the dimensional and the configuration approach of cultural effects.

Recommendation 3: Include National Differences Beyond Culture—Toward a Polycontextual Approach

It is well recognized that nation and culture do not completely overlap, that nations differ in many aspects beyond cultural values, leading to the debate on whether cultural or national differences drive differences in organizational behavior across nations (Busenitz, Gomez, & Spencer, 2000; Erez & Earley, 1993). Thus, the results from the studies that used nation as a proxy without directly measuring culture are difficult to interpret for at least two reasons. First, they do not take into account possible within-nation variation in a cultural value (Au, 1997). Within-nation variation of Hofstede's culture values has been observed in the U.S. setting (e.g., Clugston et al., 2000). Second, they do not identify many other factors beyond culture that may account for differences in work behavior across nations. For example, in the Cullen et al. (2004) study, the achievement, individualism, and universalism

values were positively related to four social institutional factors measured with objective indicators: economy (e.g., percentage of urban population and energy use), welfare socialism (e.g., taxes collected by government as percentage of GDP), family strength (e.g., divorce-to-marriage ratio), and educational attainment. By controlling for these institutional factors, we could place more confidence on the finding reported by these researchers that national culture influences managerial views of ethical behaviors. Parboteeah et al. (2005) reported that professional culture may suppress the influence of national culture in predicting perceptions of ethical climate by accountants, again suggesting the need to include noncultural factors to isolate the influence of culture.

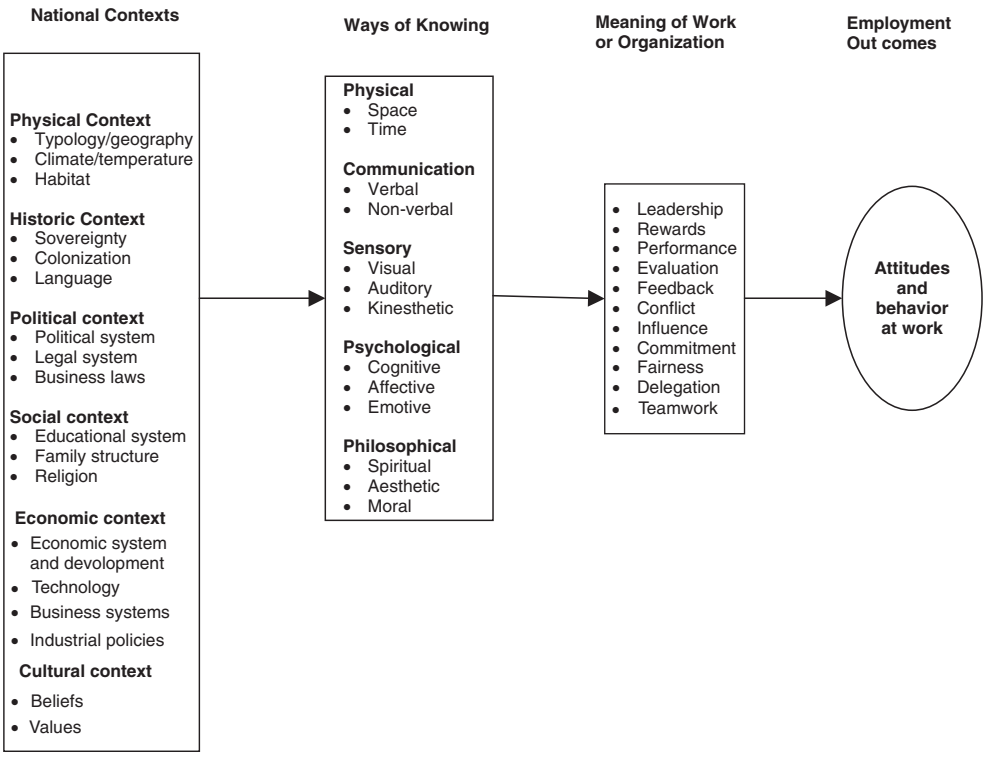
Because of the multiplicity of the context, scholars have introduced the word *polycontextualization* (Von Glinow et al., 2004) to describe the process of incorporating multiple contexts for a holistic and valid understanding of any phenomenon in it. Shapiro, Von Glinow, and Xiao (2007) further argue that much of current research, cross-cultural or monocultural, tends to rely on a single context—the verbal medium. They propose a "polycontextually sensitive" research method to guide cross-cultural research. Polycontextually sensitive research methods require strengthening the many senses of knowing, or sense making, by which cultural understanding can occur. In other words, senses of knowing can have many sources that can be traced to the nation's economic, political, geographic, or historic contexts. Including the influence of multiple contexts will provide for both better theory development and stronger inference of culture effects.

Synthesizing the ideas of various scholars, we offer a partial list of national contexts that may be relevant in analyzing organizational behavior in different nations. Figure 2 offers a polycontextual approach to cross-national, cross-cultural research. The core idea is that multiple contexts give rise to different sources of meaning, which in turn influence how employees perceive work and organizations and their responses in terms of work behaviors and outcomes.

The major contexts that may separate one nation from another include the physical, historical, political, economic, social, and cultural. These contexts pave the foundation for different ways of knowing by people in that nation. The ways of knowing include physical (e.g., the meaning of time or space), communication (reliance on verbal or nonverbal means), sensory (attention to visual, auditory, or kinetic cues), psychological (decision-making style, information processing, or display of emotion), or philosophical (moral or spiritual bases of decision making). These ways of knowing in turn determine the meaning of work or organizations.

As shown in the research by Den Hartog et al. (1999) and Brodbeck et al. (2000), employees in different nations carry different implicit leadership theories or different leadership prototypes. Similarly, employees in different nations have different mental images or metaphors of teamwork (Gibson & Zellmer-Bruhn, 2001). Focusing on social institutions and using a sample of 26 nations with more than 30,000 employees, Parboteeah and Cullen (2003) found work centrality of employees to relate to five national characteristics beyond culture. They are the level of industrialization (measured by energy use), union strength (percentage of workforce unionized), educational accessibility (by United Nations Development Program's education attainment score), social inequity (GINI index of income), and socialism (central government expenditure as a percentage of gross national product). These effects were obtained after controlling for the three cultural values of uncertainty avoidance, individualism, and masculinity. In an 84-nation analysis of survey responses from 19,525 managers, Van de Vliert and Smith (2004) found leader reliance on subordinates for information or delegation

Figure 2
A Polycontextual Approach to Cross-National, Cross-Cultural Organizational Behavior Research



to vary with the nation's development (a combined index of per capita income, educational attainment, and life expectancy) and harshness of climate. These findings remained after controlling for the cultural values of PD and uncertainty avoidance. The authors used these findings to propose an ecological leadership theory. These studies show that cross-national studies of organizational behavior need to expand beyond using culture as meaningful differentiators. We echo the advice of scholars such as Hofstede (1980, 2006) and Peterson and Smith (1997) who encourage researchers to include other national differentiators for building theories on cross-national differences in organizational behavior and performing a more valid analysis of the influence of culture. A polycontextual approach is challenging because it requires our organizational behavior scholars to draw theories from not only psychology and sociology but also economics, anthropology, political science, and so on. However, this approach has the promise for offering new, valid, and holistic insight into organizational behavior in different national contexts.

The polycontextual approach complements the "configuration" idea of cultural values. Although culture is a composite of many cultural manifestations, nation is a composite of

both cultural and noncultural factors. We advocate not only moving from studies of one or few culture dimensions to a configuration but also incorporating noncultural factors that differentiate one nation from another. We encourage future scholars to develop and test theories, using either the polycontextuality or the configuration approach or, if appropriate, both, in explaining how and why behavior in organizations differs between nations. We are not advocating a grand theory of culture. We are simply suggesting that we should move beyond the narrow models that focus on a few cultural values, providing limited understanding of relationships across societies, to incorporating a higher level of theorization that accounts for interactions among culture values (configuration) and inclusion of other contextual factors in the model (polycontextualization). This is the type of midrange cross-cultural theory advocated by Lytle et al. (1995).

Culture is not static. We also need to develop dynamic models of culture by tracking changes in culture over time and the effect of cultural changes. Scholars have observed that cultural values may more rapidly change during periods of environmental transformation in economy or technology (Fertig, 1996). Indeed, Ralston, Terpstra-Tong, Terpstra, Wang, and Egri (2006) found cultural values changed much more in China than in the United States in a recent 12-year period. Marshall and Boush (2001), in an experimental study, found that the influence of country (United States vs. Peru) on managers' cooperative intentions and behavior diminishes over time. Later decisions are influenced more by the attributes of the relationship and partners' personal characteristics than by the decision maker's country of origin. Recognizing and incorporating the likelihood of cultural change is especially important for those scholars who study nations with rapid economic, technological, and social development, such as China, India, Mexico, Russia, and Brazil.

Recommendation 4: Recognize the Nature of the Beast—Toward Cross-Level Models

Despite the fact that culture is an ecological concept, a majority of the studies (84% of the studies in this review) developed and tested hypotheses at the individual level. The results of studies (e.g., Peterson & Smith, 1997; Van de Vliert & Van Yperen, 1996) that tested culture effects (e.g., PD) on average individual experiences (e.g., role stress) at the national level are not interpretable at the individual level. Only four studies (e.g., Cullen et al., 2004; Fu et al., 2004; Hui et al., 2004) in our review used a cross-level design and a statistical test (either HLM or MLwiN) appropriate for cross-level theory and data. Analysis of employee work behavior across nations should explore different types of cross-level models (Klein & Kozlowski, 2000). Studies that use culture as a main effect correspond to the cross-level direct-effect model (Type I models), whereas those that use culture as a moderating variable correspond to the cross-level moderation model (Type II models). If the culture variable has a configural property, there is the possibility of a cross-level frog-pond model (Type III models). For example, the experiences of the individualists in a context of predominantly collectivists may be quite different from those of the individualists among those who are also individualists. Future theory development could focus on the asymmetric experiences of people whose values differ from those of others in a group.

In testing a hypothesis relating one or more cultural values at the societal level to outcomes at the individual or team levels, researchers have used two practices in terms of data analysis. One is to measure values at the individual level and test the hypotheses at this level, which is the predominant approach in the studies reviewed in this article. This approach, unfortunately, is inappropriate, as it is an ecological fallacy to assume that all individuals share the group attribute. It is an atomistic fallacy to infer that the results obtained at the individual level are valid at the societal level. Therefore, if the interest is in understanding cross-national differences in individual outcomes, scholars must build cross-level models and avoid theorizing and conducting the research at only the individual or the national level.

Another frequently used approach is the cross-level operator analysis (CLOP) method (Klein & Kozlowski, 2000), which aims to estimate the effect of higher-level characteristics on a lower-level outcome. This approach involves assigning the country-level score (a proxy or a cultural value score) to individuals and testing the hypotheses at the individual level, with a regression approach. The problems of this disaggregation of a higher-level measure to a lower level are well known. It violates the assumption of independence of data required in regression, and it produces biased standard errors and parameter estimates. Given the availability of HLM (Bryk & Raudenbush, 1992; Hofmann, 1997) and a related program, MLwiN (Rasbash & Woodhouse, 1995), we expect and encourage a decreased use of CLOP and an increased use of HLM-like procedures in future studies of cross-national, cross-cultural organizational behavior research.

Recommendation 5: Ensure Construct Validity—Beyond Back Translation and Measurement Equivalence

As Schaffer and Riordan (2003) explained in detail, it is critical to ensure construct validity across samples in cross-cultural research. This includes semantic equivalence, which can be achieved to some extent through a careful translation process. However, Farh, Cannella, and Lee (2006) pointed out that translation is not the best approach to ensure construct validity across cultures. These authors described three other approaches, adaptation, decontextualization, and contextualization. The latter two involve the development of new scales. Decontextualization develops context-free measures that can be used in many cultures. The contextualization approach develops context-specific scales that may be meaningful in one culture but not in another. Examples are the *guanxi* (Chen, Chen, & Xin, 2004), "face," or *renqing* variables (Liu, Friedman, & Chi, 2005) in studying organizational behavior in the Chinese context. In essence, the translation and back-translation procedure (Brislin, 1980) is no longer sufficient to ensure the validity of measures across cultures.

If construct development work finds a construct with similar meaning across cultures but involving different indicators, cross-cultural researchers usually retain the common items and delete those that fail to converge in another sample. However, this "pseudo-etic" approach, by using a reduced set of common items, can be detrimental to the construct validity of the measure. A long time ago, Berry (1969) argued that a measurement instrument for use in more than one country should contain items common across countries and items that are country specific. Indeed, Gelfand et al. (2001) found that U.S. and Japanese negotiators

have both etic or universal, and emic or culture-specific, construals of conflict. Parboteeah et al. (2005) needed to use different items to construct culture-specific measures of ethical climate for the Japanese and the U.S. samples. Most cross-cultural researchers have applied emic measures from one nation (usually the United States) to other nations. Other than ensuring good translation, recent studies also performed statistical tests to ensure measurement equivalence. These tests require a common set of items among the comparison groups, resulting in the pseudo-etic problem. Even though cross-cultural methodologists have discussed the possibility of combining etic and emic items in a single scale (e.g., Van Raaij, 1978), it is only recently that a statistical procedure has been available to test the equivalence of multigroup latent variable models involving different numbers of items and factors (Baumgartner & Steenkamp, 1998). Janssens, Brett, and Smith (1995) adopted this approach in their study of a safety policy in three countries: the United States, France, and Argentina. They found two items failing to converge in the factor analysis of the French data and one item failing in the Argentinean data. Instead of dropping these items from all three samples, as most scholars would do, they replaced them with constants or imagery variables in the French and Argentinean data. A related approach is to leave the loading of the emic items to be freely estimated instead of constraining them to be equivalent across groups (G. Cheung, personal communication, December 27, 2006).

The pseudo-etic approach may create an unnecessary barrier to achieving construct equivalence across samples, as illustrated in a recent study by Tang et al. (2006), who tested the measurement equivalence of a simple nine-item Love-of-Money Scale in 29 geo-polities. Only 17 samples passed the metric equivalence test. More samples may achieve construct equivalence if the researchers have identified emic items for some samples. Although the efforts to identify the emic indicators are demanding, the combined etic–emic approach has a good potential to improve construct validity in different samples and construct equivalence across samples.

Recommendation 6: Go Native—Toward Country-Specific Research

Another characteristic of cross-national, cross-cultural research is a preference to start with an existing model (most of which are U.S. models) and to analyze how other nations may differ from the United States on the phenomenon being studied. There are several reasons for this preference. The cross-cultural scholar can draw on an existing body of literature and join an ongoing intellectual conversation. By extending the model to other nations, the scholar can test the boundary conditions of current theories and knowledge. By identifying cross-cultural differences, the research can satisfy the intellectual curiosity of U.S. researchers and inform the practice of U.S. multinational corporations. However, as Ofori-Dankwa and Ricks (2000) pointed out, researchers using a "difference-oriented lens" may tend to pose questions and find results consistent with the lens used. The risk of this orientation is that the researchers might not be asking "the right questions" (Ofori-Dankwa & Ricks, 2000: 173), that is, studying issues that may be of low relevance to other cultures. Valid cross-cultural studies must start with substantive knowledge of relevant phenomena in all the contexts (Cavusgil & Das, 1997) before making meaningful comparisons between them.

Tsui (2004) showed that North American and, secondarily, European research dominates the global management literature. She encouraged more country-specific studies, especially in Asia, South America, and other developing economies to fill the gap in global management knowledge. She further distinguished country-specific (or context-specific) from cross-cultural (context-embedded) research. Tsui used the term *indigenous* to refer to the country- or context-specific research that involves a high degree of contextualization or even polycontextualization when studying novel contexts. Such research does not aim to test an existing theory but strives to derive new theories of phenomena in their specific contexts.

The best example of context-specific research is the work by local scholars using local language. However, such work may not involve explicit contextualization because the context is implicit in the theories and methods of inquiry. As such, the context is not obvious to, or shared by, researchers outside the context. The outputs of this research are usually published in local language journals that are not accessible to most cross-cultural scholars. Cross-cultural collaboration in conducting context-specific research can facilitate the transfer of knowledge across borders and ensure that the cultural assumptions are clearly explicated in the new theory or model. Like fish in water, the insider may take water for granted. Outsiders can ask about the nature of the water and reveal assumptions that are either not obvious or too obvious to the insider. High-quality context-specific research requires a deep knowledge of the context, but such research does not have to be limited to insiders. Many influential and insightful theories have been developed about China's transition from a planned to a market economy and its ramifications by scholars who are not natives to China (e.g., Boisot & Child, 1996; Earley, 1993; Guthrie, 1997; Nee, 1992; Walder, 1992). These scholars have spent substantial amounts of time observing and interacting with local scholars and managers or working with collaborators who have intimate knowledge of the context. These country-specific studies have added valuable and novel insight to the stock of global management knowledge. In a review of 226 China-related articles (including many cross-cultural studies) published in 20 journals in the period 1984 to 1999, Li and Tsui (2002) found that the most-cited articles are the country-specific studies with a high degree of contextualization.

Cross-cultural studies are valuable, but their value is limited by the lack of comparable knowledge about the nations involved in the study. Almost 300 scholars around the world, outside of the United States, participated in the 93 studies discussed in this review. This group of intellectual resources should be sought out as valuable collaborators for future cross-national studies and, more importantly, should be encouraged to contribute to global management knowledge by engaging in country-specific research using the indigenous approach.

Recommendation 7: Engage in Long-Term Cross-National Collaborations

As we approach the end of our discussion, it should be evident that cross-national research is not, could not, and should not be the undertaking of a single individual, even though we admire the seven solo scholars who conducted 10 of the studies in this review. The fact remains that almost 90% of the studies in our review are collaborative efforts, more than 60% of which involve cross-national partnerships. Many scholars have extensively written about the merit and challenges of cross-border research teams (e.g., Boyacigiller & Adler, 1991;

Meyer, 2007; Peterson, 2001; Teagarden et al., 1995; Tsui, 2004). We refer readers to these excellent discussions, especially that of Peterson (2001), who identifies the varying motivations, contextual influences, and suggestions necessary to realize effective and rewarding international collaboration. We point to the rich intellectual resources in at least 54 countries around the world, representing a total of 365 scholars who have contributed to the body of knowledge on organizational behavior across nations through these 93 studies.

The intellectual leadership of cross-national research by U.S. scholars is a mixed blessing. Although they can provide expertise on theory, research design, and familiarity with the dominant research paradigm, they also may lead (unknowingly or unintentionally) the study down a path that is essentially an application or replication of (U.S.) domestic research rather than develop new theoretical insights on unique problems that are important in the comparison nations. Because of cultural differences, scholars in some countries may be deferential to their U.S. collaborators. Therefore, U.S. researchers should make deliberate efforts to actively seek the views, advice, and input of their country collaborators, including selecting the topic to study, deciding the methods of data collection, and identifying the relevant samples. They should be involved in conducting the analyses, especially when they involve qualitative data obtained from observations, interviews, or written documents or when they involve understanding the meaning of local artifacts such as national icons. Participants in different nations may have different styles in responding to surveys or interviews. The local collaborator can provide insight into the appropriateness of methods such as simulation, experimentation, or nonparticipant observation and assist in contextualizing the research method. Using foreign collaborators primarily as data collection instruments is probably a suboptimal use of this intellectual resource.

We mentioned earlier that many scholars have developed deep insight into local phenomena through their deep involvement in the local context by spending a substantial amount of time there. Reflections by the "Great Minds in Management" (Smith & Hitt, 2005) converge on a similar point. High-quality, high-impact research is the result of the scholars' deep knowledge about the phenomena they study. This is true of cross-national research as well. International studies are not for those who cannot depart from the comfort of their homes or who dislike flying for more than a few hours. Good local knowledge cannot be attained in a matter of days, weeks, or even months. We encourage scholars of any nation to spend their sabbatical year (not months) in the country that they would most like to study. An extended stay may not only deepen knowledge; it could build friendships and trust that are critical for successful and rewarding partnerships lasting for many years. Knowledge about a phenomenon does not result from a single study but requires a program of research that continues for years or even decades. Wonderful friendships may emerge from cross-national collaborations.

Conclusion

Our review of a sample of 93 studies in the 16 leading management journals shows substantial progress, but much more important work remains. The challenge of cross-national, cross-cultural organizational behavior research is manifold greater than the challenges of domestic studies, especially in the United States, where there are a well-developed paradigm,

well-defined research methods, and a large body of literature on which to draw. However, it is also clear that global management knowledge is scant on knowledge beyond the North American or European contexts. The 21st century should be, if it is not already, the century of international management research. The unique challenges of organizational behavior research in the cross-national context are to ensure the construct validity of the culture concept, to include other national differentiators for improving the internal validity of the findings, and to strengthen the research design by leveraging on the knowledge of the country collaborators. This could enhance the external validity of the studies. If we may borrow a quote from Smith and Hitt (2005), cross-cultural research is "not for the faint-hearted" because of the need to clear many intellectual and physical barriers. Similar to creating any influential work, achieving success in cross-national, cross-cultural studies of organizational behavior requires "an unshakable sense of efficacy and a firm belief in the worth of what they are doing" (Smith & Hitt, 2005: 30). To the cross-national researchers, we salute you for your dedication and contribution to global learning.

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Interorganizational Networks at the Network Level: A Review of the Empirical Literature on Whole Networks†

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This article reviews and discusses the empirical literature on interorganizational networks at the network level of analysis, or what is sometimes referred to as "whole" networks. An overview of the distinction between egocentric and network-level research is first introduced. Then, a review of the modest literature on whole networks is undertaken, along with a summary table outlining the main findings based on a thorough literature search. Finally, the authors offer a discussion concerning what future directions might be taken by researchers hoping to expand this important, but understudied, topic.

Keywords: *interorganizational networks; whole networks; network level of analysis; networks*

The literature on networks is by now quite extensive. From social networks to organizational networks and beyond, networks have been and continue to be an emerging and developing field of study that has spanned many disciplines, including, but not limited to, organizational theory and behavior, strategic management, business studies, health care

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services, public administration, sociology, communications, computer science, physics, and psychology. In recent years, there have been a number of review articles on social and organizational networks, most recently by Borgatti and Foster (2003) and by Brass, Galaskiewicz, Greve, and Tsai (2004). In general, there has been considerable progress in understanding what networks are, how they are structured, how they operate, and even how they develop.

Despite this progress, there is still a great deal we do not yet know. This article is not an attempt to address these gaps in the literature or to review, once again, what we now know about networks. Instead, our focus is on one particular aspect of network studies that we believe has generally been underresearched. Specifically, we focus on the study of interorganizational networks at the network level rather than at the organizational level of analysis. This is what Kilduff and Tsai (2003), among others, have referred to as focusing on the "whole network." Through our review, we have found this to be a topic that is frequently discussed but seldom empirically studied. Yet it is an important area of research.

Only by examining the whole network can we understand such issues as how networks evolve, how they are governed, and, ultimately, how collective outcomes might be generated. This last point is especially relevant to policy planners and those having a perspective that goes beyond the performance of individual organizations. For instance, an examination of whole networks can facilitate an understanding of how multilateral collaboration can improve the business climate in a region within a particular industry (Saxenian, 1994), how multifirm innovation can be enhanced (Browning, Beyer, & Shetler, 1995; Powell, White, Koput, & Owen-Smith, 2005), how clusters of small firms can more effectively compete (Human & Provan, 2000), and how publicly funded health and human services can be delivered more effectively to clients (Provan & Milward, 1995). Studying whole networks can also have important implications for individual network members, even for firms that, as for-profit organizations, are often assumed not to have an interest in the development of the full network. For instance, the stage of evolution of an interorganizational network may have implications for how the network might best be structured to accomplish the goals of individual members. By focusing only on the members themselves and their interactions with others, however, the importance of individual organizations tends to be exaggerated and the importance of collective behavior underemphasized.

We review the limited empirical literature on whole interorganizational networks (rather than social networks) and offer our suggestions for what we have learned from the modest number of studies that have been conducted and for what directions we might still explore.

Defining Networks

Although interorganizational networks are by now a commonly understood phenomenon of organizational life, it is not always clear exactly what organizational scholars are talking about when they use the term. Even the term *network* is not always used. Many who study business, community, and other organizational networks prefer to talk about partnerships, strategic alliances, interorganizational relationships, coalitions, cooperative arrangements, or collaborative agreements. Many, in particular those tying their work to resource dependence theory (Pfeffer & Salancik, 1978) and transaction cost economics (e.g., Williamson, 1991) or researching interorganizational contracts (e.g., Ariño & Reuer, 2006), also focus only on

dyads (relationships between two organizations). Despite differences, nearly all definitions refer to certain common themes, including social interaction (of individuals acting on behalf of their organizations), relationships, connectedness, collaboration, collective action, trust, and cooperation.

Brass et al. (2004) define a network in a very general way as "a set of nodes and the set of ties representing some relationship, or lack of relationship, between the nodes." They point out that the content of the relationships between nodes is "limited only by a researcher's imagination" (p. 795). Brass et al. provide an overarching look at organizational network research at the interpersonal, interunit, and interorganizational levels of analysis. They take a very broad approach to studying the phenomenon of social networks, focusing in particular on the antecedents and the consequences of networks at each of these levels. Citing Podolny and Page (1998), they include in their definition of interorganizational networks a variety of forms of cooperation, including joint ventures, strategic alliances, collaborations, and consortia.

In contrast, Barringer and Harrison (2000), in their review of the interorganizational literature, provide a different take on interorganizational relationships and networks. In a manner similar to Oliver (1990) in her earlier review of the interorganizational relationship research, Barringer and Harrison provide an overview of the different types of interorganizational relationships and go into considerable detail as to how each is different. For example, they somewhat narrowly define networks as constellations of organizations that come together through the establishment of social contracts or agreements (e.g., the provision of health services through referral systems) rather than legally binding contracts. Legally binding contracts may exist within a network, but the organization of the relationship is primarily based on the social contracts maintained (Alter & Hage, 1993; Jones, Hesterly, & Borgatti, 1997). Barringer and Harrison define joint alliances as an arrangement between two or more firms that establish an exchange relationship but that lacks any joint ownership (Dickson & Weaver, 1997). Thus, alliances bring firms together in a collaborative framework like networks do. However, the term *alliance* is broad and typically refers to dyadic partnerships that are simpler and short term in nature than is seen in networks (Barringer & Harrison, 2000).

These are but two examples of varying definitions of networks and interorganizational relationships. In fact, Borgatti and Foster (2003) question whether we even need to consider networks as a unique organizational form because organizations are already embedded in their broader "network" of economic and social relationships (Granovetter, 1985; Podolny & Page, 1998). Although most would argue that networks are indeed a unique organizational form, even if they are conceived by many as a hybrid form of organization (Williamson, 1991), there has yet to be a common lexicon for studying the construct, leaving those who study networks with multiple definitions and a tangle of meanings. In 1995, Gerald Salancik called for the development of good network theories of organization. Although great strides have been made, a shared language with definite, concrete meanings in the study of networks has not been developed. In particular, it seems indispensable to distinguish between networks as a perspective (often using social network analysis as a methodology and simply capturing any relational embeddedness of organizational action) on one hand and networks as a form of governance on the other (e.g., Grabher & Powell, 2004). This would provide scholars with at least a very basic level of precision that would help to clearly elucidate exactly what is being discussed. Only in a small number of cases are networks studied as a form of governance, regardless of whether

the focus is on interorganizational networks in their broader institutional environment or taking a more managerial approach on "how to design, manage, and control networks in order to reduce uncertainties and improve competitive position" (Grabher & Powell, 2004, p. xiii).

In this article, we make no effort to try to offer an all-encompassing definition of an interorganizational network. Rather, we focus instead on one specific type of network that has been frequently discussed but only infrequently researched, namely, a whole network consisting of multiple organizations linked through multilateral ties. A whole network is viewed here as a group of three or more organizations connected in ways that facilitate achievement of a common goal. That is, the networks we discuss are often formally established and governed and goal directed rather than occurring serendipitously (Kilduff & Tsai, 2003). Relationships among network members are primarily nonhierarchical, and participants often have substantial operating autonomy. Network members can be linked by many types of connections and flows, such as information, materials, financial resources, services, and social support. Connections may be informal and totally trust based or more formalized, as through a contract. Examination and analysis of a whole interorganizational network includes organizations (nodes) and their relationships (ties), the absence of relationships, and the implications of both for achieving outcomes. However, unlike traditional network research, the focus here is on the structures and processes of the entire network rather than on the organizations that compose the network.

As will be discussed later, the boundaries of a whole network may be clear, as when formally specified through a network roster, or fuzzy, as when membership is self-defined. Issues of network bounding are, of course, important for understanding which organizations to include in a network study (Laumann, Marsden, & Prensky, 1983). For the most part, network bounding is a question best answered by individual researchers based on their knowledge of a network and its activities. Broadly speaking, whole networks are bounded by including only those organizations that interact with one another in an effort to achieve a common purpose.

Network Perspectives From Two Levels of Analysis

Most scholars who study the topic would agree that no single grand theory of networks exists (cf. Faulkner & de Rond, 2000; Galaskiewicz, 2007; Kilduff & Tsai, 2003; Monge & Contractor, 2003). However, theorizing about networks can generally be thought of as coming from two different but complementary perspectives: the view from the individual organization (actor level) and the view from the network level of analysis. Galaskiewicz and Wasserman (1994) also make this distinction, referring to a micro-level versus a macro-level network focus. Kilduff and Tsai (2003) refer to the important distinction between a focus on the egocentric network versus the whole network.

Building on these perspectives, the research on networks can be categorized along two dimensions: the independent variable being utilized for the study (organizations or networks) and the dependent variable or outcome focus adopted by the researcher (a focus on organizational outcomes or on the outcomes of collectivities of organizations). Using these dimensions, we have developed a typology, shown as a two-by-two table (see Table 1). This typology demonstrates the possibility of four different types of network research. First, researchers may, and often have, utilized characteristics and attributes of organizations to explain their relationship

Table 1
A Typology of Interorganizational Network Research

	Dependent Variable or Outcome Focus	
Independent Variable or Input Focus	Individual Organizations	Collectivities of Organizations
Organizational variables	Impact of organizations on other organizations through dyadic interactions	Impact of individual organizations on a network
Relational or network variables	Impact of a network on individual organizations	Whole networks or network-level interactions

with other organizations, focusing on such issues as organizational trust to explain the nature and extent of an organization's involvement with others, especially through dyadic relationships such as alliances and partnerships (Gulati, 1995). Second, although more rare (cf. Uzzi, 1997, Proposition 5a), researchers may utilize organization-level phenomena to try to explain how individual organizations and their actions might affect outcomes at the network level, such as network structures, stability, and effectiveness. Where this approach is most likely to be found is in studies of interorganizational networks led by a hub firm (Jarillo, 1988; Sydow & Windeler, 1998), where hub firm actions are likely to affect the entire network. Third, researchers focusing at the level of the network have tried to understand the impact of network-level structures and behaviors on individual organizations (e.g., Ahuja, 2000; Bell, 2005; Powell, Koput, & Smith-Doerr, 1996; Walker, Kogut, & Shan, 1997; Westphal, Gulati, & Shortell, 1997). For instance, a common theme has been to examine the impact of network involvement on organizational learning or innovation. Finally, researchers at the network level may choose to study the impact of multilevel actions and structures on network level outcomes. It is this last, whole network perspective on which we focus in this review.

Theories and perspectives that focus on the individual or organizational actor have a long tradition in social research and have guided most of the knowledge about networks. These views, often referred to as egocentric, are concerned with trying to explain how involvement of an individual or organization in a network affects its actions and outcomes. For instance, some egocentric theories focus on an organization and its "embeddedness" in a network. Prominent examples in the organizational literature include work by Burkhardt and Brass (1990), Burt (1992), Uzzi (1997), and Ahuja (2000). The focus of this research is frequently on dyadic relationships between organizations (cf. Gulati, 1995), but it sometimes goes beyond relational embeddedness by including structural and positional measures (Gulati & Gargiulo, 1999). Although dyads are the basic building blocks of networks, dyad-focused research is in most cases limited in that the network is primarily seen as a collection of two-party relationships rather than as a unique, multiorganizational social structure or even a social system in its own right. Researchers often talk of a network of relationships, but it is not the network itself that is being studied, thus ignoring the basic network theoretical insight that actors and actor-to-actor relationships are likely to be influenced by the overall set of relationships (Mitchell, 1969).

Egocentric or organization-level theories and related research can help to answer questions such as (a) the impact of dyadic or network ties on organizational performance, (b) which types

of links are most or least beneficial to individual network members, (c) which network positions might be most or least influential, and (d) how the position of organizations in a network might shift over time in response to changes within and outside the network. Although behavioral and process issues, such as trust and evolution, can be identified that may be unique to a particular level of network analysis, the clearest comparative distinction can be made by focusing on structural issues. Structural issues that are commonly examined and used to explain networks and network outcomes on an organizational, or egocentric, level include the following:

In-degree and out-degree centrality: Does an organization occupy a central or a more peripheral position in the network based on the number of network ties it maintains with other organizations? Degree centrality is based on the number of *direct* links maintained by an organization with others in the network. Calculation of in-degree and out-degree centrality is also possible and is based on the extent to which assets such as resources, information, and clients are coming *into* an organization from others in the network versus those being sent *out* to other organizations.

Closeness centrality: Is an organization in a structural position to spread such assets as information or knowledge that might reside in any organization in the network, even through indirect ties? Central organizations have short "paths" (connections) to all other organizations in the network. Closeness centrality is thus calculated by considering the shortest path connecting a focal organization to any other organization in the network. Direct connections, where A is connected to B, are shorter than indirect ones, where A is connected to B only indirectly through ties to C, which is directly tied to B. Unlike the case with degree centrality, in closeness centrality, *indirect* connections are viewed as valuable mechanisms for exchange of network-based resources.

"Betweenness" centrality: Does an organization serve as a gatekeeper within the network? If so, it must maintain intermediary links between organizations that are not directly connected with one another. Hence, the organization's betweenness centrality is calculated by considering the extent to which an individual's position in the network lies between the positions of other individuals.

Multiplexity: What is the strength of the relationship an organization maintains with network partners, based on the number of types of links (e.g., research ties, joint programs, referrals, and shared personnel) connecting them? Multiplex ties are thought to be an indicator of the strength and durability of an organization's links because they enable the connection between an organization and its linkage partner to be sustained even if one type of link dissolves.

Broker relationships: To what extent does an organization span gaps, or structural holes, in a network, and what are the implications of this for the organization? Organizations that span "structural holes" (Burt, 1992) are considered to be brokers, often occupying positions of considerable influence.

Cliques: Cliques are clusters of three or more organizations connected to one another. At the egocentric level, the extent of an organization's connectedness to a clique may affect organizational outcomes in ways that are different than when the organization is connected only through a dyad.

Network-level theories draw on and use many of the behavior, process, and structure ideas and measures developed by organization-level researchers. However, the focus is not on the individual organization but on explaining properties and characteristics of the network as a whole. The key consideration is outcomes at the network level rather than for the individual organizations that compose the network. The input may be either the individual organization or the interorganizational network. For instance, instead of examining how organizational centrality might affect the performance or level of influence of individual member organizations, a network-level perspective would focus on overall network structures and processes,

such as centralization or density of the network as a whole. Network-level characteristics would be determined, compared across networks or over time, and then used to answer questions such as how overall sustainability or absorptive capacity of the network could be enhanced or how the multiorganizational services provided to a customer or client group might be strengthened. This perspective presumes that a network involves many organizations collaboratively working toward a more or less common goal and that the success of one network organization may or may not be critical to the success of the entire network and its customer or client group. The preference is for optimization of the whole network even if it comes at the cost of local maximization for any node or group of nodes in the network.

Work at the network level has blossomed during the past decade, but it has primarily been conceptual (cf. Dhanaraj & Parkhe, 2006; Koka, Madhavan, & Prescott, 2006), anecdotal, or based on single, descriptive case studies performed at one point in time. Most prominently, whole networks have been the object of study in research on health (Morrissey, Calloway, Bartko, Ridgley, Goldman, & Paulson, 1994; Provan & Milward, 1995; Provan, Nakama, Veazie, Teufel-Shone, & Huddleston, 2003), but comparative empirical work has also been done in other settings (Owen-Smith & Powell, 2004; Safford, 2004). These and other studies utilize many of the structural issues previously discussed in this section for organization-level networks. Typically, these structural issues are aggregated across an entire network and then compared with those of other networks providing similar services. Unique network-level properties may also be considered in these types of studies, including the following:

Density: What is the overall level of connectedness among organizations in the network? Are some networks more fully connected than others? And, more importantly, how much density is beneficial versus detrimental to effectiveness of the network? Higher levels of density are not necessarily advantageous, especially in light of the increased coordination burden placed on network members.

Fragmentation and structural holes: Are all or most network members connected, either directly or indirectly (i.e., through another organization), or is the network broken into fragments of unconnected organizations, dyads, and cliques? Fragmented networks may exhibit connections among organizations that are themselves unconnected or only loosely connected to other clusters of connected organizations. This means that the network has many structural holes.

Governance: What mechanism is used to govern and/or manage the overall network? Even if networks are considered as a distinct form of governance, the mechanism used can considerably vary and range from self-governance, to hub-firm or lead-organization governed, to a network administrative organization (NAO) model.

Centralization: To what extent are one or a few organizations in the network considerably more centrally connected than others? Highly centralized networks may be organized in a manner approximating a hub-and-spoke pattern, recently popularized as "scale free" networks (Barabasi, 2002). Decentralized networks are far more dispersed, with links spread more evenly among members.

Cliques: What is the clique structure of the overall network? (See recent work by Rowley, Greve, Rao, Baum, and Shipilov [2005] on the topic.) How many cliques exist? Which types of organizations are involved? How large are the cliques? Are they connected to other cliques or fragmented? How much overlap is there across cliques, depending on the type of link involved (e.g., shared information or joint programs; cf. Provan & Sebastian, 1998)?

The research reported in what follows is a review of the interorganizational research conducted at this whole, or network, level of analysis and not at the egocentric, or individual,

organizational level of analysis. This literature is far less extensive than the general literature on interorganizational networks, but, as we contended earlier, it is an important topic that we believe has been underaddressed. This review is an attempt to present what work has been done at the whole network level of analysis, pointing out some of the differences and commonalities and then discussing where future research might best be headed.

Method

In an effort to identify recent empirical work done on whole interorganizational networks, we undertook an extensive review of the literature. We first conducted a search for journal articles utilizing both Academic Search Premier (http://web.ebscohost.com/ehost) and InfoTrac OneFile (http://find.galegroup.com). Consistent with the broad range of definitions of networks in the literature, our search terms included *networks*, *interorganizational networks*, *consortia*, *whole networks*, *clusters*, and *alliances*. Initially, we did not restrict the subject area within which the search was conducted. We also limited the search to the 20-year period from 1985 to 2005 because most empirical work on networks has been done in recent years and because the study of networks is still relatively new. The results were then analyzed for an indication of relevance to the field of organization studies. Because many network studies exist in a variety of fields, we were often able to quickly discard those articles falling outside of studies of networks and organizations. For example, many articles in computer science address computer networks, and many in the health field deal with neural networks.

After the initial analysis, we culled through the abstracts of the articles that remained. Often, the abstracts provided us with ample information about the methods and unit of analysis. Based on a reading of these abstracts, we were able to eliminate the many articles that focused on individuals and their social networks. We also eliminated those articles that focused on single organizations and their ties to others in a network, or what we discussed above as egocentric network studies. We found that egocentric networks make up the vast majority of research on networks in sociology and organization studies. Once relevant articles and potentially relevant articles were identified, we went on to read the complete articles to make sure that each fit the requirements of the search.

Each article that fulfilled the requirement of focusing on interorganizational networks studied at the network level of analysis was then indexed. A summary was produced for each article, which listed the sector in which the network appeared, the type of research conducted (analytic or descriptive), the number of networks involved, the type of data (e.g., cross-sectional or longitudinal), the mode of network governance, the abstract, and the key findings. The article summaries provided us with easily identifiable markers for comparisons of the research being conducted in the field.

In addition to this initial search, we also specifically conducted searches within the fields of administration or management (in public, nonprofit, and business sectors), sociology, and health care. Both Academic Search Premier and InfoTrac OneFile allow researchers to limit results to a specific discipline or area of interest. To specifically search within a discipline, a search can be conducted by choosing keywords and selecting a publication subject. For example, to search within only the sociology literature, one needs to choose sociology as the publication subject in

combination with the keywords of the search to obtain results specifically within sociology journals. These searches were conducted in the same manner as that mentioned above, with limitations placed only in the subject field. The results were much the same, with a few exceptions. We also did searches within specific journals in each of these fields to act as another check on the extensive literature. For example, we did searches solely within *Academy of Management Journal* to ensure that our initial searches were thorough and complete.

Our final list of reviewed articles included 26 empirical network-level studies. All studies included in our review had to involve some type of data collection and analysis. Some studies included egocentric findings but were included if they also showed results at the network level. Studies that heavily focused on a single network organization, such as a hub firm, rather than on the network as a whole were excluded (e.g., Browning et al., 1995). Although our review was thorough, we make no claims that it is exhaustive. Thus, despite our best efforts, we may well have unintentionally omitted a small number of network-level studies from the review.

Recent developments in the field of networks include transnational networks and policy networks. Because of the strict definition of network on which we relied in our exploration of the literature, these studies were eliminated from consideration. Transnational networks include social networks of contacts, as in the cases of migrant networks (Wiley- Hardwick, 2005) and corporate multinational networks. Within organizational transnational networks, those studies we uncovered consisted of a network of many units or nonautonomous organizations owned by the same corporation. The parent company oversees the administration of the network, and, as such, the network is more of a set of intraorganizational ties rather than interorganizational ties (Ghoshal & Bartlett, 1990). Similarly, policy networks (Laumann & Knoke, 1987), or advocacy networks (e.g., Trubek, Mosher, & Rothstein, 2000), were also not included in our study. These networks, such as the Transatlantic Policy Network, consisted not only of multiple businesses, nonprofits, and government agencies but also individual lawmakers and intellectuals, all of whom are working toward a common policy goal or set of goals.

We also excluded from our search those studies that exclusively focused on pieces of whole networks, such as subnetworks or cliques. This includes many studies of small world networks (see Watts, 1999; Watts & Strogatz, 1998), which typically focus on the actions and ties of individuals or subgroups within a broader network of relations (cf. Davis, Yoo, & Baker, 2003; Uzzi & Spiro, 2005). Some of this literature also focuses on strategic alliances between individual organizations (i.e., Madhavan, Gnyawali, & He, 2004; Schilling & Phelps, 2005). This is not to say that small world networks are unimportant; indeed, many advances in network studies are being made using this perspective. For example, in their study of small world networks, Madhavan et al. (2004) tease out what they call a "mesolevel" between dyads and networks, specifically the triads found in small world networks. However, for purposes of this literature review, small world networks largely fall in the gray area between levels of analysis in network studies and were thus excluded, unless they had clear implications for understanding whole network properties (see Baum, Shipilov, & Rowley, 2003).

The extant literature on networks is extremely large. Considering all of the academic journal articles on networks would result in more than 50,000 articles. When one starts placing limits on the networks to only focus on organizational networks, the numbers are considerably smaller. Table 2 provides a listing of the number of "hits" we encountered using each of the two search engines and using each of our search terms.

Table 2
Number of Citations by Search Term and Reference Source

	Search Engine	
Search Term	InfoTrac OneFile	Academic Search Premier
networks	46,088	48,911
interorganizational networks	54	36
whole networks	16	12
consortia	647	692
alliances	5,309	2,535
not joint alliances	5,230	2,535
and organizations	336	481
clusters	14,717	27,659
and organizations	48	780
and firms	89	110
organization networks	115	28

Note: January 1985 to December 2005.

As noted above, we also searched individual management and organization-oriented journals in a number of fields. Table 3 shows the results of this search, providing the number of network articles that appear in representative journals. These are the specific journals in which we conducted independent searches as a means for cross-checking our previous searches. These numbers include any article that references the word *network*, regardless of what type of network to which it is referring. In addition, the total number of hits does not differentiate between theoretical and empirical research. When multiple articles appeared to have the same or similar authors, with a few exceptions, our criterion for selection was that the research had to be conducted on a unique database that was not repeated in other articles. When this occurred, we selected the one article from that database that appeared to best match our search criteria.

Search Findings

A summary of our literature review findings is presented in Table 4. This table outlines the basic characteristics of each study we included and briefly summarizes the key findings.

Several distinct themes emerged in the empirical research we explored. For one thing, most of the network-level studies included in our review were comparative in nature (i.e., they contrasted at least two whole networks). Although the studies by some researchers (e.g., Baum et al., 2003; Krätke, 2002; Lipparani & Lomi, 1999; Soda & Usai, 1999) restricted their analysis to only one network, quite a few others tried to compare the substructures of one complete network with another, often longitudinally (e.g., Owen-Smith & Powell, 2004; Powell et al., 2005; Provan et al., 2003; Provan, Isett, & Milward, 2004).

Another clear finding is that the studies we reviewed often addressed networks within the health and human services sector (14 of 26). We were not sure why this was the case, although we can speculate that it may have to do with the greater prevalence of funding for

Table 3
Select Journals and Number of Network Citations, 1985 to 2005

Journal	Number of Network Hits	Number Selected
Academy of Management Journal	29	4
Administrative Science Quarterly	49	3
Public Administration Review	31	0
Organization Science[a]	14	1
American Sociological Review	69	0
American Journal of Sociology	102	2
Nonprofit and Voluntary Sector Quarterly[b]	12	2
Organization Studies	41	0
International Journal of Management	72	0
Strategic Management Journal	65	0
Journal of Management	7	0

a. Only 1990 to 2005.
b. Only 1999 to 2005.

health services research because multinetwork research is costly and time-consuming. In addition, the network level may be seen by researchers as more relevant in health care because collaboration is significantly less driven by the organizations' self-serving profit interest. Network-level studies within private industry (9) and other sectors (3) did, however, begin appearing more regularly after 1999. In fact, 10 of the 12 articles focusing on the non–health and human services sectors occurred in or after 1999, suggesting increased interest in the topic by business management scholars.

The studies were also evenly divided between cross-sectional and longitudinal data (12 and 13 articles, respectively). Longitudinal studies were also more likely to have more recently occurred, consistent with the more recent evolution of thought and study on whole networks. Nine of the 13 longitudinal studies have appeared since 2000. As one might expect, the exploration of network evolution and development was a theme of all the longitudinal studies we reviewed. Although there has been considerable discussion in the network literature on the evolution of interorganizational relationships in a network context (cf. Gulati & Gargiulo, 1999; Ring & Van de Ven, 1994), there has been scant discussion concerning how full networks evolve (for an exception, see the conceptual article by Koka et al. [2006] and empirical studies by Human and Provan [2000] and Powell et al. [2005]). From the studies we reviewed, it appears that networks have similar patterns of evolution (Human & Provan, 2000) and that their development occurs at multiple levels from the macro network level to the more micro individual organization level (Venkatraman & Lee, 2004). However, we know very little about the process of network development, such as how whole network structures evolve over time and how or if these multilateral relationships are managed.

We also conducted a more substantive review process, focusing on the specific issues addressed in the 26 studies. Although some overlap is inevitable, our observations fall into two broad categories of findings: (a) network properties and processes associated with whole networks, such as structure, development or evolution, and governance and (b) network outcomes.

(text continues on p. 502)

Table 4
Comparison and Summary of Empirical, Interorganizational, Network-Level Articles, 1985 to 2005

Author	Year	Sector	Type of Analysis	Network Description	Data	Mode of Governance	Key Findings
Morrissey, Tausig and Lindsey	1985	Public and nonprofit in health and human services	Analytic—compared two demonstration projects in New York, using surveys and interviews	Two—one in Schenectady and one in Syracuse, NY	Cross-sectional	Lead organization in both networks	Preconditions at both sites were favorable for the emergence and maintenance of interorganizational resource flows with a high degree of interagency resource dependence, a moderate client overlap, and low duplication of services. In both communities, there was little formalization or centralization. Linkages were more often associated with verbal agreements rather than formal contracts. A majority of relationships in both networks were based primarily on client referrals. Perceived effectiveness of interagency relationships were quite high across both networks.
Morrissey, Calloway, Bartko, Ridgely, Goldman, and Paulson	1994	Public and nonprofit in health and human services	Analytic—key informant and structural data across multiple mental health networks	Six—five demonstration sites and one comparison community	Longitudinal—data collected in 1989 and 1991	Lead organization in all networks, although unclear if some are NAOs	All five demonstration sites exhibited progress toward the integration goals set forth by the project's sponsor organization, although so did the comparison and control site. Regarding governance, the creation of a lead organization was found to be easier to accomplish than reorganization of the entire network. Authors found difficulty in establishing changes in effectiveness, particularly over the brief 2-year period. Network data suggested that density and centralization in service delivery systems cannot be simultaneously maximized.
Provan and Milward	1995	Public and nonprofit in health and human services	Analytic—comparative case research design. Also collected agency-level	Four networks in four cities. Cities chosen were comparable in size, at least one agency acted as	Cross-sectional	Two NAOs (one public, one nonprofit) and two lead organizations	Services integration was not found to be positively related to network effectiveness. Rather, centralization facilitated integration and coordination. Systems in which external fiscal control by the state was direct, and to a lesser

			data on involvement in each network.	coordinator, and a most-similar and most-different approach regarding funding was used.			extent not fragmented, were more effective than indirectly controlled systems in which allocation and control of state funding was delegated to a local funding authority. Stability was also important for network effectiveness. Networks were most effective when they had centralized integration and direct external control, especially in a stable and well-funded environment.
Araujo and Brito	1997	Business—port wine industry in Portugal	Descriptive—collective action in networks through one case study	Three issue-based networks operating within one major port wine production network	Cross-sectional	Self-governed	Collective action involving shippers, farmers and the Port Wine Institute was mobilized by a small group of shippers. This small group mobilized resources toward the production of a collective good despite the fact that the majority of other actors did nothing. Collective action was embedded in a broader system of interdependent actors where the process of interaction occurred at the economic and political levels of exchange. Collective actions appeared to depend on convergent interests (per Olson, 1965) and provided opportunities for bargaining processes to define shared interests.
Johnsen, Morrissey, and Calloway	1996	Public and nonprofit in health and human services	Analytic—key informant and interorganizational network surveys for two sites	Two—two adjacent North Carolina counties, one urban and one rural, that share some regional services	Longitudinal—data collected in 1991 and 1993	Unclear—appears to be a lead organization	Structural change was more apparent in the rural system. This was in part because of the relative lack of an interorganizational structure in the rural system at the beginning of the demonstration project. The urban system was well organized to begin with, so change was not as apparent, using structural equivalence analysis. The authors expected the rural system to have higher density and centralization scores with lower fragmentation scores at Time 2. However, the rural system became less centralized, denser, less complex, and, in the information exchange system, more fragmented.

(continued)

Table 4 (continued)

Author	Year	Sector	Type of Analysis	Network Description	Data	Mode of Governance	Key Findings
Fried, Johnsen, Starrett, Calloway, and Morrissey	1998	Public and nonprofit in health and human services	Analytic—key informant surveys and interviews were used to compare seven counties within two catchment areas	Seven distinct networks—one for each of the seven counties within the two area-networks. Constructed by key informants.	Cross-sectional	Varied	All systems varied in the roles assumed by organizations and the extent to which one organization dominated the network. Resource richness and contextual factors affected the structure of a system. Intracounty interactions were far more prevalent than area- or catchmentwide interactions. The authors concluded that coordination of services should not be considered a regional barrier and that integration of services likely requires the centralization of certain tasks to a regional office with a decentralization of service delivery and coordination.
Bazzoli, Hramata, and Chan	1998	Public and nonprofit in health and human services	Descriptive—comparative study of trauma network development in six U.S. cities with a population of over one million	Six developing trauma networks in six U.S. cities	Cross-sectional—used documents and interviews to construct a story	Trauma coordinating councils made up of community members and health care practitioners	Successful network leaders spent much time and energy documenting problems, assessing needs and understanding of stakeholders, educating stakeholders, and creating trust and shared understanding of values. Findings suggested that central players should focus time and energy educating stakeholders. The article provided insights into how organizations are more likely to be motivated to collaborate in situations where they lack control over the allocation of payments across involved organizations.
Kraatz	1998	Nonprofit liberal arts colleges and intercollegiate associations	Analytic—utilized multiple regression to compare within and across each consortium. Utilized data from Higher	Forty intercollegiate consortia of liberal arts colleges, organized on basis of geographic proximity or institutional similarity	Longitudinal—1971 to 1986, annually	Board composed of member college presidents	Focus was on the effects of interorganizational networks on organizations' responses to environmental threats. Liberal arts colleges in smaller, more homogeneous, and older consortia were more likely to adopt professional degree programs. Network structure had an effect on social learning. The information that comes

			Education General Survey.				from network social learning has substantial influence even when other mechanisms are at work.
Provan and Sebastian	1998	Public and nonprofit in health and human services	Analytic—comparative clique analysis across three systems using a comparative case research design. Also collected agency-level data on involvement in each network.	Three networks in each of three different cities. Cities chosen for comparable size.	Cross-sectional	Two NAOs (one public, one nonprofit) and two lead organizations	Data suggested that the coordination of clients and their needs may be most effective when there are only a small number of closely connected subgroups or cliques of agencies involved in care. Overlaps in clique membership were not as important as overlaps in service link for these networks. In those networks where service link overlaps existed, effectiveness was highest. Findings suggested that network effectiveness can be explained through intensive integration via network cliques or subnetworks. However, integration across a full network was likely to be a poor predictor of effectiveness.
Bazzoli, Shortell, Dubbs, Chan, and Kralovec	1999	Private, public, nonprofit, health and human services	Analytic—empirical measures aggregate individual hospital data to the network or system level. Used cluster analysis, converted differentiation, integration and centralization variables.	295 health systems (networks in which all providers are owned by same entity) and 274 health networks	Primarily cross-sectional but technically longitudinal—two years of data with some look at change	Varied	Authors found four-cluster solution for health networks and five-cluster solution for health systems with differentiation and centralization being particularly important in distinguishing unique clusters. High differentiation usually occurred with low centralization, suggesting a broader scope of activity is more difficult to centrally coordinate. Integration was also important, but health networks and systems typically engaged in both ownership-based and contractual-based integration or were not integrated at all.
Hendry, Brown, Defillippi, and Hassink	1999	Business, nonprofit, public—looked at optics–electronics industry	Descriptive—used public documents, in-depth interviews of 100 firms, and case studies	Six networks—compared network types and networks in general across six regions	Cross-sectional	Unclear	Proximity and local clustering of firms may be associated with different types of network structures. Here it was associated with hub coordination and commensality-based cooperation. Patterns of cooperation varied considerably across regions, reflecting

(continued)

Table 4 (continued)

Author	Year	Sector	Type of Analysis	Network Description	Data	Mode of Governance	Key Findings
		clusters by examining universities, businesses, government agencies	from six regions in the United Kingdom, the United States, and Germany				local historical experiences of each region. Industry clusters within countries function as localized nodes of national and international network of technology development, production, and distribution.
Lipparini and Lomi	1999	Private biomedical firms in Italy	Analytic—analyzed the effects of network relationships on performance of the system. Used survey data.	One network made up of 96 firms in the province of Modena	Cross-sectional	Self-governed	The structure of interfirm relationships mattered for performance of the system. The key factor affecting industry growth was the formation of different types of organizations, with new organizations playing an important role in helping larger and older organizations reduce their weaknesses. Information conveyed through the network was influenced by network structure and positioning of each organization in the industry structure. Large firms played a central role. Results suggested there was a need for appropriate governance mechanisms to integrate into the overall system of relationships. When relevant knowledge is widely distributed and not easily produced within firm boundaries, relational activity increases.
Soda and Usai	1999	Private, public—the Italian construction industry	Analytic—utilized UCINET	One network made up of the 49 largest Italian, private, state-controlled, and cooperative public works contractors	Longitudinal—1992 to 1996	Self-governed	Authors used "relational capital" to explore the effects of network embeddedness, both for dyads of firms and for the network as a whole. Relational capital for dyads was a good predictor of integration and simplification processes occurring in the industry after a crisis. High amounts of relational capital pushed companies through horizontal integration processes (i.e., mergers and acquisitions). Relational capital within the whole network decreased. The findings suggest how, under certain

							conditions, a cooperative network can cause negative effects or externalities on the whole economic system, representing a structural source of unstable competitive advantage for the individual firms in the network.
Human and Provan	2000	Business—U.S. wood products manufacturing	Analytic—compared the evolution of two networks from inception utilizing qualitative interview and survey data	Two formally constructed networks. Firms selected based on membership and activity within the network.	Longitudinal—data collected in 1994-1995 and again in 1997-1998	NAO	Comparison of two networks—one that succeeded and one that failed. The two networks had similar patterns of evolution and developed similar legitimacy requirements. Network sustainment depended on adopting both an inside-out and an outside-in strategic orientation for legitimacy building in response to demands or expectations of stakeholders. Findings suggested that when networks are formally constructed and organized "from scratch," dynamics of evolution are likely to be different from those in joint alliances and ventures—they will not be based on previous business ties.
Van Raak and Paulus	2001	Private, public—provision of health and human services in the Netherlands	Descriptive—used 12 case studies of network formation for the provision of care for psychogeriatric patients	Twelve networks, each consisting of multiple providers, including insurance companies, doctors, social workers, and home care workers	Longitudinal—data collected during a 3-year period, from 1990 to 1993	Self-governing, but the insurance company had central control over funding so acted as lead organization by proxy	This study was largely descriptive, building theory around network development or lack thereof. Key findings included evidence that the smaller the power difference between actors, the greater the chance negotiations will occur; one actor cannot impose system development on others. Findings suggested that negotiations take much time and energy and that negotiators must be skillful for development to occur, and, even then, it is not ensured. Network development was the result of use of rules produced during steering interactions that drive the development of the system and are dependent on the meanings that actors attach to them.

(continued)

Table 4 (continued)

Author	Year	Sector	Type of Analysis	Network Description	Data	Mode of Governance	Key Findings
Krätke	2002	Production firms and regional institutions in the film industry	Analytical—structural analysis of one network comprising 55 players. Also collected agency-level data on firms inside and outside the region that stayed in contact with the network.	One network in a regional cluster in East Germany.	Cross-sectional	Mostly self-governed, but some lead firms	The network exhibited not only a very marked functional differentiation but also a high degree of density, centralization, and cohesion (no subclusters despite the size of the network). Both especially large companies in the cluster (e.g., studio providers, production and postproduction firms) had a high level of centrality and seem—as lead firms—to play a coordinating role in the network. Centrality of the firms is interpreted as integration in the network. Surprisingly, television channels—the main clients of this industry—do not occupy a central position leading the author to the conclusion that the transaction relations of the cluster need to be seen in the supralocal and regional context. Some of the regional institutions (a college, a media initiative, and a bank) were densely connected to the firms in the cluster.
Bazzoli, Casey, Alexander, Conrad, Shortell, Sofaer, Hasnain-Wynia, and Zukoski	2003	Nonprofit, business, and public community organizations in health and human services (CCNs)	Analytic—compared implementation of four initiatives in 25 voluntary public–private partnerships	25 partnerships or CCNs in health care industry. Partnerships used final milestone report for quantitative data and in-depth interviews, with 8 of 25 partnerships for qualitative data.	Cross-sectional—data collected at the end of the of the CCN demonstration period	Mixed	Data suggested that external environment, especially resources in that environment, have a substantial influence over initiative implementation. Grant support was particularly helpful. CCN partnerships used availability of grant support to gain legitimacy for efforts and to motivate others to join. Study revealed that the scope of tasks associated with an initiative greatly influenced its implementation. Focused, diverse partnership leadership was also important to implementation. A good balance of responsibility between partners and paid staff was related to initiative success.

Hasnain-Wynia, Sofaer, Bazzoli, Alexander, Shortell, Conrad, Chan, Zukoski, and Sweney	2003	Nonprofit, business, and public community organizations in health and human services	Analytic—compared perceptions of network effectiveness among participating members across 25 CCNs	25 partnerships or CCNs in health care industry	Cross-sectional—used data from survey collected in 1997, site visits and reports from 1997-1998, and phone interviews in 1998	Self-governed	Findings suggested that networks with more diverse partnerships are perceived as less effective. The diversity that comes with the size and heterogeneity needed for legitimacy brought management challenges with it, especially regarding coordination, communication, and conflict management. Findings disconfirmed the assumption that breadth of membership will help a partnership be more effective. Perceptions of leadership effectiveness played a role in perceptions of network effectiveness. If leader was seen as effective in keeping partnership focused on tasks and objectives, the network was seen as being more effective. Also if the leaders were seen as ethical and not solely self-interested, the network was perceived as more effective.
Baum, Shipilov, and Rowley	2003	Investment banking syndicates in Canada	Analytic—documented the evolution of small world networks and their effects on the whole network	One network with several subnetworks	Longitudinal—used data from underwriting syndicates and their links from 1952 to 1990	Self-governed	Focus was on how small world networks emerge within a network and how that effects network level interactions. The authors discovered that cliques were initially formed based on past partners, but over time cliques were more likely to form based on clique-spanning ties and learning. The impact on the network as a whole was found to rest mainly in stability, which depends in part on the role of core and periphery players in the network. If core members are partnered in a clique, network stability is higher. If periphery members are partnered and outnumber the core organizations, the network is characterized by more instability, but may also be more open to change.
Provan, Nakama, Veazie, Teufel-Shone, Huddleston	2003	Public and nonprofit in health and	Analytic—used organizational surveys,	One network providing chronic disease health prevention and	Longitudinal—data collected after the network was	Self-governed	Findings suggested that efforts to build community capacity through the development of a broad-based collaborative network of organizations

(continued)

Table 4 (continued)

Author	Year	Sector	Type of Analysis	Network Description	Data	Mode of Governance	Key Findings
		human services	participant observations, interviews, and focus groups	services in a rural border community	formed and again 1 year later (2000 and 2001)		can be a successful way to address complex health problems. Also, external initiatives can aid in the creation of a collaborative network through the funding creation of an infrastructure, which facilitates collaboration between organizations. Collaboration was most often built on shared information. Although attitudes toward collaboration were positive, overall levels of trust decreased despite increased collaboration, suggesting that trust takes longer to establish than many types of network ties.
Provan, Isett, and Milward	2004	Public and nonprofit in health and human services	Analytic—used key informant surveys, interorganizational surveys, and in-depth personal interviews	One network providing services to adults with serious mental illness with four subnetworks of ARPs and their networks of providers	Longitudinal—compares network immediately after managed care funding mechanism was implemented and again 3 years later—1996 and 1999	NAO for full network; lead organization for each subnetwork	With pressures to control costs in a new system, there was an overall pattern of increased network involvement by all the agencies in the network, but especially for the ARPs. Formal contract ties did not increase as much as the more informal referral ties, especially across subnetworks. The increase of ties and cross-network involvement suggested that the ARPs were becoming increasingly embedded in the system, suggesting less fragmentation in the delivery of services to clients and increased local support of the NAO governance model. Performance data revealed enhanced system quality and less variance in quality among ARPs over time. Findings suggested that a community-based system of health and human services like the one studied can adapt to conflicting pressures from both the state and the profession.
Owen-Smith and Powell	2004	Business—biotechnology firms	Analytic—examined relationship	Two networks—one consisting of organizations	Longitudinal—data collected 1988 and 1999	Self-governed	Two attributes—geographic proximity and the institutional characteristics of key members in a network—transformed the

			between local and nonlocal network positions and patent volume	located within the Boston region and the other consisting of organizations outside the area having ties to a Boston-based organization			ways in which an organization's position within a larger network configuration translated into advantage. The accessibility of information transmitted through formal linkages was a function of the extent to which ties were embedded in a dense regional web of both formal and informal affiliations and whether the nodes that anchor a network pursued private goals. The main analysis was at the firm level, but key comparisons were made regarding density and reachability in the Boston versus regional network and comparing the networks at two points in time.
Soda, Usai, and Zaheer	2004	Business—Italian television production industry	Analytic—developed unique data set of television productions from archival public sources.	249 small temporary project production networks embedded in the larger historical production network	Longitudinal—all television productions produced and broadcast by any of the six national television channels in Italy from 1988 to 1999	Self-governed	Different network patterns age differently—some past structures may exert stronger effects on performance than current ones. An important aspect of this study was the focus on the outcomes of past and current ties instead of just examining the durability of the ties. The payback from bridge ties would have to be large and fast to justify investing in them, as they are more expensive to create and maintain. Authors found that there was a *U*-shaped relationship between past network closure and performance, confirming that closure has long-lasting benefits. This relationship relies on structural properties of the network rather than on tie strength. Findings suggested that rather than viewing structural holes and closure as conflicting alternative forms of social structure, they can be viewed as complementary. Because this study focused on temporary networks, tacit knowledge and intellectual capital were critical.

(continued)

Table 4 (continued)

Author	Year	Sector	Type of Analysis	Network Description	Data	Mode of Governance	Key Findings
Venkatraman and Lee	2004	Business—U.S. video game sector	Analytic—utilized multiple data sets to look at the organizational-level decision making and the evolution of the network	Multiple networks overlapping—highlighted the links between platform and producer	Longitudinal—study of product launches in the industry during an 8-year period, broken up into three snapshots of the networks	Self-governed	Results showed that video game networks evolve, with the formation of links reflecting macro network characteristics (density overlap and embeddedness) and platform characteristics (dominance and newness) when developer characteristics (age, share, coupling, and prior ties) are used as controls. Findings pointed to the need to understand competition–cooperation dynamics in a network. Authors treated the games as complementary resources for platforms—as conduits and prisms—while recognizing situations may call for treatment as either conduit or prism. The study went beyond looking at structure to look at how structure changes over time.
Knight and Pye	2005	Private and public—English health sector, prosthetic services	Analytic—network learning concept was explored using qualitative methods, including participant observation and interviews. Documentary sources also provided data.	One primary network made up of organizations providing prosthetic (artificial limbs) services. Study was also informed by comparisons with data from previous research done by authors on two other related health networks.	Longitudinal—participant observation and 34 interviews—1997 to 2001	Initially self-governed with an informal board, then a more formal NAO was created (PSSG)	The authors found that changes in network practices, structures, and interpretations must be widespread and enduring to be seen as network learning outcomes, but they need not be universal or uniform. A key finding suggested that network learning outcomes occur at the network level but that the process of learning actually occurs "slightly below" the network at a more localized level. The authors explored the link between learning and improved performance and found that where changes occurred that delivered (perceived) improvements in performance, it was because there was a new alignment among network interpretations, structures, and practices.

Powell, White, Koput, and Owen-Smith	2005	Private businesses (DBFs) in the biotechnology industry	Analytic—utilized Pajek for network data analysis and multiple measures to test hypotheses	One main network of 482 organizations. In 1988, there were 253. During the course of 11 years, 229 more entered the field, whereas 91 exited.	Longitudinal—data collected from 1988 to 1999	Self-governed	Multiconnectivity expanded as the cast of participants increased and diversity became more important over time. In this field, reputation was very important and "casts a long shadow." Collaborations were often cross-cutting, meaning that one's collaborator at Time 1 may very well be a competitor at Time 2. The density of the network called for the careful consideration of exit strategies. A very small core of organizations dominated the network over time. Multiconnectivity and "rich-get-richer" relationships dominated, and those few organizations were most likely to set the pace for the network. The main point was how the institutional features promoted very dense webs of connection that influenced both subsequent decisions and the trajectory of the field. Longitudinal data showed how the network evolved over time and how homophily may not be the best measure of attachment for all networks.

Note: NAO = network administrative organization; CCN = community care network; ARP = at-risk provider; PSSG = prosthetic strategic supply group; DBF = dedicated biotechnology firm.

Network Properties and Processes

Network structure. Many of the studies reviewed specifically addressed the structure of whole networks, focusing in particular on density, centralization, and the existence of subnetworks or cliques. Findings suggested that both general network structure and the positioning of each organization within the network influence the information that is conveyed through the network (Lipparini & Lomi, 1999). The density of ties in a network, particularly density overlap, tends to increase over time (Venkatraman & Lee, 2004). Although centralization facilitates integration and coordination in a network (Provan & Milward, 1995), density and centralization cannot simultaneously be maximized (Morrissey et al., 1994). Some tradeoff between the two must occur, and the existence of a large number of ties does not necessarily mean that the network is centralized. Different network patterns also differently age, with some past structures exerting stronger effects on performance than current ones. Time may modify the flow through the network as density and centralization change and one form of network structure benefits over another (Soda, Usai, & Zaheer, 2004). In the same way, two structurally similar networks originally at different levels of system development will develop in relatively the same way over time (Johnsen, Morrissey, & Calloway, 1996).

In addition, there is some trade-off between centralization and differentiation. High differentiation occurs with low centralization, suggesting that attempting a broad scope of activity is difficult to centrally coordinate (Bazzoli, Hramata, & Chan, 1998). High differentiation in networks proves to be important for the identification of unique clusters of organizations within networks (Bazzoli et al., 1998). Clusters can be created out of convenience, as in cases of geographic clustering (cf. Hendry, Brown, Defillippi, & Hassink, 1999; Owen-Smith & Powell, 2004). But they also can be created based on the provision of a certain set of services (Fried, Johnsen, Starrett, Calloway, & Morrissey, 1998; Morrissey et al., 1994; Provan & Sebastian, 1998). Cliques, subnetworks, or clusters within networks are prevalent and can play important roles in the creation of positive outcomes. For example, Provan and Sebastian (1998) discovered that network effectiveness can be explained through the intensive integration (where service links overlap) via network cliques.

Network development. With half the studies being longitudinal, network development, or evolution, was a major theme of the studies reviewed. Network development may be seen as the result of the use not only of resources but also of rules and norms produced as steering mechanisms to drive development of the network (Sydow & Windeler, 1998). These rules are dependent on the meanings the individual actors attach to them, so the development of the network is dependent on the knowledge of those mechanisms and the meanings, goals, and values of all organizations within the network (Lipparini & Lomi, 1999; Van Raak & Paulus, 2001). A key group of nodes (organizations) within the network and their leaders often play a central role as the main carriers of those rules and practices, often reflecting the environment in which they are situated (Hendry et al., 1999). The practices and commitments of those key nodes may result in the development of dominant logics at the network and community levels (Bazzoli et al., 1998; Owen-Smith & Powell, 2004). In other words, a dominant core within the network may drive how the network develops and/or evolves. These few organizations, marked by multiple connections and "rich get richer" relationships,

set the pace for the entire network, at least under certain conditions (Bazzoli et al., 2003; Knight & Pye, 2005; Powell et al., 2005).

Networks and subnetworks are often formed based on a firms' preoccupations with past partners and their partners' partners as a means of creating embedded relationships that foster cooperation (Gulati & Gargiulo, 1999). As Baum et al. (2003) found in their study of subnetworks in Canadian banking, past relationships work to shape future relationships between organizations and the way the network operates as a whole. These relationships are not, however, necessarily stable over time. For instance, Powell et al. (2005) found that collaborations are often cross-cutting, suggesting that a collaborator at time one may be a competitor at a later time. This suggests that a more in-depth analysis of the outcomes of ties, rather than a focus purely on the durability of ties, may be more useful for understanding the evolution of a network. It also suggests that certain network properties, such as structural holes and closures, should not be seen as conflicting concepts, but, rather, they should be viewed as complementary and shifting, which is what Soda et al. (2004) found. In general, interorganizational networks can thus be characterized by the evolution of a rich variety of relationships or ties (Araujo & Brito, 1997).

Resource availability also strongly influences the ability to gain legitimacy and facilitate network development. As seen in Bazzoli et al. (2003), the availability of grant funding greatly influenced partnership formation and the perceived legitimacy of both organizations and the network. Legitimacy and reputation are generally very important in collaborations, particularly in networks where collaborations among organizations within a network vary over time. Powell et al. (2005) discovered that a few densely connected organizations dominated the network and were found to be key actors in collaborations within those networks. Although network multiconnectivity as a whole increased during the 11-year period of their study, those few key actors seen as the most reputable maintained control over the network over time. This is true also of key organizations even when there is no control over the allocation of available resources in the network, as shown by Bazzoli et al. (1998). Key organizations can shape the evolution of the network by focusing time and energy on educating stakeholders and other organizations within the network.

Network governance. As previously mentioned, the mode of governance is also a critical aspect of whole network research, although as found in our review, the explicit study of governance has not been common. Governance may have definite impacts on network outcomes, as evidenced by the Provan and Milward (1995) study comparing four mental health service delivery networks. However, a gap appears to exist in the literature in understanding how interorganizational networks govern themselves. Although networks are seen as mechanisms not only of social embeddedness but also of coordination and governance (Grabher & Powell, 2004; Jones et al., 1997), few empirical examinations exist exploring how activities occurring within a network are managed and coordinated. Relationships between organizations in a network are understood to be either informally maintained, through the structure of the network (Coleman, 1990) and norms of reciprocity and trust (Alter & Hage, 1993), or formally maintained, through the existence of contracts, rules, and regulations (Coleman, 1990; Kogut, 2000; Ostrom, 1990). However, these formal and informal control mechanisms protect organizations in their relationships to each other (as dyads) and not the network's

activities as a whole. In addition, there has, until recently, been an implicit but incorrect assumption that networks do not significantly differ. The assumption is that they are an answer to market failure (Williamson, 1991), and, as such, they are all essentially similar in form, being primarily different from markets and hierarchies (cf. Powell, 1990). We are thus left with an understanding of why networks may be a superior mode of governance but not of how they are themselves governed.

We utilized the typology recently proposed by Provan and Kenis (2006) to identify the governance mechanisms within the networks in each article we reviewed. This typology identifies three distinct types of governance within networks: shared governance, lead organization governed, and NAO governed. Shared governance networks occur when the organizations composing the network collectively work to make both strategic and operational decisions about how the network operates. There is no unique, formal governance structure other than through the collaborative interactions among members themselves. Control over activities may be formally conducted through meetings of network members or more informally conducted through ongoing interactions and collaboration.

Lead-organization or hub-firm (Dhanaraj & Parkhe, 2006; Jarillo, 1988; Sydow & Windeler, 1998) governance occurs in networks in which all organizations may share a common purpose but where there is a more powerful, perhaps larger, organization that has sufficient resources and legitimacy to play a lead role. Although the organizations within the network may regularly interact with one another, activities and decision making are coordinated through a single organization, as in the case of Japanese *keiretsu*, or a small group of organizations that is responsive to network members. A lead organization provides products and services and conducts business much like the other members of the network but is, in addition, responsible for the maintenance of existing internal relationships and the development of external relationships.

NAO governance is similar in nature to the lead organization model in that all activities and decisions are coordinated through one organization (cf. Human & Provan, 2000). The difference is that the NAO is an organization (or even an individual) specifically created to oversee the network. Unlike the lead organization, the NAO is not involved in the manufacturing of goods or provision of services, as is the case with network members. The task of the NAO may be primarily to support (rather than execute) network leadership so that this type of governance may sometimes coexist with one of the other two.

Although we did not, of course, expect this new typology to appear in the existing literature, we did expect to find some indication of how each of the networks we reviewed is maintained and governed. In fact, very few articles specifically identified the governance model (e.g., Bazzoli et al., 1998; Johnsen et al., 1996; Provan & Milward, 1995). Several articles neglected to address governance at all (e.g., Hendry et al., 1999), and most others only implicitly did so. As with effectiveness, the articles were distinctly divided, with more attention paid to governance by those researchers who explored networks within the health and human services sector. Even so, a clear identification of governance within those studies in health and human services was far from universal. Of the articles reporting findings in the health and human services, 7 of the 14, or half, explicitly defined the network governance structure. For those articles lacking a specific explication of the governance structure, we attempted to identify the type of governance from the descriptions of the samples from which the data were gathered and were able to confidently do so in most cases. However, in

some of the larger samples, it was unclear or varied across networks. For example, in their 2003 article on community care networks, Bazzoli et al. studied 25 networks with varied governance structures. Some of these networks are known to have NAO models of governance; however, it was unclear if all 25 networks followed the same pattern.

The beginnings of a pattern of studying the modes of governance can be seen in the literature on whole networks. Mainly, networks in business or private industry were more likely to have a self-governance model than were those networks in the health and human services, which were more likely to have either a lead organization or, more often, a NAO model. In some European countries (e.g., Germany), the NAO model is also quite common because it is expected to stimulate public sector–private sector interactions in networks or clusters. Though not necessarily mandated by the government, some national or regional development programs may specifically recommend the NAO model (http://www.kompetenznetze.de).

Network Outcomes

Another theme that emerged in at least some of the studies was network outcomes, especially network effectiveness and learning. Although few studies explicitly measured effectiveness, it was an underlying theme in much of the research. Provan and Milward's (1995) study of four mental health networks was a first attempt to directly study effectiveness. Others have since addressed the topic, though only for studies focusing on health and human services. This may be because of the nature of what networks in the health and human services sector do. They generally provide services, sometimes to vulnerable populations such as the elderly or mentally ill, and are often funded in part via third parties or the government. As a result, organizations in this sector may need to be responsive to collective indicators of effectiveness. In business, more attention may be paid to matters of efficiency rather than effectiveness and to organizational rather than network-level outcomes. Ultimately, effectiveness will mean different things to each network and to each sector in which a network exists.

Although most of the studies reviewed indicated, at least implicitly, the performance enhancing effects of networks, interorganizational networks do not always result in positive outcomes. Indeed, under certain conditions a cooperative network can have negative effects on the whole economy (e.g., as in the case of cartels) and may prove to be a structural source of unstable competitive advantage between organizations (Soda & Usai, 1999) or even between regions (Grabher, 1993). Networks can also fail. For instance, Human and Provan (2000) found that the sustainability of networks was largely dependent on both internal and external legitimacy and support in the early stages of evolution. They concluded that networks that are formally constructed and do not emerge out of previous relationships are more likely to fail. Along similar lines, Baum et al. (2003) found that the stability of the whole network is in part dependent on the types of relationships occurring within subnetworks, based on their small world properties. As subnetworks evolve, the stability of the network will be determined by the nature of the organizations' status within the network. Core organizations and their subnetworks will tend to stabilize the entire network, whereas actors that are more peripheral will destabilize it. Indeed, the social and informational influences created by networks can also result in undesirable adaptation and evolution (Kraatz, 1998).

Effectiveness is also related to the concept of network learning. For instance, Kraatz (1998) found that network ties influence the way organizations evolve from an institutional isomorphism perspective (DiMaggio & Powell, 1983). Organizations are more likely to imitate a particular professional program if they are tied to a successful early adopter of innovation. Without those network ties, or with ties to less successful organizations, both the network and the individual organization members may not be successful. In other words, the organization learns from those organizations around them, and as they evolve, the network is more likely to evolve in ways that lead to network effectiveness. Without learning and evolution, the network may fail. Outcomes at the network level occur where a new alignment among network interpretations, structures, and practice occurs (Knight & Pye, 2005). The practices, structures, and interpretations within a network must be both widespread and enduring, yet they need not be universal, to result in network outcomes. Network learning occurs, but at a somewhat different pace and in a different order than is found in the traditional conceptions of learning. The traditional conception of learning consists of three ordered steps: defining meaning, developing commitment, and developing method. Knight and Pye (2005) found that although all three stages are also required in network learning, they need not and often do not occur in that order.

Network learning and successful evolution are often dependent on distinct role-players within the network. The outcomes of network learning appear at the network level of analysis, but the actual learning often occurs at a level slightly below the network level (Knight & Pye, 2005). Owen-Smith and Powell (2004) found that key organizations acted as the keepers of the rules and practices of the network, resulting in the development of dominant logics that set the pace within the network. Similarly, in their comparison of a rural and an urban network, Fried et al. (1998) found that certain organizations dominated the networks, thereby influencing the way in which the networks evolved. These organizations were not necessarily the official lead organizations within the network; rather, they were organizations that were dominant because of resource richness or contextual factors such as geographic proximity (see also, Hendry et al., 1999; Lipparini & Lomi, 1999).

Future Directions for Whole Network Research

The broadest conclusion that can be drawn from the empirical literature on whole networks, or interoganizational networks studied at the network level, is that there is simply not very much of it. There is, especially, very little work on business networks, which is somewhat surprising in light of the large number of organizational network studies that have been published in business sectors during the past 20 years. Because there have been so few empirical studies on whole networks, it seems premature at this point to review and analyze the extant literature beyond what we have already done. Rather, it seems more useful to build on what we know and do not know to discuss those areas where future researchers might most productively focus their efforts. Consistent with the themes of our review, we focus on the two broad areas of network properties and processes (structure, development, and governance) and network outcomes, primarily effectiveness. Our ideas for what is needed in each area are discussed below. These recommendations will then be followed by a discussion of what we

see as the primary methodological issues that must be overcome if significant progress is to be made on the topic.

Network Properties and Processes

Network structure. The structure of relationships among members has probably been the most frequently studied aspect of networks. This is certainly true for social networks, and it has been a common theme that has emerged from the literature on whole networks. One reason for this is the frequent collection of relational data and the availability of network analytical software, such as UCINET (Borgatti, Everett, & Freeman, 2002). Despite all we know at this point regarding certain aspects of network structure, there are many questions that have not been adequately addressed, especially at the whole network level.

- Are certain network structures more effective than others? For instance, do networks with small world properties (Watts, 1999) more effectively operate than do networks that are more densely and directly connected? Provan and Milward (1995) found that integrated health and human services networks were more effective only if integration occurred through a central coordinating entity. Do these findings hold for business networks? Are there other structural properties that are critical for overall network effectiveness, such as the presence of structural holes (Burt, 1992) or overlapping cliques (Provan & Sebastian, 1998)?
- Are the structural properties that are most predictive of network behaviors, processes, and outcomes when studying interpersonal social networks also likely to explain the behavior, processes, and outcomes of whole interorganizational networks?
- What is the role that policy entities, especially government, play in shaping and constraining the structure of relationships within interorganizational networks, especially those that are formed through mandate?
- In general, what are the critical factors that affect the emergence of different network structural forms? For instance, do structures differ across whole networks in different sectors, across networks having different functions, or across evolutionary stages?

Network governance. We have already discussed the fact that network governance has only implicitly been considered in many of the network-level studies we reviewed. However, it is important to explicitly consider network governance. Unlike dyadic relationships, which are managed by the organizations themselves, and unlike serendipitous networks, which have no formal governance structures at all, the activities of whole, goal-directed networks must generally be managed and governed if they are to be effective. We have already outlined three "pure" forms of governance that may be utilized: shared governance, lead organization governance, and NAO governance. Whether these three forms will stand up to the scrutiny of in-depth empirical analysis remains to be seen. But regardless of the specific form that governance may take, there are a number of important questions that must be addressed.

- What are the basic forms of network governance, and how do they operate? Do the governance forms discussed by Provan and Kenis (2006) fit all networks, or are there other forms that exist? What are their key characteristics? Are there really pure forms in practice, or are hybrid models common? And how do each of these forms operate in practice?

- Are certain forms of governance more effective for whole networks than others, and, if so, under what specific conditions will one form be best? And how is network performance affected when a particular governance form is mandated?
- How do governance forms emerge, and how do they become institutionalized? It may be, for instance, that nonmandated governance forms typically change as the network grows and matures, or it may instead be that, once established, a particular governance form becomes reinforced despite changing external conditions.
- When, how, and under which circumstances will the governance form of a particular interorganizational network change? Will this change be deliberate or be path dependent and proceed on any specific "organizational track" (Hinings & Greenwood, 1988) or interorganizational track?

Network development. One of the main ways in which all forms of network research have changed during recent years is that longitudinal research has become much more prevalent, opening the way to in-depth consideration of network development. This is a welcome change because there is only a limited amount we can know about networks when focusing on their static properties. Nonetheless, there is still very little we know about network dynamics (Bell, den Ouden, & Ziggers, 2006), especially when focusing on whole interorganizational networks. One reason for this is the difficulty in obtaining data during an extended period, even when relying on secondary data. In addition, although changes in social networks may be observable during a relatively short period, it may take years for whole networks to change in significant ways. There have been few studies of whole network evolution (cf. Human & Provan, 2000; Lerch, Sydow, & Provan, 2006; Owen-Smith & Powell, 2004; Powell et al., 2005), and these have suggested a number of directions that the study of network evolution might proceed.

- How do networks evolve from early birth to maturity and beyond? Does evolution occur in predictable ways, either in specific evolutionary stages or based on environmental conditions and internal pressures and changes? Human and Provan (2000) found that small-firm manufacturing networks do go through predictable stages, although it is unclear when these stages begin and end and what specific network characteristics explain each stage.
- Are there critical prenetwork activities and structures that predict successful network evolution? Prior work on dyadic relations has suggested the importance of preexisting ties (Gulati, 1995; Gulati & Gargiulo, 1999) and the establishment of trust. However, these findings are at the dyadic level, and many whole network relationships are newly established, not being built on preexisting ties. It may be, however, that prior network experience with other organizations not in the new network may be predictive of the successful emergence of a new network of relationships.
- Do networks continually shift and evolve in significant ways, or does network stability emerge at some point as an important factor for explaining network success? Networks have traditionally been discussed as highly flexible entities (Powell, 1990), but work by Provan and Milward (1995) has found that overall system change can be detrimental and that stability is an important factor for explaining network effectiveness. Other networks have even been found to be quite inert or persistent. Can this persistence, as suggested by Walker et al. (1997) regarding the impact of networks on organizations, be described in terms of path dependencies?
- To what extent can a whole network be stable (dynamic) despite significant changes at the subsystem or organizational level (cf. Kilduff, Tsai, & Hanke, 2006)? What, then, is the impact of network structural characteristics on its development? For instance, how does network homophily

(i.e., similarity of members) or its clique structure (Rowley et al., 2005) enhance or constrain the ways in which the network can grow?

- How does network-level trust evolve? There has been quite a bit of work done on trust in networks (cf. Gulati, 1995; Zaheer, McEvily, & Perrone, 1998), but it has focused on dyadic relationships. However, it is unclear whether network-level trust is the same thing and how it emerges. For instance, in their study of the evolution of chronic disease prevention networks, Provan et al. (2003) found that despite the increase in density of ties as the network evolved, measures of trust across the network actually declined. Provan and colleagues attributed this finding to the fact that the new relationships were untested and not deep. Organizations were willing to connect to new partners, but trust would take longer to develop.

Network Outcomes

Network outcomes in general, and effectiveness in particular, are critical issues when studying whole networks. If organizations are involved in networks solely for their own benefit, then one may question the viability of even studying whole networks. It is only when the interorganizational network itself has value that network members have an incentive to consider relationships beyond the ones they maintain on their own. This, perhaps, is the primary reason why such a large number of the network-level studies we reviewed focused on the health and human services sector. Organizations in this sector are traditionally more mission driven (Moore, 2000), and thus their strategies may be far more focused on broad client-based outcomes that go beyond the success of individual organizations. Community needs and interests play an important role in guiding organizational behaviors. In contrast, in business sectors, organizations tend to be far more bottom-line oriented, interested in responding to the self-interested goals of key organization-level stakeholders. Thus, the effectiveness of the network as a whole may appear to some to be less important than the performance of individual firms. That said, network-level effectiveness can be and is important in business. For instance, effective business networks can promote economic development in a region (Safford, 2004), act as a catalyst for innovation (Powell et al., 2005), stimulate new product development (Browning et al., 1995), and foster networkwide learning (Kraatz, 1998).

The relative lack of studies examining network effectiveness was somewhat surprising. If we are to understand about networks and network performance, then it is essential that network effectiveness be addressed. In part, the problem may be that few have studied network evolution during a sufficiently long period to understand why interorganizational networks might succeed or fail at their mission. In part, it may also be that, like organizational effectiveness, network effectiveness is not readily measured or understood. In fact, what may be a positive outcome for the network as a whole (e.g., improving innovation, economic activity, or community well-being) may prove detrimental to one or more individual network members, as when innovations are implemented by some firms but not others, making the innovators more competitive relative to others in the network.

What are the key issues concerning network effectiveness that need to be addressed if progress in the area of effectiveness on whole networks is to be made? Our review of the literature has suggested several.

- What do we mean by network effectiveness, and how should it be operationalized? We have already discussed that the focus must be at the network level rather than at the level of individual organization members. However, it is not clear who should benefit. Provan and Milward (2001) discussed measurement of effectiveness in the public and nonprofit sectors, suggesting that stakeholders at three levels must be considered: community, network, and organization or participant. These levels may not be appropriate for all business networks, but their work suggests the importance of considering multiple stakeholders having potentially conflicting, or at least different, goals. In addition, what is considered an effective network by some may not be viewed as having positive societal outcomes, as seen in work on illegal or "dark" networks (Baker & Faulkner, 1993; Raab & Milward, 2003).
- Consistent with the above point, are there certain network outcomes that can be viable alternatives to direct measurement of effectiveness? For instance, to what extent are proximate outcomes such as network learning (Knight & Pye, 2005) or network innovation (Powell et al., 2005) ultimately related to effectiveness?
- What is the impact of mandate on network effectiveness? Although many networks are formed from the bottom up by the members themselves, others have structures and composition that are imposed by an external entity, especially government. This is especially true in the public and nonprofit sectors, but it may also be true in business, particularly when a government entity provides funding and structure for economic development or innovation (cf. Lerch et al., 2006; Lutz, 1997).
- What is the relationship between effective dyadic ties and effectiveness at the network level? Is it simply cumulative (i.e., more effective dyads lead to more effective networks), or do conflicting goals and effectiveness measures at the organization level (based on dyadic connections) constrain network-level effectiveness?
- What effect, if any, does network effectiveness and/or its measurement have on the development of a network (Sydow, 2004) and, especially, on the choice of the actual form of network governance?

Methodological Issues

One of the main explanations for the relative lack of work on whole networks is because of problems with the research methods required for meaningful analysis. Ideally, a network-level study would require researchers to study multiple networks during a period of years. Such work is generally very time-consuming and costly. It is certainly true that traditional network research, focusing on dyads or on the antecedents or consequences of network involvement for individual organizations, may also be complicated and costly. However, the problem is one of unit of analysis. That is, when studying the organization–network interface, the unit of analysis is the organization, and researchers can collect data on many organizations, both within a single network or across many different networks. When studying whole networks, however, it may take studying interactions among 30, 50, or more organizations to research a single network. Trying to generalize would mean collecting data on perhaps 30 to 40 different networks, a daunting task. Although no such study has yet to be undertaken, larger-scale network studies have been conducted in the health services sector. As noted earlier, one of the reasons for this may be that there are more sources of research funding in health care than in business, allowing larger-scale studies to be attempted (cf. Bazzoli et al., 1998; Fried et al., 1998; Morrissey et al., 1994; Provan & Milward, 1995).

Another methodological problem is the issue of network bounding. When studying egocentric networks, what constitutes the network is typically defined as the network of relationships maintained by the focal organization. With serendipitous networks, the network is defined in terms of whatever relationships exist. For research on whole networks, however, network boundaries generally must be more carefully defined and delineated so that it is clear which nodes and ties are included in the network and which are not. This can be a difficult issue. Should only those organizations that are listed on the formal network roster be included? What if there is no such list? Should a reputational sampling approach be used? What happens when there is a formal list of network participants but many of them are involved in name only? Which ones should be included and which ones dropped? Should the network be delineated in terms of who is interacting with so-called core network members whose activities are central to the mission and goal of the network? If so, does this not constitute sampling on the dependent variable? These and other questions are critical if research on whole networks is to be successfully done in ways that can be replicated by others.

Finally, there is a clear need to study interorganizational networks not only during a longer period at different levels of analysis but also using quantitative and qualitative methods of inquiry. So far, most networks have been studied using either qualitative and secondary data or standardized questionnaires and structural network analysis (Borgatti et al., 2002), but not both. Although there is hardly any serious alternative to these quantitative methods for studying large-scale networks, additional insights into the structure and content of relationships, their development over time, the initial conditions at founding, and changing contexts could be gained by the additional use of qualitative methodologies such as narrative interviews and participant observation. These methods would prove to be especially useful for understanding the functioning of networks as a unique form of governance and why different modes of governance might be appropriate for different types of networks and at different stages of network development.

Conclusion

This article has provided a comprehensive overview of studies of whole networks, reviewing empirical studies carried out during the past 20 years at the interorganizational network level of analysis. In sharp contrast to the abundant network research at the individual organization level, especially with a focus on dyadic relationships, network-level research is still of a manageable size for a review article like this. On the more critical side, research on whole networks has, so far, left many important questions unanswered. Apart from giving an overview of empirical studies of whole networks, another aim of this article has been to raise such important questions, especially in regard to network structure, network governance, network development, network outcomes or effectiveness, and network-level methodology.

Rather than trying to independently address these questions, network-level researchers can and should draw on many of the theoretical and methodological insights gained from more micro-level analyses. For instance, the insights gained regarding trust building from research at the organizational level, in both dyadic relations and more complex networks of relationships (Bachmann & Zaheer, 2006), may be used to study this process in whole networks. At

the same time, it is clear that at a more micro level, organizations should be brought back into network-level research to investigate, for example, how, on one hand, organizations are affected by their engagement in different types of networks and how, on the other hand, organizations get ready for networking. On a more macro level, the more or less recursive interplay between whole networks and regional clusters, organizational fields, or complete societies should also be put on the agenda of network researchers.

Although our review has focused on theoretical and empirical issues relevant to network researchers, there are important practical considerations as well. In particular, when governments, communities, foundations, or regional industry groups think about how they can improve their economy, disaster preparedness, competitiveness, health and well-being of citizens, and so on, collaboration through an interorganizational network is an approach that is increasingly utilized. The focus of these government and private groups is on large-scale outcomes that can be accomplished through the collective efforts of multiple organizations. In other words, emphasis is on the whole network and not on the specific relationships that any one or pair of organizations maintains. As a result, it is imperative that network researchers understand how whole networks operate, how they might best be structured and managed, and what outcomes might result. At present, network researchers in business, public management, and health care services have only a marginal understanding of whole networks, despite their importance as a macro-level social issue. Enhancing this knowledge is clearly a challenge that researchers in all sectors must take seriously.

Despite all the efforts we have made to present a complete review of network-level research, the study has clear limitations. Admittedly, the search procedure we used was somewhat subjective, so that some studies that might be considered to be at the network level of analysis may not have been included. Our search process was narrowly focused but serves to point out the relative dearth of empirical literature on the topic, despite a considerable amount of conceptual discussion. Nevertheless, we are convinced that we have compiled the vast majority of the studies carried out on this level of analysis. We have investigated this research in a way that should provide useful insights for future researchers choosing either to focus on whole networks or to include this important level of analysis in even more complex multilevel analyses of interorganizational networks.

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