Leader Development: A Review of Research

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Executive Summary

Organizations invest considerable time and resources in developing leaders. What do we know from the systematic study of leader development that can help organizations in their efforts to develop leaders? And what gaps in our knowledge are important to fill? This review provides a perspective on these central questions. It focuses on leader development within formal organizations and on knowledge generated in the last ten years. Three streams of research on leader development are reviewed: studies that focus on the individual leader and his or her developmental path, studies that examine the impact of various leader development methods, and studies of organizational practices for leader development.

Research that examines the leader's developmental path has highlighted the importance of challenging assignments, other people, and hardships. Further research on challenging assignments has identified the developmental components of these assignments (e.g., job transitions and creating change) and has begun to examine factors that maximize learning from assignments. In-depth studies of managers who are transitioning to jobs with increased levels of leadership responsibility provide insights into the learning and development that occurs during these transitions. Future research needs to continue examining the role of individual differences and situational variables on the leader's developmental path, to take a more comprehensive look at the total path, and to focus more attention on the process of learning from developmental experiences.

The largest body of leader development research examines interventions designed to develop leaders. Most of the research attention has been on leader development

programs, multisource feedback, and mentoring. These methods have been shown to have developmental impact on participants, and some research on moderators (for whom and under what conditions do these methods work?) and process (why do the methods work?) has been conducted. There is a growing body of research on executive coaching; however, research on other methods (e.g., developmental assessment centers, action learning, networks, and developmental assignments) lags behind. Questions about why certain methods work, how to best combine methods, the impact of societal and organizational culture on the effectiveness of various methodologies, the potential of internet technology, and the link between individual development and the effectiveness of groups, team, and organization need to be addressed.

Benchmarking and best-practices research offer insights into what organizations do to generate and support leader development. For example, in organizations that are considered more effective at developing leaders, leader development strategies are aligned with business strategies, top-level executives are involved in leader development, and managers are held accountable for the development of their direct reports. These studies are a rich resource for generating hypotheses and measures for more systematically examining the factors that differentiate organizations that are more successful at developing effective leaders from those that are less successful. They also point to challenges that organizations face in building effective leader development system, for example, shaping the boss-employee relationship so that it is more developmental and developing high-potential leaders. Research that sheds light on these challenges is needed.

Finally, there is an aspect of leader development that has received theoretical attention but little research attention: What develops in leader development? Perhaps the most common approach is to conceptualize "what develops" as leader competencies (i.e., the leader's skills and abilities). However, other approaches have been proposed, including changes in the leader's worldviews and meaning structures, in the leader's network of relationships, in the leader's level of expertise, and in the leader's identity. To advance the field, researchers need to also engage in more mindful articulation and assessment of the aspects of human functioning that are enhanced by the various developmental experiences and interventions aimed at improving leader effectiveness.

Introduction

Leaders are a hot commodity in organizations. Leadership skills and abilities are seen as critical for the modern organization to adapt, innovate, and attract and retain talent—key capabilities for surviving in a complex and competitive environment. Not surprisingly, organizations invest considerable time and resources in identifying and developing leaders. As a result, the marketplace is packed with leadership books, resources, development programs, and services. And from a scholarly perspective, leadership has reemerged as a popular topic. In January 2007, the American Psychological Association devoted a special issue of *American Psychologist* to the topic of leadership. There has also been a surge in leadership programs offered at top business schools and a number of specialized leadership centers established at these schools (Doh, 2003). But what do we actually know about leader development from systematic study of the phenomenon? This question is the central focus of this review.

A major challenge in reviewing research related to leader development is bounding the review so that it is doable and yields meaningful insights. Several delimiters helped to bound this review:

- The review focuses on *leader development* rather than the more frequently used phrase *leadership development*. Using the label *leader development* denotes that this review focuses on developing individual leaders—which is what the vast majority of the literature addresses. More recent theoretical work advocates for a distinction between "leader development" and "leadership development" (Day, 2001; Drath et al., in press; O'Connor & Day, 2007; Van Velsor & McCauley, 2004) with the latter

encompassing the development of collective leadership beliefs and practices in addition to individual development.

- Because this is a review for the Society for Human Resource Management, the review focuses on leader development within formal work organizations. Leader development also takes place within student populations, communities, political systems, and social movements—important settings but beyond the scope of this review. Because of the focus on leader development in work organizations, the review draws primarily on literature published in the fields of organizational behavior, psychology, and management.
- Another often-used tactic in reviews is to focus on more recent research. This assumes that research tends to be cumulative, building on earlier research. Even if this assumption is sometimes questionable, current research tends to at least note when its findings are consistent with or discrepant from previous research or existing theory. Thus, the majority of this review focuses on research published in the last ten years. However, key studies prior to this timeframe are occasionally highlighted in the review.

A second challenge is how to deal with the relationship between the concepts of "leader" and "manager." Is this a review of "leader development" as distinct from "manager development"? Arguments have been made for the usefulness of distinguishing leadership and management. Two related distinctions have been offered: (1) management is about maintaining the stability of a group or organization, whereas leadership is about changing a group or organization; and (2) management is more about the technical tasks of running an organization (e.g., planning, securing resources, organizing), whereas

leadership is more about the social or relational work of generating collective action (e.g., generating a vision, motivating people, shaping the culture). Interestingly, these distinctions have not had much impact on theoretical frameworks used to describe managerial work (leadership is seen as an aspect of managerial work) or on theoretical frameworks used to describe leadership behaviors (which include both task- and relationship-directed behaviors and both change- and stability-oriented behaviors).

In the practitioner-oriented literature, the trend in the last twenty years has been overwhelmingly toward replacing the term *manager* with *leader*. There are likely two factors at play here. First, in most modern organizations, individuals in managerial roles are expected to provide leadership in the organization (although leadership can certainly be exercised by individuals in non-managerial roles too). When reference is made to the "leadership of the organization," the speaker is almost certainly talking about senior management. And boss-subordinate dyads are often the focus of research on leader-follower interactions. A second reason for this trend is that *leader* has simply taken on a much more positive connotation than *manager*. In the practitioner literature, *leader development* means the development of individuals who are in managerial roles or expected to soon take on managerial roles. In the research literature, individuals in managerial roles overwhelming make up the samples in studies of leader development. Thus, in this review, a sharp distinction is not made between leader development and manager development. In this review, *leader development* is more generally defined as the expansion of a person's capacity to be effective in formal and informal leadership roles and processes—that is, roles and processes that facilitate setting direction, creating

alignment, and maintaining commitment in groups of people who share common work (Van Velsor & McCauley, 2004).

A final challenge: Studies of leader development seem to exist in fairly isolated streams of research. There are studies that focus on the individual leader's development path: What triggers learning and development for the individual leader? What does he or she learn in becoming a more effective leader? A much larger body of research focuses on leader development interventions and their impact. Each major method of development (e.g., development programs, multisource feedback, and executive coaching) has its own literature which rarely speaks to the others. Finally, there are studies of organizational practices that stimulate and support leader development. Known as *best-practice* or *benchmarking* studies, they do not employ the typical tactics of social science research (e.g., hypothesis testing, measurement of constructs). However, they are an important source of knowledge for the leader development practitioner. The major part of this review is organized around these three broad types of research on leader development: (1) studies that focus on the leader's developmental path, (2) studies that focus on leader development methods, and (3) studies of organizational practices for leader development. But first I will examine the various ways that development is understood and conceptualized in the leader development literature.

What Is Developed in Leader Development?

In summarizing a series of reviews of leader development books, Arbaugh (2006) commented that "the study and practice of leadership development appears to be in the

process of defining its domain" (p. 524). Nowhere is this seen more clearly than when looking at the various ways the "what" of leader development has been conceptualized. Not only do the various conceptualizations describe the targets of leader development differently, but they also tend to draw on different theories of learning and development.

The most frequent conceptualization is that leader development is about the development of the leader's skills and abilities. These skills and abilities are often referred to as *leader competencies*, and many organizations have articulated a competency model that lists and describes their assessment of the capabilities individuals need to lead effectively in the organization (Bersin, 2007). A wide array of competencies can be included in such models. In their popular development guide for leaders, Lombardo and Eichinger (2000) describe 67 competencies. SuccessFactors, a fast-growing provider of talent management solutions, uses a library of 51 standardized competencies (Bersin, 2007). This would indicate that leaders develop on a variety of dimensions—at any one point in time an individual leader can be very developed on some dimensions and less developed on others. When leader competencies are the framework for leader development, theories of adult learning and behavior change inform the understanding of the development process (for example, see London, 2002; Peterson & Hicks, 1995), and tools such as goal setting, experiential learning, feedback, and rewards are seen as central to leader development.

Another conceptualization is that leader development is more about transformative change—changes in the leader's worldviews and meaning structures. This conceptualization can be as broad and include as many dimensions as the competency view. What is central in this view is a focus on developing leaders with more complex

ways of thinking and acting (Day & Halpin, 2004). When transformative change is the framework for leader development, theories of adult development and transformation inform the understanding of the development process (for example, see Johnson, 2008; Palus & Drath, 1995), and disequilibrating or disorienting experiences and critical reflection on assumptions are central to the process.

In recent years, other conceptualizations have been put forward, each drawing on different theories from the adult learning, growth, and change arena. Day (2001) proposed that leadership development includes not only the development of human capital but also the development of social capital. In contrast to human capital, in which the focus is on developing individual knowledge, skills, and abilities, the emphasis with social capital is on building networks of relationships among individuals that enhance cooperation and resource exchange in the organization. Day proposes that some methods of development—for example, networks and action learning—are more likely to develop social capital.

Others have focused on the development of leadership expertise. Lord and Hall (2005) proposed a theory of leader development which draws on the cognitive science literature to explain movement from a novice to intermediate to master leader. In this view, the development of leadership skills occurs over an extended period of time, beginning with effortful attempts to use multiple loosely connected skills in ways that match the leader's implicit theories of leadership, with skills becoming increasingly proceduralized, contextualized, and driven by the internal values of the leader. Sufficient development results in an expert and unique way of leading.

McCall and Hollenbeck (2008) also apply research-based conclusions from the expertise literature to the practice of leader development. One difference they note between expert leaders and expertise in other domains is that the leadership domain is vast, requiring specific knowledge (e.g., dealing with specific individuals), general knowledge (e.g., dealing with people), and a wide array of behavioral and cognitive skills. Experts, however, don't just know more than nonexperts. Their knowledge is organized differently; they develop knowledge structures that enable them to make better use of their knowledge. From this expertise perspective, variety of experience over time is crucial to leader development because it is the only way to expose people to the many aspects of the leadership domain required to lead effectively in complex organizations—exposure which in turn stimulates the development of cognitive structures needed to deal with that complexity.

Cianciolo, Antonakis, and Sternberg (2004) also focus on the development of expertise in leaders, applying the theory of practical intelligence to leader development. They argue that effective leaders have developed experienced-based knowledge that increases their sensitivity to important information in a given situation and their understanding of what action to take in response to that information—what they call *tacit knowledge*. In this view, efforts to enhance leader development should emphasize strategies for extracting information from experience and improving problem solving.

Finally, the leader's self-concept or identity has received increasing attention as a central aspect of leader development. Lord and Hall (2005) and Day and Harrison (2007) argue that the development of one's leader identity (i.e., how one thinks of oneself as a leader) is critical in one's ongoing development. Identity development is viewed as

expanding from an individual identity (leader identity based on one's traits) to a relational identity (leader identity based on relationships with followers) to a collective identity (leader identity based on leading a collective). Hall (2004) also emphasizes the role of identity in leadership, contending that a major aspect of leader development is the enhanced awareness of the components of the self and the ability to observe the self accurately and objectively.

The study of leader development is indeed in the process of defining its domain. Currently, the domain is quite large, as perhaps it needs to be if there are many aspects of human functioning that can contribute to leader effectiveness and many strategies for enhancing that functioning. An overall framework that integrates the various perspectives on "what is developed" has yet to be articulated. As the following review will attest, much more attention has been given to what stimulates and supports leader development. To advance the field, researchers need to also engage in more mindful articulation and assessment of the aspects of human functioning that are enhanced by the various developmental experiences and interventions aimed at improving leader effectiveness. As Day and Halpin (2004) conclude, "despite the voluminous leadership literature, relatively little is known about exactly what gets developed in leader development" (p. 5).

The Leader's Developmental Path

There are three major types of studies which have examined individuals and how they develop the capabilities needed for effectiveness in leadership roles: (1) studies in which leaders describe previous developmental experiences in their careers, (2) studies

that look at development within the context of the leader's current job, and (3) studies that examine how transitions to new jobs or work roles affect development.

Developmental Experiences in Careers

A series of studies which began in the 1980s at the Center for Creative Leadership (CCL) examined key developmental experiences and what managers learned from these experiences. Each study used the same open-ended question and data were collected via interviews or surveys:

> When you think about your career as a manager, certain events or episodes probably stand out in your mind—things that led to a lasting change in you as a manager. Identify at least three "key events" in your career, things that made a difference in the way you manage now. What happened? What did you learn from it?

Four major studies collected data from different samples: 191 successful executives (189 men and 2 women) in six large North America-based companies (Lindsey, Homes, & McCall, 1987; McCall, Lombardo, & Morrison, 1988), 76 successful women executives in 25 Fortune 100 companies (Morrison, White, & Van Velsor, 1987; Van Velsor & Hughes, 1990), 101 successful global executives from 36 countries working for 16 global companies (McCall & Hollenbeck, 2002), and 288 managers (diverse in terms of gender, race, and organizational level) in a variety of companies based primarily in the United States (Douglas, 2003).

Across the studies, five major categories of developmental events were identified:

- challenging assignments (e.g., first supervisory job, turning around an ailing business, working on a visible project)

- other people (e.g., bosses, role models, peers, receiving feedback)
- hardships (e.g, business mistakes, downsizing, problems with subordinates)
- coursework (e.g., training programs, pursuing advanced degrees)
- personal life experiences (e.g., having children, family changes, personal challenges)

The majority of events reported by study participants were either challenging assignments, other people, or hardships; around 10 percent of the events were coursework or personal life experiences. However, women reported more other people and fewer challenging assignments than did men. African-Americans reported more hardships and fewer challenging assignments than did whites.

A wide range of "lessons learned" from these events were reported. They included learning to lead and manage others, learning to run a business, learning to deal with problematic relationships, learning about self and career, learning to deal with cultural issues, and developing the personal qualities of a leader, such as flexibility, perseverance, and optimism (McCall & Hollenbeck, 2002). Some patterns between types of events and lessons learned were found. For example, learning to be tough and persuasive was more strongly associated with turnaround assignments, and learning how to handle political situations was more strongly associated with other people.

The CCL studies have been replicated in Japan and the Netherlands (Ohlott, 2004). These studies found the same types of experiences as developmental but noted some differences. In the Netherlands, more personal life events were reported as developmental, such as a leadership role in a community organization or growing up in an immigrant family. In Japan, lateral moves were more commonly cited as developmental, reflecting a culture in which horizontal shifts are more acceptable.

Japanese managers also were more likely to cite their first job after college as developmental, suggesting that this transition might be a bigger one in Japan where students receive much more of a generalist education than in the United States. Replication studies are also underway in India, Singapore, and China.

Bennis and Thomas (2002) also conducted in-depth interviews with leaders to learn more about their experiences. In structured interviews, 43 leaders described themselves as leaders, how they defined success, what mattered most to them, and the defining moments in their lives. The researchers found that every leader described at least one intense, transformational experience in becoming a leader—what the researchers called a crucible experience. These experiences varied across leaders (e.g., mentoring, mastering a difficult challenge, and personal losses), but all involved being tested and emerging stronger and better equipped to lead. Crucible experiences tended to enhance four leadership competencies: adaptive capacity, engaging others by creating shared meaning, voice (i.e., self-confidence and a sense of purpose), and integrity.

These retrospective studies of key developmental experiences in managerial careers have yielded rich qualitative data and have pointed to the types of experiences that can stimulate learning and development. They have also provided (and are continuing to provide) insights about differences in developmental experiences related to gender, race, and nationality by replicating the research with diverse samples. These studies have also had an important impact on the practice of leader development, encouraging individuals and organizations to look beyond formal training and development programs and to make better use of work experiences and relationships as the major drivers of leader development.

However, the studies also have limitations. They rely on retrospective accounts of the participants' most memorable experiences, and the study samples are skewed toward highly successful managers and executives. Data on individual differences in participants' personality, values, career paths, or aspirations were not collected. Samples have not been large enough to make comparisons across organizations or industries. Because of these limitations and other design features, the studies do not directly answer some fundamental questions about developmental experiences in managerial careers:

- Are developmental experiences rare or commonplace?
- Are some developmental experiences more developmental than others?
- Do similar experiences generate more or different learning and development for some individuals than for others? What individual and situational variables might account for such differences?
- Are there certain sequences or combinations of experiences that better prepare individuals for particular kinds of leadership roles (e.g., general managers, CEOs, high-level staff positions, global leaders)?
- What's the relationship between diversity of developmental experiences and success as a leader?

Development in Current Job

Research has also examined the degree to which managers are learning in their current jobs. Ohlott (2004) summarized this research, delineating five broad sources of challenge that are associated with the developmental impact of a managerial job:

- Job transitions: Transitions place leaders in new situations where job responsibilities are somewhat unfamiliar and where usual actions and behaviors may no longer be

adequate. Transitions spark new ways of thinking and responding to problems, and often expose leaders to new knowledge and networks of coworkers.

- Creating change: Jobs that require a leader to create change call for actions and decisions in the face of uncertainty and ambiguity. They provide the opportunity to take action and see the consequences of those actions—key elements of experiential learning.
- High levels of responsibility: Jobs with high levels of responsibility have greater breadth, visibility, and complexity; they also expose the leader to pressure and high-stakes situations. It is in taking on larger-scope jobs that leaders report learning to think more strategically, work effectively under pressure, integrate different perspectives, prioritize, and make trade-offs.
- Managing boundaries: Jobs which entail working laterally across internal and external boundaries require leaders to influence people over whom they have no direct or formal authority. Leaders in these situations report improving their interpersonal competencies: building relationships, communicating, negotiating, and handling conflict.
- Dealing with diversity: Leaders increasingly work with diverse people—people of both genders and different ethnicities, from different backgrounds, and from different countries. Working across different value systems, experiences, and expectations challenges leaders to examine their own beliefs and understand business and workplace issues from multiple perspectives.

The Job Challenge Profile (McCauley, Ruderman, & Ohlott, 1999) was developed as a self-rating instrument to measure current levels of these five challenges in a manager's

job. Scores on the JCP are related to self-reported on-the-job learning, self-perceptions of change in leader behaviors, and boss ratings of leader competencies (Dragoni, Tesluk, Russell, & Oh, in press; McCauley, Ruderman, Ohlott, & Morrow, 1994; Thompson, 2003).

More recently, moderators of the relationship between job challenge and learning have been investigated. Dragoni et al. (in press) found that learning goal orientation (i.e., an orientation to gain new skills and master tasks when in achievement situations) moderated the relationship between developmental quality of the job and supervisor ratings of the job incumbent's competencies. When in highly developmental assignments, managers with stronger learning orientations appeared to gain more from those assignments in terms of competencies than those with weaker learning orientations. Dragoni et al. also found that managers with higher learning orientations were more likely to be in a developmental assignment, particularly when the manager perceived greater access to developmental assignments.

DeRue and Wellman (2008) investigated moderators in the form of the relationship between job challenges and learning. First, they found that the relationship between overall developmental challenge in a work experience (an average across the JCP dimensions) and supervisory rating of skill development from that experience was curvilinear, supporting their proposition that individuals would suffer diminishing returns in leader development as the developmental challenge in an experience became too overwhelming for the individual to process. However, they found two factors that moderated this curvilinear relationship: the strength of the leader's learning orientation and the leader's access to feedback. They found that individuals with a higher learning

orientation or greater access to feedback did not experience the same diminishing returns in leader development compared to individuals with a lower learning orientation or less access to feedback. In other words, the challenge-learning relationship was linear rather than curvilinear for those with a high learning orientation and greater access to feedback.

Organization-based self-esteem has also been examined as a moderator of the challenge-learning relationship. Brutus, Ruderman, Ohlott, and McCauley (2000) found a stronger challenge-learning relationship for manages with low self-esteem compared to managers with high self-esteem. Those with high self-esteem tended to report high degrees of learning from their job regardless of the degree of challenge.

Research on managers' development in their current jobs has generated a framework and measurement tool for assessing job challenges associated with development. Subsequent studies have strengthened the evidence that these challenges are indeed related to development by using independent measures of learning and development. Now, moderators of the challenge-learning relationship are being explored. This line of research holds promise for increasing knowledge of how to shape job assignments so that they are more developmental, how to match individuals to assignments to maximize development, and how organizations can support learning from assignments. Two streams of work are particularly important for advancing knowledge in this arena:

- Continued examination of moderators of the challenge-learning relationship. Learning orientation and self-esteem were logical places to begin in examining individual difference moderators, given their prominence in the adult learning literature. That literature offers ideas for other moderators to pursue, including

cognitive ability, openness to experience, and locus of control. Situational moderators (e.g., managerial support, access to coaching, clear developmental goals) may be even more important to examine because these elements are more readily built into the experience.

- Studies that follow leaders as they take on, move through, and complete a developmental assignment. Such studies would allow for a more fine-grained examination of the *process* of learning from experience. What kind of learning processes are unfolding? Again adult learning theory can be used to hypothesize about these processes. Are leaders learning primarily because they have to do things they've never had to do before and thus are getting to practice new skills? Are they enhancing their tacit knowledge of leading through a process of making decisions and taking action and then seeing the consequences of those decisions and actions? Are they encountering more complex dilemmas and trade-offs in their work that causes them to reexamine their assumptions? Or is the social context what matters most—people who share with them new knowledge, insights, and perspectives? All these processes are likely at play, but do different types of developmental experiences make use of different learning processes? More informed answers to these questions can help leaders be more intentional about their learning strategies and help organizations provide the right kind of support.

Work Transitions

One of the most influential recent publications on leader development is *The Leadership Pipeline* (Charan, Drotter, & Noel, 2001). The authors argue that to foster effective leaders at all levels of the organization and prepare individuals for higher levels

of leadership, organizations need an approach that takes into account the different requirements at distinct leadership levels. This premise—that the demands placed on leaders change at different levels of the organization and subsequently that effective performance requires a somewhat different mix of skills at different organizational levels—is well documented (Mumford, Campion, & Morgeson, 2007). Charan et al. identify six career passages that represent a major change in job requirements, skills, and work values. However, there is surprisingly little research on what managers experience as they move through one of these passages or “a turn in the pipeline” (i.e., move from one level to the next). Exceptions are the in-depth studies of managers in transition by Hill (1992) and Gabarro (1987).

Hill studied the experiences of 19 new managers during their first year on the job. The study describes their challenges, how they developed and changed, and the individual and organizational resources they relied on. Two themes ran through the managers’ accounts of their first year on the job: (1) Becoming a manager required a profound psychological adjustment. To make this adjustment, they had to address four developmental tasks: learning what it means to be a manager, developing interpersonal judgment, gaining self-knowledge, and coping with stress and emotion. (2) Becoming a manager was primarily a process of learning from experience. The lessons were learned as the managers confronted daily interactions and problems. They learned incrementally and gradually.

Gabarro studied the experiences of 17 managers. Most of the managers were moving into their first general management position; several were moving into top functional positions. Both retrospective and longitudinal data were collected on the

process by which the manager established mastery and influence in the new assignment. Gabarro found that this process occurred in a series of stages of learning and action (taking hold, immersion, reshaping, consolidation, and refinement) and that it took 2.5 to 3 years for managers to progress through these stages. The more successful managers were more effective at assessing the organization and diagnosing its problems, building a management team, and bringing about timely changes that addressed organizational problems.

More studies of leaders as they make major shifts in job scope and responsibility are needed. Although in-depth studies like Hill's and Gabarro's are extremely useful, survey research could also be a valuable complementary study design in this arena. Such data would allow researchers to examine a host of variables that might impact the success of the transition and how a leader develops as a result—variables that focus on the individual's ability and motivation to learn, on the leader's self-concept, on foundational competencies that need to be mastered before taking on higher levels of responsibilities, and on tactics used to prepare and support the transitioning leader.

Research Opportunities

The quest to better understand the leader's developmental path has been largely driven by the pragmatic interest of more intentionally shaping that path in ways that generate a larger population of talented leaders. Not surprisingly, the focus has been on the kinds of experiences that are developmental and what leaders gain from those experiences. With such knowledge, more people can seek out or be given such experiences with the explicit intent of developing specific skills, competencies, and perspectives. One obvious next step in knowledge development is to apply what has been

learned and see whether (and when) the expected results are achieved. Organizations are beginning to use developmental assignments and job moves more intentionally but are not systematically examining the impact of those choices. This is a prime arena for researchers and practitioners to collaborate to further understand leader development through experience.

And, as noted several times, research is just beginning to examine the role of individual differences and situational variables on the leader's developmental path. More research on moderators is needed. In addition to examining variables that impact learning and development in general (e.g., learning orientation, availability of feedback), variables that impact an individual's interest in pursuing leadership roles and participating in leadership processes should also be included. For example, Chan and Drasgow (2001) proposed the construct "motivation to lead" as central to leadership performance and developed a measure of this construct. Likewise, a measure of aspiration is included in the Corporate Leadership Council's (2005) assessment of potential for success in more senior leadership positions in an organization.

It is also time for basic research on the leader's developmental path to take a more comprehensive look at the total path. To date, research has examined a few experiences that stand out in that path or the leader's current experiences. Methodologies that generate data about a broader spectrum of the path (e.g., life histories, experience inventories, biographies, and longitudinal studies) would shed light on questions about the role of sequence, patterns, and diversity of experience. Longitudinal studies that follow the leader's developmental journey over time, although complex and resource intensive, would be particularly rich.

Finally, more fine-grained examination of the process of learning from experience is needed. What kind of learning processes generate developmental outcomes from experiences? Do different types of experiences make use of different learning processes? As noted above, exploring these questions can generate knowledge about the kinds of learning strategies and organizational support that maximize learning from experience.

Methods of Leader Development

The largest body of leader development research focuses on interventions designed to develop leaders. Studies typically focus on one type of intervention (rather than a comparison of different interventions), and bodies of literature have built up around each type of intervention. For each method of leader development, research tends to focus on two broad questions: Does this type of intervention work (i.e., are leaders more developed as a result of the intervention), and under what conditions are the interventions most effective?

This section reviews research on six types of leader development interventions are reviewed: development programs, multisource feedback, developmental assessment centers, executive coaching, action learning, and mentoring. Because there is a considerable body of literature on each of these topics, I rely heavily on review articles to describe the current state of research on each.

Development Programs

Leader development programs are structured, off-the-job events that bring individuals together for shared learning and development experiences. They vary widely

in their content, pedagogical techniques, purposes, and targeted outcomes. In the literature, such programs are often referred to as *training programs*; however, in more recent years *development programs* has become the more common term, reflecting an increased emphasis on leader development as a continuous process in which the leader takes an active role in developing rather than as a series of events in which knowledge and skills are taught to leaders.

Leader development programs are pervasive. In contrast, although quite a few studies of their effectiveness can be found in the literature (see meta-analytic reviews below), the proportion of programs which are systematically evaluated with results published is small. A well-designed and -implemented study of program impact requires resources and expertise, and even when an organization does invest in such evaluation, it is primarily to improve the program and maintain internal support for it; there is little motivation to publish the results.

Meta-analytic studies have summarized available research examining the effectiveness of leader development programs. Burke and Day's (1986) analysis included 70 studies conducted from 1951 to 1982. Collins and Holton's (2004) analysis included 83 studies conducted from 1982 to 2001. Since a wide range of criterion measures were used across studies to assess program effectiveness, in both meta-analyses, effect sizes were examined by type of criterion measure:

(1) Subjective knowledge/learning: Knowledge and skills learned based on judgments of the participant or trainer.

(2) Objective knowledge/learning: Knowledge and skills learned based on objective means, such as number of errors, number of solutions reached, or standardized tests.

(3) Subjective behavior: Changes in on-the-job behavior as perceived by participants, or global perceptions by peers or a supervisor.

(4) Objective behavior (Collins & Holton only): Observed changes in on-the-job behavior or supervisor ratings of specific observable behavior.

(5) Objective system results: Tangible organizational results, such as reduced costs, improved quality and quantity, and promotions.

Both meta-analyses indicated that the effectiveness of leader development programs varies widely, although average effect sizes were positive across all criteria. The Burke and Day analysis is often cited as empirical support for the effectiveness of leader development programs, although these authors concluded that leader development programs are "on the average moderately effective in improving learning and job performance" (p. 243). The Collins and Holton analysis yielded somewhat higher average effect sizes; however, these authors caution that given the range of effect sizes, it is possible to have very large positive outcomes or no outcomes at all.

Also, the magnitude of effect sizes across the two analyses varied in different ways. Burke and Day found larger average effect sizes for objective system results, followed by changes in behavior, with the smallest average effect sizes for knowledge/learning outcomes. Collins and Holton found the opposite (the largest average effect sizes for knowledge/learning outcomes and the smallest average effect sizes for system results). Although the latter pattern is more consistent with the view that learning is easiest to impact, followed by behavior, then system results, Collins and Holton caution that direct comparisons of the two analyses is problematic because of differences in meta-analytic methodology used and study inclusion criteria.

Burke and Day also categorized studies by training content: general management, human relations, problem solving/decision making, rater training, self-awareness, and motivation/values. Human relations and self-awareness training tended to produce higher average effect sizes. Collins and Holton categorized studies by research design: posttest only with control group (POWC), pretest-posttest with control group (PPWC), and single group pretest-posttest (SGPP). Not surprisingly, the more stringent design (PPWC) produced the smallest average effect sizes.

Burke and Day note that meta-analytic studies of leader development programs are hampered by poor reporting in the original research studies, including lack of information about degree of range restriction, criterion and predictor reliabilities, and sample characteristics, as well as incomplete descriptions of methodology.

Collins and Holton note that one limitation in the study of leader development programs is that small sample sizes limit evaluation of possible moderators (i.e., do programs produce more development for some participants than for others or in some contexts than others?). Moderators have been studied in the broader employee training literature, and this literature is a useful source of potential moderators to include in future studies of leader development programs. These include individual characteristics, such as locus of control, conscientiousness, anxiety, age, cognitive ability, self-efficacy, and job involvement, as well as situational characteristics, such as adequate resources, opportunities to use skills, frequent feedback, and favorable consequences for using training content (Colquitt, LePine, & Noe 2000).

The meta-analyses also point to another important aspect of leader development programs: There is a great deal of diversity in the content focus of these programs and in

the criterion measures used to assess program effectiveness. When there is high variation in a development methodology, research on that methodology can be aided by the use of some common typologies for classifying programs. Such typologies would differentiate leader development programs in meaningful ways and serve as a useful starting point for studies that examine the impact of different types of programs (e.g., are certain leader competencies better developed through a particular type of program?) and moderators of program impact (e.g., are some types of programs more effective at certain points in a leader's developmental path?).

One promising typology is offered by Conger (1992). Based on a review of approaches to leadership training and on first-hand experience as a participant-observer in five leader development programs, Conger described four categories of leadership training differentiated by their targeted outcomes and methodologies:

(1) *Conceptual understanding*: Leader development through an increased understanding of the leadership phenomenon. This approach makes heavy use of theory, models, and case studies to explain what leaders actually do and has traditionally been the domain of universities. Conceptual training "serves the function of expanding participants' perceptions of the process and of what it requires as well as generating interest in becoming a leader" (p. 49).

(2) *Skill building*: Leader development through more skilled performance of leadership behaviors. This approach involves learning about the components of a skill (such as strategic visioning or communication) through descriptions, examples, and discussion, and then practicing that skill with feedback. Skill building is the most

commonly employed approach to leader development and is used most frequently at supervisory and mid-management levels.

(3) *Feedback*: Leader development through learning about one's strengths and weaknesses as a leader and targeting areas for improvement. This approach uses multiple methods (e.g., 360-degree surveys, personality measures, experiential exercises, and simulations) to provide feedback to participants on a wide variety of leader skills and behaviors.

(4) *Personal Growth*: Leader development through tapping into personal talents and increasing one's motivation to lead. This approach often uses outdoor adventure activities and psychological exercises to stimulate personal reflection and to empower participants to take responsibility for their situations.

Conger and Benjamin (1999) built on this work by examining how organizations were using leader development programs to strengthen and expand the leadership capabilities of employees. They identified three major purposes for leader development programs in organizations: individual skill development, the socialization of leadership values and vision, and a tactic for enabling and supporting organizational change initiatives. Thus, leader development programs can be classified by their outcomes and methodologies, and by their purposes.

A final note about leader development programs: Although individuals are the primary target of change in leader development programs, these programs may also be evaluated in terms of their impact at the group, organization, and even industry and society levels (Hannum, Martineau, & Reinelt, 2007; W. K. Kellogg Foundation, 2002). For example, an evaluation study might not only examine changes in the individual

leader but also assess changes in followers' satisfaction with the leader, increases in team productivity or innovation in the organization, or the diversity and composition of networks in a field. However, there is little investigation of how changes at the individual level impact these higher-order outcomes. More research focused on these cross-level links would address the broader question of the role of leader development in enhancing the effectiveness of groups, teams, and organizations.

Multisource Feedback

Multisource feedback, also known as 360-degree feedback, is a method of collecting perceptions of a leader's performance from subordinates, peers, bosses, and customers. Typically, the leader selects a number of coworkers who individually complete surveys designed to collect information about the leader's behaviors, skills, or abilities that are considered important for leader effectiveness. The ratings are summarized to maintain coworker anonymity and a report is produced for the leader (Chappelow, 2004). Multisource feedback proliferated in the 1990s, is now pervasive in U.S. organizations, and is spreading to other parts of the world (Atwater, Brett, & Charles, 2007; Morgeson, Mumford, & Campion, 2005).

Of all the leader development interventions, 360-degree feedback has received the most research attention. This is likely due in part to its widespread use, but also to the fact that quantitative data are generated by the use of the tool itself, making it an attractive source of research data. The feedback instrument can be readministered at a later date to track progress, although there are difficulties in trying to measure change using this procedure (Craig & Hannum, 2007).

Recent reviews by Smither, London, and Reilly (2005) and Atwater et al. (2007) provide useful summaries of the state of 360-degree feedback research. The table in Appendix A provides highlights from these summaries as well as additional research published since these reviews. Research has focused primarily on the following:

- *Validity of multisource ratings*: Multisource ratings are positively correlated with performance appraisal ratings, assessment center ratings, and objective performance measures.
- *Performance improvement as a result of multisource feedback*: Performance improvement after feedback is positive, but the magnitude of improvement is small. More improvement is experienced by leaders who initially receive low ratings, perceive a need to change, perceive their feedback as accurate, meet their raters after receiving feedback, work with a coach after receiving feedback, perceive organizational support, and have high self-esteem and low cynicism.
- *Reactions to feedback*: Leaders with high self-esteem, openness to experience, learning goal orientation, self-efficacy, and internal locus of control have a more positive attitude toward multisource feedback. The valence of the ratings (negative to positive) as well as self-other discrepancies in ratings impact a number of attitudes about and responses to feedback.
- *Consequences of variations in the feedback process*: Rater anonymity and purpose of the feedback process impact the degree to which accurate ratings are provided. Online administration did not impact feedback scores; text feedback generated more negative reactions than numeric feedback.

Both reviews provide conceptual models for organizing and guiding research on multisource feedback—an element that is needed to better integrate what appears to be an array of unconnected studies. A number of the reviewers' recommendations for future research are strikingly similar:

- Move from asking "Does multisource feedback work?" to "Under what conditions and for whom does multisource feedback work?"
- Examine the combined effects of individual differences and organizational support on the reactions to and use of feedback.
- Examine how the feedback culture in organizations influences responses to and uses of multisource feedback.
- Examine how other leader development interventions, such as training and executive coaching, can enhance the impact of multisource feedback and vice versa.

Questions raised by practitioners are another source of guidance for research on multisource feedback (Eichenger & Lombardo, 2003; Morgeson et al., 2005). Process issues still being discussed and debated in the literature include:

- What value do self-ratings provide in the process?
- Should multisource feedback reports be confidential?
- When is an organizational culture ready for a multisource feedback program?
- How should an organization develop its 360-degree feedback survey?
- How long should the survey be?
- How should raters be chosen, how many raters are needed, and what kind of training do they need?

- What should feedback recipients focus on in determining developmental goals (e.g., leveraging strengths vs. improving weaknesses, low ratings vs. self-other discrepancies)?
- How often should 360-degree data be collected?

Multisource ratings are increasingly used internationally, and comparisons of multisource surveys and feedback process are just beginning to be published. Gillespie (2005) found that the constructs underlying a multisource survey and their relationship to the survey items differed across cultures, raising questions about comparability of 360-degree surveys across cultures. Brutus et al. (2006) found a consistent set of challenges in the implementation of multisource feedback in six countries where utilization was relatively new (Argentina, Australia, China, Slovakia, Spain, and the United Kingdom). These challenges all pertained to the inherent difficulties in giving and receiving feedback. And a study by Shipper, Hoffman, and Rotondo (2007) provided support for the overall effectiveness of the 360-degree process across five national samples (United States, Ireland, Israel, Philippines, and Malaysia). However, the process was found to be most effective in cultures with low power distance and individualistic values. These studies provide initial cross-cultural comparison of multisource instruments and process. Future research needs to establish the validity of multisource ratings across cultures and to examine cultural differences in reactions to feedback and performance improvement as a result of feedback.

Developmental Assessment Centers

Assessment centers are used to evaluate individuals on a number of dimensions or competencies shown to be important on the job. Participants take part in a series of

exercises or simulations that elicit behaviors related to the dimensions being assessed. Trained assessors observe the behaviors and make evaluations of the participants' proficiency on each dimension. Assessment centers have traditionally been used for selection and promotion decisions, particularly in middle to upper management levels; however, they are increasingly used for developmental purposes. Surveys of organizations using assessment centers found that around 40 percent of these assessment centers are used for employee development (Povach & Ballantyne, 2004; Spychalski, Quinones, Gaugler, & Pohley, 1997).

One reason that assessment centers are used for development is that they generate a lot of data and thus are a source of in-depth feedback for the individual. Some developmental assessment centers simply assess, provide in-depth feedback, and help individuals create developmental plans as a result of the feedback. However, Thornton and Rupp (2006) argue that developmental assessment centers can be designed to provide more of a training experience in addition to a feedback experience. Such a design can include training on the assessment dimensions; feedback, reflection, coaching, and goalsetting at multiple points throughout the center experience; and exercise sequences designed to provide opportunities to practice new behaviors. Rather than being a diagnostic at the start of a development process, learning and development take place during the assessment center. Thornton and Rupp also point out some important differences between traditional assessment centers and those used for development: In developmental assessment centers the focus should be on dimensions that are developable, assessors need to be skilled at coaching and facilitating a learning experience, and more time is spent on in-depth feedback and development planning.

In contrast to the broad research literature on assessment centers used for selection and promotion decisions, research on developmental assessment centers is sparse. Because assessment is a core element of this methodology, the reliability and validity of these assessments is one topic of research. Research has shown that there is reliability and validity in assessors' behavioral observations (Thornton & Rupp, 2006). However, one controversy with traditional assessment centers is the degree to which there is adequate convergent and discriminant validity evidence for the dimensions being assessed. There is limited research on this question in the context of developmental assessment centers and the results are mixed (Fleenor, 1996; Thornton & Rupp, 2006).

Research has also begun on developmental assessment centers as a developmental intervention. Engelbrecht and Fischer (1995) compared supervisor ratings of assessment center participants three months after the center experience with supervisor ratings of an equivalent group of managers who were not participants. Ratings on three of the five assessment center dimensions were higher for participants than for nonparticipants. Jones and Whitmore (1995) found no difference in the career advancement of managers who were developmental assessment center participants and those who were not. However, within the group of participants, those who followed more of the developmental recommendations were more likely to advance than those who followed fewer recommendations. Thornton and Rupp (2006) argue that this study is a conservative test of the effectiveness of developmental assessment centers because of the broad criteria used. They advocate for evaluation research that examines improvement on the dimensions that the assessment center was designed to develop. In a study of two developmental assessment centers, Rupp et al. (2006) found evidence of learning during

the assessment center experience and positive changes in self ratings (pre vs. post assessment center experience) but few changes in subordinate or boss ratings. A major limitation of this study was small sample sizes.

Finally, there is some limited research on factors that might affect the developmental impact of developmental assessment centers. Kudisch (1997) found that assessment center participants were more likely to perceive their feedback as accurate when they perceived assessors as experts, feedback as favorable, and exercises as job-related, and when they enjoyed the overall assessment experience. Bell and Arthur (2008) found higher assessor ratings associated with higher feedback acceptance, and this relationship was partially mediated by the participant's affective reaction to the feedback session. Abraham, Morrison, and Burnett (2006) found that those who performed poorly in the assessment center, particularly on interpersonal dimensions, were less likely to initiate a scheduled feedback session with an assigned coach.

Clearly, research on developmental assessment centers is at an early stage. As an assessment and feedback tool, important areas of research mirror those for multisource feedback: validity of ratings, the dynamics and impact of reactions to the feedback, and consequences of variations in the feedback process. However, because developmental assessment centers also have similarities to development programs, particularly skill-building programs, questions of impact and of individual and situational moderators are also important. Rupp et al. (2006) note that developmental assessment centers vary widely in their design and implementation, and that studies are needed that vary in exercise types, participants, dimensions, target jobs, and industries.

Executive Coaching

Executive coaching is likely the fastest growing leader development method. And it has garnered considerable attention in the professional literature. In the last twelve years, four special issues of *Consulting Psychology Journal: Practice & Research* have focused on executive coaching. The British Psychological Society launched a new journal in 2006, the *International Coaching Psychology Review*. The Society of Industrial and Organizational Psychology is devoting its 2008 Leading Edge Consortium to the topic of executive coaching. However, the research literature on executive coaching is quite limited.

Kilburg (2000) proposed the following definition of executive coaching, which appears consistent with the way executive coaching is generally described in the literature:

> a helping relationship formed between a client who has managerial authority and responsibility in an organization and a consultant who uses a wide variety of behavioral techniques and methods to help the client achieve a mutually identified set of goals to improve his or her professional performance and personal satisfaction and, consequently, to improve the effectiveness of the client's organization within a formally defined coaching agreement (p. 67).

In practice, executive coaching typically consists of three key elements: one-on-one counseling about work-related issues, use of 360-degree feedback on strengths and weaknesses as a starting point, and a goal of improving the manager's functioning in his or her current position (Feldman, 2001). Recipients of executive coaching are typically mid-level to senior executives (Judge & Cowell, 1997; McDermott, Levenson, & Newton, 2007). Coaching tends to be directed primarily at two types of leaders: those

who have performed well in the past but whose behaviors are not sufficient for current job requirements and those who are targeted for advancement to senior levels but are missing some specific skills (London, 2002).

Several review articles have summarized recent research on executive coaching (Feldman & Lankau, 2005; Joo, 2005; Kampa-Kokesch & Anderson, 2001; Mackie, 2007; Passmore & Gibbes, 2007). This research has focused primarily on the impact of coaching and on client (i.e., coachee) perceptions of effective coaching.

Studies of the impact of coaching have relied heavily on client reports of learning, change in behavior, and performance improvement. Interviews with the client are the most frequently employed data collection method. In general, these studies report that a majority of participants report positive outcomes from their coaching experiences (Feggetter, 2007; Hall, Otazo, & Hollenbeck, 1999; Kombarakaran, Yang, Baker, & Fernandes, 2008; McGovern et al., 2001; Olivero, Bane, & Kopelman, 1997; Wasylyshyn, 2003).

A few studies have used more rigorous research designs. Hernez-Broome (2002) compared leaders who participated in coaching following a leader development program to a paired group who participated in the program but did not engage in follow-on coaching (hence creating a control group). Those using coaching were more focused in forming their developmental goals and objectives, they were more successful in achieving their goals, and their new behaviors were more closely related to their roles as managers and leaders. Smither, London, Flautt, Vargas, and Kucine (2003) compared managers who worked with an executive coach after receiving multisource feedback with those who did not work with a coach after receiving feedback. Managers who worked

with a coach were more likely than other managers to set specific (rather than vague) goals, to solicit ideas for improvement from their supervisors, and to improve their multisource ratings one year later. Evers, Brouwers, and Tomic (2006) compared changes in self-efficacy beliefs and outcome expectations (two variables which, according to social learning theory, affect the likelihood of engaging in new behaviors) of 30 managers who engaged in coaching with those of 30 managers in a matched sample who did not engage in coaching. Self-efficacy beliefs and outcome expectations were measured before coaching began and four months later in three domains: setting goals, acting in a balanced way, and mindful living and working. Improvements in the coached group were significantly greater than in the noncoached group on two of the six measures (self-efficacy beliefs about setting goals and outcome expectations about acting in a balanced way). Kampa-Kokesch (2001) compared ratings on the Multifactor Leadership Questionnaire (which measures transactional and transformational leader behaviors) for executives in the early stages of coaching with those in the later stages of coaching. Only one significant difference was found on one of the transactional leadership scales.

Studies on coachee and client organization perceptions of effective coaches (Bush, 2005; Gonzalez, 2004; Jones & Spooner, 2006; McDermott et al., 2007; Luebbe, 2005; Wasylyshyn, 2003) have yielded a wide variety of elements seen as important for an effective coaching relationship, including the experience and credibility of the coach, qualities of the relationship (e.g., trusting, collaborative), skills of the coach (e.g., listening, providing candid feedback, summarizing), and the relationship of the coach with the client's organization. There is little consistency in findings across these studies, making it difficult to conclude that any of these elements are critical.

All of the review articles call for more rigorous research on the outcomes of executive coaching, including use of reliable measures, pre-post designs, control groups, and assessments of return on investment. Kampa-Kokesch and Anderson (2001) and Mackie (2007) note the need for more clarity in the field about the kinds of outcomes expected from coaching, which would lead to more consistency across studies in measures used to evaluate the effectiveness of coaching. Joo (2005) also notes that data are rarely collected from both the coach and the client in analyzing coaching outcomes. Kampa-Kokesch and Anderson (2001) and Passmore and Gibbes (2007) also call for better reporting of research in the literature. They found that existing published studies often provided limited information about research methodologies, samples, response rates, and the nature of the coaching intervention.

Additional research topics suggested by the reviewers include the following:

- The relative effectiveness of different approaches to coaching (e.g., psychodynamic, behaviorist, cognitive therapy, person-centered) and of different kinds of relationships (e.g., internal coaches vs. external coaches, employed by executive vs. employed by organization).
- Client, coach, and organizational factors that affect the coaching process and outcomes. Feldman & Lankau (2005) suggest using a practice-based model of coaching effectiveness (e.g., Kilburg, 2001) as a starting point for research on the coaching process.
- Patterns of coaching behaviors that are most helpful to clients.
- The development of positive coaching-client relationships.

- Organizational processes for choosing coaches, matching coaches with leaders, setting expectations, contracting, etc.

Action Learning

The roots of action learning are often traced to Revans (1982), who used the term to label a specific educational approach that encourages people to generate and apply knowledge from real-world situations. Although there are numerous ways that action learning is practiced, the approach has three main components: problems or issues that have no clear solution, people who will take responsibility for action on the issues, and a group of six or so colleagues who support and challenge each other to make progress on problems (Pedler, 1997). When one of the goals of action learning is leader development, the groups often take on team projects which focus on complex organizational challenges involving multiple stakeholders, such as the movement into new markets, the introduction of new technology, and the integration of organizational groups or processes. The team also focuses on individual and collective learning as they work on the projects, often guided by a coach who encourages reflection, dialogue, and feedback. How organizations make use of action learning has evolved in several directions. Action learning may be a component of a leader development program, a developmental component of an organizational change initiative, or part of an ongoing strategy for organizational learning (Marsick & O'Neil, 1999; Dotlich & Noel, 1998).

Considerable practical knowledge on implementing action learning programs is available (Dotlich & Noel, 1998; Marquardt, 1999; O'Neil & Marsick, 2007; Rimanoczy & Turner, 2008). On the other hand, research on action learning is quite limited. Most rely on interviews with program participants (see Smith & O'Neil, 2003). A few studies

stand out as examples of the kind of research needed to better understand the impact of action learning on leader development.

Raelin (1997) asked 41 program participants and their coworkers (boss, peers, and subordinates) to rate changes in the participant's behavior on 12 items reflecting "questioning competencies" (e.g., questioning of processes and norms in the group, ability to handle nonstandard problems, creativity when faced with new situations) and management skills. Individual and contextual data (demographics, personality, job situation, and organizational culture) were also collected from participants using well-established scales in the field. Average ratings of behavior changes were moderately positive with more change reported on the questioning competencies than on the managerial skills. Several individual difference and contextual variables predicted degree of change, including consistency of beliefs and actions, need for job challenge, organizational commitment, and organizational clarity.

Yorks et al. (1998) used an in-depth field study to examine the kinds of learning and learning transfer that took place in an international food company using action learning with senior managers as part of its efforts to become a more global organization. Data were collected through field observations and formal interviews with participants and others in the organization. The results suggest that the majority of participants experienced changes in some aspect of their "meaning schema" and transferred practices back to their work environments, although the degree of transfer varied. The importance of the post-training environment on transfer was also supported. Transfer was most visible when the boss had incorporated many of the skills and practices of the action learning program and when other workplace relationships were supportive.

Mentoring

A mentoring relationship is an intense, committed relationship in which a senior person (the mentor) stimulates and supports the personal and career development of a junior person (the protégé). There is a vast mentoring literature that has examined this phenomenon inside and outside the workplace. This literature has focused on the roles or functions of the mentor (e.g., sponsorship, coaching, protection, role modeling, and counseling), the phases of the mentoring relationship, the influence of mentor and protégé characteristics on the formation and quality of the relationship, and the impact of mentoring on job attitudes and career advancement. Meta-analytic studies support the career benefits associated with mentoring for the protégé; there were reliable, but small, effect sizes on several career outcomes (Allen, Eby, Poteet, Lentz, & Lima, 2004; Kammeyer-Mueller & Judge, 2007).

Although mentoring is engaged in across the organization (not just by those with leadership responsibilities) and its effects are broader than development (e.g., career advancement and satisfaction), two elements of the mentoring literature are relevant for understanding leader development: the link between mentoring and development, and formal mentoring programs designed for leader development.

Surprisingly, although mentoring theory assumes that individuals learn from mentors, there is little empirical work examining what and how protégés learn from their mentors. Both Hezlett (2005) and Lankau and Scandura (2007) have recently reviewed this research and proposed models to stimulate further research. Hezlett concludes that research tentatively supports the proposition that mentoring enhances protégés cognitive, skill-based, and affective learning. There is at least some evidence that protégés gain

organizational and technical knowledge; technical, interpersonal, time management, and self-management skills; and self-confidence. Lankau and Scandura distinguish short-term, context-specific personal learning (skill development and learning about one's job role in the organization) and long-term, context-free personal learning (developing self-awareness, ability to learn, and adaptability). They conclude that there is evidence that mentoring relationships can contribute to short-term, context-specific personal learning, and that mentor and protégé characteristics, such as perceived similarity and motivational orientation, affect the extent of personal learning experienced from the relationship. They also note an absence of empirical research on long-term personal learning. Clearly, more research is needed to understand what and how leaders learn from mentors.

Organizations have used formal mentoring programs for leader development, particularly in efforts to "fast-track" high-potential junior managers and to increase gender and racial diversity within the management ranks (Baugh & Fagenson-Eland, 2007; Douglas, 1997). In formal programs, the organization assigns mentors to protégés and supports and monitors the relationship for a specified period of time. Research has examined differences in the quality of relationships in formal and informal mentoring with mixed findings: some studies indicate that informal protégés receive more mentoring than formal protégés, while others find no differences (Baugh & Fagenson-Eland). Differences across studies may be attributed to variations in methodologies and measures; future research should examine whether any differences between formal and informal mentoring can be attributed to factors that influence the intensity of the relationship (e.g., differences in protégé expectations, in mentor motivation or skill, in frequency of interaction, or in length of relationships). Future research also needs to

examine whether learning outcomes are different in formal and informal mentoring relationships.

Finkelstein and Poteet (2007) provide a thorough review of mentoring program best-practice recommendations from the practitioner literature and summarize which recommendations are further supported by research. They conclude that perceived organizational support for the program, a clear set of objectives, agreed-upon expectations by both partners, and program evaluation are important. However, they note that many more questions about formal programs need to be addressed:

- How much organizational support is minimally necessary for a program to be successful?
- What level of participation in the mentor-protégé matching process is most desirable?
- What matching characteristics are more or less important?
- How does mentor-protégé similarity and dissimilarity impact the outcomes of the relationship?
- What kind of training do mentoring program participants need?

Research Opportunities

There appears to be a natural progression in research on leader development methodologies. Early research examines impact (does it work?). Once some evidence of impact is established, there is a surge of interest in moderators (for whom and under what conditions does it work best?), followed by a more in-depth look at process (why does it work?). Different leader development methodologies are at different stages in this progression. Research on development programs, multisource feedback, and mentoring supports the positive impact of these methodologies, and the research agenda now

includes a focus on moderators and a call for more research on process. Research on the impact of developmental assessment centers, executive coaching, and action learning is just beginning.

Two other methodologies—the systematic use of developmental assignments and the fostering of leader networks and communities—have received little research attention, although they are increasingly prominent in practitioner literature. As noted in the first section of this review, assignments and relationships are central in the leader's developmental path. And organizations are more intentionally using developmental assignments and supporting leader networks and communities of practice. The impact of these efforts have yet to be assessed.

Regardless of where a methodology is in its research progression, there are many gaps in knowledge where research is needed. Throughout this section, I have noted what expert reviewers recommend in terms of needed research in each of the methodology domains. However, there are several recommendations that cut across methodologies:

- Research within each methodology tends to look at the methodology as one method rather than a collection of many methods that share some common features. For example, there are numerous approaches to development programs or executive coaching. Instead of asking "Do leader development programs work?" or "Who gains the most from executive coaching?" a narrower focus would be useful. Instead ask "Do feedback programs work?" or "Who gains the most from psychodynamic approaches to coaching?" In addition, researchers should look for opportunities to compare different approaches within the same method. An excellent example is Tushman, O'Reilly, Fenollosa, Kleinbaum, and McGrath's (2007) comparison of an

education-oriented and an action-oriented version of the same executive leadership program.

- More research is needed that looks at the combination of methods. How might methods be combined for increased impact? For example, Smither et al. (2003) examined the impact of adding executive coaching to multisource feedback, and Hernez-Broome (2002) examined the impact of adding executive coaching to a leader development program.
- Internet technology is impacting all methods of leader development, from the online delivery of program content to e-coaching, e-mentoring, and virtual networks. Using technology to make leader development available to a geographically dispersed population of leaders (without the need to travel) is attractive to organizations. As organizations experiment with ways to make use of internet technology for leader development, this is an important opportunity to study the impact and efficacy of new technology tools.
- Leader development methods generated in the United States and Western Europe are being exported around the globe. Research on multisource feedback has begun to examine the reactions to and effectiveness of this method across different cultures. However, little research exists examining the impact of societal beliefs and norms on the dynamics and outcomes of the various leader development methods.
- A scan of 55 leader development programs by the W.K. Kellogg Foundation (2002) found that few of these programs articulated a "theory of change," i.e., a model delineating the intended outcomes of the program and how the elements of the program would facilitate change in service of those outcomes. This lack of an

articulated theory of development extends to other leader development methodologies. More theory-driven research on development methodologies would elevate knowledge beyond "what works" to "why it works"—a more generative form of knowledge that facilitates the development of new interventions built on the same principles but taking new forms.

- A "theory of change" perspective can be applied beyond the impact of leader development interventions on individual participants. Organizations invest in these interventions because they expect more developed leaders to have positive benefits for the organization—improved job performance, more effective teams, more leaders who can successfully take on higher levels of responsibility in the organization, enhanced employee satisfaction and retention, better strategy, more alignment, and better business results. Yet, there is often not an articulated rationale for how changes at the individual level impact these higher-order outcomes. As noted above, more research is needed focused on the link between individual development and the effectiveness of groups, teams, and organizations these individuals are part of.
- Likewise, there is little understanding of the ways in which group and organization context influences the impact of leader development interventions. The targeted outcomes of a leader development intervention (i.e., the competencies, expertise, or mindsets being developed) might be more or less aligned with what organizational members expect, value, and reward in leaders. In other words, the interventions "theory of leadership" might be different from implicit theories of leadership widely held by others in the organization. What happens in these situations? Are there times when the intervention can serve as a vehicle for changing cultural values and beliefs

about leadership and other times when those values and beliefs stymies the intervention?

Significant advancement in our understanding of leader development interventions requires more than research that addresses gaps in current knowledge. What's also required is a more interconnected research community that can more readily accumulate, share, and compare research on interventions. Currently, the research on leader development methods appears disconnected and somewhat piecemeal. Tools for encouraging and supporting such a community include the following:

- An archive of leader-development-intervention evaluation studies. As noted above, many of these evaluation studies are not published. The archive could request a standard set of information on all studies (e.g., research design, detailed information about the intervention, sample demographics, item-level information about measures, and results).
- A core set of common data collection tools (e.g., measures, surveys, interview questions). The field needs more shared conceptual frameworks and measurement tools. For example, Kram's (1985) framework of mentoring functions, which in turn generated several questionnaires designed (and tested) to measure those functions, have been regularly used across studies of mentoring. This consistency has made findings more clearly comparable and results increasingly cumulative.
- Settings (virtual or face-to-face) for input and advice on ongoing research, and for conversation and deliberation about leader development methods and the theories and central constructs that guide them.

The Leadership Learning Community (LLC) is an example of an effort to create a more interconnected research community (Meehan & Reinelt, 2007). LLC was founded in 2000 by a diverse group of leader development stakeholders: people who fund, run, deliver, study, and evaluate leader development programs. The group is primarily focused on the nonprofit sector and the development of leaders for social impact. Community members contribute their knowledge about effective leader development design and evaluation with the goal of elevating the practice of the entire field. Supported by the W.K. Kellogg Foundation and other foundations, LLC's work is accomplished primarily through self-organizing groups that are focused on a common issue or question and that experiment with tools and methodologies that support collective learning and knowledge generation. LLC is a model that can be replicated to create learning communities focused on specific leader development methods, audiences, of sectors.

Leader Development Practices in Organizations

Another type of research that examines leader development is benchmarking and best-practice studies. These studies systematically tap into the knowledge, perspectives, and opinions of those closest to and most experienced with leader development—human resource professionals and leaders themselves. Although data are typically collected from individuals, the unit of interest is the organization with the overall question being "What does the organization as a collective do to generate and support leader development in the organization?" These studies are typically sponsored or conducted by consulting firms or

membership organizations. A variety of methodologies are used; however, most can be categorized into one of three approaches:

- Surveys of HR professionals and line managers in a large number of organizations.
- Working groups that oversee the collection and synthesis of interview and survey data from a select group of organizations that have a reputation as effective at leader development (although the selection process and criteria are almost never explicitly described).
- In-depth review of the practices in a small number of organizations that have been carefully screened to meet best-practice criteria. Often practices in these organizations are compared to a convenience sample of other organizations.

A review of seven major leader development benchmarking and best-practice studies conducted in the last ten years yielded several consistent themes (see Table 1 for a description of the sample and methods used in each study).

Insert Table 1 About Here

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(1) *Leader development objectives and strategies are aligned with business strategy*. In best-practice organizations, leader development is closely tied to the vision, values, and goals of the business and serves as a driver of the achievement of these. Hence, leader development is examined as part of strategic planning processes.

(2) *Top-level executives are supportive of and involved in leader development*. Their involvement not only ensures alignment with corporate strategy but also conveys the importance of leader development work in the organization. Involvement includes

discussing leader development in executive team meetings, teaching in leader development programs, and mentoring and coaching others. Senior leaders maintain support through the ups and downs of the business performance cycle.

(3) *Responsibility for leader development systems is an HR-line partnership*. Although HR professionals bring expertise to the design of leader development systems, they work closely with line managers in crafting these systems and support line managers in their implementation.

(4) *Managers in the organization are held accountable for development of their direct reports*. Developing leaders is a growing measure of executive success and thus is often an element of performance appraisals. Some organizations allocate a portion of incentive compensation to demonstrated effectiveness at people development.

(5) *Leader development initiatives are integrated with other HR processes*. Leader development efforts are maximized when they are integrated and aligned with other HR practices, such as performance management, recruiting, and compensation. In best-practice organizations, succession planning and talent reviews are considered part of the leader development process (rather than a separate activity).

(6) *Leader development is available to employees at all levels of the organization*. In best-practice organizations, leader development begins early and is widespread in the organization. There is an emphasis on growing leaders as opposed to buying them, although this may vary depending on the nature of the business or marketplace. A foundation is the annual performance management process, in which all employees work with their boss to identify development goals and execute a development plan.

(7) *Extra developmental attention is given to high-potential leaders* (i.e., those employees expected to be successful at higher levels of responsibility in the organization). Attention is given to carefully identifying highnpotentials, and they are typically given more developmental opportunities (e.g., access to more stretch assignments, participation in high-visibility task forces and projects, access to developmental resources such as coaches and training programs, more attention from managers, and more targeted feedback about performance and potential). This focus on high potentials is not without its challenges in terms of managing the high potentials' expectations of the organization and the motivation of those not identified as high-potentials.

(8) *Competency models serve as guides for the focus of leader development*. It seems safe to say that all best-practice organizations have identified and described leadership competencies needed for success in the organization. More important, these competencies are agreed upon in the organization and widely used, not only in leader development initiatives but also in performance management, recruiting and staffing, and succession planning.

(9) *Multiple development methods are used*. Job experiences and coaching are often considered the most effective development methods, but they are complemented by customized training, online learning, 360-degree feedback, and mentoring. Best-practice organizations are more likely to focus on highly customized development (i.e., tailoring development activities to a leader's strengths, developmental needs, and career potential).

(10) *Leader development initiatives are evaluated*. Best-practice organizations invest in evaluating the impact of their leader development processes. For some, participant reactions and evidence of learning are sufficient; others pursue more thorough evaluations of behavior change and organizational impact. In addition to evaluating specific leader development interventions, these organizations develop metrics to monitor progress on system-wide leader development goals (e.g., percentage of internal promotions for management positions, number of developmental job moves). Several of the studies note that evaluation is often the least addressed area.

Research Opportunities

Research on leader development practices in organizations documents what organizations are doing to generate leader development—and what they experience as working the best. These studies are a rich resource for generating hypotheses and measures for more systematically examining factors that differentiate the organizations that are more successful at developing effective leaders from those that are less successful.

An important first step is the development of assessments of an organization's leader development system. Based on the best-practice studies, such an assessment would include the following:

- Documentation of the formal development processes in place (e.g., development programs, multisource feedback, and development plans) and the extent of their use at different levels of the organization.
- The degree to which various system qualities are present (e.g.,, clear connection to organizational strategy, integration across elements of the system, cooperation among

various groups responsible for different elements of the system, and ongoing system evaluation and improvement).

- An employee survey of the organization's climate for development. The survey would assess the degree to which development is valued in the organization as reflected in the actions of top management, resources available, organizational metrics, reward systems, and organizational communications.
- Desired outcomes of the system (e.g., the caliber of leaders in the organization, the ability to fill leadership positions from within the organization, the organization's reputation as a developer of leaders, and organizational performance).

With data collected on such an assessment across organizations, relationships between elements of a leader development system and leader development outcomes could be systematically tested. And how effective leader development systems might vary by context (e.g., type of organization, organizational life cycle, and organizational culture) could also be examined.

Another opportunity for understanding how elements of a leader development system are related to the organization's ability to develop effective leaders is by studying the impact of the introduction of new elements to the system or changes in the system. For example, what is the impact of introducing a competency model, or a practice that holds managers more accountable for the development of their employees, or a process for using developmental assignments more systematically? This is another fruitful arena for research-practitioner collaboration.

One way that best-practice research can continue to make contributions to the understanding of how organizations can best foster leader development is by

documenting the challenges organizations face in building effective leader development systems and how they successfully deal with these challenges. Examples:

- A strong theme throughout the best practices literature is the critical role that leaders themselves play in developing other leaders—and the particular importance of the boss-employee relationship. However, the typical dynamics of the boss-employee relationship can be both a facilitator of development (e.g., the employee's development can directly benefit the boss; the boss often works closely with the employee and thus can provide regular and relevant feedback) and an impediment to development (e.g., bosses tend to reward employees for current performance, which may discourage employees from taking on developmental tasks). How do organizations shape the boss-employee relationship to maximize its developmental outcomes?
- The development of high-potential leaders is often a central concern of organizations. In identifying a pool of high-potential leaders, organizations create a number of challenges, including the pressure to move high-potential leaders more quickly through the hierarchy and uncertainty about how much transparency to have about who is considered high potential and who isn't. Can the development of high-potential leaders be accelerated, for example, through particular development experiences or interventions? And does telling individuals their status (high potential or not) have any negative consequences on their motivation or development?
- The strong reliance on competency models as a guiding framework for leader development in organizations also generates challenges. To be effective, do leaders need to be competent at all the elements of the framework? By focusing on

competencies, are other important targets of development ignored (e.g., experiences, tacit knowledge, meaning structures)? Does the development of a competency model serve to align organizational members' implicit leadership theories? To what degree do leader competency models need to change over time as organizational challenges and strategies change?

- If a large portion of a leader's development occurs through challenging assignments and relationships in the workplace, how do organizations make better use of these naturally occurring phenomena for learning? In other words, how can leaders develop more effectively in the context of work? And how can more formal interventions like feedback, coaching, and programs be in service to, rather than separate from, ongoing work-based learning and development? The challenge at both the individual and organizational level is in balancing the need for day-to-day work to generate effective performance and the opportunity to learn.
- Another controversy in the practice literature is whether more emphasis should be placed in leader development on identifying, refining, and enhancing a leaders' strengths or identifying and improving leaders' weaknesses or deficits. Although the negative impact of some deficits on leader effectiveness has been documented (Hogan & Hogan, 2001; Van Velsor & Leslie, 1995), research is needed to better understand the gains in effectiveness that can be achieved from honing a strength or from improving a weakness. And we need to better understand the degree to which leaders can improve capabilities that may not come naturally to them.

Conclusions

Research on leader development has examined this phenomenon from three perspectives: the developing leader, developmental methodologies, and development-fostering organizational practices. Research from each perspective has yielded useful knowledge. By focusing on the leader, we have learned about the developmental experiences in leaders' lives. By focusing on methodologies, we have learned about effective interventions for leader development. By focusing on organizational practices, we have learned about factors that differentiate organizations that are more successful at developing effective leaders from those that are less successful.

However, there remains much to learn about leader development. Table 2 summarizes research questions identified in this review from each of the three perspectives. As noted in the table, each stream of research serves a broad practical question, began with a focal research question (shown in italic), and has a number of remaining questions which have been barely explored—if at all. Broadly speaking, these questions go beyond the impact of experiences, methods, and organizational practices to examine moderators, patterns, learning processes, cultural influences, cross-level impact, and challenges.

Insert Table 2 About Here

What the three perspectives have in common is a focus on the "development" in leader development. Their models and constructs draw heavily on adult learning and

development literatures. A fourth potential perspective—one that focuses more on the "leader" in leader development—is also presented in Table 2. It is driven by the practical question of what should be developed in leader development. It more directly addresses the question raised at the beginning of this review: What develops in leader development? And it connects leader development research more directly to leadership theory and research. Because the "what" of leader development is potentially quite broad, research from this fourth perspective needs to find ways to narrow its focus, for example:

- Focus on a core leader capability: Are there a few core capabilities that equip leaders to be more effective in many contexts? A number of such capabilities have been proposed in the leadership literature, including self-awareness, adaptability, ability to learn, interpersonal skills, motivation to lead, and cognitive complexity. Which of these are more susceptible to development? And what experiences and interventions best develop each? Research on the development of foundational leader capabilities would help organizations (and society) better prepare individuals for a wide variety of leadership roles and processes.
- Focus on a particular leadership role or context: What are the capabilities needed by team leaders or business unit leaders or leaders in roles with little formal authority? Which of these are most developable? What experiences, interventions, and organizational practices best prepare people for theses roles?
- Focus on the future: How is the world of work changing and what impact do these changes have on leadership capabilities? Again the leadership literature is a resource to inform this focus. For example, leaders are seen as needing to be increasingly collaborative, able to deal with complexity, skilled at working with diverse

employees, and responsible for their own development. Many of the changes are calling for shifts in mental models and for new domains of expertise. What impact does this have on how leader development is accomplished?

And finally, in addition to expanding the questions that we ask in leader development research, it is worthwhile to expand our research methodologies. A positive aspect of the leader development field is that it has been open to a variety of methodologies, making use of both qualitative and quantitative data. However, several types of research are underutilized: longitudinal studies that examine the process of development over time, methods that capture an extensive accounting of leaders' developmental experiences across their careers, quasi-experimental designs to study leader development interventions, programs of research that utilize and refine standard data collection tools for studying leader development, and in-depth case studies of the implementation of organizational practices that support leader development. Because it is a complex phenomenon, we will broaden and deepen our understanding of leader development by viewing it through the different perspectives made possible through diverse methodologies.

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Table 1

Recent Leader Development Best Practices Studies

Sponsoring Organization	Year	Method and Sample
American Management Association	2005	Online survey completed by 1,573 managers. Twenty-seven percent were in human resources. Two-thirds were from the United States and Western Europe. Fifty-eight percent were in organizations with more than 1,000 employees.
APQC	1998	In-depth case study of six best practice organizations: • Arthur Anderson • General Electric • Hewlett-Packard • Johnson & Johnson • Shell International • The World Bank Questionnaires completed by best practice organizations and 19 comparison organizations.
APQC	2006	In-depth case studies of five best-practice organizations: • Caterpillar • Cisco Systems • PepsiCo • PricewaterhouseCoopers • Washington Group International Questionnaires completed by best practice organizations and 14 comparison organizations.
Bersin and Associates (Lamoureux, 2007)	2007	Surveys completed by 773 leadership development managers (48 percent in organizations with less than 2500 employees). Interviews with 40 managers responsible for enterprise leadership development.

The Conference Board	2002	Surveys completed by 150 companies. Interviews with 31 leadership development practitioners in “well-regarded” organizations and 22 thought leaders. Input from working group (sponsors of the study) consisting of 35 HR practitioners, primarily from large international organizations.
Council for Excellence in Management and Leadership (Burgoyne, 2001)	2001	Interviews with 21 directors responsible for leader development in large companies with a strong UK base. Literature review.
Hewitt Associates	2005	Twenty organizations chosen by a panel of authors, professors, and coaches based on survey and interview data, company reputation, industry trends, and diversity practices. Questionnaires completed by organizations and interviews with internal leadership development practitioners in each organization.

Table 2

Summary of Leader Development Research Questions

The Leader's Developmental Path
Practice Question: How do we develop more leaders? Research Questions: • *What experiences are developmental for leaders? Are different experiences developmental for leaders of different genders, ethnicities, or nationalities?* • Under what conditions do leaders learn the most from these experiences? • Do some leaders learn more or develop in different ways from similar experiences? • Are there combinations, patterns, or sequences of experiences that predict particular developmental outcomes? • What processes drive learning in these experiences? Do different types of experiences make use of different learning processes?
Methods of Leader Development
Practice Question: What kinds of interventions promote leader development? Research Questions: • *Do leaders develop from participating in development programs, multisource feedback, developmental assessment centers, executive coaching, action learning, mentoring, developmental assignments, and leadership networks?* • Under what conditions do leaders learn the most from each of these methodologies? • Do some leaders learn more or develop in different ways from the same developmental intervention? • Within each method, what variations in the methodology matter (e.g., yield different outcomes, have greater impact for certain subgroups)? • What is the impact of combinations of methods? • How is internet technology affecting the design of each method and with what impact? • What are the reactions to and effectiveness of each method across cultures? • What processes drive learning in each intervention method? • When and how does leader development produce change at the group and organization levels? • How does a leader's group or organizational context influence the impact of leader development interventions?

Leader Development Practices in Organizations
Practice Question: What do organizations need to have in place to foster leader development? Research Questions: • *What differentiates organizations that are more successful at developing effective leaders from those that are less successful?* • Do these success factors vary by context (e.g., type of organization, organizational life cycle, and organizational culture)? • What challenges do organizations face in building these success factors into their organizational systems? How do they successfully deal with these challenges?
Targets of Leader Development
Practice Question: What should be developed in leader development? Research Questions: • Are there core leader capabilities that predict leader effectiveness across roles and contexts? Which of these are more developable? • Are there core leader capabilities that predict leader effectiveness for particular types of leadership roles or contexts (e.g., team leaders, business unit leaders, leadership roles with low formal authority, and leading a diverse group of employees)? Which of these are more developable? • How are changes in the world of work impacting the capabilities needed by leaders? • What types of experiences and interventions best develop particular leader capabilities?

Appendix A

Multisource Feedback Studies

Validity of Multisource Ratings	
Multisource ratings are positively associated with assessment center ratings. Self-ratings are not correlated with assessment center ratings.	Atkins & Woods, 2002 Warech, Smither, Reilly, Millsap, & Reilly, 1998
Multisource ratings are moderately correlated with performance appraisal ratings.	Beehr, Ivanitskaya, Hansen, Erofeev, & Gudanowski, 2001 Ostroff, Atwater, & Feinberg, 2004
Multisource ratings are positively associated with objective performance outcomes (e.g., production, retail store outcomes, customer loyalty, turnover in workgroups).	Conway, Lombardo, & Sanders, 2001 Erickson & Allen, 2003 Smither & Walker, 2001 Church, 2000
Performance Improvement as a Result of Multisource Feedback	
Positive performance improvement occurs as a result of multisource feedback; however, magnitude of improvement is small.	Smither, London, & Reilly, 2005 (meta-analysis of 24 longitudinal studies)
Though small changes may be made after multisource feedback, significant results may not be seen for a year or two.	Atwater, Waldman, Atwater, & Cartier, 2000 Walker & Smither, 1999
Leaders who initially overrate themselves and leaders who initially receive low ratings improve more than others.	Atwater, Rouch, & Fischthal, 1995 Johnson & Ferstl, 1999 Smither et al., 1995 Walker & Smither, 1999
Self-efficacy moderates the relationship between multisource ratings and performance improvement; those with high self-efficacy showed a greater increase in performance.	Hesline & Latham, 2004 Bailey & Austin, 2006

Participants who are cynical about the organization or who are unclear about how multisource feedback fits into organizational goals are less likely to improve and may resist the process.	Atwater, Waldman, Atwater, & Cartier, 2000 Waldman & Atwater, 1998
Improvement is more likely when managers perceive a need to change.	London & Smither, 2002 Smither, London, & Reilly, 2005
Leaders who meet with raters as a group after receiving feedback are more likely to realize improvements.	Walker & Smither, 1999 Goldsmith & Underhill, 2001
Leaders who worked with a coach after receiving feedback are more likely to improve.	Smither, London, Flautt, Vargas, & Kucine, 2003 Luthans & Petersen, 2003
Age, cynicism, perceptions of accuracy of feedback, and perceived organizational support predicts self-reported behavior change.	McCarthy & Garavan (2006)
Individual Differences in Reactions to Multisource Feedback	
Individuals with high self-esteem, internal locus of control, openness to experience, a learning goal orientation, and high self-efficacy had more positive attitudes toward multisource feedback.	Brett & Atwater, 2001 Funderburg & Levy, 1997 Mauer & Palmer, 1999 Mauer, Mitchell, & Barbeite, 2002 Smither, London, & Richmond, 2005
Leaders who perceived support from coworkers and supervisors for development activities reported more positive attitudes toward the feedback system and were involved in more development activities.	Mauer, Mitchell, & Barbeite, 2002
Leaders with more positive attitudes toward the feedback process were more motivated following feedback; those who expressed more motivation subsequently improved in terms of direct report ratings and those who expressed negative emotions showed a decline in direct report ratings.	Atwater & Brett, 2005

Feedback recipients with fewer negative emotions used the feedback more constructively.	Facteau, Facteau, Shoel, Russell, & Poteet, 1998
Characteristics of Feedback and Reactions to Feedback	
Feedback recipients with positive ratings viewed the process as more accurate and useful than those with negative ratings.	Brett & Atwater, 2001
Managers receiving negative feedback set more improvement goals than those who received positive feedback.	Brutus, London, & Martineau, 1999 Smither, London, Flautt, Vargas, & Kucine, 2003 Mesch, Farh, & Podasakoff, 1994
Overraters reported more negative reactions and viewed the feedback as less accurate.	Brett & Atwater, 2001
Leaders who received low ratings and overrated themselves were more motivated than leaders who received low ratings and gave themselves low ratings.	Atwater & Brett, 2005
Individuals with high core self-evaluations were most committed to developmental goals when self and others' ratings were discrepant; individuals with low core self-evaluations were most committed to developmental goals when self and others' ratings were in agreement.	Bono & Colbert, 2005
Multisource Feedback Process	
Rater anonymity is needed for honest responses.	Antonioni, 1994 Brutus & Derayeh, 2002
Data collection method (electronic vs. paper-and-pencil) did not influence feedback scores.	Smither, Walker, & Yap, 2004

Text feedback was reacted to significantly less favorably than numeric feedback.	Atwater & Brett, in press
Multisource feedback processes used for development as compared to those used for administrative purposes: Ratings are less likely to be affected by rater biases, employees believe they are more likely to produce positive outcomes, leaders are more likely to select raters who will provide accurate ratings, and ratings are more strongly related to performance improvement.	Bettenhausen & Fedor, 1997 Greguras, Robie, Schleicher, & Goff, 2003 Brutus & Petosa, 2002 Smither, London, & Reilly, 2005

Primary Sources: Atwater, Brett, & Charles, 2007; Smither, London, & Reilly, 2005.