



Advances in leader and leadership development: A review of 25 years of research and theory

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ABSTRACT

The development of effective leaders and leadership behavior is a prominent concern in organizations of all types. We review the theoretical and empirical literature on leader and leadership development published over the past 25 years, primarily focusing on research published in *The Leadership Quarterly*. Compared to the relatively long history of leadership research and theory, the systematic study of leadership development (broadly defined to also include leader development) has a moderately short history. We examine intrapersonal and interpersonal issues related to the phenomena that develop during the pursuit of effective leadership, describe how development emerges with an emphasis on multi-source or 360-degree feedback processes, review longitudinal studies of leadership development, and investigate methodological and analytical issues in leader and leadership development research. Future research directions to motivate and guide the study of leader and leadership development are also discussed.

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1. Introduction and overview

Leadership development has emerged as an active field of theory building and research, providing a more scientific and evidence-based foundation to augment the long-standing practitioner interest in the topic. This emergence has transpired primarily over the last 10 to 15 years and *The Leadership Quarterly* has played a major role as an important outlet for this work. The purpose of this article is to review those advances, highlight their respective contributions, and identify areas in need of future research.

The purpose of this review is to identify advances in scholarly approaches to leader development (intrapersonal, focused on individual leaders), leadership development (interpersonal, focused on enhancing leadership capacity), and related topics that have been featured in this journal over the previous 25 years. The good news is that much has changed. There have been significant contributions to understanding leadership development (broadly defined to also include leader development) as well as multi-source or 360-degree feedback processes. The latter represent important process tools for enhancing leadership development. Although a lot of new knowledge has been generated in the previous 25 years, there is much more that needs to be learned. For that reason we will review the articles and special issues in *The Leadership Quarterly* since its beginning that have contributed to these scholarly advances. We will also highlight areas where additional focus is needed in terms of building a stronger evidence-based foundation for leadership development and feedback processes.

We begin by elaborating on how and why leadership development is different from the broader field of leadership theory and research. In doing so, we wish to demonstrate that more fully understanding leadership development goes far beyond merely

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choosing a particular leadership theory and training people in behaviors related to that theory. Leadership development is a complex topic that is deserving of scholarly attention with regard to theory and research independent of what has been studied more generally in the field of leadership.

The structure of this review is as follows. First, the content or the “what” of leadership development will be examined to summarize the phenomena that develop and what factors play a role in developing successful leadership skills and potential. This section will include *intrapersonal* factors (mainly relevant to leader development) as well as *interpersonal* factors (relating more to leadership development). Second, we consider process issues or the “how” in leadership development. The goal of this section is to describe the ways in which leadership development emerges in organizations and the practices that can be implemented to facilitate effective leadership. Third, we review a series of recent pieces that address aspects of longitudinal studies of leadership development. These are theoretical and empirical contributions that provide valuable insights into the longitudinal nature of leadership development. Fourth, we investigate how leadership development has been assessed or evaluated in the literature, thus promoting a scholarly understanding of evaluation methods in leadership development research. We conclude with an agenda for future research on the topic of leadership development. Whereas many of the pieces we review overlap multiple categories, our hope is that this structural framework provides a clear yet comprehensive understanding of the relevant theory and research pertaining to leadership development.

2. Leader and leadership development: research and theory

There is a relatively long history of leadership theory and research spanning more than a century (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009); however, in comparison, there is a fairly short history of rigorous scholarly theory and research on the topics of leader and leadership development. As noted by Day (2000), the distinction between developing leaders and developing leadership is potentially an important one. Leader development focuses on developing individual leaders whereas leadership development focuses on a process of development that inherently involves multiple individuals (e.g., leaders and followers or among peers in a self-managed work team). But given the keen attention paid to leadership theory historically, there appears to be a widespread misperception that if that the field could just identify and agree on the “correct” leadership theory then the development piece would inevitably follow. It turns out that this is not so simple. Developing individual leaders and developing effective leadership processes involve more than simply deciding which leadership theory is to be used to motivate effective development. This is so because human development involves a complex set of processes that need to be understood. Given that individual leader development occurs in the context of ongoing adult development (Day, Harrison, & Halpin, 2009), we need to focus on development as much as leadership to shed light on how this process unfolds.

One of the reasons leadership theory and research have contributed little to leadership development is a long-standing focus linking personality with leadership. If personality is conceptualized in terms of traits that summarize relatively enduring dispositional tendencies (House, Shane, & Herold, 1996), then its relevance for studying development (i.e., change) is questionable. Another popular approach in leadership research that is likewise limited in its developmental usefulness is the behavioral approach. Although behaviors can be learned, the primary intervention focus associated with leadership behaviors tends to be based on training rather than on longer-term development initiatives. Training typically involves providing proven approaches to solve known problems but the challenges facing contemporary leaders tend to be too complex and ill-defined to be addressed successfully through such relatively short-term training interventions. As a result of these challenges, the nascent fields of leader and leadership development tend to focus less on leadership theory and more on developmental science. In other words, there has been a change in focus associated with studies of leadership development broadly defined, away from leadership research and toward understanding and enhancing developmental processes.

Another important difference is that the nature of leadership development is inherently multilevel and longitudinal (Day, 2011). Specifically, studying development involves mapping and understanding within- and between-person change patterns – as well as those involving groups, teams, and larger collectives – over time. To contribute to greater understanding of how leaders and leadership processes develop and change, relevant theory and research should reflect both the multilevel and the longitudinal nature of development. This longitudinal, multilevel focus means that intrapersonal and interpersonal processes are central to leadership development over time.

3. Intrapersonal content issues in development

In terms of intrapersonal content (see Table 1 for a summary), a relevant question is what develops as a function of leader development? Additionally, are there individual differences that affect these interventions? Researchers such as Lord and Hall (2005) have noted the importance of individual identity in developing leadership skills and expertise as part of the leader development process. Other researchers have examined issues of cognitive and metacognitive skills at the core of leadership potential (Marshall-Mies et al., 2000), as well as various approaches to understanding the underlying patterns of leadership skills (Mumford, Campion, & Morgeson, 2007; Mumford, Marks, Connelly, Zaccaro, & Reiter-Palmon, 2000; Mumford et al., 2000). Moreover, the role of personality has also been examined as a predictor of leadership styles (deVries, 2012) as well as leader performance (Strang & Kuhnert, 2009). All of these issues involving skills, experience, learning, and personality are central to the notion of developing the expert leader (Day et al., 2009; Lord & Hall, 2005). Research and theory on leader self-development also contribute to our conceptual understanding of intrapersonal content issues.

Table 1
Intrapersonal and interpersonal content issues in leadership development.

Topics	Summary	Source
<i>Intrapersonal</i>		
Experience and leaning	Leaders' previous work history as well as the leadership relevance of previous positions held (as opposed to tenure) should be considered in decisions about the kinds of experiences that enhance leader development.	Bettin and Kennedy (1990)
	Leadership development occurring in adolescence can be shaped, in part, by parental modeling.	Zacharatos et al. (2000)
	A leader's level of experience plays a role in determining how much he or she will learn, but at the same time, not all leaders learn at the same rate or in the same way.	Hirst et al. (2004)
Skills	Although certain kinds of experience may encourage skill development at one point in time in a leader's career, others might be more advantageous at a different time.	Mumford, Marks et al.(2000)
	Whereas individuals with specific skill types are more inclined to hold senior level leadership positions (such as those who scored high on achievement), there is still a fair amount of diversity in terms of ability, personality, and motivational characteristics across leaders at the same level.	Mumford, Zaccaro et al. (2000)
	Six skills relevant for creative problem solving of high-level leaders include general problem solving, planning and implementation, solution construction, solution evaluation, social judgment, and metacognitive processing (i.e., knowledge of one's cognitive processes).	Marshall-Mies et al. (2000)
	As leaders assume more senior positions in an organizational, the acquisition of strategic and business skills will be more important for effective performance than the acquisition of interpersonal and cognitive skills.	Mumford et al. (2007)
	Effective leadership entails developing and integrating wisdom, intelligence, and creativity.	Sternberg (2008)
	Identity, meta-cognitive, and self-regulation processes are crucial to the refinement of knowledge structures and information processing capabilities associated with leadership expertise.	Lord and Hall (2005)
Personality	Conscientiousness can be a significant predictor of leader performance.	Strang and Kuhnert (2009)
	Different patterns of personality tend to be more equally representative at junior level leadership positions compared to more senior level positions.	Mumford, Zaccaro et al. (2000)
Self-development	Work orientation, mastery orientation, and career-growth orientation facilitate leader self-development activities.	Boyce et al. (2010)
	Specific organizational-level (i.e., human resources practices) and group-level (i.e., supervisor style) constructs can promote leader self-development.	Reichard and Johnson (2011)
<i>Interpersonal</i>		
Social mechanisms	The creation of positive learning environments in which education about other groups occurs, innovation is supported, and cultural communication competence is encouraged, facilitates high quality relationships in diverse leader–member dyads.	Scandura and Lankau (1996)
	Leadership development practices can shape social capital development stages (such as networking, mentoring, leadership training, and job assignments) in a variety of ways.	Galli and Müller-Stewens (2012)
Authentic leadership	Authentic leadership development involves “ongoing processes whereby leaders and followers gain self-awareness and establish open, transparent, trusting and genuine relationships, which in part may be shaped and impacted by planned interventions such as training” (p. 322).	Avolio and Gardner (2005)
	The positive outcomes of authentic leader–follower relationships include heightened levels of follower trust in the leader, engagement, workplace well-being, and sustainable performance.	Gardner et al. (2005)
	Authentic leaders develop authentic followers through positive modeling.	Ilies et al. (2005)
	Positive other-directed emotions (e.g., gratitude, appreciation) will motivate authentic leaders to behave in ways that reflect self-transcendent values (e.g., honesty, loyalty, and equality).	Michie and Gooty (2005)
	The attainment of relational authenticity, wherein followers afford leaders the legitimacy to promote a set of values on their behalf, is challenging for many women in positions of authority, and thus, the development of women leaders should focus on the relational aspects of achieving authenticity as a leader.	Eagly (2005)
	There is a need for empirical evidence evaluating the underlying principles of authentic leadership theory.	Cooper et al. (2005)

3.1. Experience and leaning in development

Although there is a long-held assumption on the part of both practitioners and researchers that experience plays an important role in developing effective leadership, research suggests that the empirical evidence for this assumption is far from definitive (Day, 2010). Leadership involves a complex interaction between people and their social and organizational

environments (Day, 2000). Therefore, simply correlating a leader's performance with the number of months he or she has been in a job or organization is inadequate (i.e., contaminated and deficient) in capturing the full effects of something as nuanced as experience.

Bettin and Kennedy (1990) addressed these conceptualization and measurement concerns by examining several different ways that experience can be measured in organizations. They argued that a limitation in the research on experience and leader development is the use of tenure or length of time in a job or organization as a proxy for experience. They studied biographies of 84 U.S. Army Captains who all had very similar years of experience. Experience was assessed by experts who rated the biographies according to the knowledge, skills, or practice that the Captains gained from their current position and the leadership relevance of previous positions. When measured in this manner, experience was found to be a significant predictor of leadership performance; however, time in service and number of previous positions were unrelated to leadership performance.

The results of the Bettin and Kennedy (1990) study suggested that whereas time and experience are not mutually exclusive – it does take time to gain experience – it is important for scholars to be mindful that using time as a proxy for experience is limited. Moreover, the authors offered leadership scholars an appropriate conceptualization of experience as the relevant skills, knowledge, and practice acquired while holding various jobs that may be relevant to research on the role of experience in leader development. These findings also have practical implications in terms of taking into account individuals' previous work history as well as the leadership relevance of the previous positions held in making decisions about the kinds of experiences that enhance leader development.

Zacharatos, Barling, and Kelloway (2000) extended this focus on individual experience and leader development by studying adolescents' observations of transformational leadership behaviors exhibited by their respective parents and how this experience was associated with their leadership effectiveness within a team context. Transformational leadership (Bass & Riggio, 2006) is conceptualized around four interrelated components: (a) idealized influence, (b) inspirational motivation, (c) intellectual stimulation, and (d) individualized consideration, and is one of the most frequently studied leadership approaches in the leadership literature (Day & Antonakis, 2012). To better understand how transformational leadership behaviors develop in youths, Zacharatos et al. (2000) invoked social learning theory to explain the influence that parental modeling can have on the development of adolescents' leadership. The research focused on a sample of 112 Canadian high school students who were members of different sports teams. Adolescents' perceptions that their parents demonstrated transformational leadership behaviors were associated with a greater likelihood that these adolescents exhibited similar leadership behaviors. Also, those adolescents who displayed transformational behaviors were rated as more satisfying, effective, and effort-evoking leaders by their peers and coaches in their particular team context. In terms of leadership development, this study suggests that development of leadership (particularly transformational leadership) can start in adolescents and is likely shaped, in part, by parental modeling.

In a year-long empirical study of R&D teams, Hirst, Mann, Bain, Pirola-Merlo, and Richter (2004) examined the role of learning and individual differences in the development of facilitative leadership behaviors. Facilitative leadership endorses respect and positive relationships among team members, constructive conflict resolution, and candid expression of thoughts and attitudes. The authors grounded their hypotheses in action learning theory, proposing that leaders “learn from challenging work, from solving complex problems, and from leading a team, and that they use this knowledge to foster team communication and enhance team performance” (p. 321). But not all leaders learn at the same rate or in the same way. The authors supported their contention that leaders who are better able to learn from their experiences tended to engage in greater levels of facilitative leadership. This learning of facilitative leadership behaviors was, in turn, associated with higher levels of team reflexivity and performance.

Hirst et al. (2004) also found support for their hypotheses that a leader's level of experience will determine how much he or she will learn and, further, experience will moderate the relationship between leadership learning and facilitative leadership. Less experienced leaders simply have more to learn and are more likely to encounter novel situations than their more veteran counterparts. The schemas and implicit leadership theories of inexperienced leaders are likely to be less complex or crystallized, and thus are more amenable to change. This is not meant to suggest that experienced leaders are incapable of learning or translating that learning into their leadership behaviors, but rather that they must work harder to integrate new knowledge into their established cognitive frameworks. Another important finding from this research involved the time lag (ranging from 4 to 8 months) between leadership learning and facilitative leadership behavior enactment. The authors surmised that this “may reflect the interval between gaining new insight and grasping an understanding of how best to translate this knowledge into leadership behavior” (p. 322). In other words, it takes time for leaders to progress from a conceptual understanding of their facilitative role to the procedural expression of their leadership competence through specific facilitative behaviors.

3.2. Skills and development

At the turn of the 21st century, leadership scholars began focusing attention on the particular leadership skills that can be acquired through development processes. For instance, Mumford, Marks et al. (2000) and Mumford, Zaccaro et al. (2000) used U.S. military samples to examine the skills acquired over the course of a leader's career and how these skills are acquired. The researchers examined complex problem-solving skills, creative thinking skills, social judgment skills, solution construction skills, and leader knowledge or expertise. In order to describe changes in these skills from lower to higher level leadership positions, Mumford, Marks et al. (2000) illustrated that scores on assessments of these skills increased from junior-level positions (e.g., second

lieutenant, first lieutenants, and junior captains) to mid-level positions (e.g., senior captains and majors) and from mid-level to upper-level positions (e.g., lieutenant colonels and colonels). They also found that certain skills were more important at certain phases of a leader's career. In particular, technical training was found to be more strongly related to skill increases moving from junior to mid-level positions whereas more advanced professional training was more strongly related to increases in requisite complex problem-solving skills as leaders moved from mid-level to more senior positions.

The findings of Mumford, Marks et al.'s (2000) study of differences in leadership skills across six grade levels of officers in the U.S. Army offer useful theoretical and practical implications for those interested in leadership development. Specifically, their findings supported their proposed organization-based model of leader skill development, which suggests that skill development depends on learning as people interact with their environment. It also explains that skill development can occur over a long period of time and that this process is progressive, moving from simple aspects of development to more complex, integrated components. These findings also suggest that whereas certain kinds of experience may encourage skill development at one point in time in a leader's career, others might be more beneficial at a different time. Thus, they recommended that training assignments should be carefully tailored to current developmental needs, which, of course, is easier said than done.

In a related study, Mumford, Zaccaro et al. (2000) were interested in identifying types or subgroups of individuals entering into the U.S. Army according to ability, personality, and motivational characteristics, as well as determining which of these types were found in more senior positions. They identified seven different types of individual profiles: *Concrete Achievers* were those high on achievement and planning; *Motivated Communicators* were extraverted, dominant, responsible, and high in achievement needs; *Limited Defensives* were introverted, and scored high in areas of sensing, thinking, and judging; *Disengaged Introverts* were also introverted but scored high on intuition, perception, and planning; *Social Adaptors* were extraverted, and scored high in feeling, perception, and openness; *Thoughtful Innovators* were introverted, intuitive, achievement-oriented, and open; and *Struggling Misfits* were those who did not score high on any of the measures.

Results suggested that all seven of these groups were well represented in junior officers, with at least 10% to at most 20% of the officers being found in each subgroup. Whereas group representation was more uniform at the junior officer level, a different pattern of group membership emerged at the more senior level. Specifically, members of three of the subgroups – Motivated Communicators, Thoughtful Innovators, and Social Adaptors – were represented with greater or equal frequency at the senior officer level compared to the junior officer level, with Motivated Communicators and Thoughtful Innovators being especially pronounced with 40% and 26% of the sample, respectively. These findings suggest that whereas individuals with specific skills types are more apt to hold upper level leadership positions there is still a good deal of diversity in terms of ability, personality, and motivational characteristics among leadership incumbents at the same level. The authors encouraged practitioners and scholars to recognize that the development process is holistic in nature and that different types of people will be needed to fill different types of organizational leadership roles.

In an effort to identify and appropriately measure specific skills related to effective senior-level leaders, Marshall-Mies et al. (2000) created and tested an on-line computer-based cognitive and metacognitive (i.e., knowledge of one's cognitive processes) skill assessment battery called the Military Leadership Exercises. In doing so, they first identified complex cognitive and metacognitive skills relevant for creative problem solving in high-level leaders. The cognitive skills included general problem solving, planning and implementation, solution construction, solution evaluation, and social judgment. Metacognitive processing was measured as individuals' awareness of prior understandings as evidenced by their ability to reevaluate these understandings over time in light of new information. The skills were assessed using complex and domain-specific (i.e., geared towards the military) situational leadership scenarios, which were used to predict performance outcomes. This study contributes to our understanding of leader development by describing skills that are important to senior-level leaders as well as by providing a way in which these skills can be measured.

Other researchers have since investigated different patterns of skills that are important to leaders and leadership development. In particular, Mumford et al. (2007) presented four leadership skill requirements (cognitive, interpersonal, business, and strategic) as a *strataplex*, conceptualized as layered (strata) across the organization and segmented (plex) into a specified number of parts. Findings from their study on approximately 1000 junior, midlevel, and senior managers supported the proposed *strataplex* approach and demonstrated that specific skill requirements vary by organizational level. In addition, they proposed that as managers are promoted to more senior roles, the acquisition of strategic and business skills will be more important for effective performance than the acquisition of interpersonal and cognitive skills.

Sternberg (2008) provided a WICS approach to leadership, which refers to Wisdom, Intelligence, and Creativity Synthesized. This approach is grounded in the notion that effective leadership entails developing and integrating these three types of skills (wisdom, intelligence, and creativity) that all play an important role in decision making. Accordingly, leadership is a process that involves generating ideas (creativity), then analyzing whether the ideas are good or not (intelligence), and then, ideally, acting on the ideas in a way to achieve a common good (wisdom). Sternberg recommends that one way that leadership potential can be developed is through identifying and encouraging this kind of synthesis.

Lord and Hall (2005) proposed that leadership development is predicated on progressive skills development. Their approach is based on a general theory of learning and expertise, which suggests that changes in information processing and underlying knowledge structures occur as skills are gradually refined. Thus, through the process of skill development a leader advances through novice, intermediate, and expert skill levels. Each level requires increasingly sophisticated knowledge structures and information processing capabilities within broadly defined task, emotional, social, and self-relevant realms. Compared to Hirst et al. (2004), who examined less experienced leaders against more experienced leaders, Lord and Hall focused on the underlying processes involved in moving from a novice (i.e., inexperienced) to an expert (i.e., highly experienced) leader.

The development of leadership skills also requires self-motivation. In that regard, identity, meta-cognitive, and self-regulation processes are thought to be crucial to the refinement of knowledge structures and information processing capabilities associated with leadership expertise. Through the course of development, identity progresses from the individual level, in which the self is defined in terms of uniqueness from others, to the relational level, in which the self is defined in terms of roles and relationships, to the collective level, in which the self is defined in terms of group or organizational affiliations (Lord & Hall, 2005). Concomitant development of meta-cognitive skills enables better knowledge access, goal formation, action, and social reactions, which frees up cognitive resources that can be directed toward effective self-regulation. Self-regulation involves the control and communication of emotions to others. As a leader's skills progress into the expert domain over time, the identity and behaviors of a leader are increasingly guided by understanding the situation and collaborating with others.

3.3. Personality and development

Research has found certain personality traits to be predictive of effective leadership. For example, Strang and Kuhnert (2009) found that the Big Five personality factor of conscientiousness significantly predicted of leader performance as measured by the average rating of three sources (subordinate, peer, and supervisor). Moreover, Mumford, Zaccaro et al. (2000) suggested that patterns of personality can have an impact on leader skill development and performance. Nonetheless, if personality changes relatively little compared with other personal characteristics in adulthood, then it makes sense to evaluate their predictive value in terms of leadership performance. Other approaches will be discussed that examine more malleable constructs that are thought to change as part of leader development processes (e.g., self-efficacy).

3.4. Self-development

In terms of understanding leader self-development, Boyce, Zaccaro, and Wisecarver (2010) addressed the relative lack of research on the personal characteristics of individuals who engage in leadership self-development activities. Through an empirical examination of junior military leaders, the authors supported a conceptual model in which dispositional characteristics differentially predict leader development activities. The individual characteristics found to be associated with leader development activities were *work orientation* (e.g., job involvement and organizational commitment); *mastery orientation* (greater self-efficacy, conscientiousness, openness to experience, and intellectual maturity); and *career-growth orientation* (greater career exploration and feedback seeking behaviors). Depending on the strength of their mastery and work orientations, individuals were more or less motivated to engage in self-development activities. Those individuals with a stronger career growth orientation were found to be more skilled at performing self-development activities. Overall, the results indicated that work orientation, mastery orientation, and career-growth orientation play key roles in leader self-development.

Further addressing the scarcity of research in the area of self-development of leadership skills, Reichard and Johnson (2011) proposed a multi-level model of leader self-development that describes how leaders are “transformed into continuous self-developers” (p. 34). In this model organizational-level constructs such as human resources practices and resources are linked with group-level phenomena such as norms, supervisor style, and social networks to promote leaders' motivation to develop their leadership and to engage in continuous self-development behavior. Specifically, HR processes (selection, training, and performance appraisal) create group norms (learning, responsibility, and openness), and support the development of individual leader skills and abilities. These individual-level leader characteristics are moderated by supportive group norms to engender an individual's motivation to develop leadership and to engage in continuous self-development. The authors assert that “leader self-development is a cost-effective way for organizations to develop leaders resulting [potentially] in a competitive edge” (p. 33).

4. Interpersonal content issues in development

Given that leadership development is a dynamic process involving multiple individuals spanning various levels of analyses, the content aspects of this process include a variety of interpersonal factors (see Table 1). One such approach to understanding the content of leadership development includes a focus on the development of leader–member exchange (LMX) quality. Another relevant approach examines how leadership development practices shape the development of social capital in organizations. Relatedly, a special issue on authentic leadership emphasized the interactive leader–follower quality of authentic leadership and provided developmental strategies related to this leadership approach.

4.1. Social mechanisms and development

Leadership development emphasizes the enactment of leadership built on a foundation of mutual trust and respect (Day, 2000). As a result, it is important to understand the development of social interactions that occur within the leadership process. For instance, Boyd and Taylor (1998) conceptually evaluated how the presence of friendship contributes to either effective or ineffective working relationships in the LMX process. Scandura and Lankau (1996) further extended research on LMX by including the potential role that gender and race relations may play in the process of forging effective exchange qualities. More specifically, these authors described how certain social psychological processes (e.g., self-knowledge, interpersonal skills, communication competence, and cultural competence) and contextual influences (e.g., organizational climate/culture, group/organizational composition, economic environment, and organizational support for diversity) moderate the development of high quality relationships in diverse leader–

member dyads. They highlighted the importance of leaders creating positive learning environments in which learning about other groups occurs, innovation is supported, and cultural communication competence is encouraged. From this, individuals create more integrated self-concepts that include both intrapersonal and interpersonal dimensions.

More recently, [Galli and Müller-Stewens \(2012\)](#) demonstrated how leadership development practices shape the development of social capital in organizations. In contrast to human capital, which focuses primarily on individual leader attributes (i.e., knowledge, skills, and abilities), social capital considers connections and interactions among individuals within a social context. In an effort to understand how leadership development potentially impacts organizational performance, the authors adopted a case study approach to examine the development of social capital at more strategic levels of the firm. They found that social capital differs regarding its intensity and progresses through stages characterized by contact (e.g., networks, off-sites, mentoring), assimilation (e.g., leadership training, 360-degree feedback), and identification (e.g., job assignments, action learning). Also, their results suggest that leadership development practices vary in their potential impact on social capital development stages; thus, they should be designed accordingly.

4.2. Authentic leadership development

In a special issue of *The Leadership Quarterly* on the topic of authentic leadership, [Avolio and Gardner \(2005\)](#) noted that authentic leadership development involves “ongoing processes whereby leaders and followers gain self-awareness and establish open, transparent, trusting and genuine relationships, which in part may be shaped and impacted by planned interventions such as training” (p. 322). Thus, the development of authentic leadership is conceptualized as a more complex process than just the development of authentic leaders. The former involves the development of an authentic relationship (i.e., social capital focus) between leaders and their followers; in contrast, the development of authentic leaders is more intrapersonal in nature (i.e., human capital focus).

[Avolio and Gardner \(2005\)](#) highlighted the environmental and organizational forces that have generated interest in the study of authentic leadership and its development. They described the similarities and defining features of authentic leadership theory in comparison to other perspectives of leadership (e.g., transformational, charismatic, servant, and spiritual leadership). In this vein, a model of the relationships between authentic leadership, follower development, and follower performance was presented ([Gardner, Avolio, Luthans, May, & Walumbwa, 2005](#)). The proposed model highlighted the developmental processes of leader and follower self-awareness and self-regulation, as well as the influence of the leaders' and followers' personal histories on authentic leadership and followership. The model also considered the reciprocal effects of an inclusive, ethical, and compassionate organizational climate. Positive modeling was viewed as the primary mechanism through which leaders developed authentic followers and the outcomes of authentic leader–follower relationships included heightened levels of follower trust in the leader, enhanced engagement and workplace well-being, as well as more sustainable performance. Although this approach is commendable for including both leaders and followers in the development process, it is unclear what it offers beyond the well-established effects of leader–member exchange (LMX) theory. Future tests of authentic leadership development will need to control for LMX in demonstrating a unique contribution to the establishment of authentic relationships.

[Ilies, Morgeson, and Nahrgang \(2005\)](#) presented a somewhat different model of authentic leader development that focused on the elements of authenticity and the processes through which authentic leadership contributes to the well-being of both leaders and followers. Authentic leaders are expected to consider multiple sides and multiple perspectives of an issue, and gather related information in a relatively balanced manner. Similar to what was proposed by [Gardner et al. \(2005\)](#), the focus is on positive modeling as the primary means used by authentic leaders to influence followers and to generate well-being as a positive outcome of authenticity.

Researchers have also stressed the importance of values and behaviors to the understanding and development of authentic leadership. In an investigation of the effects of emotions and values on leader authenticity, [Michie and Gooty \(2005\)](#) posited that emotions and values play a fundamental role in the emergence and development of authentic leadership. The authors' central thesis was that positive other-directed emotions (e.g., gratitude, appreciation) motivate authentic leaders to behave in ways that reflect self-transcendent values (e.g., honesty, loyalty, equality). By stressing the importance of emotions in understanding leadership and followership, this approach represented a somewhat different and novel perspective on the development of authentic leadership.

To further explore the boundary conditions of authentic leadership theory, [Eagly \(2005\)](#) presented a relational view of authenticity in arguing that much more is required of leaders than transparently conveying and acting on their values. Achieving relational authenticity is thought to require that followers afford leaders the legitimacy to promote a set of values on their behalf. Leaders are able to elicit the personal and social identification of followers only when these conditions exist. Eagly suggested that eliciting identification is more difficult for female than male leaders, as it is more generally for members of outsider groups (e.g., minorities, non-natives) who have not traditionally had access to leadership roles. Because of the interactive effects of gender role and leader role requirements, achieving relational authenticity is challenging for many women in positions of authority. The development of women leaders should therefore focus on the relational aspects of achieving authenticity as a leader. Trends toward participative decision making and transformational leadership may also increase the probability that women and other outsiders will achieve success as leaders.

In a critique of authentic leadership approaches, [Cooper, Scandura, and Schriesheim \(2005\)](#) advised researchers in this area to learn from the mistakes made in other areas of leadership research. They suggested that the core propositions of this theory must first be tested by studying the developmental processes that encompass authentic leadership. Authentic leadership theory, therefore, must be examined through experimental investigations of the hypothesized relationships between its core development

processes and essential theoretical constructs. Until the theory has been properly tested (including controlling for the effects of LMX), the authors warned against a rush to push authentic leadership development in practice.

5. Process issues in leadership development

Researchers have also addressed the role of *process* in leader and leadership development (see Table 2 for a summary of this literature). Specifically, process factors are those that shape the rate or pattern of development over time. In general, these factors can emerge through organizational practices such as mentoring and coaching, 360-degree feedback, leadership training, job assignments, and action learning among others. In particular, research and theory appearing in *The Leadership Quarterly* has contributed significantly to shaping our scholarly understanding of feedback processes, especially 360-degree feedback. Other process factors related to leadership development that have received attention in this journal include self-other agreement (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010) and the use of narratives and life stories (Ligon, Hunter, & Mumford, 2008; Shamir & Eilam, 2005).

5.1. Feedback as a process of development

Corresponding with the emergence of leadership development as a scholarly field of interest, the use of 360-degree feedback as a developmental process to foster self-awareness and competency development has become a major area of research. 360-degree feedback has become almost ubiquitous in organizations of every type (e.g., corporate, government, non-profit, military, education) and is a prominent process for facilitating development. If used as intended, 360-degree feedback can help people understand systematically the impact of their behavior on others. In general, the approach gathers and reports on ratings of leader behavior and/or effectiveness from multiple sources such as subordinates, peers, bosses, and possibly even external stakeholders such as customers, in addition to self-ratings. These ratings are usually aggregated and therefore remain anonymous,

Table 2
Process issues in leadership development.

Topics	Summary	Source
360-degree feedback	It is important to consider the pattern of strategic, organizational, and HR-related factors that must be integrated in order to link feedback results to organizational performance. Merely assuming that giving a leader feedback will result in a behavioral change, and ultimately organizational performance improvement, is overly simplistic.	Atwater and Waldman (1998)
	Leaders' reactions to 360-degree feedback vary as a function of the feedback content as well as other factors about the raters and the organizational climate, including whether or not recipients felt the organization was supportive of their developmental efforts.	Facteau et al. (1998)
	Leaders who are high self-monitors do not receive higher 360-degree feedback ratings, suggesting that the impression management styles of high self-monitors do not significantly influence 360-degree ratings.	Warech et al. (1998)
	The administration of two feedback interventions has the ability to improve leader effectiveness more so than a single administration of a feedback intervention.	Seifert and Yukl (2010)
	In terms of how political leaders respond to criticism, others' supportive reactions are positively related to collaboration and persuasion strategies as a response to criticism, whereas diverting attention and persuasion are related to unsuccessful resolution of the issue.	Eubanks et al. (2010)
Self-other agreement	While most leadership development programs have improved leader effectiveness as an ultimate goal, the main roles associated with effective leadership differ according to who is being asked (e.g., focal manager, peers, subordinates, or bosses); hence, effectiveness may be in the eye of the beholder (or evaluator).	Hooijberg and Choi (2000)
	Leaders who rate themselves similarly to how others rate them are likely to be more effective leaders.	Atwater and Yammarino (1992)
	Self-other agreement does not appear to be related to leadership effectiveness. There is a link between rating agreement and leader effectiveness. Whereas self-other agreement appears to be related to leader effectiveness, its relationship to leadership outcomes is complex. Also, self-other agreement can be an important factor in increasing the self-perception accuracy or self-awareness of individuals participating in leadership development programs using multi-source assessments.	Fleenor et al. (1996) Atwater et al. (1998) Fleenor et al. (2010)
Self-narrative	Authentic leaders can gain self-knowledge, self-concept clarity, and person-role merger, by constructing, developing, and revising the personal narratives they construct about themselves (i.e., life stories).	Shamir and Eilam (2005)
	Continuously revising and updating self-narratives as experiences accrue through written journals or other similar techniques can help enhance the effectiveness of programs and interventions that seek to increase self-awareness.	Sparrowe (2005)
	Various leader performance dimensions can be linked to certain types of experiences. For example, experiences that create optimistic views of others and empathy for their suffering are strongly related to outstanding leader performance.	Ligon et al. (2008)

with the exception of ratings provided by the supervisor. A major part of the feedback process is in understanding where the perceptions across different sources converge – as well as diverge – in their perceptions of a focal manager (Hoffman, Lance, Bynum, & Gentry, 2010). Attention is also given to how others' ratings correspond with a leader's self-ratings. The intended focus is typically on leader development but may also include an evaluative component in some organizations. As 360-degree feedback has evolved as an evidence-based process, much of its developmental focus is on identifying leadership skills and competencies that are perceived by various sources to be effective or ineffective.

Because of the interconnected nature of leadership development with 360-degree feedback, these topics will be reviewed together. But to clarify their relationship, leadership development is inherently longitudinal in terms of studying individual and collective change over time; it is multilevel in focusing on intrapersonal and interpersonal changes; and 360-degree feedback is a process used to facilitate this development. It should also be made clear that 360-degree feedback is not a tool such as a personality assessment or other type of psychological inventory. Instead, it is a process of collecting multisource ratings, summarizing these data into an accessible format, and presenting these summaries as a way of fostering self-awareness and the development of individual leaders. This feedback process might be used with larger collectives such as teams and organizations, but its primary use is with individual leaders.

Although many of the articles pertaining to 360-degree feedback and leader development have been published in more practitioner-oriented journals, *The Leadership Quarterly* has published a variety of empirically-based articles on the subject of feedback and its relevance to leadership development. One of the fundamental components of effective leadership is self-awareness or self-understanding. Ashford (1989) wrote eloquently on the topic of feedback-seeking behavior and on the importance of recognizing how one is perceived by others in order to develop a more accurate self-view. This self-view subsequently shapes an understanding of one's own strengths and weaknesses, ultimately influencing decision-making and subsequent behavior. The importance of accurate self-assessment (i.e., enhanced self-awareness) has been extended recently to meta-perceptions, which concern not only how an individual views himself or herself and how others view that individual, but also how the individual thinks others view him or her (Taylor & Hood, 2011).

In the 1990s, interest in the process and outcomes of 360-degree feedback gathered momentum. The use of 360-degree feedback as a development tool was being implemented with varying degrees of success around the world and a number of research questions about what influenced its success were being asked. In an attempt to summarize and highlight what was known about 360-degree feedback from a scholarly perspective, Atwater and Waldman (1998) edited a special issue on 360-degree feedback and leadership development for *The Leadership Quarterly*. Unfortunately, implementation of 360-degree feedback was apparently ahead of research on its effectiveness in that only two studies were published on the topic in that special issue. But notably, this special issue was one of the first publications to highlight areas in which more research was needed on the use of 360-degree feedback for leadership development. Additionally, the issue was noteworthy for its focus on the potential impact of organizational culture on the implementation of 360-degree feedback processes.

In their introduction to the special issue, Atwater and Waldman (1998) recommended that researchers adopt configural approaches to 360-degree feedback by considering the pattern of strategic, organizational, and human resources-related factors that must be integrated in order to link feedback results to organizational performance. Merely assuming that giving a leader feedback will result in a behavioral change, and ultimately organizational performance improvement, is overly simplistic. Atwater and Waldman also suggested that researchers closely examine the link between 360-degree feedback and organizational culture. For example, 360-degree feedback initiatives may be effective only in organizations that have a culture of innovation, behaviorally-based appraisal practices, and developmental strategies. In an attempt to change their culture, some organizations may adopt 360-degree feedback in hopes that these practices will result in employees becoming more open, participative, and trusting. Nonetheless, it is an empirical question whether 360-degree feedback can have positive effects on organizational culture. It might be that a 360-degree feedback process would not be successful until the organization has an open, participative, and trusting culture. This was one of the areas in which the guest editors cited the need for more research on 360-degree feedback.

Another area in need of research was related to the determinants and consequences of developmental goal setting that arise as a result of receiving 360-degree feedback. In an attempt to partially address this need, Fecteau, Fecteau, Schoel, Russell, and Poteet (1998) examined factors related to leaders' reactions to 360-degree feedback. Positive reactions to feedback are an important element in the success of 360-degree feedback in that such reactions likely result in leaders seeking additional feedback and setting developmental goals, both of which are critical to fostering development. Lacking favorable reactions to the feedback, positive behavior change is unlikely to occur.

Fecteau et al. (1998) hypothesized that higher overall other ratings, organizational support, and perceived rater ability would be positively related to the reactions of feedback recipients (acceptance and perceived usefulness of peer and subordinate feedback). Their findings were somewhat mixed. Although they found that overall ratings were positively related to the acceptance of feedback, these ratings were not consistently related to perceived feedback usefulness. For example, the recipient may be very accepting of positive ratings but not find them terribly useful. Whether the feedback was perceived as useful had more to do with the degree to which the recipients felt the organization was supportive of their developmental efforts. Overall, this study provided early evidence that leaders' reactions to 360-degree feedback vary as a function of the feedback itself as well as other factors about the raters and the organizational climate. Differences in the reactions of the participants to the feedback, therefore, were not simply attributable to the overall ratings provided to these leaders. The study concluded that organizations that wish to implement successful 360-degree feedback systems will need to consider all of the various factors that may contribute to the leaders' reactions to feedback.

Reporting on the positive effects of 360-degree feedback for leadership development, Warech, Smither, Reilly, Millsap, and Reilly (1998) studied the relationship between leader self-monitoring, personality, and 360-degree feedback ratings from peers and subordinates. This was an important question to address because it would be disconcerting if a leader's degree of self-monitoring (i.e., the desire and ability to fashion a positive image for a particular situation) explained a large amount of variance in 360-degree ratings. That is, if self-monitoring and 360-degree ratings were highly related it might be concluded that such ratings were manipulated to some extent by the impression management styles of high self-monitors. Encouragingly, the authors found that leaders who were high self-monitors did not receive higher overall ratings, thus providing some assurances that 360-degree feedback ratings reflected mainly perceptions of leadership behaviors rather than the result of active impression management.

Atwater and Waldman (1998) recognized that these studies made significant contributions to our understanding of 360-degree feedback and leadership development but stressed that much more work remained to be done in this area. In particular, it was suggested that future research should focus more squarely on the outcomes of 360-degree feedback. Examples of such outcomes included: (a) the extent to which 360-degree feedback initiatives can affect organizational performance; (b) how often 360-degree feedback should be administered to maintain participant interest and continue the developmental process; and (c) the points in leaders' careers at which 360-degree feedback will have the most impact. For the most part, these still remain important but largely unexamined research questions.

Seifert and Yukl (2010) did address one of the questions posed above in terms of repetition of the feedback process. They conducted a longitudinal field experiment of middle managers in which half of the managers received one developmental workshop including 360-degree feedback and the other half participated in a follow-up workshop where they received feedback a second time. In each workshop they were provided with a feedback report of their self and other ratings of their influence tactics, as well as a discussion to help them understand the results of the feedback and ways to use it to more effectively influence others in the future. The managers' overall effectiveness was measured pre-feedback as well as post-feedback. The pre-feedback effectiveness ratings did not differ in the two groups; however, at the second measurement period those who participated in two feedback processes were rated as significantly more effective following feedback than those who received feedback only once. This suggests that additional resources allocated to the feedback process (e.g., doubling the number of feedback sessions) has the potential to improve leader effectiveness. A question that deserves future research attention concerns whether there is compelling economic or financial utility associated with increasing the number of feedback sessions provided to a leader.

Eubanks et al. (2010) took a different approach to looking at feedback in examining how political leaders respond to criticism. They used a historiometric approach to study biographies of 120 world leaders and how the response strategies to the criticism used by the leader related to success in terms of follower reactions and resolution of an issue. Their results demonstrated that others' supportive reactions were positively related to collaboration and persuasion strategies as a response to criticism, whereas diverting attention and persuasion were related to unsuccessful resolution of the issue. Regarding the ultimate conclusion of the event, both collaboration and confrontation were positively related to the outcome although confrontation was also negatively related to unsupportive reactions by others. It is interesting to speculate about strategies that have differing results for popular opinion versus effective resolution. One could speculate that strategies such as persuasion might be used to influence attitudes while ineffectively resolving the issue. The authors suggested that future research might examine events in which leaders receive praise, the types of behaviors that are praised, as well as follower reactions to the praise. In the political arena – especially in democratic countries – criticism and praise will likely elicit very different reactions depending on whether or not members are from one's own political party or an adversarial party.

Most leadership development programs target, as an ultimate goal, improved leader effectiveness. But the question arises: effectiveness according to whom? Hooijberg and Choi (2000) discovered that the main roles associated with effective leadership differ according to who is being asked (e.g., focal manager, peers, subordinates, or bosses). For example, when considering a monitoring role, focal managers and their subordinates found this to be an important leadership role whereas peers and superiors did not. As another example, the role of facilitator was seen as a component of effectiveness from the perspective of subordinates and peers but not from the perspective of bosses or the managers themselves. These findings provide potentially important implications to the leadership development process because they reinforce the idea that effectiveness may be in the eye of the beholder (or evaluator). Are we developing leaders to align with what superiors or subordinates find to be most important? Is it possible to develop a leader who can succeed in all roles? Hooijberg and Choi suggested that 360-degree feedback is a good starting place for managers in understanding the differing expectations of various constituency groups.

5.2. *Self-other agreement as a process of development*

A debate emerged in the mid-1990s on the topic of self-other agreement (SOA) in ratings and its role in contributing to leader effectiveness. Atwater and Yammarino's (1992) conclusion that leaders who rated themselves similarly to how others rated them were likely to be more effective leaders was questioned (Fleenor, McCauley, & Brutus, 1996). According to Atwater and Yammarino, so-called over-estimators who rate themselves higher than do others may inaccurately over-estimate their strengths and underestimate their weaknesses, which could adversely affect their leadership effectiveness. Using a categorization scheme that included level of performance (i.e., good versus poor), Fleenor et al. reported that self-other agreement was unrelated to leadership effectiveness. Unfortunately, the categorization approach that was used suffered from methodological shortcomings (e.g., dichotomizing or otherwise truncating continuous data). Using more sophisticated analyses such as polynomial regression,

Atwater, Ostroff, Yammarino, and Fleenor (1998) found relationships between rating agreement and leader effectiveness; however, the relationship was more complex than originally believed.

In a review of the literature on self-other rating agreement, Fleenor et al. (2010) addressed some of these complexities including issues influencing SOA, as well as optimal measurement and analytic techniques for studying this phenomenon. An important conclusion of this review was that whereas self-other agreement was generally related to leader effectiveness, its relationship to various leadership outcomes was not as straightforward. For example, although self-raters who are in agreement with others' ratings are generally most effective, in some contexts over- and under-estimators can be effective. Another conclusion was that self-other agreement can be an important factor in increasing the self-perception accuracy or self-awareness of individuals participating in leadership development programs that use 360-degree feedback or other types of multisource assessments.

Fleenor et al. (2010) also addressed the implications of using sophisticated analytic tools (e.g., polynomial regression) to study self-other agreement. Although psychometrically the most precise of the available techniques for testing hypotheses about SOA, techniques such as polynomial regression are not very useful for providing feedback on self-other agreement to participants in leader development programs. Instead, simpler and more straightforward approaches are recommended. For example, using comparisons of self-ratings to mean ratings across other rater groups (e.g., subordinates or peers) is useful; however, inter-rater agreement should be assessed prior to using mean ratings. An additional suggestion for optimizing the value of 360-degree feedback to leaders was to provide rater training and incentives to raters to guide them in providing quality feedback. Moreover, the anonymity of raters, especially subordinates, is critical in reducing fears of retribution. As mentioned earlier, the role of the rater and his or her definition of effectiveness should also be considered in interpreting 360-degree feedback ratings.

5.3. Self-narrative as a process of development

In addition to investigating how the 360-degree feedback and SOA processes can contribute to leadership development, Shamir and Eilam (2005) advanced a self-narrative approach in which leaders' self-stories contribute to their ongoing development. Leaders wrote personal narratives about themselves (i.e., life stories) to help provide insight into the self-relevant meanings they attach to their life experiences. The authors focused on authentic leadership and suggested that by constructing, developing, and revising their life stories, leaders gain self-knowledge, self-concept clarity, and person-role merger, which are necessary elements in their development as authentic leaders. As noted by the authors, "leaders gain authenticity when they act and justify their actions on the basis of the meaning system provided by their life-stories" (p. 396).

Complementing this life-story approach, Sparrowe (2005) offered an explanation of the narrative process through which a leader's authentic self emerges. This perspective is grounded in hermeneutic philosophy (the theory and study of interpretation), proposing that individuals are able to construct their identities from their interpretations of self-narratives created based on their life experiences. An important aspect of these self-narratives is to continuously revise and update them as experiences accrue. Doing so through written journals or other similar techniques can help enhance the effectiveness of programs and interventions that seek to increase self-awareness.

Ligon et al. (2008) also considered the role of hermeneutic philosophy in leadership development. Rather than relying on leaders to interpret their own narratives, these researchers analyzed and coded the developmental events from the early lives of outstanding leaders as chronicled in their biographies. The results supported the proposition that outstanding leaders rely on past experience to assist their sense-making efforts. Although this may seem unsurprising, it suggests that leaders may be engaged in assimilating recent experiences with past experiences in building a coherent personal narrative or life story. Also, patterns of early experiences emerged that distinguished leaders based upon their leadership orientation (socialized or personalized) or style (charismatic, ideological, or pragmatic). For instance, socialized leaders had relatively more experiences that helped to anchor their core values, whereas personalized leadership resulted more from "a life riddled with instability and uncertainty" (p. 329). Ligon et al.'s findings regarding leadership style also suggested that ideological leaders tended to make decisions based on the beliefs and values they formed through early anchoring events, rather than engaging in more proactive fact-finding and analysis activities. Conversely, pragmatic leaders tended to make decisions based on facts and analysis, due in part to "originating" events at the beginning of their careers that helped define their long-term goals and plans for action. Moreover, charismatic leaders were found to have experienced more turning-point or life-redirection events during their formative years. Finally, and perhaps most interestingly, the study demonstrated that various dimensions of leader performance were related to certain types of experiences. For instance, having had experiences that create optimistic views of others and empathy for their suffering is strongly related to outstanding performance. Consistent with the implications noted by others (e.g., Shamir & Eilam, 2005; Sparrowe, 2005), Ligon and colleagues underscored the importance of the life narrative and its theoretical and practical implications for leadership development research and practice.

6. Longitudinal perspectives on leadership development

As noted previously in this review, the nature of leadership development is inherently multilevel and longitudinal (Day, 2011). Thus, it is important for scholars to map and understand intra- and inter-personal change patterns of leaders over time (see Table 3 for a summary and overview). In an attempt to demonstrate the significance of longitudinal research in studying leadership development, Day, Gronn, and Salas (2004) provided a theoretical model outlining how individual leader and follower skills and attributes could contribute to building team leadership capacity. From this model, it was shown how the development

Table 3
Longitudinal research in leadership development.

Topics	Summary	Source
Developmental theories	Transactional and transformational leader development involves episodic skill acquisition combined with adult constructive development. Feedback enables the evolution of individuals' intellectual capacities, values, and beliefs.	Russell and Kuhnert (1992)
	Team leadership capacity is an outcome of team processes such as teamwork and team learning, which in turn contribute to team member resources such as knowledge, skills, and abilities, helping to shape subsequent performance. Mixed support was found that a leader's order of development influences his or her leadership effectiveness and performance.	Day et al. (2004)
Longitudinal studies	A leader's stage of development is a significant predictor of performance ratings. Future developmental experiences and leadership effectiveness are associated with early learning and leadership experiences, as well as developmental factors including temperament, gender, parenting styles, and attachment styles.	McCauley et al. (2006)
	True longitudinal studies involve the measurement of the same indicators of leadership at multiple points in time; quasi-longitudinal studies measure predictors early in time and assess their impact on leadership outcomes at a later time.	Strang and Kuhnert (2009) Murphy and Johnson (2011)
	Adolescent extraversion is a significant predictor of adult leader emergence and self-ratings of transformational leadership.	Day (2011)
	Academic intrinsic motivation during childhood and adolescence is a significant predictor of intrinsic motivation to lead during adulthood.	Reichard et al. (2011)
	Adolescent extraversion, especially when coupled with social skills, is associated with greater leadership potential.	Gottfried et al. (2011)
	Subclinical traits are important moderators of the rate of leader development. While some subclinical traits (i.e., skeptical and imaginative) have a negative relationship with leader development in a military setting others (i.e., cautious, bold, and dutiful) had a positive relationship.	Guerin et al. (2011)
	Intelligence is a poor predictor of leadership outcomes. Self-esteem is a strong predictor of leadership role occupancy.	Harms et al. (2011)
	Enhanced self-esteem mediates the relationship between positive parenting and leadership potential.	Li et al. (2011)
	A strong leader identity acts as a time-varying covariate of leadership effectiveness.	Oliver et al. (2011)
	An individual's learning goal orientation may also serve as a moderator of developmental trajectories. Evidence from this study suggests two different classes of developmental trajectories.	Day and Sin (2011)

of leadership capacity over time can provide for significant leadership resources at subsequent performance episodes. As such, the importance of longitudinal studies was highlighted. This model also was one of the first to attempt to link individual human capital inputs to the development of teamwork, social capital, and shared leadership capacity, among other things. In further elaborating on the longitudinal nature of leader and leadership development, we next focus on conceptual articles related to the longitudinal nature of leadership development as well as the empirical studies described in a special issue of *The Leadership Quarterly* dedicated to longitudinal research.

6.1. Developmental theories applied to leader development

In an early conceptual article that considered issues of development over time, Russell and Kuhnert (1992) created a model of leader development based on the integration of three different approaches. Specifically, they combined Kanfer and Ackerman's (1989) episodic model of skill acquisition with Kegan's (1982) approach to adult development based on constructive-developmental theory (McCauley, Drath, Palus, O'Connor, & Baker, 2006), while also incorporating the development of transactional and transformational leadership into the model. Feedback mechanisms were next added to the model to explain changes in leaders' intellectual capacities, values, and beliefs over time. An important contribution of this approach was the crafting of a longitudinal theoretical perspective on leader development through the integration of literatures on skill acquisition, adult development, and leadership.

Russell and Kuhnert's (1992) framework provided a summary of what was known at that time about the processes underlying developmental change related to how leaders understand and act on their environment. With this framework, the authors went beyond the contributions made in individual disciplines (e.g., learning theory, individual differences, performance models) to encompass diverse research from the skill acquisition, human development, and personnel selection literatures. The article provided a framework for future research on how transactional and transformational leaders develop, which led to more systematic investigations of the experiences that contribute to the development of leaders.

McCauley et al. (2006) reviewed the literature on constructive-developmental theory and its relevance for understanding and predicting leader effectiveness. Constructive-developmental theory is a suite of different theories portraying stage theories of adult development. These approaches are mainly concerned with how a person's understanding of self and the world becomes more elaborated and complex over time. There are two main features of development considered from this theoretical perspective. The first concerns so-called *orders of development* (also referred to as levels of psychosocial development), which are organizing principles that guide how individuals gain understanding of themselves and the external world. Successive orders of development build on and

transcend the previous orders such that development is from simpler to more complex and interconnected ways of sense-making. The second feature concerns *developmental movement* involving the change from one order of development to another, usually a higher one, driven by new environmental challenges that demand more complex sense-making abilities.

Constructive-developmental theory has been used sporadically in research in the area of leadership development, usually assuming that a leader's order of development influences his or her leadership effectiveness or managerial performance. Constructive-developmental theory delineates six discrete stages of human development based on the notion that individual differences are a product of how individuals construct or arrange experiences relating to themselves and their social environments (McCauley et al., 2006). One such study examined the psychosocial development of a sample of West Point cadets over a four-year time period. They found evidence of positive constructive development changes in approximately half of the cadets in the sample and that higher levels of development were positively related to various peer, subordinate, and superior measures of cadet performance as leaders in their junior and senior years (Bartone, Snook, Forsythe, Lewis, & Bullis, 2007). Despite the generally supportive findings of the Bartone et al.'s (2007) study, in general the proposition about higher levels of development being associated with better leadership effectiveness has found at best mixed support in the empirical literature. McCauley et al. (2006) called for more research integrating constructive-developmental theory with other relevant streams, moving beyond the focus on developmental order to include dynamics of developmental movement, and examining how the theory might relate to teams and organizations.

In an attempt to answer this call for more integrative research utilizing constructive-developmental theory, Strang and Kuhnert (2009) investigated the application of this theory along with individual personality to examine their effects on leader performance as measured by 360-degree (i.e., multisource) ratings. In a study of 67 management executives who participated in an executive development program, the authors examined constructive-developmental stage (conceptualized as Leadership Developmental Level; LDL) as a predictor of multisource leader performance ratings. They found that LDL was a significant predictor of performance ratings from all rater sources (subordinates, peers, and supervisors). More importantly though, they also tested the incremental predictive ability of LDL compared to the Big Five personality factors. Their results indicated that LDL accounted for unique variance in leader performance beyond that accounted for by personality (when using the leader performance ratings from subordinates and peers); however, they cautioned that this relationship was relatively weak. Nonetheless, constructive-developmental theory provides a unique contribution to our current understanding of leadership and represents a fruitful avenue for future leadership development research.

Taking a different perspective based on childhood antecedents of leader development, Murphy and Johnson (2011) examined the so-called seeds of leader development that germinate and root at various stages before adulthood. They suggested that relevant developmental experiences may occur more readily during sensitive periods of childhood and adolescence, which influence development during adulthood. The authors advanced a framework that considers the influence of early developmental factors on leader identity and self-regulation, which have a relationship to future developmental experiences and leadership effectiveness. In this framework, early developmental factors including genetics, temperament, gender, parenting styles, attachment styles, and early learning and as well as early learning leadership experiences such as those associated with education and sports were important to the leader development process. This framework is immersed in contextual factors such as the individual's developmental stage, societal expectations, and the historical setting. The authors ultimately argued for additional longitudinal examinations of leadership development over the lifespan as a means to help advance current leader development practices.

6.2. Longitudinal studies of leadership development

A 2011 special issue of *The Leadership Quarterly* devoted to longitudinal studies of leadership development represented an important milestone in establishing further evidence for leader development processes and the individual difference factors that shape them. The articles in the issue supported the assertion that leaders are products of their life experiences beginning at an early age; however, multiple forces affect leaders' development during their respective life spans. For example, personality characteristics can play an important role in the early development of leaders whereas experience plays a more important role in adulthood. This special issue emphasized the importance of early leader development and the need for more long-term, longitudinal studies of leadership development. Taken together, the research presented in the special issue addressed several key questions related to how leadership develops, including: (a) how do the dispositional characteristics of individuals (e.g., intelligence, temperament, and personality) influence development as leaders, (b) what role do life experiences play in the development of leaders, (c) do early leader development efforts help to develop future leaders in organizations and communities, and (d) what are some individual difference factors that shape the trajectories of leader development?

Three major longitudinal databases were used in several of the articles in this issue. The Fullerton Longitudinal Study (FLS) started in 1979 with 130 one-year-olds and their families. For the first four years, these children were assessed semi-annually and then annually until they reached the age of 17. Data collection in this program is ongoing. Longitudinal data from United States Military Academy at West Point was collected that focused on the leader development of military cadets over the course of their time at the Academy. The U.S. Department of Labor's National Longitudinal Survey of Youth 1979 (NLSY79) tracked young people born between 1957 and 1964, and first interviewed in 1979.

Three of the special issue articles focused on the effects of personality on leadership development. Using the Fullerton database, Reichard et al. (2011) investigated how the five-factor model of personality (neuroticism, extraversion, openness, conscientiousness, and agreeableness) and intelligence were related to leader emergence and transformational leadership. They found that personality traits predicted leader emergence in early adults. Of the five personality factors, extraversion was the best predictor of leader emergence and

self-ratings of transformational leadership. Surprisingly, intelligence was only related to non-work leader emergence. The authors stressed the need for exposure to leadership opportunities for both extraverted and introverted youth to help them develop more fully as leaders in adulthood.

Continuing with the Fullerton data, [Gottfried et al. \(2011\)](#) looked at academic intrinsic motivation (motivation for and enjoyment of school learning without external rewards) during childhood and adolescence as a predictor of three aspects of motivation to lead during adulthood. The three aspects of motivation to lead included two intrinsic motives (affective identity motivation and non-calculative motivation) and one extrinsic motivation (social normative motivation). *Affective identity motivation* to lead concerns the enjoyment of leading, *non-calculative motivation* concerns leading for its own sake and not for the purpose of receiving external advantages, and *social normative motivation* concerns leading to fulfill one's duty. The first two of these motives to lead are intrinsic in nature, whereas the third is guided by external forces. The study revealed that academic intrinsic motivation was highly related to the affective identity and non-calculative components of motivation to lead, supporting the authors' contention that intrinsic motivation is a state that exhibits continuity over the lifetime. Children and adolescents who exhibit academic intrinsic motivation are more likely to become adults who are intrinsically motivated to become leaders. Accordingly, academic intrinsic motivation was unrelated to social normative motivation. In a recurring theme, leader intelligence was of no consequence in predicting motivation to lead.

In a related article, [Guerin et al. \(2011\)](#) focused on the roles of extraversion and intelligence in predicting leadership outcomes. This study explored the early antecedents of extraversion by investigating behavior and temperament in childhood. Extraverted adolescents – especially those who possessed good social skills – showed greater leadership potential, whereas intelligence did not appear to be predictive of leadership potential.

Also using data from FLS, [Oliver and associates \(2011\)](#) examined the role of supportive parenting in adolescence and transformational leadership in young adults. They found that the relationship between positive parenting and leadership potential was mediated by enhanced self-esteem. Quality parenting and self-esteem were measured during adolescence and self-reported transformational leadership was assessed at age 29 while controlling for the effects of socioeconomic status. This study represented one of the first attempts to investigate these relationships across time. Results supported the hypothesis that a stimulating and supportive environment provided by an adolescent's family created a more positive self-concept, which in turn positively influenced the subsequent emergence of transformational leader qualities. Thus, the content of familial support during adolescence was related to self-rated leadership outcomes as an adult.

Taking a different approach to examining personality in leadership development research, [Harms, Spain, and Hannah's \(2011\)](#) study went beyond typical personality assessments (e.g., Big Five) in exploring the role of subclinical personality traits on leadership development over time. The authors argued that there is a need for empirical research using large samples of developing leaders over time to examine the potential influence of personality traits in general, and what they see as character flaws in particular, and their respective influences on leader development. Specifically, Harms et al. were interested in idiosyncratic (i.e., subclinical) traits that do not greatly inhibit daily functioning (as would clinical traits or those used to diagnose psychological pathologies) yet have the potential to lead to negative consequences in certain contexts. Examples include subclinical traits of excitable, skeptical, leisurely (e.g., indifferent to requests of others), colorful (e.g., expressive, dramatic, wants to be noticed), and imaginative (e.g., acting or thinking in unusual ways).

Using the West Point database, [Harms et al. \(2011\)](#) studied a leader development program that had demonstrated an overall positive effect on participants over a span of three years. The authors found subclinical traits to be important moderators of the rate of leader development (i.e., developmental trajectories) during the program, accounting for 11–17% of the variance in the changes in leader development. Whereas the authors found that some of the subclinical traits (i.e., skeptical and imaginative) had negative relationships with leader development, they also found that others (i.e., cautious, bold, colorful, and dutiful) had positive relationships. This provides somewhat of a mixed message with regard to subclinical traits, indicating that they may not always have negative influences on leader development. (It should be noted that these relationships were found in a student military sample where traits such as imaginative may not be highly regarded while dutiful would be.) The results of this study also demonstrated that leader development persists over numerous years and that the effects of personality on this process endure over time. From these results, Harms and colleagues proposed that leader development is a dynamic process in which personality factors moderate developmental processes through enhancing or inhibiting personal change over time. They suggested that with additional research, leadership interventions and executive training programs might be tailored to the specific needs or characteristics of the leader.

Consistent with the individual difference focus of other articles in this issue, [Li, Arvey, and Song \(2011\)](#) investigated the effect of general mental ability, self-esteem, and familial socioeconomic status on leadership role occupancy (whether an individual occupies a leadership role) and leader advancement (an increase in supervisory scope assessed by the number of assigned subordinates). Additionally, gender was examined as a moderating variable. Using the NLSY79 database, Li et al. found that developmental outcomes were not strongly related to general mental ability (a consistent theme across several studies in the special issue). Specifically, they found self-esteem to be strongly predictive of leadership role occupancy across both genders as well as predictive of the rate of leadership advancement for females. An unusual and unexpected finding was that familial socioeconomic status was negatively related to leader advancement for women. It is unclear why this would be the case (i.e., women from higher socioeconomic families having lower levels of development) and replication of this finding is needed before any strong conclusions can be drawn.

[Day and Sin \(2011\)](#) offered yet another perspective on leader development, focusing on developmental trajectories of emerging leaders over a 13-week time span. Within this paradigm, individuals were hypothesized to vary in terms of initial leadership effectiveness levels and follow different developmental trajectories based on different situational and experiential

demands, as well as their willingness and ability to learn. The authors found support for the contention that because of its hypothesized impact on individual thinking and behavior assuming a strong leader identity would function as a within-person, time-varying covariate of leadership effectiveness. This echoes the focus on self-identity proposed by authors such as [Lord and Hall \(2005\)](#). Results partially supported an additional hypothesis that an individual's learning goal orientation (an orientation that focuses on one's development rather than demonstrations of competence) would serve as a between-person, cross-level moderator of developmental trajectories, suggesting that how individuals construct and manage goals can affect their development as leaders.

In an integrative review of the articles addressed in this special issue, [Day \(2011\)](#) discussed the difference between true longitudinal investigations of leadership development and what he termed to be quasi-longitudinal studies (following the distinction made between experimental and quasi-experimental designs). True longitudinal studies involve the measurement of the same indicators of leadership at a minimum of three points in time, whereas quasi-longitudinal studies measure predictors early in time and assess their impact on leadership outcomes at a later time. As noted by Day, both methods have value because they each take a long-lens approach to understanding leadership development and the process of developing leaders over time. Guest Editors [Riggio and Mumford \(2011\)](#) concluded by stating their wishes that this special issue would: (a) encourage more longitudinal research on leader development; (b) draw attention to existing longitudinal databases that are useful for studying the lifelong development of leadership; and (c) encourage more evaluation of leadership development efforts through the use of true longitudinal designs.

7. Evaluation methods in leadership development

A significant obstacle to advancing scholarly interest in leader and leadership development over the years can be traced to methodological and analytical issues. In the 1970s, prominent psychologists and psychometricians (e.g., [Cronbach & Furby, 1970](#)) questioned whether we could, or even should, attempt to measure change. Since that time the field has advanced rapidly in understanding ways to measure and model change appropriately. We now know much more about longitudinal methods as well as multilevel modeling than we did even a decade ago. And given the multilevel and longitudinal nature of leadership development ([Day, 2011](#)), these are critically important contributions further motivating the advancement of scholarly interest in the topic (see [Table 4](#) for a summary).

But it is also important to bring rigorous evaluation methods to understanding content, process, and outcome issues in development. As such, the *evaluation* of developmental interventions is another area that has received theoretical and empirical attention in this journal. In evaluating the effects of leadership development interventions, it should be noted that focusing on job performance and performance change over time is not the most appropriate approach to understanding the development of leaders or leadership. Job performance is affected by many things other than leadership skills. In other words, it is a contaminated as well as deficient criterion if the focus is purportedly on leadership development. Changes in job performance may also have different time lags associated with change compared to those for development. Thus, the appropriate criterion for evaluation efforts is development and its markers rather than performance per se. The field needs to focus on identifying and tracking appropriate markers or proxies of development that go beyond a fixation on rated job performance.

A special issue of *The Leadership Quarterly*, on the evaluation of leadership development interventions was co-edited by [Hannum and Craig \(2010\)](#). Because of the conceptual and measurement challenges inherent in this type of research, evaluating leadership development is often a complex undertaking. Evaluations of leadership development efforts are made more difficult by the contexts in which they occur. For example, participants in leader development programs may represent different organizations, different functional positions, and position levels, which create difficulties in identifying appropriate control groups and conducting rigorous evaluation studies. Additionally, there may be long time periods between interventions and outcome measurements.

Although evaluation methods exist that can meet these challenges, few published studies have focused on the application of these techniques in estimating the behavioral, psychological, or financial effects associated with leadership development initiatives. The

Table 4
Evaluation methods in leadership development.

Topics	Summary	Source
Social network analysis	Social Network Analysis (SNA) can identify the structure of relationships among people, goals, interests, and other entities within an organization.	Hoppe and Reinelt (2010)
Q-methodology	Q-methodology can be an effective method for soliciting participants' perceptions of outcomes. This method can reduce the individual viewpoints of the participants down to a few factors depicting shared ways of thinking about outcomes.	Militello and Benham (2010)
Formative and summative evaluation	Mixed methods including both summative evaluation and formative evaluation can be used to evaluate leader self-development.	Orvis and Ratwani (2010)
Hierarchical linear modeling	Hierarchical linear modeling (HLM) can be used to assess multilevel change over time in a leadership development context.	Gentry and Martineau (2010)
Return on leadership development investment	A method for estimating the return on leadership development investment (RODI) was proposed, along with implications for measuring organizational effectiveness.	Avolio et al. (2010)

aim of this special issue was to present research that demonstrated such methods. Described below are a number of articles from this issue that were particularly innovative.

Three articles offered specific techniques for evaluating leadership development interventions. Following Day's (2000) thinking about the role of social capital in leadership effectiveness, Hoppe and Reinelt (2010) described how Social Network Analysis (SNA) can identify the structure of relationships among people, goals, interests, and other entities within an organization. SNA, for example, can be used to determine if a leadership development intervention resulted in changes in connectivity in an organization. Additionally, the authors presented a typology for classifying different kinds of leadership networks, along with outcomes typically associated with each type of network.

The use of Q-methodology as a data collection tool for evaluating an initiative to develop collective leadership was described by Militello and Benham (2010). According to the authors, Q-methodology can be an effective method for soliciting participants' perceptions of outcomes. One purpose of this method is to reduce the individual viewpoints of the participants down to a few factors depicting shared ways of thinking about outcomes. It began with the development of a set of statements (the Q-sample) that would be sorted into categories by the participants. To develop the Q-sample, researchers reviewed documents detailing the mission and goals of the initiative being evaluated. They selected statements that were outcome oriented and descriptive of the initiative, which resulted in a Q-sample consisting of 33 statements. Participants then sorted these statements into outcome categories for the purpose of evaluating leader development. This methodology provided a valuable leadership development tool for participants and an evaluation tool for researchers.

Relatedly, Orvis and Ratwani (2010) highlighted the application and integration of formative and summative evaluation approaches for leader self-development. Because of the highly individualized nature of self-development, evaluators often face unique challenges when evaluating these initiatives. They recommended using a mixed-methods approach that applies effectiveness attribute taxonomy for a self-development activity. The authors demonstrated a methodology for applying this taxonomy to evaluate the effectiveness of self-development activities and discussed the practical implications of adopting the taxonomy for evaluation purposes.

Two articles in this issue described statistically based approaches to leadership development evaluation. Gentry and Martineau (2010) presented an application of hierarchical linear modeling (HLM) for assessing multilevel change over time in a leadership development context. One of the difficulties in evaluating leadership development is measuring whether and how participants change during the initiative. Even when change is an integral part of the design and evaluation of the initiative, uncontrolled events (e.g., missing data) may affect the ability of the evaluators to accurately measure change over time. Using data from a longitudinal school team leadership development initiative, the researchers used HLM procedures to examine changes that occurred across participating teams. The results demonstrated how to detect whether teams were significantly different on an initial assessment and predicted progress using an intercept-as-outcomes analysis. It also demonstrated how to detect whether growth rates were different across teams and how these changes could be predicted using a slopes-as-outcomes analysis. An advantage of this type of evaluation approach is that it allows researchers to examine and test whether successful teams improved at faster rates than other teams, rather than merely performing better at the start of the initiative.

In another statistical approach to evaluation, a method for estimating the return on leadership development investment (RODI) was proposed (Avolio, Avey, & Quisenberry, 2010), along with its implications for measuring organizational effectiveness. The authors suggested that the decision-making process involved in deciding to invest in leadership development should be similar to the decision-making process used by organizations whenever there is a decision to incur costs for an anticipated future benefit. The authors described how to estimate the return on leadership development using different assumptions, scenarios, length of the intervention, and level of participants engaged in the development program. They found that the expected return on investment from leadership development interventions ranged from a low negative RODI to over 200% depending on a number of factors.

Taken together, the articles published in this special issue on the evaluation of leadership development initiatives provided state-of-the-science perspectives on the design, analysis, and interpretation of evaluation research. It is invariably stated that any leadership development initiative must include an evaluation component. Unfortunately, this admonition is often ignored in practice. This special issue provided a "way forward" for helping researchers and practitioners involved with leadership development by providing sound advice to more fully integrate evaluation in their interventions and why doing so is critical.

8. Summary and future directions

The purpose of this review was to identify scholarly advances and contributions to the field of leadership development published mainly in *The Leadership Quarterly* over its 25-year history. We reviewed both conceptual and empirical articles that collectively examined definitional, content, process, longitudinal, and evaluation issues concerning leader and leadership development. In terms of operationalizing leadership development, Day (2000) posits that leadership is a complex interaction between people and environments that emerges through social systems. He recommends that scholars and practitioners approach leadership development as a process that transcends but does not replace individual leader development. Building upon earlier reviews of the field, the present review provides an in-depth look at how the leadership development field (including that of leader development) has evolved.

The major insights from the review can be summarized as follows: through the examination of an array of factors including experience, skills, personality, self-development, social mechanisms, 360-degree feedback, self-other agreement, and self-narratives, leadership development represents a dynamic process involving multiple interactions that persist over time. The leadership development process tends to start at a young age and is partly influenced by parental modeling. It involves the development and application of a variety of skills (e.g., wisdom, intelligence, and creativity; Sternberg, 2008) and is shaped by factors such as

personality and relationships with others. The overall developmental process can be informed by different theories, such as constructive-developmental theory (McCauley et al., 2006) and authentic leadership (Gardner et al., 2005), and can be measured in a variety of ways including multisource ratings. Wherever possible, developmental practices should be carefully tailored to current developmental needs of the leader.

Leadership is something that all organizations care about. But what most interests them is not which leadership theory or model is “right” (which may never be settled definitively), but how to develop leaders and leadership as effectively and efficiently as possible. As such, this is an important area of scholarly research and application with myriad unanswered (and even undiscovered) questions to pursue. We next outline some promising avenues for future research.

8.1. Process-oriented research

Because leadership development is a field that is inherently longitudinal in nature, researchers need to focus on conceptualizing process theories related to the development of leaders and leadership over time and testing these models using relevant methodologies. Leadership as a field has perhaps been preoccupied with proposing and testing static models, even those that hypothesize mediation (i.e., causal) effects. Simply put, cross-sectional methods are incomplete and probably inappropriate for testing hypotheses and research questions related to leadership development. This puts a burden on researchers given the difficulties associated with conducting longitudinal research. But if leadership is a process and not a position, and leadership development is a longitudinal process involving possibly the entire lifespan, then we need to put forward comprehensive process models and test them appropriately.

8.2. Choosing relevant outcome variables

Researchers need to give serious thought to what is hypothesized to develop as a function of leader or leadership development in a given context. This may involve human capital kinds of variables related to individual knowledge, skills, and abilities, or it maybe things that are even more difficult to assess such as the psychosocial stage of adult development (i.e., orders of development) as proposed in constructive-developmental theory (McCauley et al., 2006). Adopting good outcomes (in place of job performance) to study models of leader and leadership development is also important. Of course, there should be a link between development and performance in a job or role but that is likely neither immediate nor straightforward. Related to the use of job performance, another outcome of questionable relevance to studies of leader development is the organizational position or role one holds (i.e., leadership role occupancy). As noted, leadership is conceptualized as a process rather than a position, so using position as an outcome in leader development research has limited meaning (Day, 2011). Although it may be convenient to use such outcomes, it is unclear how to compare positions across different organizations or sectors (e.g., corporate, military, government, or nonprofit). Researchers should always clarify what it is they think will develop over the period that they plan to study leader development processes. In this way, linking process models with relevant outcomes is a pressing research need.

8.3. Focus on personal trajectories of development

It has been noted that “one central challenge facing scientific psychology is the development of comprehensive accounts of why humans progress along different life trajectories” (Smith, 2009, p. 419). A related challenge in the leader development field is crafting comprehensive accounts of why individuals progress along different developmental trajectories as leaders. The good news is that we now have the methods and analytical techniques to appropriately chart and understand these kinds of developmental trajectories. However, we need more in the way of theories and process models to guide our research. Examining different trajectories of development is a related and important concern. There is likely little argument that people start at different places in their developmental journeys as leaders and develop at different rates and in different ways over time. For these reasons, we need to more fully examine individual differences in developmental trajectories and whether a typology of trajectories can be devised to help us understand and more accurately predict how people change over time. In practical terms this would provide guidance for enabling us to better learn from those who develop more quickly and effectively and to apply the knowledge to help those who struggle to develop as leaders. Admittedly, this is not easy research to conduct because it requires large samples, a longitudinal focus, and appropriate measurement intervals. Despite these challenges, research on charting and understanding developmental trajectories is an area that deserves future research attention.

8.4. Broadening the Developmental Focus

Researchers have tended to examine how individual leaders develop over time. We need to give greater attention to more collective aspects of leadership, whether they are dyadic leader and follower development or even more collective forms such as shared leadership. We know that development tends to occur in an interpersonal context, so incorporating that context into our research designs, methods, and analyses seems like a logical step in advancing the field of leadership development. For that reason, something like social network analysis (e.g., Hoppe & Reinelt, 2010) may be especially appropriate to consider in future studies of leadership development. There is an emerging interest in what some have called network churn or changes in network structure and individual positions within networks over time (e.g., Sasovova, Mehra, Borgatti, & Schippers, 2010). This seems like a logical stream of research to consider in broadening the focus of leadership development. But as we broaden this focus to include collectives, it should be noted that the line between these forms of leadership development and what has historically

been considered organization development (OD) becomes blurred. Nonetheless, that should not stop researchers from taking steps to broaden the focus on development and in doing so perhaps will also advance the field of OD.

8.5. Practicing Leadership

We know from the extensive literature on expertise and expert performance that it generally takes 10 years or 10,000 h of dedicated practice to become an expert in a given field (Ericsson & Charness, 1994). For this reason, it is highly unlikely that anyone would be able to develop fully as a leader merely through participation in a series of programs, workshops, or seminars. The actual development takes place in the so-called white space between such leader development events. However, we lack a clear idea of the ongoing ways in which people practice to become more expert leaders. Such practice may not be intentional or mindful, which may make it more difficult to study. But this notion of ongoing practice through day-to-day leadership activities is where the crux of development really resides. Rather than focusing on implementing better instructional design or putting together what we hope are more impactful developmental interventions, it might be more productive to take a step back and focus on what happens in the everyday lives of leaders as they practice and develop.

8.6. Self-awareness and 360-degree feedback

Another area for future research is related to the use of 360-degree feedback instruments as measures of self-awareness. It is often assumed that individuals with ratings that mirror those provided by their followers (high self-other agreement) are more self-aware. Indeed, self-other agreement is often used as a proxy for self-awareness in leadership research. For instance, Fleenor et al. (2010) suggested that low rating agreement is an indication of low self-awareness, especially for over-estimators. In much of the research in this area, however, self-awareness is measured with the same instrument used to determine rating agreement (i.e., the instrument also contains a scale that measures self-awareness). In order to test the relationship between self-awareness and leader effectiveness, there is a need to develop valid and independent measures of self-awareness. With better measures, it may be possible to more thoroughly investigate the relationships among self-awareness, rating agreement, and effectiveness for leader development purposes.

9. Limitations

Although we have attempted to provide a comprehensive review of the scholarly literature on leader and leadership development published over the previous 25 years in this journal, there are areas with potential developmental implications that we have chosen not to review. The predominant reason for this decision is that the focal literature is not sufficiently developed or the implications for leadership development are unclear. Alternatively, it might be argued that there are potential developmental implications associated with just about every published leadership article. That is not very helpful in attempting to summarize and synthesize the most highly relevant literature.

In making choices about what to review, we did not address areas such as the genetic bases of leadership (De Neve, Mikhaylov, Dawes, Christakis, & Fowler, 2013), in which leadership role occupancy was used as the criterion (see criticisms of this outcome discussed previously) and for which it is difficult to argue that leadership can be developed if it is genetically determined; cross-cultural leadership (Sadri, Weber, & Gentry, 2011), whereby there are differing perspectives on what are the most important behaviors or competencies that should be developed; political perspectives on leadership (Ammeter, Douglas, Hochwarter, Ferris, & Gardner, 2004) that take a somewhat unique position in terms of how effective leader behavior is defined; and a recent special issue on leader integrity (Simons, Palanski, & Trevino, 2013), of which we have little empirical evidence as to how it might be developed. Although there are emerging literatures in these areas, as noted, we have confined this review to research that pertains most directly to the development of leaders and leadership.

10. Conclusion

As noted by the eminent leadership scholar John Gardner (1990), “In the mid-21st century, people will look back on our present [leadership development] practices as primitive” (p. xix). This statement is consistent with our contention that despite the significant advances in understanding leadership development made over the past 25 years, many of which have been published in the pages of *The Leadership Quarterly*, the field is still relatively immature. This also means the field is replete with opportunities for researchers and theorists. Looking ahead to the ensuing 25 years, it seems certain that if scholars answer the call, the field will continue to progress to a less primitive state. This will stimulate better leadership and, consequently, foster better organizations, communities, and societies.

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