

TOWARD A “GRAND UNIFYING THEORY” OF LEADERSHIP: IMPLICATIONS FOR CONSULTING PSYCHOLOGY

Richard R. Kilburg and Marc D. Donohue
Johns Hopkins University

A succinct overview of some of the major research approaches to the study of leadership is provided as a foundation for the introduction of a multicomponent model of leadership that draws on those findings, complexity theory, and the concept of emergence. The major aspects of the model include: the personal characteristics and capacities, thoughts, feelings, behaviors, and human working relationships of leaders, followers, and other stake holders, the organization’s systems, including structures, processes, contents, and internal situations, the organization’s performance and outcomes, and the external environment(s), ecological niches, and external situations in which an enterprise functions. The relationship between this model and other approaches in the literature as well as directions in research on leadership and implications for consulting practice are discussed.

Keywords: leadership, ecological systems, emergence, complexity theory, consulting

Case Study

Mary Hawthorne sat in the comfortable chair across the small conference table from her consultant (Richard Kilburg).

“I got the promotion,” she said with a smile spreading across her entire face.

“Congratulations! When do you take over?” I said.

“I become the Executive Vice President for Operations in two weeks. I can hardly wait to get started. I hope you can help us through a process to formulate our strategy.”

I had worked with Mary episodically for several years as a coach and consultant, taking on a variety of assignments within her organizational units as she progressed up the ladder in the large, diversified consumer products company. For 12 years, she had succeeded at every assignment that the executive team of the organization had given to her. Now, she was joining the senior team of a new CEO who had just been appointed at the company.

“I’d like to think so. Can I ask you a question to start?”

“Of course,” Mary smiled knowing well that my questions often led to an interesting conversation.

Richard R. Kilburg is a member of the Practice Faculty at the Carey Business School of the Johns Hopkins University and the CEO of RRK Coaching and Executive Development; Marc D. Donohue is a Professor at the Whiting School of Engineering of the Johns Hopkins University.

Correspondence concerning this article should be addressed to Richard R. Kilburg, 5 Barrow Court, Towson, MD 21204. E-mail: dickkilburg@comcast.net

“What theory of leadership will you be using to guide your activities in your new position?”

Mary’s smile disappeared and was replaced by a look of perplexed concentration. After several moments of reflective silence, she sighed and laughed softly.

“Well, what would you suggest?”

That began an elaborate exchange that stretched over several months in which Mary thought through many of the issues and frameworks that her new position would require her to address and use.

Models of Leadership

In virtually every coaching and consulting engagement, practitioners face the challenge of discerning the implicit and explicit leadership models that clients use or they help a leader construct a framework that will work more effectively in their organizational environment. Tichy and Cohen (1997) suggested that developing a teachable point of view was one of the most important steps that leaders could take to guarantee their success. If an integrated theoretical approach to leadership were readily available to consultants and executives, the task of developing such a teaching point of view would be relatively easy. However, given the current state of the leadership literature, this is easier said than done.

Recent reviews of the research on leadership demonstrate the enormous complexity and subtlety of the models and the issues involved in trying to create an integrated view of leadership theory (Goethals & Sorenson, 2006; Hogan & Kaiser, 2005; Mumford, Zaccaro, Harding, Jacobs, and Fleishman, 2000; Northouse, 2010; Van Vugt, Hogan, & Kaiser, 2008; Yammarino, 2000; and Yukl, 2005, 2010).

A great deal still remains to be discovered about just how leaders and their followers create organizations that perform effectively in challenging and ever changing environments. It seems clear that Bennis’ (2007) call for a more integrated theory and the historical support for such efforts provided by scholars such as Goethals & Sorenson, (2006); Kuhn (1970, 1977); Lewin, (1952, 1997), and Von Bertalanffy, (1968) has yet to be answered fully by the research community. The purposes of this paper are to provide a very succinct overview of many but not all of the contemporary approaches to the study of leadership and describe the features of a six component model for use by consultants which suggests that leadership is an emergent property of complex ecological systems involving leaders, followers, other stakeholders, organizational systems, and external environments. In addition, we will suggest some research agendas on leadership and provide observations about why these theories are vitally important in the practice of consulting psychology.

Major Approaches to Leadership Theory

Table 1 provides a brief summary of eight major research approaches to the study of leadership that have appeared in the scientific literature over the past 60 years. This is not being offered as a comprehensive taxonomy of the research models available in leadership but rather as a significant sampling of them for comparative and expository purposes. Fleishman, Mumford, Zaccaro, Levin, Korodin, and Hein (1991) offered an extensive examination of classification issues trying to synthesize what was known at that time. Other approaches to the classification of scientific findings and conceptual approaches can be found in the latest editions of Yukl’s (2010) and Northouse’s (2010) summary texts on leadership. In addition, several other detailed approaches to the consideration of classification are found in Goethals and Sorenson’s (2006) summary of the results of the deliberations of a group of scholars who spent several years trying to create a general theory of leadership. In that volume, for example, Wren (2006) presented what he called a periodic table of leadership research in which 53 approaches to the study of the phenomena were organized under five major headings—contextual, individual, process, normative, and method. At the end of 5 years of individual and collective deliberations, that panel of scholars decided that they could not agree on

Table 1
Major Approaches to Leadership Theory

Major approaches	Key propositions	Significant proponents
Trait Theory	<ul style="list-style-type: none"> • Effective leaders demonstrate combinations of extraordinary qualities, for example, cognitive abilities and personality traits. • Physiological leadership traits include preferences for height and perceived strength. Psychological leadership traits include integrity, persistence, humility, dominance, competence, decisiveness, and vision. Derailing executives tend to be judged as not possessing some or all of these types of psychological traits. • The interaction of different combinations of leadership qualities with situations dramatically affects organizational outcomes. • Leadership qualities and traits vary in their malleability over time. • Gender and other forms of diversity can have profound effects on how leaders behave and even more importantly how individuals are perceived by colleagues. • Developmental assignments can create changes in traits and their interactions. 	<p>Carlyle, 1849/1907; Chin & Sanchez-Hucles, 2007; Eagly & Carli, 2007; Fleishman et al., 1991; House, 1971, 1988; Judge et al., 2002; Lord, De Vader, & Alliger 1986; Morrison, 1992; Stogdill, 1948, 1974; Zaccaro, 2007</p>
Contingency/Goal Path/ Situational Theory	<ul style="list-style-type: none"> • Leadership is a process involving people who interact with each other and their environments. • Leadership always involves efforts to influence/motivate people and systems. • Effective influence efforts lead to collaborative behavior moving toward a common goal. • Different organizational and environmental situations and contexts and the capacities of subordinates and systems call for different approaches to influence and can place limits on what leaders can do. • Individuals can be trained to use influencing strategies. • Leaders create and use in-groups and out-groups to enact their influence on organizations and through them to their external environments. • Leaders often use a dyadic paradigm of leader-follower relationships that focuses on behaviors a formally appointed supervisor uses to either direct subordinates in ways that help them to better accomplish their goals (path-goal interventions) or to improve subordinates satisfaction with their overall work experience (need satisfying interventions). • Participative leadership behavior is emphasized to clarify path-goal relationships, goal attainment and alignment with organizational objectives, work effort; improve subordinate autonomy and performance; and increase pressure towards effective organizational performance through alignment of supervisor direction and peer pressure in a participatory process. 	<p>Avolio, 2007; Avolio & Luthans, 2006; Drath, 2001; Fiedler, 1967, 1971; Fiedler & Chemers, 1974; Graen & Uhl-Bien, 1995; Hersey & Blanchard, 1977; House, 1971; House & Mitchell, 1974; Likert, 1961; Vroom & Yago, 2007</p>

Table 1 (continued)

Major approaches	Key propositions	Significant proponents
Style/Behavior Theory (Charismatic, Servant, Authentic)	<ul style="list-style-type: none"> • Multiple classes of leadership behavior are involved such as achievement orientation, empowering, work facilitation, and values directed activities that interact with a variety of intervening variables such as subordinates expectancies of the relationship between effort and accomplishment, that efforts yield rewards, and that rewards are important to people. • Leadership role performance tends to cluster in behaviors directed towards driving task performance by colleagues and towards creating and managing effective relationships with them. • Leaders are expected to assess the environmental conditions they face and the developmental capacities of their subordinates and use the results of those evaluations to help them select the approaches that would best work in any given set of circumstances. • How leaders actually behave and what they choose to do can make a radical difference in how others perceive them as leaders and the nature of the outcomes their organizations produce. • Leaders focus on creating and using vertical and lateral relationships inside and outside of organizations to do their work. • Leaders engage idealized methods of influence, intellectual stimulation, inspirational appeals, and interpersonal support aimed at key individuals to change their imaginations, values, emotions, attitudes, and behaviors. • Leaders constantly and consistently try to change their organizations and their external environments in order to transform and improve the ways in which they function. • Leaders must focus on what is really going on in themselves, their colleagues, and their organizations in order to be effective. • Authentic leaders demonstrate self-awareness, moral perspective, and an ability to balance what they experience emotionally and cognitively, and they act transparently with their colleagues. • Effective leaders first emerge in organizations through their efforts in serving others. Over time, they become more effective at identifying the needs of their colleagues, becoming more involved in community life, and helping them to become better leader servants themselves. 	<p>Avolio & Gardner, 2005; Bass, 1990; Burns, 1978; Conger & Kanungo, 1998; Eagly, Johannesen-Schmidt, & van Engen, 2003; Ferguson, Hagaman, Grice, & Peng, 2006; Frederickson, 1998; Greenleaf, 1970, 1977; House, Spangler, & Woycke, 1991; Judge & Bono, 2001; Judge et al., 2002; Likert, 1961; Mintzberg, 1973, 2009; Sayles, 1993; Shamir & Eilam, 2005; Shamir & Howell, 1999; Weber, 1947</p>
Skills/Capacities/ Competencies Theory	<ul style="list-style-type: none"> • Effective expression of leadership is dependent on the individual's ability and skill to solve novel, complex, and amorphous problems that threaten the organizations for which they are responsible. • Problem solving and other leadership competencies and skills can improve with experience and can be developed deliberately and systematically. 	<p>Kilburg, 2006; Lombardo & Eichinger, 2001; Mumford & Connelly, 1991; Mumford, Zaccaro, Johnson et al., 2000; Sternberg, 2007; Sternberg, Kaufman, & Pretz, 2003; Yammarino, 2000; Yukl, 2005, 2010; Zaccaro, 2007</p>

(table continues)

Table 1 (*continued*)

Major approaches	Key propositions	Significant proponents
Ecological Systems Theory (Evolution, Integration, Context, Evaluation)	<ul style="list-style-type: none"> • Demonstration of effective leadership skills in contextually sensitive ways improves organizational performance. • Leadership is an interdependent, emergent process that arises out of the mutual interaction of all members of a system. • Groups and organizations self-organize in different ways and use feedback loops in response to various internal and external environmental pressures. • Individuals who consistently demonstrate creative and useful responses and approaches at the right time to organizational challenges are more likely to emerge as leaders and to remain in those roles. • Internal and external environmental situations and pressures demand that alternative forms of leadership may be needed at different times to ensure the survival and success of the organization. Humanity has inherited attitudes, values, beliefs, and a wide variety of behaviors from its history and ancestors and contemporary views of and practices in leadership are strongly informed by these ancient experiences and their contemporary expression. • Leadership has evolved across types of species to address problems of group movement, intra-group peacekeeping, and intergroup competition and conflict. • There are two key choices in the leadership game: to initiate and to follow. • Leaders derive their legitimacy from the engagement and investment of their followers. • Followers and followership are severely understudied and underappreciated in comparison to leaders and leadership. • Senior leadership work is characterized by cognitive, social, personal, political, technological, financial, and staffing challenges and processes. • Leadership occurs at different levels in organizations and can have complex characteristics in every stratum. • Leadership is defined and caused by the context in which it occurs. • Leaders influence their organizations in many different ways to promote and direct positive enterprise outcomes. 	<p>Avolio, 2007; Buss, 2005; Chemers, 1997; Day & Lord, 1988; Goethals & Sorenson, 2006; Guastello, 2002; Hambrick & Mason, 1984; Heifetz, 1994; Hunt, 1991; Jacobs & Jaques, 1987; Katz & Kahn, 1978; Northouse, 2010; Stacey, 1992, 1996, 2005; Sternberg, 2007; Van Vugt, Hogan, & Kaiser, 2008; Weilkiewicz & Stelzner, 2005; Yukl, 2005, 2010; Zaccaro & Klimoski, 2001</p>
Relationship/Leader Member Exchange/ Attachment/Social Network Theory	<ul style="list-style-type: none"> • Leadership can be expressed by all members of an organized system. • Leadership is expressed and arises out of the interactions between leaders and followers who work in dyads, triads, and other forms of groups - in groups and out groups of various sizes. • Leaders and followers work together in groups and all members of systems influence each other and organizational processes, structures, and outcomes. 	<p>Balkundi & Kilduff, 2005; Bresnahan & Mitroff, 2007; Drath & Paulus, 1994; Graen & Graen, 2007; Graen, 2007; Graen & Uhl-Bien, 1991; Graen & Uhl-Bien, 1995; Kahn & Kram, 1994; Popper, Mayseless, & Castlenovo, 2000</p>

Table 1 (continued)

Major approaches	Key propositions	Significant proponents
Effectiveness/Outcome Theory	<ul style="list-style-type: none"> • Leadership is an emergent property of groups. • High quality exchanges and relationships between leaders and followers create positive effects on various dimensions of organizational performance including decreased turnover, greater career progress, and increased participation of subordinates. • Social networks have been shown to demonstrate a wide variety of structural, process, social, psychological, and economic characteristics. They operate within and between organizations. • Most of the literature on executive effectiveness measures the perception of leadership performance by others. • Leaders make their biggest impact on organizations based on how they influence the other leaders with whom they work most closely. • Effective leaders can and do make a significant and measurable difference in the performance of their organizations. • The research on the impact of leadership on actual organizational outcomes is tremendously smaller than that available on the perception of executive performance by others. 	Cameron & Whetton, 1993; Cappelli & Hamori 2005; Collins, 2001a, 2001b; Day, 2001; Day, Gronn, & Salas, 2004; Day & Lord, 1988; Finkelstein, 2003; Finkelstein & Hambrick, 1996; Kaiser et al., 2008; Kirby, 2005; Lord et al., 1986; Luthans, 1988; Tepper, 2000; Thomas, 1988; Tosi, Misangyi, Fanelli, Waldman, & Yammarino, 2004; Waldman, Ramirez, House, & Putanam, 2001
Ethical/Moral Theory	<ul style="list-style-type: none"> • Leaders are responsible for engaging with their colleagues to address moral issues, value conflicts, and personal struggles, moving them to higher standards of ethical behavior. • Leaders who have an understanding of and work within an ethically derived set of normative expectations for their behavior are less likely to behave immorally. • Leaders who develop their character strengths and traditional virtues are likely to perform more effectively over time. • Ethical leaders are expected to transcend their own self-interests in the performance of their assigned duties and responsibilities. • Developing and using an ethical perspective in the day-to-day operations of any organization is at the heart of effective leadership. • Traditionally, ethical leaders respect and serve others, demonstrate justice, behave honestly, and create community within organizations. 	Burns, 1978; Ciulla, 1998; Coles, 2000; Greenleaf, 1970, 1977; Heifetz, 1994; Kilburg, 2006

the common elements of a general theory. Their decision to publish the volume of their collected papers as Wren stated, “was not (or, at least, not wholly) a consequence of despair over the possibility of success...they are invitations to further debate” (p. 34). Examining the research studies, conceptual papers, and books reviewed in Table 1 have led the authors to conclude that

several generalizations currently can be made concerning the concept of leadership and the state of leadership theory. These are as follows:

- Leadership is an emergent property of complex, adaptive ecological systems and hence is seen as an ephemeral phenomenon that is difficult to predict, achieve, and sustain. However, it may well be possible in the near future to make sense out of what today seems to be random, chaotic, and mostly situational (Stacey, 2007).

- Leadership in organizational contexts can be expressed by any and all members of a system (Drath, 2001; Graen, 2007; Rost, 1991; Weilkiewicz & Stelzner, 2005, 2007; Zaccaro & Klimoski, 2001) and is highly dependent on the personal characteristics and capabilities of the leaders, followers, and other stakeholders involved in a specific organization, a specific external environment, and within a specific timeframe (Eagly & Carli, 2007; Mumford, Zaccaro, Johnson et al., 2000). Research strongly suggests that a variety of organizational outcomes are reliably and validly tied to certain features of personality (Collins, 2001a, & 2001b; Judge, Bono, Ilies, & Gerhardt, 2002) and to general and specific skills of those in leadership positions at specific times and in different ways (Mumford, Marks, Connelly, Zaccaro, & Reiter-Palmon, 2000). While these characteristics and traits make a substantial contribution to a leader's performance in specific situations, at the present time, they do not appear to be the only or even dominant factor in a person's success as a leader.

- Research models and findings suggest that another major set of contributing factors in the emergence and success of leadership involves the thoughts, feelings, and behaviors used by leaders, followers, and other stakeholders in specific situations both in the organization and in the external environment (Chemers, 1997; Fiedler, 1967, 1971; Fleishman, Zaccaro, & Mumford, 1991; Hambrick & Mason, 1984; Hersey & Blanchard, 1977; Judge et al., 2002; Lord, Klimoski, & Kanfer, 2002; Zaccaro, Gilbert, Thor, & Mumford, 1991). The success of the exchanges of thoughts, emotions, and behaviors that take place between individuals in assigned leadership roles and those with whom they work is highly contingent on the ability of those involved to properly assess, choose, and deploy the correct behavior called for in specific adaptive situations inside the home organization and in the institution's external environment. Contingency models provide complex frameworks within which leaders, followers, stakeholders, and organizational behavior can be analyzed. However, establishing predictive validity for the use of any particular model or approach for specific leadership, organizational, or environmental challenges has remained elusive. These leadership behaviors have been shown to fall reliably into two broad classes—those that focus on directing attention and human effort toward specific work related tasks and goals and those that focus on creating and maintaining the psychological and social environments within which work takes place.

- Leaders, followers, and other stakeholders cocreate complex, human attachments and relationships that display many different psychological, social, political, and economic features (Chemers, 1997; Drath, 2001; Peterson, Smith, Martorana, & Owens, 2003; Rost, 1991). The efforts of individuals in leadership positions to influence the psychosocial, technical, political, economic, and other features of the organization are often multidimensional and multidirectional.

- The interactions and exchanges that take place between a leader and his or her key subordinates on an executive team (Finkelstein & Hambrick, 1990, 1996; Hambrick & Mason, 1984; Matthews, 1998) regarding the goals they pursue and the provision of mutual psychosocial support are crucial determinants of how a particular organization will perform in a given environment at a specific time (Wageman, Nunes, Burruss, & Hackman, 2008). Some studies of the organizational outcomes of leadership activities suggest that these results are predicted best by examining what actually happens in the relationships between leaders in formally structured positions and those that work most closely with them.

- Research on the effectiveness of the strategies and initiatives that leaders choose for their organizations demonstrates how complex, difficult, and elusive the pursuit of success can be (Cameron & Whetton, 1993; Marion & Uhl-Bien, 2001). Current data on the average tenure of CEO's for major corporations indicate that the rate of turnover has been accelerating and the amount

of time leaders have to demonstrate their capabilities has decreased dramatically (Cappelli & Hamori, 2005).

- Traditional and contemporary theories emphasize that leaders who can create inspirational visions and transformational pathways for their followers to enact can and will be perceived by others as highly effective executives who attract and motivate strong teams of subordinates. However, few studies of the true effectiveness of such charismatic leaders have demonstrated long-term organizational success. The small number of studies of the long-term effectiveness of leaders suggest that individuals who possess and enact virtues such as modesty and persistence in the face of obstacles tend to be more successful than those who would more classically be described as charismatic (Collins, 2001a, 2001b). Very recently, the findings of even these few studies have been contradicted by other research efforts using somewhat different methodologies (Resnick & Smunt, 2008; Niendorf & Beck, 2008).

- Evolutionary psychology (Buss, 2005) suggests that many aspects of leadership are similar across species and address the major adaptive problems of group movement, intragroup peacekeeping, and intergroup competition and conflict. The evolutionary successes of leaders across centuries of social evolution tend to be underappreciated for their power and ability to structure human and other animal species' behavior (Van Vugt, Hogan, and Kaiser (2008).

- Ethical systems and levels of moral reasoning can have dramatic effects on how leadership is enacted by individuals and groups and in turn can create significant impacts on the performance of an enterprise (Ciulla, 2003; Coles, 2000).

- The level of individual development and self-awareness of an individual executive and the members of a leadership team can influence their performance and the success of an organization (Yammarino & Atwater, 1993).

The researched-based models of leadership outlined in Table 1 demonstrate the difficulty in translating research results into an effective, comprehensive description and explanation of this overwhelmingly complex ecological phenomenon (Weilkiewicz & Stelzner, 2005). The scientific models that historically emphasized personality and other characteristics were found wanting because they could not account for the dynamic and contingent exchanges that occurred between leaders and followers. Contingency theories themselves often did not speak to the specific knowledge and skills possessed and expressed by leaders and followers. Research studies focusing on goal-path and situational models began to highlight that leaders were using different types of behavior to influence followers and that such structuring and supporting behaviors produced different results for those involved and for the organization. Models that characterize the relationships between leaders and followers allow more exploration and thoughtful interventions in their work together, but often stop short of demonstrating how they actually produce success or failure in the adaptive exchanges with an organization's environment. And studies of organizational success and failure when viewed through the simple lenses of profit and loss statements cannot inform us about what leaders do and say with the other stakeholders in enterprises to produce such outcomes.

Although each of these models has been pursued within its own paradigm (Kuhn, 1970, 1977) and makes a significant and valuable contribution to our collective understanding of leadership, unless they are woven together into an overall tapestry, scholars and practitioners alike often are left holding useful bits, ideas, and suggestions without an overarching and useful scheme in which to integrate them. Thus, it is easy to understand Bennis' (2007) and Wren's (2006) arguments for the need for a comprehensive theory and the simultaneous recognition and frustration with the fact that a universal consensus cannot currently be obtained within and by the research communities. Nevertheless, as the case vignette demonstrates practitioners and educators clamor for and need something more understandable and teachable than a taxonomy of approaches and findings.

Every leader and consultant will endorse one or more of the core concepts or approaches identified in Table 1 as part of their own framework for understanding what constitutes effective leadership. As the opening case vignette indicated, it can be vitally important for consultants to engage their clients in specific conversations regarding their leadership beliefs and practices in order to clarify what might otherwise be implicit and difficult to understand. The material and references

provided in Table 1 can serve as a useful entry point into this exploration as consultants can examine the contents to determine their perspectives and perhaps additional areas for study and comparison.

Toward an Integrative Model

Based on the summaries, reviews, and critiques identified above, there seems to be general agreement that the current state of research on leadership is extensive, extremely useful, yet disjointed and that no single model or theory currently appears to take the majority of the scientific findings into account. Zaccaro and Klimoski (2001) emphasized this view stating: “the various parts of this literature still appear disconnected and directionless” (pp. 3). In addition, it is clear that most of this knowledge has been developed largely via the modernist/reductionist approach to science which tends to focus on building theory by looking at the parts of natural phenomena and how they relate to each other. This approach usually can correlate vast amounts of factual information but can have difficulty producing more comprehensive, explanatory concepts. If this is a reasonable description of the field of leadership research, the question should be asked logically what would a more understandable and integrative framework include. At a minimum, we believe that such a model would need to account for the following:

1. Leadership is an emergent property of complex human systems. Emergence can be defined as “models which produce unexpected macroscopic behavior that is not immediately predictable upon inspection of the system. . .” (Assad & Packard, 2007, p. 232), (Guastello, 2002, 2007; Weilkiwicz & Stelzner, 2005, 2007).

2. Given different conditions and situations, leadership can be expressed by virtually any member of such systems (Bresnahan & Mitroff, 2007; Chemers, 1997; Day, Gronn, & Salas, 2004, Drath, 2001; Graen, 2007; Rost, 1991).

3. Personal knowledge, skills, abilities, attitudes, personality, values, ethics, virtues, vices, history, and many other diverse characteristics of the members of organizational systems have tremendous impact on whether, how, and how effective leadership is expressed (Avolio, 2007; Zaccaro, 2007).

4. The thoughts, feelings, and behaviors of the members of a system create a complex, contingent set of exchanges and mutual influences through which leadership occurs (Lord, 2002; Vroom & Yago, 2007; Yukl, 2005, 2010).

5. Those thoughts, feelings, and behaviors expressed over time by the members of an enterprise in the context of collectively performing the work of the organization build human relationships that mediate, influence, and ultimately direct virtually everything that happens in an enterprise (Bresnahan & Mitroff, 2007; Stacey, 2007).

6. The systems of organizations, their structures, processes, functions, inputs, throughputs, and outputs depend on these human relationships that enable or disrupt the performance of the institution (Guastello, 2002; Weilkiwicz & Stelzner, 2007).

7. The outputs of the organization result in success or failure for the organization and its members (Cameron & Whetton, 1993; House, 1971; Kaiser, Hogan, & Craig, 2008).

8. The successes and failures are determined in, through, and by an external environment in which the enterprise contributes and competes in the global ecology of human organizations. The degree of success or failure is a broad measure of the ability of the leadership of an enterprise to set a strategic direction and guide its adaptation and fit into that global ecology (Hogan & Kaiser, 2005; House, 1971; Kuilman, Vermeulen, & Li, 2009; Van Vugt et al., 2008).

9. Each of the principal components of such a model has many subcomponents and all of them can and potentially do interact in patterned, chaotic, and random types of exchanges to collectively create the organization’s experience and the emergent ecological property of leadership (see No. 1 above for a brief definition of emergence; Graen, 2007; Guastello, 2002, 2007; Weilkiwicz & Stelzner, 2007).

10. The processes of human social evolution continue to exert survival pressures on individuals, families, groups, and organizations. Successful leadership and followership improve the capacity of

people and their enterprises to thrive in evolutionary terms (Buss, 2005; Kaiser et al., 2008; Van Vugt et al., 2008).

The next issue that should be addressed concerns what would constitute a working definition of leadership within an integrated, ecological, emergence-oriented model. Based on the elements described above, we would suggest the following:

Leadership is a complex, multidimensional, emergent process in which the leader(s), follower(s), and other formal and informal stakeholders in a human enterprise use their characteristics, capabilities, thoughts, feelings, and behaviors to create mutually influencing relationships that enable them to coevolve strategies, tactics, structures, processes, directions, and other methods of building and managing human enterprises with the goal of producing adaptive success in their chosen niche(s) in the competitive, evaluative, and evolving global ecology of organizations.

This definition provides what we would argue are a number of the essential components required for the beginning exposition and exploration of an integrated model of leadership. These components include:

1. The external environment, organizational niches, and situations of an enterprise.
2. The diverse personal characteristics and capacities of the leaders, followers, and other stakeholders in an organization.
3. The diverse thoughts, feelings, and behaviors of the leaders, followers, and other stakeholders in an organization, most importantly those concerning the direction and purposes of the enterprise and how to achieve them.
4. The human working relationships cocreated by the leaders, followers, and other stakeholders in an organization.
5. The organizational systems—structures, processes, contents, and internal situations—of the organization.
6. The organizational Performance and outcomes—successes and failures of the enterprise.

This definition focuses on leadership itself as an emergent process, the wide variety of relationships in organizations, and how the various participants influence each other to try to create systems in order to successfully adapt to external environments. It can be compared to other descriptions of leadership but due to the limitations and focus of this paper such comparisons are not pursued here.

Our definition targets leadership itself as the emergent process arising from the interactions of all of the elements in an organization, the essential importance of human relationships as the vehicle through which structure, strategy, and process are cocreated, and the dynamic exchanges between the leader(s), followers, and other stakeholders with each other and a competitive external environment that ultimately determines adaptive success or failure. Although we do not want to denigrate or deny the fundamentally important role that the chief executive has in any number of domains of organizational behavior, we do believe that leadership itself, even that expressed by a truly effective senior executive, emerges out of a dynamic complex environment that always involves others.

In the following sections of this paper, we will further describe this emergence centered model, how it relates to some of the other significant models of leadership that have been explicated in the scientific literature, some of the research questions it logically raises, and why these matters are important to practicing consultants.

The six components of our suggested approach to an integrated model of leadership attempt to depict the principal known elements that contribute to the emergence of leadership in any given organization and that speak to the nine major properties described in Table 1. In this model, the external environment, including the ecological, geopolitical, social, geographic, and economic niches in which an enterprise operates, establishes the basic context for leadership to manifest in an organization. The personal characteristics and capabilities of the leaders, followers, and other stakeholders in the organization including the knowledge, skills, abilities, personalities, race, gender, experiences, histories, and other diverse characteristics including the roles that they occupy and tasks that they undertake establish fundamental building blocks for leadership within that

specific environmental situation. Leaders, followers, and other stakeholders have thoughts, feelings, and observable behaviors that comprise the day-to-day and moment-to-moment exchanges through which both leadership and the performance of the enterprise emerge (Stacey, 2007). As a result of those exchanges taking place over time, the members of the organization form human attachments and relationships within and through which they do the work of the enterprise. They cocreate, maintain, and when necessary change direction, culture, climate, structures, processes, functions, strategies, and tactics within their organizational systems and between their enterprise and the external environments with which they interact. Over time, those organizational systems perform and produce results (products and services) that are consumed by and evaluated in the external environment. These results characterize the organization's outputs and, hence, its leadership as effective or ineffective and lead to organizational success or failure. Success modifies the external environments of the enterprise by making them more accepting, rewarding, and welcoming of the organization. Over time, failure creates a more hostile, punishing, and rejecting environment. Both results affect how the performance of the leaders, followers, and other stakeholders is judged.

It also must be emphasized that each of six elements of the model has the capacity to engage simultaneously in a dynamic way with every other element. Thus, the external environment can push a leader or followers to exhibit different aspects of their personality, skills, and experience that influence their thoughts, feelings, and behavior. Such behavior can affect the members and systems of the organization as well as elements in the external, ecological environment. Similarly, inputs from the external environment can and often do directly influence aspects of the human relationships in the enterprise. For example, exchanges like this often occur when external consultants or market analysts interact with a CEO or with members of the Board of Directors of a business. Feedback or stimulation from a CEO or Board can lead senior executives to modify aspects of the processes or structures of their organizations. Mergers, acquisitions, off shoring of production, and lay offs are just some of the types of behavioral changes that Boards of Directors can push their leadership teams to execute independent of their own desires or preferences. These types of interactions can and, when they occur, do change the nature of the relationships the members of the Board have with each other and the executives of a firm.

Complexity Science and Leadership

The complexity science approach to leadership is similar to Chemers' (1997) model of integrative leadership in its emphasis on the interaction among the environment, the leader's characteristics and behaviors, the relationships leaders develop with subordinates, and the outcomes that are realized by their collective efforts. However, it differs specifically through the clarification of the role of systems functions and processes which are implicit in Chemers' approach and in the recognition that the influencing processes between and among the elements of the model are omnidirectional. In Chemers' model, the various components of the proposed systems elements relate mostly in linear fashion with the exception of several feedback loops and bidirectional exchanges. In addition, although Chemers called for integration across various perspectives in the study and practice of leadership, he did not speak at all to the contributions that complexity theory and the concept of emergence could make to the field.

In addition, we suggest again that leadership is an emergent property of all of the dynamic exchanges between the complex subsystems involved in the adaptive processes of organizations in competitive ecological environments. Within complexity science, increasingly the phenomenon of emergence has drawn theoretical, philosophical, and empirical interest (Bedau & Humphreys, 2008; Bütz, 1997; Laughlin, & Pines, 2008; Masterpasqua & Perna, 1997; and Stacey, 1992, 1996, 2005, 2007) but many fundamental questions about it remain to be answered. The essential idea of emergence is that complex, dynamically interacting systems can and do create what can be considered as phase state transitions through which the properties and interactions of the elements of a system transform to become something that has radically different properties than those of the originally configured system. Crutchfield (2008) defines it as:

... generally understood to be a process that leads to the appearance of structure not directly described by the defining constraints and instantaneous forces that control a system. Over time, "something new" appears at scales not directly specified by the equations of motion. An emergent feature also cannot be explicitly represented in the initial and boundary conditions. In short, a feature emerges when the underlying system puts some effort into its creation (p. 269).

Similarly, leadership itself cannot be divorced successfully from any of the complex, interacting subsystems identified in the six component model. In our six component paradigm, leadership also can be described as a discernable pattern, an archetypal form in Stacey's (1996, 2005, 2007) terminology. Indeed, leadership most often is portrayed as being explicitly and inherently involved in each of these elements and as implied in Zaccaro's (2001) and others' definitions, these exchanges and subsystems are under the explicit control of the leader. Humans know leaders and leadership when they see and experience it. Most often, we look to the top of a chain of command to a particular individual who has been invested with the title, authority, and responsibility to direct an organization to identify the executives in an enterprise. However, when looking at the price of a publicly traded stock or the performance of a professional baseball team on game day, it can be nearly impossible to describe exactly just where and how leadership produced that price or the final score of a game. In such situations, leaders at the top of organizations typically get the credit and the blame for what happens in their enterprises even though it may be nearly impossible to specify the causal chain through which the leader's explicit actions created the enterprise's success or failure.

We believe that the scholarly efforts in the scientific paradigms that have focused on particular elements of the emergent property of leadership have proven to be extremely useful. They help to clarify the nature of many of the dynamic exchanges that our model suggests are occurring all the time. However, such partial models of leadership always run the risk of not engaging all the other contextually critical and dynamically interacting components of these ecological systems and therefore potentially misleading both scientists and practitioners about what is truly most important in reliably producing the dynamic pattern.

It seems clear to us that the modern, and, we argue, atomistic, approaches applied to the scientific study of leadership over the past century have given both scholars and practitioners tremendous insights into the phenomenon and phenomena that have been called leadership by so many different people. However, as Bennis (2007); Goethals and Sorenson (2006), and Zaccaro and Klimoski (2001) suggested, the research community mostly has produced a fine grained analysis and understanding of the various parts that make up the whole.

We are suggesting that complexity science and the phenomenon identified as emergence can help to extend our comprehension of leadership. We also want to be clear that we are not advocating that the model we have presented constitutes the grand unifying theory that Bennis (2007); Goethals and Sorenson (2006), and others think is needed. We believe that if such a comprehensive paradigm is possible to achieve, it will take much longer to evolve, and that the simultaneous pursuit of a deeper understanding of both reductionist and emergent approaches will facilitate more rapid creation of such a paradigm. The six component model provided above is proposed neither as a final product nor as a truly viable candidate for a grand unifying theory, however it does allow us to see and begin to understand just why leadership has been and remains such a tricky and complex subject in contemporary research and it also offers an integrated approach that relies both on the extensive scientific knowledge base available and on complexity science to help scholars and practitioners alike see the core elements that lead to the emergence of leadership operating together until a truly unifying theory emerges.

To further illustrate this model and the emergence centered approach, let us briefly return to the case study with which we opened this article. Approximately four months into the consulting and coaching engagement with Mary Hawthorne, she had been thinking deeply about her role as Executive Vice President for Operations and how she would work with her boss and subordinates. She had established a revised meeting structure to broaden the number of key people with whom she could interact and influence on a regular basis, toured every research, manufacturing, and distribution facility that the company operated, and begun a series of discussions with key subordinates about how to improve operating margins. As Mary, the CEO, and the other members of the

executive team started to think about what changes they might need or want to make in the strategy of the enterprise, they noticed significant softening in the sales numbers for several of their major product lines for two consecutive quarters. As a result of these trends, the CEO, CFO, and Mary began to reach out to members of their Board of Directors and selected economic advisors and consultants that they had known and trusted for years to try to determine if these were short term problems or harbingers of a significant shift in business conditions.

Before these consultations were completed, in one of our coaching calls, Mary told me about a meeting she had with her direct reports.

“I hadn’t even told them what the Executive Team was trying to do, and two of my group members started a conversation going during the meeting about the sales declines and their own research into the trends. One of them had a brother-in-law who is an economist with one of the major banks. He had called him to discuss the situation and he learned that the bank was beginning to change policies in anticipation of a significant tightening of economic conditions and a possible slow down. After that conversation, he and his colleague had a series of quick, quiet meetings with their key people to start to brainstorm about what they could do to restrain costs, potentially restructure some operations, and even use those changes to take market share during a variety of potential economic scenarios. Completely on their own, they came to the meeting prepared to advance some ideas for our whole group.”

“What did you do?” I asked her.

“Since I had been traveling around talking to people about the importance of leadership at all levels of the organization and opening communication channels, I just worked hard at keeping my mouth shut.”

“And?”

“And, by the end of the meeting, we had a preliminary plan from the Operations Team to cut as much as 15% from our side of the Company without losing any significant capacity and with minimal job losses in research, manufacturing, and distribution. Within, 48 hours, I had a pretty good proposal to take to my boss and colleagues.”

“What did they do?”

“My boss took it to the Executive Committee of the Board with minimal changes. They told him to execute on it immediately. He was very, very happy.”

“What did this teach you about your approach to leadership?” I asked.

“If you encourage your colleagues, leadership can come from anywhere. And you don’t need to have all the answers yourself. In fact, most of the answers can come from people who know the business, trust each other, and have the opportunity to exchange their ideas openly.”

Needless to say, I was very impressed by what Mary and her team accomplished in a very short period of time and very pleased for their organization since they were able to anticipate the adverse economic conditions significantly ahead of their competitors and despite struggling along with every other company in their industry, they did take market share and suffered far fewer losses than anyone else. This additional vignette should provide an illustration of how leaders who know themselves and their people, use their competencies and capabilities skillfully, develop trusting relationships, and engage their operating environments in nuanced and anticipatory ways can make structural and process changes in their organizations to improve performance. Such leadership does not necessarily flow down the chain of command in hierarchically structured enterprises. It can emerge spontaneously from virtually any level within an institution and contribute to its capacities to survive and grow. In our opinion, leaders need to learn how to understand these emergent phenomena and to improve the capacities of their organizations to produce and take advantage of them.

Additional Research Questions

We argue that executives and their key colleagues and stakeholders must operate with a holistic understanding of how an organization, its members, and its external environment will respond to the behaviors that they strategically and intuitively choose to enact. Any consultant working with

leaders and within the integrated model described above should be able to raise significant and challenging questions concerning other approaches that could be considered by individuals in such positions. The advantages of the proposed model are that it provides consultants and practitioners alike with a comprehensively integrated and diverse set of viewpoints within and through which any challenge can be examined and reconsidered. The model as described also encourages a broad understanding of the research questions proposed by Hackman and Wageman (2007) and the modifications and additions suggested by Graen (2007) as moving in the direction of seeing the complex entity of leadership more fully. However, each of these two lists of suggested inquiries either ignores or under emphasizes different components of the model we have proposed. Both lists demonstrate a much improved comprehension of the complexity of the interactions and exchanges as they attempt to connect some of the pieces in broader and more dynamic rather than in static, fine-grained ways. Examining such questions also is supported by the summary in Table 1 provided above. Indeed, each of the eight approaches described provides a great deal of useful information and tremendous insight into the nature of leadership. However, the scientific study of leadership probably does not yet possess research designs or methodologies that would allow the kind of complex, multidimensional, highly interactive, and longitudinally conducted ecological studies that are required to leap into the different scientific paradigm suggested by this model. Because of funding difficulties and such methodological challenges, the research community may be forced to continue to study the subcomponents or the interactions of some of the parts. However without a theory of the whole, leadership will never completely come into focus even if we perform better studies of how the parts interact to form the entire phenomenon because the studies of the parts and the key interactions are most likely to be haphazard rather than systematic.

In the spirit of the questions offered by Hackman and Wageman (2007) and Graen (2007), and based on the model and assessment of the current theories of leadership we have presented, we want to suggest that the following items be added to the research agenda in the pursuit of the gestalt we are collectively trying to describe as leadership. These are not offered as specific, testable hypotheses derived from the model presented above. They do not engage the three major approaches—mathematical methods, simulations, or formal logic—to the development of formal theory suggested by Adner, Pólos, Rall, and Sorenson (2009). Rather, they are presented as an effort to use natural language to formulate “conjectures . . . to help guide empirical researchers in terms of what data they should collect and what questions they should attempt to answer” (Adner et al., 2009, p. 205). Undoubtedly, other scholars and practitioners will have many other ideas to add.

1. What is the total spectrum of known and hypothesized variables that contribute to the emergence of leadership within, between, or among ecologically engaged human organizations?
2. Out of those variables, is there a minimally required, interactive set(s) that reliably and validly permit(s) or facilitate(s) the emergence of leadership within or between these organizations?
3. Under what conditions in the external environments of ecologically engaged organizational systems does this interactive set of reliable and valid variables lead to success or failure for the enterprise as a whole?
4. What are the subsets of the interactive variables that can lead to organizational success independent of the activities and behaviors of a formally defined leader?
5. Similarly, what subsets of the interactive variables can result in the success of a formally defined leader even when the organization as a whole fails?
6. What types of thoughts, emotions, and behaviors should leaders, followers, and other stakeholders in an organization enact to create effective relationships that produce success for the enterprise as a whole, and to what extent are these thoughts, emotions, and behaviors sensitive to specific situations?
7. What are the reliable patterns of responses from an organization’s external environment that have either adverse or positive effects on the levels of productivity in the relationships between leaders, followers, and other stakeholders in the organization?
8. What are the predictable patterns of behaviors in which leaders, followers, and other stakeholders engage that affect their relationships and the types of organizational structures and processes that they cocreate as a result?

9. How does a leader use personality traits and learn to reliably use selected knowledge, abilities, attitudes, beliefs, values, virtues, and skills, as well as their behavioral manifestations, to produce productive relationships with followers and other stakeholders in an organization?

10. What methodological innovations would be required to empirically study larger sets of these variables in dynamic interaction with each other to demonstrate measurable and potentially emergent outcomes for the individuals and their organizations over different timeframes?

Discussion

One might reasonably ask why it is so important for the leadership research community to continue to pursue what Bennis (2007) called a “grand unifying theory?” The question is especially challenging in the face of the disjointed nature of the scientific literature that has been developed to date, the questions raised by Crutchfield (2008) and Horgan (1996), and in recognition that many, if not most, practitioners and educators agree that at this point in time, the practice of leadership is truly an art rather than a science (DePree, 1989; Klein, 1999, 2003). In a sense, Bennis, and virtually everyone else who has ever written on the subject, has answered this most central question as follows: because effective leadership is vitally important to human organizations and to the future of the entire species.

The historical record of *homo sapiens* demonstrates that humanity has made steady progress against the forces that pose true dangers to it only when effective leadership has been consistently and demonstrably exhibited over time. A comprehensive, scientifically reliable and valid theory of leadership would enable all practitioners and educators to anchor their activities in principles that are consistently sound rather than following the most recent trends, fads, or anecdotally focused biographical memoirs. The hard won understandings of leadership that have been accumulated in and by the scientific community over the past century already enable leaders to more reliably create and direct their organizations. However, all too often, leaders fail in that effort with sometimes catastrophic results for everyone involved (Cappelli & Hamori, 2005; Finkelstein, 2003; Kellerman, 2004). Simply put, a better, comprehensive, scientific theory would potentially reduce the likelihood of such losses and enable human progress to continue across many fronts.

A comprehensive theory of leadership also would enable the scientific community itself to ask different questions and to answer them more systematically. We believe that it is time for the study of leadership to consider adding to or significantly changing the paradigm with which it has conducted research for over a century (Kuhn, 1970, 1977). The types of comprehensive, ecologically informed, and longitudinal studies that will be required to examine the interactive and adaptively focused nature of the model proposed in this paper seem well beyond the resources of any one research group. Developing and orchestrating the resources necessary to conduct such studies may well present one of the most significant obstacles to the advancement of our scientific knowledge base on leadership.

Imagine then the implications for the practice of consulting psychology and other related developmental disciplines if such an integrated, emergent theory of leadership could be more completely illuminated. Most current practitioners are constantly faced with various aspects of the dilemma outlined at the beginning of this paper. The question is what models or conceptual frameworks should guide our work with the real leaders of operating organizations who face truly important problems and challenges? Every consultant, teacher, and coach currently must examine the plethora of paradigms and findings suggested in and by Table 1 and try to determine which models and findings can best inform the work they have with specific clients. Each professional must interpret the literature in idiosyncratic ways and offer his or her best analysis for the specific situation and time. And every leader faces the same challenges in their work every day.

The six component model offered in this paper potentially provides every practitioner with a significantly improved ability to focus both their deliberations and choices. In that context, the correct answer to Mary’s question in the vignette at the beginning of this paper “what would you suggest” was, “let’s discuss how you and your various stakeholders perceive the key environmental challenges your organization faces and how you and your colleagues would define success in

meeting them. Then, we need to explore what personal capacities and characteristics, thoughts, feelings, and behaviors you need to access and deploy to build the relationships you'll need to create the organizational systems that will increase the probability you and your organization will reach your goals. Finally, we need to work steadily on how to make all of this happen." Such an answer immediately begins to emphasize both intuitive and tangible core elements of executive performance, yet, as we hope we have demonstrated, it is organized on top of a very complex understanding of the current state of leadership science and practice. What follows is an additional set of questions that consultants can use to explore these issues with their clients.

1. What direction and goals are your organization pursuing in the markets/environments in which you compete and why have you chosen them?
2. What characteristics and capabilities in yourself and your key subordinates are you emphasizing to accomplish your goals?
3. What thoughts, feelings, behaviors, knowledge, skills, abilities, experience, and other dimensions of diversity do you want to routinely employ to help build the relationships with the people you need to help the organization reach your goals?
4. What are the preferred characteristics of the relationships that you believe you need to lead and manage this enterprise?
5. How do you engage and use these relationships to build and maintain the structures, processes, inputs, throughputs, and outputs that the organization needs to achieve success in its environments?
6. How do you measure the success or failure of the enterprise and its leadership team(s) in the markets in which it competes?
7. What resources, relationships, and sources of information do you need and use to help you, your colleagues, and your organization succeed?

Such an approach and emphasis the above list of questions provides does not require that practitioners give an explicit and comprehensive exposition of the available taxonomies of leadership models and research findings to their clients. It does recognize that a number of classifications have been created and that leaders and their consultants need a more practical and accessible method and framework in order to better use what has been learned. In addition to helping to broaden the approach to the scientific study of leadership, we simultaneously hope that the summaries, arguments, and model offered above will enable practicing consultants to sharpen the focus of their work with clients.

References

- Adner, R., Pólos, L., Ryall, M., & Sorenson, O. (2009). The case for formal theory. *Academy of Management Review*, *34*, 201–208.
- Assad, A., & Packard, N. H. (2007). Emergence. In M. A. Bedau & P. Humphreys (Eds.), *Emergence: Contemporary readings in philosophy and science* (pp. 231–234). Cambridge, MA: MIT Press.
- Avolio, B. J. (2007). Promoting more integrative strategies for leadership theory- building. *American Psychologist*, *62*, 25–33.
- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *Leadership Quarterly*, *16*, 315–338.
- Avolio, B. J., & Luthans, F. (2006). *The high impact leader: Moments that matter in authentic leadership development*. New York: McGraw-Hill.
- Balkundi, P., & Kilduff, M. (2005). The ties that bind: A social network approach to leadership. *Leadership Quarterly*, *16*, 941–961.
- Bass, B. M. (1990). *Bass and Stoghill's handbook of leadership* (3rd ed.). Hoboken, NJ: Wiley.
- Bedau, M. A., & Humphreys, P. (Eds.). (2008). *Emergence: Contemporary readings in philosophy and science*. Cambridge, MA: MIT Press.
- Bennis, W. (2007). The challenges of leadership in the modern world: Introduction to the special issue. *American Psychologist*, *62*, 2–5.
- Bresnahan, C. G., & Mitroff, I. I. (2007). Leadership and attachment theory. *American Psychologist*, *62*, 607–608.

- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Buss, D. M. (2005). *Handbook of evolutionary psychology*. Hoboken, NJ: Wiley.
- Büztz, M. R. (1997). *Chaos and complexity: Implications for psychological theory and practice*. Washington, DC: Taylor and Francis.
- Cameron, K. S., & Whetton, D. A. (1993). *Organizational effectiveness: A comparison of multiple models*. New York: Academic Press.
- Cappelli, P., & Hamori, M. (2005). The new road to the top. *Harvard Business Review*, 85(1), 25–32.
- Carlyle, T. (1907). *On heroes, hero-worship, and the heroic in history*. Boston: Houghton Mifflin.
- Chemers, M. M. (1997). *An integrative theory of leadership*. Mahwah, NJ: Lawrence- Erlbaum Associates.
- Chin, J. L., & Sanchez-Hucles, J. (2007). Diversity and leadership. *American Psychologist*, 62, 608–609.
- Ciulla, J. B. (1998). *Ethics, the heart of leadership*. Westport, CT: Greenwood.
- Coles, R. (2000). *Lives of moral leadership*. New York: Random House.
- Collins, J. (2001a). *Good to great*. New York: HarperCollins.
- Collins, J. (2001b). Level 5 leadership: The triumph of humility and fierce resolve. *Harvard Business Review*, 79, 66–76.
- Conger, J. A., & Kanungo, R. N. (1998). *Charismatic leadership in organization*. Thousand Oaks, CA: Sage.
- Crutchfield, J. P. (2008). Is anything new? Considering emergence. In M. A. Bedau & P. Humphreys (Eds.), *Emergence: Contemporary readings in philosophy and science* (pp. 269–286). Cambridge, MA: MIT Press.
- Day, D. V. (2001). Assessment of leadership outcomes. In S. J. Zaccaro & R. J. Klimoski (Eds.), *The nature of organizational leadership* (pp. 384–410). San Francisco: Jossey-Bass.
- Day, D. V., Gronn, P., & Salas, E. (2004). Leadership capacity in teams. *Leadership Quarterly*, 15, 857–880.
- Day, D. V., & Lord, R. G. (1988). Effective leadership and organizational performance: Suggestions for a new theory and methodology. *Journal of Management*, 14, 453–464.
- DePree, M. (1989). *Leadership as an art*. New York: Bantam Books Dell.
- Drath, W. H. (2001). *The deep blue sea: Rethinking the source of leadership*. San Francisco: Jossey-Bass.
- Drath, W. H., & Palus, C. J. (1994). *Making common sense: Leadership as meaning making in a community of practice*. Greensboro, NC: Center for Creative Leadership.
- Eagly, A. H., & Carli, L. L. (2007). *Through the labyrinth*. Boston: Harvard Business School Press.
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 29, 569–591.
- Ferguson, E. D., Hagaman, J., Grice, J. W., & Peng, K. (2006). From leadership to parenthood: The applicability of leadership styles to parenting styles. *Group Dynamics: Theory, Research, and Practice*, 10, 45–56.
- Fiedler, F. E. (1967). *A theory of leadership effectiveness*. New York: McGraw-Hill.
- Fiedler, F. E. (1971). Validation and extension of the contingency model of leadership effectiveness: A review of the empirical findings. *Psychological Bulletin*, 76, 128–148.
- Fiedler, F. E., & Chemers, M. M. (1974). *Leadership and effective management*. Glenview IL: Scott Foresman and Company.
- Finkelstein, S. (2003). *Why smart executives fail and what you can learn from their mistakes*. New York: Portfolio.
- Finkelstein, S., & Hambrick, D. C. (1990). Top-management team tenure and organizational outcomes: The moderating role of managerial discretion. *Administrative Science Quarterly*, 36, 484–503.
- Finkelstein, S., & Hambrick, D. C. (1996). *Strategic leadership: Top executives and their effects on organizations*. Minneapolis/St. Paul, MN: West.
- Fleishman, E. A., Mumford, M. D., Zaccaro, S. J., Levin, K. Y., Korotkin, A. L., & Hein, M. B. (1991). Taxonomic efforts in the description of leader behavior: A synthesis and functional interpretation. *Leadership Quarterly*, 2, 245–287.
- Fleishman, E. A., Zaccaro, S. J., & Mumford, M. D. (1991). Individual differences and leadership: An overview. *Leadership Quarterly*, 2, 237–243.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology*, 2300–2319.
- Goethals, G. R., & Sorenson, G. L. J. (Eds.). (2006). *The quest for a general theory of leadership*. Cheltenham, U.K.: Edward Elgar.
- Graen, G. B. (2007). Asking the wrong questions about leadership. *American Psychologist*, 62, 604–605.
- Graen, G. B., & Graen, J. A. (Eds.). (2007). *LMX leadership: The series. Vol. 4. Sharing network leadership*. Greenwich, CT: Information Age Publishing.
- Graen, G. B., & Uhl-Bien, M. (1991). The transformation of professionals into self-managing and partially self-designing contributions: Toward a theory of leadership making. *Journal of Management Systems*, 3, 33–48.

- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory over 25 years. *Leadership Quarterly*, 6, 219–247.
- Greenleaf, R. K. (1970). *The servant as leader*. Newton Centre, MA: Robert K. Greenleaf Center.
- Greenleaf, R. K. (1977). *Servant leadership: A journey into the nature of legitimate power and greatness*. New York: Paulist.
- Guastello, S. J. (2002). *Managing emergent phenomena: Nonlinear dynamics in work organizations*. Mahwah, NJ: Erlbaum.
- Guastello, S. J. (2007). How leaders really emerge. *American Psychologist*, 62, 606–607.
- Hackman, J. R., & Wageman, R. (2007). Asking the right questions about leadership: Discussion and conclusions. *American Psychologist*, 62, 43–47.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9, 193–206.
- Heifetz, R. (1994). *Leadership without easy answers*. Cambridge, MA: Harvard University Press.
- Hersey, P., & Blanchard, K. H. (1977). *Management of organizational behavior: Utilizing human resources* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Hogan, R., & Kaiser, R. B. (2005). What we know about leadership. *Review of General Psychology*, 9, 169–180.
- Horgan, J. (1996). *The end of science: Facing the limits of knowledge in the twilight of the scientific age*. London: Abacus.
- House, R. J. (1971). A path-goal theory of leader effectiveness. *Administrative Science Quarterly*, 16, 74–84.
- House, R. J. (1988). Power and personality in organizations. *Research in Organizational Behavior*, 10, 305–357.
- House, R. J., & Mitchell, T. R. (1974). Path-goal theory of leadership. *Journal of Contemporary Business*, 3, 81–97.
- House, R. J., Spangler, W. D., & Woycke, J. (1991). Personality and charisma in the U.S. Presidency: A psychological theory of leader effectiveness. *Administrative Science Quarterly*, 36, 364–396.
- Hunt, J. G. (1991). *Leadership: A new synthesis*. Thousand Oaks, CA: Sage.
- Jacobs, T. O., & Jaques, E. (1987). Leadership in complex systems. In J. Zeidner (Ed.), *Human productivity enhancement*. New York: Praeger.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluation traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80–92.
- Judge, T. A., Bono, J. E., Ilies, R., & Gehardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87, 765–780.
- Kahn, W. A., & Kram, K. E. (1994). Authority at work: Internal models and their organizational consequences. *Academy of Management Review*, 19, 17–50.
- Kaiser, R. B., Hogan, R., & Craig, S. B. (2008). Leadership and the fate of organizations. *American Psychologist*, 63, 96–110.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: Wiley.
- Kellerman, B. (2004). *Bad leadership: What it is, how it happens, why it matters*. Boston: Harvard Business School Press.
- Kilburg, R. R. (2006). *Executive wisdom: Coaching and the emergence of virtuous leaders*. Washington, DC: American Psychological Association.
- Kirby, J. (2005). Toward a theory of high performance. *Harvard Business Review*, 83, 30–39.
- Klein, G. (1999). *Sources of power: How people make decisions*. Cambridge, MA: MIT Press.
- Klein, G. (2003). *Intuition at work*. New York: Doubleday.
- Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed.). Chicago: University of Chicago Press.
- Kuhn, T. S. (1977). *The essential tension: Selected studies in scientific tradition and change*. Chicago: The University of Chicago Press.
- Kuilman, J. G., Vermeulen, I., & Li, J. (2009). The consequences of organizer ecologies: A logical formalization. *Academy of Management Review*, 34, 253–272.
- Laughlin, R. B., & Pines, D. (2008). The theory of everything. In M. A. Bedau & P. Humphreys (Eds.), *Emergence: Contemporary readings in philosophy and science* (pp. 259–268). Cambridge, MA: MIT Press.
- Lewin, K. (1952). *Field theory in social science: Selected theoretical papers by Kurt Lewin*. London: Tavistock.
- Lewin, K. (1997). *Resolving social conflicts and field theory in social science*. Washington, DC: American Psychological Association.
- Likert, R. (1961). *New patterns of management*. New York: McGraw-Hill.
- Lombardo, M. M., & Eichinger, R. M. (2001). *The leadership engine: Architecture to develop leaders for any future*. Minneapolis, MN: Lominger.
- Lord, R. G., De Vader, C. L., & Alliger, G. M. (1986). A meta-analysis of the relation between personality traits

- and leadership perceptions: An application of validity generalization procedures. *Journal of Applied Psychology*, 71, 402–410.
- Lord, R. G., Klimoski, R. J., & Kanfer, R. (2002). *Emotions in the workplace: Understanding the structure and role of emotions in organizational behavior*. San Francisco: Jossey-Bass.
- Luthans, F. (1988). Successful vs. effective real managers. *Academy of Management Executive*, 2, 127–132.
- Marion, R., & Uhl-Bien, M. (2001). Leadership in complex organizations. *Leadership Quarterly*, 12, 389–418.
- Masterpasqua, F., & Perna, P. A. (Eds.). (1997). *The psychological meaning of chaos: Translating theory into practice*. Washington, DC: American Psychological Association.
- Matthews, L. L. (1998). A review of executive teamwork. *Team Performance Management*, 4, 269–285.
- Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper and Row.
- Mintzberg, H. (2009). *Managing*. San Francisco: Berrett-Koehler.
- Morrison, A. M. (1992). *The new leaders: Guidelines on leadership diversity in America*. San Francisco: Jossey-Bass.
- Mumford, M. D., & Connelly, M. S. (1991). Leaders as creators: Leader performance and problem solving in ill-defined domains. *Leadership Quarterly*, 2, 289–315.
- Mumford, M. D., Marks, M. A., Connelly, M. S., Zaccaro, S. J., & Reiter-Palmon, R. (2000). Development of leadership skills: Experience and timing. *Leadership Quarterly*, 11, 84–114.
- Mumford, M. D., Zaccaro, S. J., Harding, F. D., Jacobs, T. O., & Fleishman, E. A. (2000). Leadership skills for a changing world: Solving complex social problems. *Leadership Quarterly*, 11, 11–35.
- Mumford, M. D., Zaccaro, S. J., Johnson, S. R., Diana, M., Gilbert, J. A., & Threlfall, K. V. (2000). Patterns of leader characteristics: Implications for performance and development. *Leadership Quarterly*, 11, 84–117.
- Neindorf, B., & Beck, K. (2008). Good to great or just good? *The Academy of Management Perspectives*, 22, 13–20.
- Northouse, P. G. (2010). *Leadership: Theory & practice* (5th ed.). Los Angeles: Sage.
- Peterson, R. S., Smith, D. B., Martorana, P. V., & Owens, P. D. (2003). The impact of chief executive officer personality on top management team dynamics. *Journal of Applied Psychology*, 88, 795–808.
- Popper, M., Mayseless, O., & Castlenovo, O. (2000). Transformational leadership and attachment. *Leadership Quarterly*, 11, 267–289.
- Resnick, B. G., & Smunt, T. L. (2008). From good to great to. *The Academy of Management Perspectives*, 22, 6–12.
- Rost, J. C. (1991). *Leadership for the twenty-first century*. Westport, CT: Praeger.
- Sayles, L. R. (1993). *The working leader: The triumph of high performance over conventional management principles*. New York: McGraw-Hill.
- Shamir, B., & Eilam, G. (2005). What's your story? A life stories approach to authentic leadership development. *Leadership Quarterly*, 16, 395–417.
- Shamir, B., & Howell, J. M. (1999). Organizational and contextual influences on the emergence and effectiveness of charismatic leadership. *Leadership Quarterly*, 10, 57–283.
- Stacey, R. D. (1992). *Managing the unknowable: Strategic boundaries between order and chaos in organizations*. San Francisco: Jossey-Bass.
- Stacey, R. D. (1996). *Complexity and creativity in organizations*. San Francisco: Berrett-Koehler Publishers, Inc.
- Stacey, R. D. (2007). *Strategic management and organisational dynamics: The challenge of complexity* (5th ed.). Harlow, England: Prentice Hall/ Financial Times.
- Stacey, R. D. (Ed.). (2005). *Experiencing emergence in organizations: Local interaction and the emergence of global pattern*. London: Routledge.
- Sternberg, R. J. (2007). A systems model of leadership: WICS. *American Psychologist*, 62, 34–42.
- Sternberg, R. J., Kaufman, J. C., & Pretz, J. E. (2003). A propulsion model of creative leadership. *The Leadership Quarterly*, 14, 455–473.
- Stogdill, R. M. (1948). Personal factors associated with leadership. *Journal of Psychology*, 25, 35–71.
- Stogdill, R. M. (1974). *Handbook of leadership* (1st ed.). New York: Free Press.
- Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, 43, 178–190.
- Thomas, A. (1988). Does leadership make a difference to organizational performance? *Administrative Science Quarterly*, 33, 388–400.
- Tichy, N. M., & Cohen, E. (1997). *The leadership engine*. New York: HarperCollins.
- Tosi, H. L., Misangyi, V. F., Fanelli, A., Waldman, D. A., & Yammarino, F. J. (2004). CEO charisma, compensation, and firm performance. *Leadership Quarterly*, 15, 405–420.
- Van Vugt, M., Hogan, R., & Kaiser, R. B. (2008). Leadership, followership, and evolution: Some lessons from the past. *American Psychologist*, 63, 182–196.
- Von Bertalanffy, L. (1968). *General systems theory*. New York: Braziller.

- Vroom, V. H., & Jago, A. G. (2007). The role of the situation in leadership. *American Psychologist*, *62*, 17–24.
- Wageman, R., Nunes, D. A., Burruss, J. A., & Hackman, J. R. (2008). *Senior leadership teams: What it takes to make them great*. Boston: Harvard Business School Press.
- Waldman, D. A., Ramirez, G. G., House, R. J., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of Management Journal*, *44*, 134–143.
- Weber, M. (1947). *The theory of social and economic organization* (A. M. Henderson & T. Parsons, Trans.). New York: Oxford University Press. (Original work published 1924).
- Weilkiewicz, R. M., & Stelzner, S. P. (2005). An ecological perspective on leadership theory, research, and practice. *Review of General Psychology*, *9*, 326–341.
- Weilkiewicz, R. M., & Stelzner, S. P. (2007). Special issue on leadership falls behind. *American Psychologist*, *62*, 605–606.
- Wren, J. T. (2006). *A quest for a grand theory of leadership*. In G. R. Goethals, & G. L. J. Sorenson, (Eds.), *The quest for a general theory of leadership*. Cheltenham, U.K.: Edward Elgar.
- Yammarino, F. J. (2000). Leadership skills: Introduction and overview. *Leadership Quarterly*, *11*, 5–9.
- Yammarino, F. J., & Atwater, L. E. (1993). Understanding self-perception accuracy: Implications for human resource management. *Human Resource Management*, *32*, 231–247.
- Yukl, G. (2005). *Leadership in organizations* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Yukl, G. (2010). *Leadership in organizations* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Zaccaro, S. J. (2001). *The nature of executive leadership: A conceptual and empirical analysis of success*. Washington, DC: American Psychological Association.
- Zaccaro, S. J. (2007). Trait based perspectives of leadership. *American Psychologist*, *62*, 6–16.
- Zaccaro, S. J., Gilbert, J. A., Thor, K. K., & Mumford, M. D. (1991). Leadership & social intelligence: Linking social perspectiveness and behavioral flexibility to leader effectiveness. *Leadership Quarterly*, *2*, 317–342.
- Zaccaro, S. J., & Klimoski, R. J. (2001). The nature of organizational leadership: An introduction, in S. J. Zaccaro & R. J. Klimoski, (Eds.), *The nature of organizational leadership: Understanding the performance imperatives confronting today's leaders*. (pp. 3–41). San Francisco: Jossey-Bass.

Received June 9, 2008

Latest revision received November 29, 2010

Accepted December 1, 2010 ■

Showcase your work in APA's newest database.



Make your tests available to other researchers and students; get wider recognition for your work.

"PsycTESTS is going to be an outstanding resource for psychology," said Ronald F. Levant, PhD. "I was among the first to provide some of my tests and was happy to do so. They will be available for others to use—and will relieve me of the administrative tasks of providing them to individuals."

Visit <http://www.apa.org/pubs/databases/psyc-tests/call-for-tests.aspx> to learn more about PsycTESTS and how you can participate.

Questions? Call 1-800-374-2722 or write to tests@apa.org.

Not since PsycARTICLES has a database been so eagerly anticipated!