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Leadership and individual differences: At the cusp of a renaissance

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The Leadership Quarterly

6 May 2012

Abstract

In this introductory editorial, we provide a brief overview of the history of individual difference research in leadership. We explain the major challenges that trait research faced, and why it was revived primarily because of methodological advancements. Next, we argue that leadership individual difference research is at a cusp of a renaissance. We explain why we are at this cusp and what researchers should do reify the renaissance in terms of theoretical extensions of trait models, the application of robust methodological advancements, and the development of process models linking distal (i.e., traits) predictors to proximal predictors (e.g., behaviors, skills, attitudes), and the latter to leader outcomes. We then summarize the papers we accepted for the special issue, and conclude with an optimistic note for leadership individual difference research.

Keywords: leadership, traits, individual differences, personality, intelligence, multilevel models, process models.

The idea of a special issue on leader individual differences emerged following a symposium hosted in Lausanne, Switzerland on December 2009. From the discussions with the invited panel, presenters, and participants, the general consensus was that individual-differences research in leadership was at a critical juncture; a new genre of theories and the application of new methods would reignite interest in what has so far been a productive area of research with particular importance for practice.

Our interest in editing this special issue was to provide a forum for new theory and novel findings on the general topic of leadership and individual differences both from a leader and a follower perspective. As all those who study individual differences know, this area of research has had a tumultuous history in general psychology (Kenrick & Funder, 1988; Mischel, 1977) as well as in leadership research (House & Aditya, 1997). At this time, there is still debate on what constitutes a trait (Jackson, Hill, & Roberts, 2012), whether personality is measured broadly enough (K. Lee & Ashton, 2004, 2008), whether big-five type inventories are casting too long a shadow over other individual differences that could also contribute to predicting outcomes (Day & Schleicher, 2006), and whether alternative conceptions of intelligence matter (Fiori & Antonakis, 2011).

The notion of individual differences in leadership goes back a long way: The ancient Greeks took leader selection (as well as development) very seriously. For example, in the *Republic* (Plato & Jowett, 1901), Plato noted "we are not all alike; there are diversities of natures among us which are adapted to different occupations" (p. 50). With respect to leadership Plato said that: "There will be discovered to be some natures who ought to . . . be leaders in the State; and others who are not born to be [leaders], and are meant to be followers rather than leaders" (p. 175). He acknowledged that "The

selection [of leaders] will be no easy matter" (p. 56), and how right he was. This point is particularly salient nowadays, given the importance that leadership plays in organizational even country-level effectiveness (Day & Lord, 1988; House, Spangler, & Woycke, 1991; Jones & Olken, 2005; Judge & Piccolo, 2004; Judge, Piccolo, & Ilies, 2004).

The idea of quantifying individual differences to predict leadership outcomes began in earnest in the 20th century (Zaccaro, Kemp, & Bader, 2004). The measurement of individual differences (or traits) is obviously needed if they are to be used to predict anything, and this beyond mere behaviors (cf. Jackson, et al., 2012). Individual differences are usually conceived of as "psychological or biological characteristics that exhibit four essential properties. [They] (a) are measurable, (b) vary across individuals, (c) exhibit temporal and situational stability, and (d) predict attitudes, decisions, or behaviors and consequently outcomes" (Antonakis, 2011, p. 270). Of course, as we suggest later, the context must also be considered because cross-situational consistency is not perfect but probable (cf. Jackson, et al., 2012); many exogenous factors can affect how strongly attitudes, decisions, or behaviors correlate across contexts (and time too).

As for traits in leadership, findings round about the mid-20th century did appear to be very promising (House & Aditya, 1997); however, following misinterpreted reviews (e.g., Mann, 1959; Stogdill, 1948), a false consensus soon emerged that there were no measurable individual differences that could predict leader outcomes. As shown by Zaccaro, Kemp, and Bader (2004), until even recently, textbooks were replete with aphorisms suggesting that a trait perspective of leadership simply does not matter. Other reasons also contributed to the demise of trait perspectives: There was no method to

integrate research findings beyond eyeballing the data and putting on whatever spin went best with the story the author wished to tell. Moreover, personality theory was fragmented and not studied from a multivariate perspective. In addition, some researchers may have found the thought of traits predicting leadership as being rather unpalatable because such findings implied a deterministic perspective of leadership; that is, leaders were "born" with certain characteristics and not be made. Of course, the "made" argument has found support (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009), but research has extensively demonstrated that traits matter as do "deep" determinants going back to genes (Arvey, Rotundo, Johnson, Zhang, & McGue, 2006; Arvey, Zhang, Avolio, & Krueger, 2007; Ilies, Arvey, & Bouchard, 2006).

The reason why individual difference research was only recently revived was because studies using meta-analysis have shown that intelligence matters for leadership (Judge, Colbert, & Ilies, 2004; Lord, De Vader, & Alliger, 1986). Other studies using fixed-effects type designs demonstrated systematic person-level variance in leadership, irrespective of the context or team composition, which were manipulated (Kenny & Zaccaro, 1983; Zaccaro, Foti, & Kenny, 1991). These studies found that up to 80% of the variance in leadership ratings depended on systematic (though unobserved) person-level effects.

As for leader personality, current models have mainly been grouped around "big" factors (cf. M. C. Ashton et al., 2004; Digman, 1989; Goldberg, 1990), which seek to measure the most salient aspects of personality; in combination with meta-analysis, it is now clear that leader personality also matters for leader outcomes (e.g., DeRue, Nahrgang, Wellman, & Humphrey, 2011; Judge, Bono, Ilies, & Gerhardt, 2002). The last

decade of the 20th century showed a strong interest in trait models of leadership, at least judging by what has been published in *The Leadership Quarterly* (Lowe & Gardner, 2000). However, trait theory appears to be in a "mature phase" of research and interest in it may start declining (Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010). We hope that our special issue will help end this impasse.

We think that recent theoretical and methodological advances are pointing to the cusp of a *renaissance*. Below, we discuss why we are optimistic that there will be a resurgent interest in trait perspectives of leadership. New theorizing and methods will provide the impetus for major discoveries and more complete models. Also, apart from a focus on the leader, one area that we think looks promising is to investigate further is how follower individual differences affect perception and legitimization of leaders; this research goes back to the idea that the variance in perception of followers of the same leader is not only measurement error but also a reflection of follower individual differences (e.g., Felfe & Heinitz, 2010; Graen, 1976; Hofmann, Morgeson, & Gerras, 2003).

Prior to introducing the papers comprising in this special issue, we first explain relevant aspects of individual-differences research that should be more seriously considered by researchers. We believe that incorporating some of the ideas we present below will help jolt trait research out of its current lull. We present ideas to extend theory (e.g., incorporating time and follower traits in trait research), and discuss methodological advances (e.g., testing process models) that can test more complete trait models.

We have been, at times, a bit critical regarding the narrowness and simplicity with which some research in individual-differences has been conducted, both from a theoretical and a methodological perspective, which may have hindered the advancement of trait theory. Zaccaro (in press) makes similar suggestions. Yet, we agree with Zaccaro that there is a bright future ahead for leadership individual differences research as these themes become salient.

Towards a renaissance

Time, time scales, and time frames

How is time implicated in individual differences, both from a leader and follower perspective (Bluedorn & Jaussi, 2008; Shamir, 2011)? There is some literature suggesting that leaders differ in their orientation towards the future, which may influence preferences for different strategic planning horizons (Das, 1991). There has also been discussion of "temporal leadership" (Ancona, Goodman, Lawrence, & Tushman, 2001) and the different temporal leadership challenges senior teams face as they help their organizations adapt to changing environments. From the research on culture (e.g., Hofstede, 1997) we know that long-term orientation has been argued to be an important difference at the more collective level, but what about time orientations at the level of individual leaders or leadership teams?

The impact of time on leadership should also be considered in terms of how long it takes for leaderships effects, stemming in part from leader individual differences (Hambrick & Mason, 1984) to take hold on the company level (cf. Day & Lord, 1988). Or, how long does it take for followers to see certain characteristics in leaders and does this depend on follower characteristics? When do certain particular leader effects work and how might they be linked to individual differences? How are follower's time orientations altered by a leaders vision having temporal connotations (see Shamir, 2011)?

More broadly, time is a contextual factor whose fixed effects should be modeled because time may correlate with the individual difference variables under study, both in terms of a predictor or moderator (Liden & Antonakis, 2009).

Personality traits as state distributions

An overlooked area in leader research is on traits as "density distributions" of states and the ability of traits to predict distributions of naturally occurring behaviors (Fleeson, 2001; Fleeson & Gallagher, 2009). Fleeson's (2001) paper is especially interesting because it shows that within-person variability in "big-five" relevant states (e.g., behavior) is such that a typical individual regularly manifests nearly all levels of a trait in everyday behavior. In addition, individual differences in central tendencies of behavioral distributions were "almost perfectly stable" (Fleeson, 2001, p. 1011). The amount of within-person variability in one trait studied (extraversion) reflected individual differences in reactivity to extraversion-relevant situational cues.

But the key issue is the notion that we tend to manifest all trait levels during the course of everyday behavior. To think that an extravert is always outgoing and sociable (for example) is a misnomer. We need to do a much better job of linking our theory and research outcomes with more dynamic notions of traits as well as to the context, which can trigger or inhibit leader prototypes and hence trait-induced behaviors (Lord, Brown, Harvey, & Hall, 2001; Lord, Foti, & De Vader, 1984).

Proactivity at work and proactive personality

Research around proactivity as an individual difference motivational construct has potential, particularly for leadership research (Parker, 1998; Parker, Bindl, & Strauss, 2010; Parker, Williams, & Turner, 2006). This work maintains there are important individual differences in terms of the tendency to make things happen as part of ones' work role. We see other potential implications in terms of proactive leadership as well as a leader's role in developing proactivity among followers. This variable could be considered a relevant individual difference that could help reconnect the fields of leadership and motivation. Specifically, a leader's ability to initiate or otherwise enhance followers' proactivity behaviors could be an interesting pathway to study leadership influences on follower motivation.

Moral development

There is scant research on how leader moral development should be measured, to what extent it matters for leadership outcomes, and how leader moral orientation can effect follower moral orientation (cf. McCauley, Drath, Palus, O'Connor, & Baker, 2006). Some of the rare empirical research in this area includes Turner, Barling, Epitropaki, Butcher, and Milner (2002), Sosik, Juzbasich, & Chun (2011) Tucker, Turner, Barling, and McEvoy (2010), among others. Leaders' morality is also theorized to change in transforming leader-follower relationships (Burns, 1978).

The importance of moral development does not just have to do with whether power is exercised in a prosocial way or not (Howell & Shamir, 2005); it is core to some leadership theories, and has important implications for organizational studies in general (Trevino, Weaver, & Reynolds, 2006). Moreover, some theorists suggests that leaders, particularly transformational leaders have some sort of alchemic ability to transform individuals' values (Bass, 1985; Burns, 1978); however, we are short on empirical studies showing that transformational leaders are actually able of performing such feats, whether on individuals or organizations (Antonakis, 2012; Antonakis & House, 2002).

Follower Personality

As with other aspects of leadership, individual difference research has tended to be leader centric. Although contributions are being made in understanding follower individual differences, research into followers' personality and their perception of leaders has mainly focused on the perception of charismatic or transformational leadership, though there is also some research into the perception of Leader-Member Exchange.

Perception processes of followers can be helpful in better understanding leadership influencing process. For example, charisma is a "fuzzy" construct and is often defined as "we know it when we see it" or it being "in the eye of the beholder" (e.g., Schyns & Sanders, 2007) and is thus open to projection. Interestingly, followers who ascribe themselves characteristics typical for charismatic/transformational leaders (e.g., extraversion; Judge & Bono, 2000), also tend to perceive their leaders as more charismatic/ transformational (Felfe & Schyns, 2010), lending support to the similarity assumption regarding the influence of follower personality on the perception of charisma (see Klein & House, 1998). This line of research could also be extended to studying leader-follower personality congruence using polynomial regression congruence models (Edwards, 1994, 1995). That is, congruence-type models are often studied with difference scores, which are known have problematic statistical qualities (Cronbach & Furby, 1970) and which usually make untenable constraints (Edwards, 2007).

Apart from research focusing on personality traits such as the big five, another type of individual differences in followers that is relevant to leader perception, but not studied much, is attachment style (Hazan & Shaver, 1990). Based on Bowlby's (1969) observation of children, attachment style describes individual stable tendencies in how they relate to others. Three attachment styles can be differentiated: Avoidant, anxious, and secure attachment styles (Ainsworth, Blehar, Waters, & Walls., 1978; Hazan & Shaver, 1987). Keller and Cacioppe (2001) argue that followers' attachment style influences their expectations towards their leaders and, at the same time, their actual relationship with their leaders. Hansbrough (in press) examines in how far attachment style is related to the perception of transformational leadership and found that attachment anxiety is related to the perception of charisma in leaders. More research in this area is needed to examine whether followers seek charismatic leaders who are similar to themselves or because leaders provide them with reassurance.

Biological foundations of leadership

Individual differences are rooted to a large extent in biological differences (Michael Craig Ashton, 2007; Chamorro-Premuzic, 2007) and these links are particularly relevant for those social contexts in which leadership is exercised (cf. Caldu & Dreher, 2007). Yet the links between biological processes and psychological or behavioral leadership outcomes is still at its infancy in the field of leadership. There are many ways in which major advances could be made in linking basic science disciplines like neuroscience, behavioral genetics, evolution, as well as hormones and behavior to leadership. For example, to what extent does leadership testosterone affect leader dominance or prosocial behavior? Is there a specific leadership gene? How are individual-difference determinants of leadership linked to ancestral leader individual differences? How are affective states of followers (measured using neurological measures) altered when exposed to certain types of leaders?

Basic psychology (i.e., biological psychology) has made many advances in this domain; interestingly though, of the rest of the social sciences it is economics that is currently leading the way in biological underpinnings of microeconomic behavior as evidence by the work of Ernst Fehr and his collegues (e.g., de Quervain et al., 2004; Fehr, 2008; Fehr & Camerer, 2007; Fliessbach et al., 2007; Knoch, Pascual-Leone, Meyer, Treyer, & Fehr, 2006; Knoch, Schneider, Schunk, Hohmann, & Fehr, 2009; Kosfeld, Heinrichs, Zak, Fischbacher, & Fehr, 2005; Weber, Rangel, Wibral, & Falk, 2009); the design protocols used in these studies, with respect to the use of game theory and basic science, could be easily applied to leadership research. Examples include exogenous administration of hormones to observe outcomes (both on followers and leaders), understanding how punishment of followers is felt neurologically (in terms of brain activation) by leaders, obtaining insights into how leader rewards are felt neurologically (from a social comparison perspective) by followers, and so forth. Although we are pleased to see a special issue recently edited in The Leadership Quarterly on The Biology of Leadership (N. Lee, Senior, & Butler, 2012), as well as findings from other research teams (Arvey, et al., 2006; Ilies, et al., 2006; Waldman, Balthazard, & Peterson, 2011), leadership research must make serious inroads in this area, which can help make major advances in leadership theory, particularly by providing objective measures of mediation and outcome measures.

Multivariate models of individual differences

Individual differences are multidimensional and often correlated with each other; as such, they should be modeled simultaneously so that the incremental contribution of a particular trait (Judge, et al., 2002)—beyond standard individual differences like age and sex—can be correctly estimated. Failure to robustly test traits against existing trait predictors will engender inaccurate estimates (Antonakis, Bendahan, Jacquart, & Lalive, 2010), leading to a lot of false "eureka" moments and muddying the nomological waters. Testing trait models must be done in ways to avoid construct proliferation (cf. Antonakis, Ashkanasy, & Dasborough, 2009).

Beyond multivariate effects, methodological advances have been around for some time (e.g., Lazarsfeld & Henry, 1968) allowing researchers to test profiles of traits (e.g., latent profile and latent class analysis, finite mixture models). These methods are easily implemented in advanced SEM programs such as Mplus (Muthén & Muthén, 2010) and allow researchers to identify subgroups of individuals that are similar along a series of variables; thus, these methods care more about modeling individuals as a "whole," which of course, makes sense because individuals are units of analysis. We are very pleased that one of the papers we have accepted (Foti, Bray, Thompson, Allgood, in press) nicely showcases one of these methods.

Multilevel models of individual differences

One methodological issue not well understood, and which is related to the previous subsection has to do with correct multilevel specification. Because individuals are usually nested under higher-level entities (e.g., followers under leaders, leaders under organizations, etc.) researchers often estimate what are known as HLM-type models (cf. Gavin & Hofmann, 2002; Hofmann, 1997) like random-effects/intercepts models. With these models, one can examine, for example, whether a higher (*j*) level entity (e.g., leader-level individual differences) predicts or moderates outcomes at a lower (*i*) level (e.g., follower ratings).

Random-effects models are specified automatically by statistical problems to make certain constraints. These constraints must be tested (with Hausman-type tests, see Hausman, 1978, or overidentification tests) to ensure that the model parameters are consistent (i.e., converge to their true population values with an increasing sample size). Unfortunately, though, researchers employing these methods, particularly outside of economics are unaware of this issue (Halaby, 2004). For instance, a random-effects model constrains the fixed-effect (i.e., the constant unobserved effect at the *j* level, which explains differences in the level of *y*) to be orthogonal to the regressor variables (Antonakis, et al., 2010; Bollen & Brand, 2010). This constraint will only hold if the *j*-level regressors (i.e., personality, intelligence, sex, age) capture all the variance due to the higher level entity (i.e., the fixed-effect) that predicts *y*. Many (probably most) models fail this test; if failed, it means that there is systematic unmodeled variance (i.e., fixed-effects) that is pooled in the error term but which correlates with the regressors thus making them inconsistent.

If the aforementioned constraint does not hold, the only way to ensure consistent estimates is (a) to use a fixed-effect estimator (i.e., dummy variables capturing the constant effects, which means that *j*-level regressors like intelligence, personality, etc. cannot be modeled as regressors because they will be perfectly collinear with the dummy variables), (b) to ensure that all relevant *j*-level variables have been measured (which is difficult to do in practice), or (c) to model the fixed-effects along with the *j*-level regressors by including the cluster means of all *i*-level regressors (Mundlak, 1978) instead of dummy variables; the latter model is straightforward to specify and always ensures consistent random-effects or OLS estimates (see Antonakis, et al., 2010). In

addition, researchers should always examine if their results still hold when using a cluster-robust "Huber"-type variance estimator (Huber, 1967; White, 1980), which corrects standard errors due to clustering.

Correctly testing multilevel models will ensure clean tests of trait models by ensuring that all relevant trait predictors of the dependent variable are controlled for (via the fixed-effects) before testing for incremental contributions of a particular trait. That is, if one estimates an HLM model with certain leader-level individual differences as predictors in a model where there is still significant unaccounted for variance in *y* (due to the fixed effect), any conclusions made on the basis of this model will be specious.

Towards a process model of leadership

Recently, there has been a movement afoot to integrate leadership theories into process-type models (Antonakis, 2011; Day & Antonakis, in press; DeRue, et al., 2011; Dinh & Lord, in press; Judge & Long, 2012; Lim & Ployhart, 2004; Zaccaro, in press; Zaccaro, et al., 2004). Briefly, such models seek to identify the mediating mechanisms of a proximal *x* variable (e.g., behaviors, attitudes) intervening between a distal (i.e., "deep") determinant *z* (i.e., traits) and leader outcomes *y* (e.g., leader effectiveness) in a causal chain: *z* (*distal predictor*) \rightarrow *x* (*proximal predictor*) \rightarrow *y* (see Figure 1). These outcomes could operate on the individual (follower), group, as well as the organizational level. As the level of analysis becomes more macro, the type of leadership process that is being modeled is leadership *of* organizations (Antonakis & Atwater, 2002; Dubin, 1979; Hunt, 1991; Waldman & Yammarino, 1999) as opposed to what has been the focus of most research endeavors in leadership: interpersonal influence *in* organizations. As mentioned earlier, the effects of leader individual difference can be manifested in organizational processes and systems.

Apart from identifying clear mechanisms to show how the effects of traits are expressed in individual outcomes or even organizational structures and systems (see Miller, Droge, & Toulouse, 1988), using "exogenous" traits can help ensure consistent (i.e., causal) estimation of the second stage model (i.e., $x \rightarrow y$). That is, behaviors and attitudes are usually "endogenous"—they have not been manipulated by the researcher nor do they vary randomly in nature (Antonakis, et al., 2010). Endogenous regressors (i.e., x's) depend, in part, on certain other variables (stemming from the leader, followers, or contextual factors). Thus, the x's cannot be used as regressors of other endogenous variables unless they have been purged of endogeneity because the x's may share common variance with y; thus, what relationship may be found between the x's and ymay not be due to the fact that they are related in any way to y, but because the variables all depend on an omitted common cause. Hence the x's covary with y, but this is a spurious relation that cannot inform practice or policy.

Traits, however, have been manipulated randomly in nature and are a mostly exogenous (i.e., leaders' intelligence will not change as a function of, say, how satisfied employees are with them). Thus, intelligence can be used to "lock-in" the causal effect of $x \rightarrow y$, if, and only if, the model is estimated correctly. By correctly, we mean using an "instrumental variable estimator" like the two-stage least squares (2SLS) estimator or maximum likelihood, whereby the covariance between the endogenous disturbances is estimated (e.g., Cavazotte, Moreno, & Hickmann, 2012; de Vries, in press; Hu, Wang, Liden, & Sun, in press). We are pleased to also showcase one such example in special

issue by Colbert, Judge, Choi, and Wang (in press). Of course, such empirical estimation can only follow strong "process-type" theorizing, as exemplified in Dinh and Lord's (in press) contribution to the special issue.

Process models can also include follower mediating mechanisms (i.e., person perception, attitudes, behaviors) and individual differences as well as contextual factors (e.g., like national culture, crises, leader hierarchical level, etc.). These contextual factors are not process variables per se, but can operate from a main effects and moderation perspective by influencing what kind of trait or behavior may emerge, changing the strength of the relation between variables (Rousseau & Fried, 2001), or affecting when a particular outcome will be manifested (Shamir, 2011). More work on such models which can also accommodate multilevel data (as well as multivariate or profile-type models)—will set the foundations of more complete leadership theories, perhaps even a general leadership theory.

[Figure 1 here]

In the next section, we briefly summarize the papers that we accepted in the special issue.

Introduction to the special issue papers

We accepted four papers to the special issue, including one theoretical and three empirical papers. We also invited a paper from Stephen J. Zaccaro in the role of "chronicler," given his extensive experience in individual-difference research and the fact that he co-edited a special issue on the topic in *The Leadership Quarterly* in the early 1990s. Thus, he is in a unique position to comment on where this line of research has been and where it is heading.

Dinh and Lord (in press) review dispositional and process views of traits and how

these different views are relevant in the context of leadership. They argue that apart from examining stable traits, leadership research needs to take into account the event level of analysis, thus bringing to the fore a dynamic view of leadership. They argue that focusing on situational factors will improve our knowledge about leader behavior, development, and emergence.

Colbert, Judge, Choi, and Wang (in press) hypothesized that personality assessed using both self and observer ratings would explain more variance in leadership than self ratings of personality alone. Results from participants in leaderless group discussions supported this hypothesis. Relative weights analysis revealed that observer ratings of extraversion explained the largest percentage of variance in leadership, followed by self ratings and then observer ratings of openness to experience. Results of two-stage least squares regression analysis showed that the relationship between personality and leadership was mediated by contributions to group success. These results suggest that the five-factor model, assessed using both self and observer ratings (as compared with selfratings alone), is a useful framework for the prediction of leadership.

Richards and Hackett (in press) examined how attachment style (a relationshipbased trait disposition), and the interaction between attachment and emotion regulation, predicted LMX quality. Data were collected from matched pairs of subordinates and supervisors in a variety of work settings. Attachment anxiety and attachment avoidance negatively predicted LMX quality; however, they also found significant interaction effects between attachment and emotion regulation such that high anxiety and avoidance (attachment) coupled with low reappraisal or suppression (emotional regulation) were associated with the lowest levels of LMX quality.

Foti, Bray, Thompson, and Allgood (in press) went beyond tradition bivariate and multivariate leadership trait models to examine profiles of traits. In addition to the use of very advanced methodological analyses, they looked at traits from a leader prototype perspective, focusing specifically on modeling the similarity between self and ideal leader perceptions. In addition, they also predicted the profiles using gender, self-efficacy and narcissism.

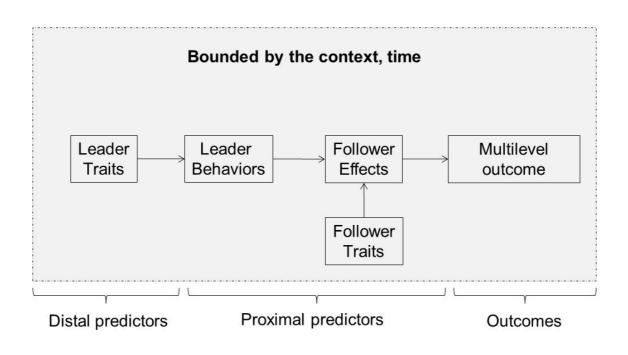
Zaccaro's (in press) historical review on individual difference research brings to the fore the trials and toils that individual differences research faced in the last century. He discusses "tipping points"—major shifts in thinking—that occurred over the last century. The first, when trait research was not taken seriously in the mid 19th century, the second, why trait research was revived, and third the future of individual-difference models (and indeed leadership models), which lies in richer process-type theorizing and methodology.

Conclusion

We hope that the special issue on individual differences in leadership helps to usher in a new era of research in a domain that is fascinating, but which also has very important practical consequences, for leader and follower selection, team constitution, and so forth.

As noted in our title, we believe that the field of leadership and individual differences is on the cusp of a renaissance—or at another tipping point to use Zaccaro's terminology. But to truly realize this renaissance possibility, researchers need to continue to propose and test innovative models using sophisticated methods and analyses. We hope the ideas set forth in this special issue provide some guidance in moving the field further into interesting and useful areas of theory and research.

Figure 1: A Leadership Process Model



References

- Ainsworth, M. D. S., Blehar, M., Waters, E., & Walls., S. (1978). *Patterns of attachment*. Hillsdale, NJ: Erlbaum.
- Ancona, D. G., Goodman, P. S., Lawrence, B. S., & Tushman, M. L. (2001). Time: A new research lens. Academy of Management Review, 26(4), 645-563.
- Antonakis, J. (2011). Predictors of leadership: The usual suspects and the suspect traits.
 In A. Bryman, D. Collinson, K. Grint, B. Jackson & M. Uhl-Bien (Eds.), *Sage Handbook of Leadership* (pp. 269-285). Thousand Oaks: Sage Publications.
- Antonakis, J. (2012). Transformational and Charismatic Leadership. In D. V. Day & J. Antonakis (Eds.), *The nature of leadership* (2nd ed., pp. 256-288). Thousand Oaks: Sage Publications.
- Antonakis, J., Ashkanasy, N. M., & Dasborough, M. T. (2009). Does leadership need emotional intelligence? *The Leadership Quarterly*, 20(2), 247-261.
- Antonakis, J., & Atwater, L. E. (2002). Leader distance: A review and a proposed theory. *The Leadership Quarterly*, *13*, 673-704.
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, *21*(6), 1086-1120.
- Antonakis, J., & House, R. J. (2002). An analysis of the full-range leadership theory: The way forward. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and Charismatic Leadership: The Road Ahead* (pp. 3-34). Amsterdam: JAI Press.
- Arvey, R. D., Rotundo, M., Johnson, W., Zhang, Z., & McGue, M. (2006). The determinants of leadership role occupancy: Genetic and personality factors. *The Leadership Quarterly*, 17(1), 1-20.
- Arvey, R. D., Zhang, Z., Avolio, B. J., & Krueger, R. F. (2007). Developmental and genetic determinants of leadership role occupancy among women. *Journal of Applied Psychology*, 92(3), 693-706.

- Ashton, M. C. (2007). *Individual differences and personality*. Boston: Elsevier Academic Press.
- Ashton, M. C., Lee, K., Perugini, M., Szarota, P., de Vries, R. E., Di Blas, L., et al. (2004). A six-factor structure of personality-descriptive adjectives: Solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology*, 86(2), 356-366.
- Avolio, B. J., Reichard, R. J., Hannah, S. T., Walumbwa, F. O., & Chan, A. (2009). A meta-analytic review of leadership impact research: Experimental and quasiexperimental studies. *The Leadership Quarterly*, 20(5), 764-784.
- Bass, B. M. (1985). Leadership: Good, better, best. Organizational Dynamics, 13(3), 26-40.
- Bluedorn, A. C., & Jaussi, K. S. (2008). Leaders, followers, and time. *The Leadership Quarterly*, *19*(6), 654-668.
- Bollen, K. A., & Brand, J. E. (2010). A General Panel Model with Random and Fixed Effects: A Structural Equations Approach. *Social Forces*, 89(1), 1-34.
- Bowlby, J. (1969). Attachment and loss (2 ed. Vol. 1). New York: Basic Books.
- Burns, J. M. (1978). Leadership. New York: Harper & Row.
- Caldu, X., & Dreher, J. C. (2007). Hormonal and genetic influences on processing reward and social information. [Article]. Social Cognitive Neuroscience of Organizations, 1118, 43-73.
- Cavazotte, F., Moreno, V., & Hickmann, M. (2012). Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance. *The Leadership Quarterly*, 23(3), 443-455.
- Chamorro-Premuzic, T. (2007). *Personality and individual differences*. Malden, MA: BPS Blackwell.
- Colbert, A. E., Judge, T. A., Choi, D., & Wang, G. (in press). Assessing the trait theory of leadership using self and observer ratings of personality: The mediating role of

contributions to group success. The Leadership Quarterly.

- Cronbach, L. J., & Furby, L. (1970). How we should measure "change" or should we? *Psychological Bulletin*, 74(1), 68-80.
- Das, T. K. (1991). Time: The hidden dimension in strategic planning. *Long Range PLanning*, 24(3), 49-57.
- Day, D. V., & Antonakis, J. (in press). The future of leadership *The Blackwell Handbook* of Leadership.
- Day, D. V., & Lord, R. G. (1988). Executive Leadership and Organizational Performance: Suggestions for a New Theory and Methodology. *Journal of Management*, 14(3), 453-464.
- Day, D. V., & Schleicher, D. J. (2006). Self-monitoring at work: A motive-based perspective. *Journal of Personality*, 74(3), 685-713.
- de Quervain, D. J. F., Fischbacher, U., Treyer, V., Schelthammer, M., Schnyder, U., Buck, A., et al. (2004). The neural basis of altruistic punishment. *Science*, 305(5688), 1254-1258.
- de Vries, R. E. (in press). Personality predictors of leadership styles and the self-other agreement problem. *The Leadership Quarterly*.
- DeRue, D. S., Nahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An intergration and meta-analytic test of their relative validity. [Article]. *Personnel Psychology*, 64(1), 7-52.
- Digman, J. M. (1989). 5 Robust Trait Dimensions--Development, Stability, and Utility. *Journal of Personality*, 57(2), 195-214.
- Dinh, J. E., & Lord, R. G. (in press). Implications of dispositional and process views of traits for individual difference research in leadership. *The Leadership Quarterly*.
- Dubin, R. (1979). Metaphors of leadership: An overview. In J. G. Hunt & L. L. Larson (Eds.), *Crosscurrents in leadership* (pp. 225–238). Carbondale, IL: Southern Illinois University Press.

- Edwards, J. R. (1994). The Study of Congruence in Organizational Behavior Research: Critique and a Proposed Alternative. Organizational Behavior and Human Decision Processes, 58, 51-100.
- Edwards, J. R. (1995). Alternatives to Difference Scores as Dependent Variables in the Study of Congruence in Organizational Research. *Organizational Behavior and Human Decision Processes*, 64(3), 307-324.
- Edwards, J. R. (2007). Polynomial regression and response surface methodology. In C. Ostroff & T. A. Judge (Eds.), *Perspectives on organizational fit* (pp. 361-372). San Francisco: Jossey-Bass.
- Fehr, E. (2008). The effect of neuropeptides on human trust and altruism: A neuroeconomic perspective. In D. Pfaff, C. Kordon, P. Chanson & Y. Christen (Eds.), *Hormones and Social Behavior* (pp. 47-56). Berlin: Springer-Verlag Berlin.
- Fehr, E., & Camerer, C. F. (2007). Social neuroeconornics: the neural circuitry of social preferences. *Trends in Cognitive Sciences*, *11*(10), 419-427.
- Felfe, J., & Heinitz, K. (2010). The impact of consensus and agreement of leadership perceptions on commitment, OCB and customer satisfaction. *European Journal of Work and Organizational Psychology*, 19, 279-303.
- Felfe, J., & Schyns, B. (2010). Followers' personality and the perception of transformational leadership: Further evidence for the similarity hypothesis. *British Journal of Management*, 21, 393-410.
- Fiori, M., & Antonakis, J. (2011). The ability model of emotional intelligence: Searching for valid measures. *Personality and Individual Differences*, 50(3), 329-334.
- Fleeson, W. (2001). Toward a structure- and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology*, 80(6), 1011-1027.

Fleeson, W., & Gallagher, P. (2009). The implications of Big Five standing for the

distribution of trait manifestation in behavior: Fifteen experience-sampling studies and a meta-analysis. *Journal of Personality and Social Psychology*, *97*(6), 1097-1114.

- Fliessbach, K., Weber, B., Trautner, P., Dohmen, T., Sunde, U., Elger, C. E., et al. (2007). Social comparison affects reward-related brain activity in the human ventral striatum. *Science*, *318*(5854), 1305-1308.
- Foti, R. J., Bray, B. C., Thompson, N. J., & Allgood, S. F. (in press). Know thy self, know thy leader: Contributions of a pattern-oriented approach to examining leader perceptions. *The Leadership Quarterly*.
- Gardner, W. L., Lowe, K. B., Moss, T. W., Mahoney, K. T., & Cogliser, C. C. (2010). Scholarly Leadership of the Study of Leadership: A Review of The Leadership Quarterly's Second Decade, 2000-2009. *The Leadership Quarterly*, 12(6), 922-958.
- Gavin, M. B., & Hofmann, D. A. (2002). Using hierarchical linear modeling to investigate the moderating influence of leadership climate. *The Leadership Quarterly*, 13, 15-33.
- Goldberg, L. R. (1990). An Alternative Description of Personality the Big-5 Factor Structure. *Journal of Personality and Social Psychology*, *59*(6), 1216-1229.
- Graen, G. B. (1976). Role-making process within complex organizations. In M. D.Dunnette (Ed.), *Handbook of industrial and organizational psychology*. Chicago: Rand McNally.
- Halaby, C. N. (2004). Panel models in sociological research: Theory into practice. Annual Review of Sociology, 30, 507-544.
- Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons the Organization as aReflection of Its Top Managers. *Academy of Management Review*, 9(2), 193-206.
- Hansbrough, T. K. (in press). The Construction of a Transformational Leader: Follower Attachment and Leadership Perceptions. *Journal of Applied Social Psychology*.

- Hausman, J. A. (1978). Specification Tests in Econometrics. *Econometrica*, 46(6), 1251-1271.
- Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, *52*, 511-524.
- Hazan, C., & Shaver, P. R. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology*, *59*, 270-280.
- Hofmann, D. A. (1997). An overview of the logic and rationale of hierarchical linear models. *Journal of Management*, 23(6), 723-744.
- Hofmann, D. A., Morgeson, F. P., & Gerras, S. J. (2003). Climate as a moderator of the relationship between Leader-Member Exchange and content specific citizenship:
 Safety climate as an exemplar. *Journal of Applied Psychology*, 88, 170-178.
- Hofstede, G. H. (1997). *Cultures and organizations: Software of the mind* ([Rev. ed.). New York: McGraw-Hill.
- House, R. J., & Aditya, R. N. (1997). The social scientific study of leadership: Quo vadis? *Journal of Management*, 23(3), 409-473.
- House, R. J., Spangler, W. D., & Woycke, J. (1991). Personality and charisma and the U.S. presidency: A psychological theory of leader effectiveness. *Administrative Science Quarterly*, 36, 364-396.
- Howell, J. M., & Shamir, B. (2005). The role of followers in the charismatic leadership process: Relationships and their consequences. Academy of Management Review, 30(1), 96-112.
- Hu, J., Wang, Z., Liden, R. C., & Sun, J. (in press). The influence of leader core selfevaluation on follower reports of transformational leadership. *The Leadership Quarterly*.
- Huber, P. J. (1967). The behavior of maximum likelihood estimates under nonstandard conditions. *Fifth Berkeley Symposium on Mathematical Statistics and Probability*, *Vol. 1*, 221-233.

Hunt, J. G. (1991). Leadership: A new synthesis. Newbury Park, CA: Sage Publications.

- Ilies, R., Arvey, R. D., & Bouchard, T. J. (2006). Darwinism, behavioral genetics, and organizational behavior: a review and agenda for future research. *Journal of Organizational Behavior*, 27(2), 121-141.
- Jackson, J. J., Hill, P. L., & Roberts, B. W. (2012). Misconceptions of Traits Continue to Persist. *Journal of Management*, *38*(3), 745-752.
- Jones, B. F., & Olken, B. A. (2005). Do leaders matter? National leadership and growth since World War II. *The Quarterly Journal of Economics*, 835-864.
- Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. *Journal of Applied Psychology*, 5(85), 751-765.
- Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87(4), 765-780.
- Judge, T. A., Colbert, A. E., & Ilies, R. (2004). Intelligence and leadership: A quantitative review and test of theoretical propositions. *Journal of Applied Psychology*, 89(3), 542-552.
- Judge, T. A., & Long, D. M. (2012). Individual differences in leadership. In D. V. Day & J. Antonakis (Eds.), *The Nature of Leadership*. Thousand Oaks, CA: Sage Publications.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755-768.
- Judge, T. A., Piccolo, R. F., & Ilies, R. (2004). The forgotten ones? The validity of consideration and initiating structure in leadership research. *Journal of Applied Psychology*, 89(1), 36-51.
- Keller, T., & Cacioppe, R. (2001). Leader-follower attachments: Understanding parental images at work. *Leadership & Organizational Development Journal*, 22, 70-75.

- Kenny, D. A., & Zaccaro, S. J. (1983). An estimate of variance due to traits in leadership. *Journal of Applied Psychology*, 68(4), 678-685.
- Kenrick, D. T., & Funder, D. C. (1988). Profiting from controversy: Lessons from the person-situation debate. *American Psychologist*, *43*(1), 23-34.
- Klein, K. J., & House, R. J. (1998). On fire: Charismatic leadership and levels of analysis. In F. Dansereau & F. J. Yammarino (Eds.), *Leadership: The multiplelevel approaches - Part B: Contemporary and Alternative* (pp. 3-22). Stamford, Connecticut: JAI Press.
- Knoch, D., Pascual-Leone, A., Meyer, K., Treyer, V., & Fehr, E. (2006). Diminishing reciprocal fairness by disrupting the right prefrontal cortex. *Science*, *314*(5800), 829-832.
- Knoch, D., Schneider, F., Schunk, D., Hohmann, M., & Fehr, E. (2009). Disrupting the prefrontal cortex diminishes the human ability to build a good reputation. *Proceedings of the National Academy of Sciences of the United States of America*, 106(49), 20895-20899.
- Kosfeld, M., Heinrichs, M., Zak, P. J., Fischbacher, U., & Fehr, E. (2005). Oxytocin increases trust in humans. *Nature*, *435*(7042), 673-676.
- Lazarsfeld, P. F., & Henry, N. W. (1968). *Latent Structure Analysis*. Boston: Houghton Mifflin.
- Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO Personality Inventory. *Multivariate Behavioral Research*, *39*(2), 329-358.
- Lee, K., & Ashton, M. C. (2008). The HEXACO Personality Factors in the Indigenous Personality Lexicons of English and 11 Other Languages. *Journal of Personality*, 76(5), 1001-1053.
- Lee, N., Senior, C., & Butler, M. (2012). Leadership research and cognitive neuroscience: The state of this union. *The Leadership Quarterly*, 23(2), 213-218.
- Liden, R. C., & Antonakis, J. (2009). Considering context in psychological leadership

research. Human Relations, 62(11), 1587-1605.

- Lim, B. C., & Ployhart, R. E. (2004). Transformational leadership: Relations to the fivefactor model and team performance in typical and maximum contexts. *Journal of Applied Psychology*, 89(4), 610-621.
- Lord, R. G., Brown, D. J., Harvey, J. L., & Hall, R. J. (2001). Contextual Constraints on Prototype Generation and their Multilevel Consequences for Leadership Perceptions. *The Leadership Quarterly*, 12, 311-338.
- 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(3), 402-410.
- Lord, R. G., Foti, R. J., & De Vader, C. L. (1984). A Test of Leadership Categorization Theory: Internal Structure, Information Processing, and Leadership Perceptions. *Organizational Behavior and Human Performance*, 34, 343-378.
- Lowe, K. B., & Gardner, W. L. (2000). Ten Years of the Leadership Quarterly:
 Contributions and Challenges for the Future. *The Leadership Quarterly*, 11(4), 459-514.
- Mann, R. D. (1959). A Review of the Relationships between Personality and Performance in Small-Groups. *Psychological Bulletin*, *56*(4), 241-270.
- McCauley, C. D., Drath, W. H., Palus, C. J., O'Connor, P. M. G., & Baker, B. A. (2006). The use of constructive-developmental theory to advance the understanding of leadership. *Leadership Quarterly*, 17(6), 634-653.
- Miller, D., Droge, C., & Toulouse, J.-M. (1988). Strategic Process and Content as Mediators Between Organizational Context and Structure. Academy of Management Journal, 31, 544-569.
- Mischel, W. (1977). The interaction of person and situation. In D. Magnusson & D. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology* (pp. 333-352). Hillsdale, NJ: Lawrence Erlbaum associates,

Publishers.

- Mundlak, Y. (1978). Pooling of Time-Series and Cross-Section Data. *Econometrica*, *46*(1), 69-85.
- Muthén, L. K., & Muthén, B. O. (2010). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.
- Parker, S. K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, 83, 835-852.
- Parker, S. K., Bindl, U. K., & Strauss, K. (2010). Making things happen: A model of proactive motvation. *Journal of Management*, 36(4), 827-856.
- Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, 91(3), 636-652.
- Plato, & Jowett, B. (1901). The republic of Plato; an ideal commonwealth (Rev. ed.). New York: The Colonial Press.
- Richards, D. A., & Hackett, R. D. (in press). Attachment and emotion regulation: Compensatory interactions and leader–member exchange. *The Leadership Quarterly*.
- Rousseau, D. M., & Fried, Y. (2001). Location, location, location: Contextualizing organizational research. *Journal of Organizational Behavior*, 22, 1-13.
- Schyns, B., & Sanders, K. (2007). In the eyes of the beholder: Personality and the perception of leadership. *Journal of Applied Social Psychology*, *37*, 2345-2363.
- Shamir, B. (2011). Leadership takes time: Some implications of (not) taking time seriously in leadership research. *The Leadership Quarterly*, 22(2), 307-315.
- Sosik, J. J., Juzbasich, J., & Chun, J. U. (2011). Effects of moral reasoning and management level on ratings of charismatic leadership, in-role and extra-role performance of managers: A multi-source examination. *Leadership Quarterly*, 22(2), 434-450.

- Stogdill, R. M. (1948). Personal factors associated with leadership: A survey of the literature. *Journal of Psychology*, 25.
- Trevino, L. K., Weaver, G. R., & Reynolds, S. J. (2006). Behavioral ethics in organizations: A review. *Journal of Management*, *32*(6), 951-990.
- Tucker, S., Turner, N., Barling, J., & McEvoy, M. (2010). Transformational leadership and childrens' aggression in team settings: A short-term longitudinal study. *Leadership Quarterly*, 21(3), 389-399.
- Turner, N., Barling, J., Epitropaki, O., Butcher, V., & Milner, C. (2002).
 Transformational leadership and moral reasoning, *Journal of Applied Psychology* (Vol. 2, pp. 304-311).
- Waldman, D. A., Balthazard, P. A., & Peterson, S. J. (2011). Social cognitive neuroscience and leadership. *Leadership Quarterly*, 22(6), 1092-1106.
- Waldman, D. A., & Yammarino, F. J. (1999). CEO charismatic leadership: Levels-ofmanagement and levels-of-analysis effects. Academy of Management Review, 24(2), 266-285.
- Weber, B., Rangel, A., Wibral, M., & Falk, A. (2009). The medial prefrontal cortex exhibits money illusion. *Proceedings of the National Academy of Sciences of the United States of America*, 106(13), 5025-5028.
- White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48, 817-830.
- Zaccaro, S. J. (in press). Individual Differences and Leadership: Contributions to a Third Tipping Point. *The Leadership Quarterly*.
- Zaccaro, S. J., Foti, R. J., & Kenny, D. A. (1991). Self-monitoring and trait-based variance in leadership: An investigation of leader flexibility across multiple group situations. *Journal of Applied Psychology*, 76(2), 308-315.
- Zaccaro, S. J., Kemp, C., & Bader, P. (2004). Leader traits and attributes. In J. Antonakis,A. T. Cianciolo & R. J. Sternberg (Eds.), *The Nature of Leadership* (pp. 101-124).

Thousand Oaks: Sage.