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Authentic Leadership: Development and Validation of a Theory-Based Measure

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Abstract

This study developed and tested a theory-based measure of authentic leadership using five separate samples obtained from China, Kenya, and the United States. Confirmatory factor analyses supported a higher order, multidimensional model of the authentic leadership construct (the Authentic Leadership Questionnaire [ALQ]) comprising leader self-awareness, relational transparency, internalized moral perspective, and balanced processing. Structural equation modeling (SEM) demonstrated the predictive validity for the ALQ measure for important work-related attitudes and behaviors, beyond what ethical and transformational leadership offered. Finally, results revealed a positive relationship between authentic leadership and supervisor-rated performance. Implications for research and practice are discussed.

Keywords: authentic leadership, construct validation, leadership development, measurement development

Authenticity as a construct dates back to at least the ancient Greeks, as captured by their timeless admonition to “be true to oneself” (S. Harter, 2002). Although the

concept of authenticity is not new, there has been a resurging interest in what constitutes authentic leadership within both the applied (Gardner & Schermerhorn, 2004; George & Sims, 2007; George, Sims, McLean, & Mayer, 2007; George, 2003; May, Chan, Hodges, & Avolio, 2003) and academic management literatures (Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Avolio & Luthans, 2006; Avolio & Walumbwa, 2006; Gardner, Avolio, & Walumbwa, 2005; Luthans & Avolio, 2003; see also *The Leadership Quarterly*, Volume 16, Number 3, 2005). Yet, as these and other authors (Ilies, Morgeson, & Nahrgang, 2005; Shamir & Eilam, 2005) suggest, there may be much more to authentic leadership than just being true to oneself. We support this position and explore what we propose as a higher order, multidimensional construct of authentic leadership.

Taking a macrolevel perspective, an upswing in highly publicized corporate scandals, management malfeasance, and broader societal challenges facing public and private organizations has contributed to the recent attention placed on authenticity and authentic leadership. The convergence of these challenges have in combination elicited calls for more positive forms of leadership in institutions and organizations to restore confidence in all levels of leadership (Avolio & Luthans, 2006; Brown, Treviño, & Harrison, 2005; George, 2003; Lorenzi, 2004). Indeed, in response to repeated and spectacular lapses in ethical judgment by highly visible leaders, the public is demanding greater accountability of organizational leaders (Dealy & Thomas, 2006). Corporate boards are being held more accountable (Aguilera, 2005); executives who fail to display consistency between their words and deeds can expect to lose the trust of followers (Simons, 2002). Hence, organizational stakeholders appear to be much less tolerant of inconsistencies between leaders' espoused principles, values, and conduct and are expecting those leaders to operate at higher levels of integrity. Although organizational stakeholders have certain expectations about the positive attributes they require of leaders (e.g., implicit leadership theories; Lord, 1985; Phillips & Lord, 1986), including integrity as a core quality (Kouzes & Posner, 1993), there are relatively few validated tools for measuring these attributes or behaviors. Simply expecting leaders to be more authentic and to demonstrate integrity will be ineffective if tools for measuring these aspects of leadership are lacking. Indeed, in lieu of sound means of measuring these constructs, it is very difficult to fairly hold leaders ethically accountable (Folger & Cropanzano, 2001).

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The Authentic Leadership Questionnaire is copyright © 2007 by Bruce J. Avolio, William L. Gardner, and Fred O. Walumbwa. All rights reserved. Users should request the instrument from Mind Garden, 1690 Woodside Road, Suite 202, Redwood City, CA 94061. The Role-Based Performance Scale was used with the permission of Theresa Welbourne, University of Michigan Business School, 701 Tappan Street, Ann Arbor, MI 48109-1234.

At the individual leader level, there is growing evidence that an authentic approach to leading is desirable and effective for advancing the human enterprise and achieving positive and enduring outcomes in organizations (George et al., 2007; George, 2003). For example, personal benefits of authenticity, as shown by mounting evidence from social, cognitive, and positive psychology as well as organizational studies, include more “optimal” levels of self-esteem, higher levels of psychological well-being, enhanced feelings of friendliness, and elevated performance (Grandey, Fiske, Mattila, Jansen, & Sideman, 2005; Kernis, 2003). We suggest that when organizational leaders know and act upon their true values, beliefs, and strengths, while helping others to do the same, higher levels of employees’ well-being will accrue, which in turn have been shown to positively impact follower performance (Ryan & Deci, 2001).

To properly address the call for more attention to what constitutes the construct of authentic leadership, we must first begin by operationally defining, measuring, and providing evidence of construct validity. Indeed, Cooper, Scandura, and Schriesheim asserted with respect to the emerging area of authentic leadership theory that “scholars in this area need to give careful attention to four critical issues: (1) defining and measuring the construct, (2) determining the discriminant validity of the construct, (3) identifying relevant construct outcomes (i.e., testing the construct’s nomological network), and (4) ascertaining whether authentic leadership can be taught” (2005: 477) to lay the necessary conceptual and empirical groundwork for advancing authentic leadership theory and development.

The purpose of this article is threefold. Our first objective is to build the case for a higher order, multidimensional theory-based questionnaire of authentic leadership (the Authentic Leadership Questionnaire [ALQ]) tied to the latest conceptualizations of authentic leadership and to provide preliminary evidence for its construct validity. To accomplish this objective, we first define the construct of authentic leadership and provide an overview of the relevant theory. Next, we elaborate on the theoretical dimensions of authentic leadership underlying the ALQ and describe the item development and validation processes performed to assess this theoretically derived structure (Study 1). Our second objective is to demonstrate the utility of a four-factor authentic leadership construct by showing its ability to uniquely predict relevant organizational outcomes beyond closely aligned measures of other recognized forms of leadership, namely, ethical and transformational leadership (Study 2). Our final objective is to empirically examine the extent to which authentic leadership contributes to individual follower job satisfaction and performance (Study 3).

We achieve these three objectives using data obtained from Kenya, The People’s Republic of China, and the United States. The inclusion of the Chinese and Kenyan samples is particularly important because most leadership research has used samples from Western cultures, and there has been a call for research in more culturally diverse settings (Bass, 1990). Indeed, although leadership is generally regarded as a universal phenomenon (Bass, 1997), an extensive review by House and Aditya (1997) revealed that about 98% of leadership theory emanates from the United States. Thus, we initiated our efforts to develop and operationalize the authentic leadership construct within diverse cultural contexts to enhance the generalizability and utility of the resultant ALQ measure.

Our article is organized as follows. First, we provide an overview of authentic leadership theory and present a definition of the construct. Next, we discuss Studies 1, 2, and 3 sequentially, including the theoretical rationale, hypotheses, methods, and results associated with each study. We conclude with a general discussion of the findings, limitations, directions for future research, and practical implications.

Authentic Leadership: Construct Definition

A theory of authentic leadership has been emerging over the last several years from the intersection of the leadership, ethics, and positive organizational behavior and scholarship literatures (Avolio et al., 2004; Cameron, Dutton, & Quinn, 2003; Cooper & Nelson, 2006; Luthans, 2002; Luthans & Avolio, 2003). As conceptualized within the emerging field of positive psychology (Seligman, 2002), authenticity can be defined as “owning one’s personal experiences, be they thoughts, emotions, needs, preferences, or beliefs, processes captured by the injunction to know oneself” and behaving in accordance with the true self (S. Harter, 2002: 382).

A review of the recent literature focusing on authentic leadership indicates that the definition of authentic leadership has converged around several underlying dimensions. Luthans and Avolio initially defined authentic leadership “as a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviors on the part of leaders and associates, fostering positive self-development” (2003: 243). However, several authors (e.g., Cooper et al., 2005; Shamir & Eilam, 2005; Sparrowe, 2005) have expressed concerns about defining authentic leadership as encompassing the positive psychological capacities of confidence, hope, optimism, and resilience. Drawing on the Michael Kernis’s (2003) conception of authenticity, Ilies et al. (2005) proposed a more focused four-component model of authentic leadership that included self-awareness, unbiased processing, authentic behavior/acting, and authentic relational orientation. Shamir and Eilam described authentic leaders as people who have the following attributes: (a) “the role of the leader is a central component of their self-concept, (b) they have achieved a high level of self-resolution or self-concept clarity, (c) their goals are self-concordant, and (d) their behavior is self-expressive” (2005: 399).

Gardner, Avolio, Luthans, May, and Walumbwa (2005) attempted to integrate these various perspectives and definitions of authentic leadership and proposed a self-based model of authentic leader and follower development. The Gardner, Avolio, Luthans, et al. (2005) model focuses on the core self-awareness and self-regulation components of authentic leadership. They identified several distinguishing features associated with authentic self-regulation processes, including internalized regulation, balanced processing of information, relational transparency, and authentic behavior. Consistent with the Ilies et al. (2005) framework, the Gardner Avolio, Luthans, et al. model is influenced heavily by Kernis’s (2003) conception of authenticity, as well as Deci and Ryan’s (2000) self-determination theory. In addition, Avolio and Gardner (2005), Luthans and Avolio (2003), and May et al. (2003) have argued that authentic leadership includes a positive moral perspective characterized by high ethical standards that guide decision making and behavior.

In an effort to understand and capture what constitutes authentic leadership, we used Avolio, Gardner, and colleagues (e.g., Avolio & Gardner, 2005; Gardner, Avolio, Luthans, et al., 2005) and Ilies et al.'s (2005) consolidations and conceptualizations of the construct. The perspective on authentic leadership advanced by Avolio, Gardner, and colleagues and by Ilies et al. was selected to provide the conceptual underpinnings for this research for three reasons. First, it is firmly rooted in the extant social psychological theory and research on authenticity (e.g., Deci & Ryan, 2000; Kernis, 2003), in contrast to those of other authentic leadership scholars who have taken a more inductive (Shamir & Eilam, 2005) or philosophical (Sparrowe, 2005) approach to theory development. Second, it explicitly recognizes and articulates the central role of an internalized moral perspective to authentic leadership and its development posited by other authors (Eigel & Kuhnert, 2005; George, 2003; May et al., 2004). Third, it focuses explicitly on the development of authentic leaders and authentic followers, which make it state-like and ultimately something one can develop in leaders (Avolio & Luthans, 2006; Luthans & Avolio, 2003). We consider these features to be crucial requirements for a theory of authentic leadership *and* its development, as explained next.

Although authentic leadership theory is in its early stages of conceptual development, the construct of authenticity has deep roots in philosophy (S. Harter, 2002; Heidegger, 1962) and psychology (Rogers, 1959, 1963). However, in recent years, the construct of authenticity has been clarified and refined through theoretical developments and empirical research by social psychologists (Deci & Ryan, 2000; Kernis, 2003; Ryan & Deci, 2001, 2003). Drawing on an extensive research program and a comprehensive review of the relevant literature, Kernis (2003) advanced a developmental model that posits attainment of authenticity produces "optimal" levels of self-esteem. That is, when individuals come to know and accept themselves, including their strengths and weaknesses, they display high levels of stable, as opposed to fragile, self-esteem. Such individuals are also relatively free of the defensive biases displayed by less mature persons and consequently more comfortable forming transparent, open, and close relationships with others. Furthermore, they display authentic behavior that reflects consistency between their values, beliefs, and actions. Similarly, Ryan and Deci (2003) asserted that authenticity is achieved when individuals enact internalized self-regulation processes—that is, their conduct is guided by internal values as opposed to external threats, inducements, or social expectations and rewards. Both of these research streams provide impressive empirical evidence of the positive consequences that accrue in terms of physical and psychological well-being to individuals who achieve relatively high levels of authenticity (Deci & Ryan, 2000; Kernis & Goldman, 2005).

These social psychological conceptions of authenticity also suggest the two remaining distinguishing and crucial components of authentic leadership theory posited by Avolio, Gardner, and colleagues (e.g., Avolio & Gardner, 2005; Gardner, Avolio, Luthans, et al., 2005; Gardner, Avolio, & Walumbwa, 2005): an inherent moral component and a development focus. Specifically, Gardner, Avolio, and Walumbwa (2005), along with other authors (Chan, Hannah, & Gardner, 2005; Eigel & Kuhnert, 2005; Hannah, Lester, & Vogelgesang, 2005; Luthans & Avolio, 2003; May et al., 2003), asserted that an advanced level of moral development is a requirement for the achievement of leader authenticity. Note that this view stands in marked contrast to

that of Shamir and Eilam (2005), who deliberately omitted consideration of the leader's values and convictions from their conceptualization of authentic leadership, reasoning that a leader can be "true to self" without attaining a high level of moral development or complying with high standards of ethical conduct. Indeed, they and others (e.g., Sparrowe, 2005) question whether authenticity is a good thing among leaders with narcissistic or otherwise dysfunctional personalities.

Gardner, Avolio, and Walumbwa (2005) advanced several definitional, theoretical, and philosophical reasons for rejecting the argument that authentic leadership is ethically neutral. With respect to the former, they asserted that defining authenticity as involving self-awareness and self-acceptance appears to be conceptually inconsistent with a low level of moral development. Although people may be true to themselves at a modest level of moral development (Kegan, 1982; Kohlberg, 1984), they are unlikely to possess the capacity for self-reflection and introspection required for a true understanding of the self (or others).

To be clear, we have specifically taken the stand that authentic leaders by our definition and in terms of development are of high moral character ... which is a prerequisite for such leadership, in the same way that Burns (1978) defined transforming leaders as being of high moral character ... again, using Burns's description of transforming leaders as leading based on their "end values" of justice and liberty, disqualifies all of the narcissistic leaders throughout history as satisfying our definition of authentic leadership. (Gardner, Avolio, & Walumbwa, 2005: 395-396)

The theoretical/empirical rationale for rejecting this argument is also supplied by the social psychology literature just discussed. Specifically, Gardner, Avolio, and Walumbwa pointed out that authenticity, as theoretically defined and operationalized by social psychologists, is associated with advanced levels of cognitive, emotional, and moral development (Deci & Ryan, 2000; Kernis, 2003; Kernis & Goldman, 2005; Ryan & Deci, 2001, 2003). Finally, the philosophical rationale stems from a conviction that any effort to develop leaders should focus attention on their moral development (Avolio, 2005; Kanungo & Mendonca, 1996). Indeed, given the profound impact that leaders exert on the lives of others—for their betterment or harm—it is clear that ethics lie at the very heart of leadership (Ciulla, 2004). Hence, we concur with Gardner, Avolio, and Walumbwa's assertion that any theory of leader development, but particularly one focused on authentic leadership development, will be incomplete and misguided if it does not contribute to increased awareness and attention to the inherent ethical responsibilities that reside in the leadership role.

Based on the preceding discussion, we have modified Luthans and Avolio's (2003) initial definition of authentic leadership to advance a refined definition that more fully reflects the underlying dimensions of the construct posited by Gardner, Avolio, Luthans, et al. (2005) and Ilies et al. (2005). Specifically, we define authentic leadership as *a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development*. Note that this definition reflects several assumptions that underlie our perspective of authentic leadership. First, although we see positive psychological capacities (George & Sims, 2007) and a positive ethical climate as fostering the development of authentic leadership, and vice versa, these are not inherent components of the construct.

Second, we see self-awareness and the self-regulatory processes reflected in an internalized moral perspective, balanced processing of information, and relational transparency as core components of authentic leadership. Third, consistent with Gardner, Avolio, Luthans, et al.'s self-based model of authentic leadership and followership, we see authentic leadership as reflecting an interactive and authentic relationship that develops between the leader and followers.¹ Fourth, the definition explicitly recognizes the importance of leader and follower development to authentic leadership. We elaborate on the four underlying dimensions of authentic leadership next as part of our description of the theoretical underpinnings for the development and validation of the ALQ in Study 1.

Study 1

Dimensional Structure of a Higher Order Authentic Leadership Construct

Building on Avolio, Gardner, and colleagues' (Avolio & Gardner, 2005; Gardner, Avolio, Luthans, et al., 2005; Gardner, Avolio, & Walumbwa, 2005) and Ilies et al.'s (2005) recent conceptualizations of authentic leadership, we initially viewed authentic leadership as being composed of five distinct but related substantive components: self-awareness, relational transparency, internalized regulation (i.e., authentic behavior), balanced processing of information, and positive moral perspective. For purposes of theoretical parsimony, we combined the internalized regulation processes and authentic behavior into internalized moral perspective, because these concepts are conceptually equivalent (both involve exhibiting behavior that is consistent with one's internal values and standards) from a self-determination theory perspective (Deci & Ryan, 2000). Moreover, as described in greater detail next, preliminary efforts to operationalize the authentic leadership construct revealed conceptual overlap between the internalized regulation and positive moral perspective dimensions. Hence, these dimensions were further collapsed into a single dimension labeled internalized moral perspective, which involves a leader's inner drive to achieve behavioral integrity (i.e., consistency between values and actions).

Self-awareness refers to demonstrating an understanding of how one derives and makes meaning of the world and how that meaning making process impacts the way one views himself or herself over time. It also refers to showing an understanding of one's strengths and weaknesses and the multifaceted nature of the self, which includes gaining insight into the self through exposure to others, and being cognizant of one's impact on other people (Kernis, 2003). **Relational transparency** refers to presenting one's authentic self (as opposed to a fake or distorted self) to others. Such behavior promotes trust through disclosures that involve openly sharing information and expressions of one's true thoughts and feelings while trying to minimize displays of inappropriate emotions (Kernis, 2003). **Balanced processing** refers to leaders who show that they objectively analyze all relevant data before coming to a decision. Such leaders also solicit views that challenge their deeply held positions (Gardner, Avolio, Luthans, et al., 2005). Finally, **internalized moral perspective** refers to an internalized and integrated form of self-regulation (Ryan & Deci, 2003). This sort of self-regulation is guided by internal moral standards and

values versus group, organizational, and societal pressures, and it results in expressed decision making and behavior that is consistent with these internalized values (Avolio & Gardner, 2005; Gardner, Avolio, Luthans, et al., 2005).

In sum, the proposed view of the authentic leadership suggests that authentic leaders show to others that they genuinely desire to understand their own leadership to serve others more effectively (George, 2003). They act in accordance with deep personal values and convictions to build credibility and win the respect and trust of followers. By encouraging diverse viewpoints and building networks of collaborative relationships with followers, they lead in a manner that followers perceive and describe as **authentic** (Avolio et al., 2004).

To operationalize this construct definition, we intend to test a higher order, multidimensional model of the authentic leadership construct. According to Law, Wong, and Mobley, "under the latent model the overall latent construct leads to various dimensions of the construct, because the dimensions are simply different ways the construct is realized" (1998: 747). Law et al. also suggested that because latent models are defined in terms of the commonality among the dimensions, there has to be evidence that the dimensions are correlated to justify the summing of component dimensions into a single overall representation of those dimensions. Of course, those dimensions must each make a unique contribution to the latent construct; thus, there must also be evidence of discriminant validity for the component dimensions. Consistent with this perspective, we view authentic leadership as being composed of related and substantive dimensions that we believe are all necessary for an individual to be considered an authentic leader.

Item Development and Validation

We used both deductive and inductive approaches for item generation to assess how leaders exhibit or demonstrate authentic leadership (Hinkin, 1995). Initial content specifications were developed based on (a) an extensive review of the literature on authentic leadership theory and development (Avolio et al., 2004; Avolio & Gardner, 2005; Avolio & Walumbwa, 2006; Gardner, Avolio, Luthans, et al., 2005; Gardner, Avolio, & Walumbwa, 2005; Ilies et al., 2005; Luthans & Avolio, 2003; Shamir & Eilam, 2005; Sparrowe, 2005) and practice (Gardner & Schermerhorn, 2004; George, 2003; May et al., 2003), (b) recently completed dissertations on authentic leadership, and (c) discussions with a leadership research group consisting of faculty and graduate students focusing on what constitutes authentic leadership and its development. Based on this comprehensive literature review and generative group discussions, five initial domains were identified that were deemed appropriate as constituting the authentic leadership construct: self-awareness, relational transparency, balanced information processing, internalized regulation, and positive moral perspective.

To assess the adequacy of these categories we asked a group of doctoral students at the same research university (all of whom had several years of full-time work experience and extensive experience conducting research on leadership) to describe a person they regarded as an authentic leader (e.g., what made him or her authentic leader?). Their responses were then content analyzed. The emergent categories closely matched those just described, providing initial evidence of the multidimensionality of the authentic leadership construct. Based on these ini-

tial results, feedback from doctoral students and faculty, and discussion among research team members, no new dimensions were added, but the final domains were reduced to four, with the internalized regulation and positive moral perspective dimensions combined into one—internalized moral perspective. This reduction was done because the behavioral descriptions of authentic leaders failed to differentiate between these two categories, as both involve exhibiting behavior that is consistent with one's internal values and standards (Deci & Ryan, 2000). These final four dimensions fell in line with our review of previous conceptualizations of authentic leadership previously presented, and thus they were submitted for further construct testing.

Next, we examined the extent to which these four domains distinguished authentic from ethical and transformational leadership by extensively reviewing these two literatures. We began to generate a pool of items based on these literatures. We theoretically derived 35 items, which were later refined to 22 items that best captured the proposed content areas and were considered the least ambiguous and most behavioral. These 22 items were then subjected to a content validity assessment by faculty members and doctoral students at the same research university, who were asked to assign each randomly ordered item to one of the four categories. Each rater was provided with a brief description of the four dimensions of authentic leadership previously described. Those items that were assigned to the proper a priori category more than 80% of the time were retained (MacKenzie, Podsakoff, & Fetter, 1991). Six items were not properly classified under any of the four a priori categories. The 6 items were dropped, resulting in a final pool of 16 items. On the basis of the ratings, as well as comments regarding the appropriateness of the items for the specified categories, we revised some of the items accordingly and then tested them in the subsequent analyses described next. The items that were retained for further analysis were distributed as follows: self-awareness (4 items), relational transparency (5 items), internalized moral perspective (4 items), and balanced processing (3 items). Sample items are listed in the appendix representing each dimension.

Confirmatory Factor Analysis

We performed a confirmatory factor analysis (CFA) using two independent samples from the United States and the People's Republic of China. The U.S. sample consisted of 224 full-time employees from a large high-tech manufacturer based in the northeastern part of the country who rated their immediate supervisors on authentic leadership behaviors. The average age of respondents was 44.8 years ($SD = 8.75$), with mean work experience of 15.03 years ($SD = 8.56$). All respondents had a university degree, and 80% were men. All surveys were distributed by the human resources department and collected on site. Respondents were guaranteed confidentiality in a cover letter from the researchers and endorsed by senior management.

The Chinese sample consisted of 212 full-time employees from a large state-owned company located in Beijing. The average age of the respondents was 23.31 years ($SD = 2.63$), with mean work experience of 2.65 years ($SD = 1.55$). Seventy-one percent of the Chinese respondents were women, 21% had a senior high school education, 48% had a technical secondary education, 15% had a junior college degree, and 16% had a college or university degree. Participants were assured confidential-

ity in a cover letter from the researchers and endorsed by senior management. All surveys were distributed and collected on site.

Because the original instrument was developed in English, we translated the survey into Chinese using the standard method of back-translation (Brislin, 1980). The survey was first translated into Chinese by a bilingual speaker who was not familiar with the items. Another bilingual speaker was asked to back-translate the same items into English without having access to the original survey and comment on any items that were seen as ambiguous. This process did not give rise to major changes to any of the items. In both China and the United States, respondents were asked to judge how frequently each statement fit his or her supervisor using a 5-point scale ranging from 0 (*not at all*) to 4 (*frequently, if not always*).

Results

Validation of the higher order authentic leadership model: U.S. sample. We conducted a CFA to examine whether a second-order authentic leadership factor existed and whether it explained the relationships among the four lower order factors, with AMOS maximum likelihood procedure (Arbuckle & Wothke, 1999). To assess our model fit, we used several fit indexes including comparative fit index (CFI), root mean square error of approximation (RMSEA), chi-square (χ^2), and the ratio of the differences in chi-square to the differences in degrees of freedom (χ^2/df). Given that there is no one acceptable cutoff value of what constitutes adequate fit (Cheung & Rensvold, 2002), we elected to use an CFA value of .95 and an RMSEA value of .06 or less as indicative of adequate fit (Hu & Bentler, 1999). For χ^2/df , we interpreted a ratio of less than 3.00 as a good fit (Kline, 2005).

Using 224 employees from the United States, we compared the fit of three different factor structures. The first was a one factor model, in which all 16 items were indicative of one larger authentic leadership factor. The second was a first-order factor model in which items were allowed to load onto their respective factors (i.e., self-awareness, relational transparency, internalized moral perspective, and balanced processing) and the factors allowed to correlate with each other. The third was a second-order factor model in which items were loaded onto their respective factors and the four factors loading on a second-order latent authentic leadership factor. The third (i.e., second-order) model is mathematically equivalent to the second (first-order) model (Bollen, 1989). However, if tenable, the second-order factor model is preferable because it allows for the covariation among first-order factors by accounting for corrected errors that are very common in first-order CFA (Gerbing & Anderson, 1984).

The fit statistics for the three models are shown in the upper section in Table 1. The results illustrate that the best-fitting model is the second-order factor model. The fit statistics represent a considerable improvement in the chi-square, CFIs, and RMSEAs over the one-factor and first-order factor models and thus suggest that the second-order factor model is preferable. The estimated internal consistency alphas (Cronbach's alpha) for each of the measures were also at acceptable levels: self-awareness, .92; relational transparency, .87; internalized moral perspective, .76; and balanced processing, .81. The standardized factor loadings of the second-order factor authentic leadership model are presented in Table 2, with factor loadings ranging from .66 to .93.

Table 1. Comparison of *A Priori* Authentic Leadership Questionnaire Factor Structure

Structure	χ^2	<i>df</i>	χ^2/df	$\Delta\chi^2$	CFI	RMSEA
U.S. sample ^a						
One-factor model (all 16 items)	356.78	102	3.50		.91	.11
First-order factor model	272.65	96	2.84	84.13**	.94	.09
Second-order factor model	234.70	98	2.39	122.08**	.97	.05
Chinese sample ^b						
One-factor model (all 16 items)	249.79	102	2.45		.91	.09
First-order factor model	208.71	96	2.17	41.08**	.93	.08
Second-order factor model	176.03	98	1.83	73.76**	.95	.06

All chi-square values are significant at $p < .001$; the $\Delta\chi^2$ is in relation to one-factor model. CFI = comparative fit index; RMSEA = root mean square error of approximation.

a. $n = 224$.

b. $n = 212$.

** $p < .01$ (two-tailed).

Table 2. Authentic Leadership Questionnaire Factor Loadings

Items	Self-Awareness	Relational Transparency	Internalized Perspective	Moral Balanced Processing
AL1	.85 (.71)			
AL2	.93 (.70)			
AL3	.84 (.69)			
AL4	.81 (.67)			
AL5		.82 (.63)		
AL6		.79 (.66)		
AL7		.86 (.64)		
AL8		.85 (.78)		
AL9		.68 (.71)		
AL10			.82 (.64)	
AL11			.66 (.62)	
AL12			.69 (.68)	
AL13			.77 (.74)	
AL14				.74 (.68)
AL15				.87 (.74)
AL16				.85 (.69)

The factor loadings in parentheses are for the Chinese data. All the factor loadings are significant at $p < .001$.

The worst-fitting model is the one-factor model in which items were loaded directly on a single-factor authentic leadership, as demonstrated by the relatively poor fit indexes. Assessing whether the second-order factor model is significantly better than the first-order factor model was done using a chi-square test. The differ-

ence in chi-square between the first-order factor and second-order factor models is 37.95 (i.e., 272.65 - 234.70), which is distributed as chi-square with $(98 - 96 = 2)$ degrees of freedom. The fact that this value is statistically significant would suggest that the second higher order factor model is significantly better than the first-order factor model. The relatively poor fit of the first-order factor model compared to the second-order factor model may be a result of significant relationships among the four measures. Indeed, the average correlation among the four measures was .67 (item-level correlations are available from the first author). Thus, although the first-order CFA revealed that the items loaded on their respective factors, the four factors are strongly correlated.

Although the results from the U.S. sample are supportive of the higher-order factor model of authentic leadership, DeVellis (1991) stressed the importance of testing the reliability and factor analytic structure of a newly developed instrument on new samples to further assess the construct validity. To deal with this issue, we used another field sample consisting of 212 full-time employees from China.

Validation of the higher order authentic leadership model: Chinese sample.

Prior to conducting our primary CFA analysis, we assessed the extent to which the higher-order authentic leadership construct was invariant across the two countries following Byrne's (2001) guidelines. We first tested two separate baseline models for each sample. Table 1 suggests that the higher-order factor model had an adequate fit across the two samples. Results also suggest that the model performed slightly better for the U.S. sample as the lower RMSEA and higher CFI indicate. The standardized factor loadings of the second-order factor authentic leadership model are presented in Table 2 (in parentheses), with factor loadings ranging from .62 to .78.

Next, two nested models were evaluated as part of each multigroup analysis: (a) an unrestricted model that imposed no equality constraints between the two countries (Model 1) and (b) a restricted model that specified that all factor loadings, factor variance, and the error covariances were equal (invariant) between the two samples (Model 2). The key indices are the chi-square statistic, CFI, and RMSEA values. A nonsignificant chi-square difference would provide support for generalizability across the two countries (Byrne, 2001).

Fit statistics of the unrestricted model (Model 1) were as follows: $\chi^2(196) = 421.30$, CFI = .96, and RMSEA = .06. In the restricted model (Model 2) the fit statistics were as follows: $\chi^2(213) = 444.10$, CFI = .96, and RMSEA = .06. The comparison of the chi-squares yields a chi-square difference value of 22.80 with 17 degrees of freedom. This comparison of models was not statistically significant. Given this finding, we concluded that all factor loadings, variances, error covariances, and the covariance, are invariant across the U.S. and Chinese samples.

Having established the invariance of the higher-order factor structure across the two samples, we then compared the fit of the three-factor structures (e.g., a one-factor model, a first-order factor model, a second-order factor model) to further assess if the results obtained using U.S. sample would hold in a Chinese sample. The results are shown in the lower part of Table 1.

The results suggest that the best-fitting model is the second-order factor model as the lower chi-square and the RMSEA as well as the higher CFI indicate. We concluded that the second-order factor model is preferable. The estimated internal consistency alphas (Cronbach's alpha) for each of the measures were also at acceptable

levels: self-awareness, .79; relational transparency, .72; internalized moral perspective, .73; and balanced processing, .76.

As with the U.S. sample, the worst-fitting model is the one-factor model in which items were loaded directly on a single factor authentic leadership, as demonstrated by the relatively poor fit indexes. The difference in chi-square between the first-order factor and second-order factor models is 32.68 (e.g., 208.71 - 176.03), which is distributed as chi-square with 2 degrees of freedom, further suggests that the higher-order second factor model is significantly better than the first-order factor model. Once again, the relatively poor fit of the first-order factor model compared to the second-order factor model may be a result of significant relationships among the four measures. The average correlation among the four measures was .69 (item-level correlations are available from the first author). Taken together, these results suggest that there is substantial convergent validity among the four measures and that self-awareness, relational transparency, internalized moral perspective, and balanced processing converge to form a higher-order factor that is indicated by and explains the relationships among the lower-level measures in both the U.S. and Chinese samples.

Discussion

Results of this study demonstrate that the four factors of self-awareness, relational transparency, internalized moral perspective, and balanced processing are not independent and that a single second-order factor accounts for this dependence. Thus, our results suggest that it might not be reasonable to conceptualize the measures as assessing entirely separate and distinct constructs. Moreover, the relatively high convergent validity among the factors of self-awareness, relational transparency, internalized moral perspective, and balanced processing suggests that they convey less unique information as they form a higher order construct. Our confidence in the plausibility of the higher order factor model of authentic leadership is further strengthened by the observation that no significant differences were found between two diverse samples. For example, the Chinese sample differed from the U.S. sample in that participants were considerably younger, with less work experience, less education, and more likely to be female. Finally, we should point out here that these results do not address the possible distinctiveness among the measures. It is possible that the scales indicate a higher order factor yet at the same time have distinct relationships with other theoretically relevant variables.

Study 2

Authentic, Ethical, and Transformational Leadership and Follower Work Outcomes

The purpose of this study was to examine the psychometric properties and provide further evidence of construct validity and nomological validity for the newly developed authentic leadership measure as a necessary part of construct validation (Hinkin, 1995; Nunnally & Bernstein, 1994). The construct validation process adopted involved (a) demonstrating dimensionality and internal consistency, (b) demonstrating further convergent validity by showing positive correlations with alternative measures of similar constructs (ethical leadership and transformational leadership), and (c) demonstrating discriminant and predictive validity.

Table 3. Comparisons of Authentic Leadership Development Theory, Ethical Leadership Theory, and Transformational Leadership Theory

Theoretical Components	Authentic Leadership	Transformational Leadership	Ethical Leadership
Authentic leadership			
Leader self-awareness	✓	✓	
Relational transparency	✓	*	
Internalized moral perspective	✓	✓	✓
Balanced processing	✓	*	
Ethical leadership			
Moral person	✓	✓	✓
Moral manager	*	*	✓
Transformational leadership			
Idealized influence	*	✓	✓
Inspirational motivation		✓	
Intellectual stimulation		✓	
Individualized consideration		✓	*

✓ = focal component; * = minor or implicit component.

We begin by providing overviews of the ethical leadership and transformational leadership theories, with a focus on the conceptual overlap and distinctions between these theories and authentic leadership theory. For comparative purposes, the core components of each theory are summarized in Table 3, as well as the extent to which these components are reflected by other theories. Next, we advance specific hypotheses about the relationships between authentic leadership and ethical and transformational leadership, and three work outcomes (organizational citizenship behavior, organizational commitment, and job satisfaction). Finally, we use two independent samples from a large university located in the southwestern United States to assess the validity of the authentic leadership.

Ethical Leadership

As Table 3 indicates, there are two core components of ethical leadership: the moral person and the moral manager. Brown et al. defined ethical leadership as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (2005: 120). From this definition, it is apparent that ethical leaders are seen as principled decision makers who care about people and the broader society (Brown & Treviño, 2006); they display actions indicating they seek to do the right thing personally and professionally and have the attributes of honesty, fairness, integrity, and openness. This dimension is the **moral person** aspect of ethical leadership (Treviño, 2000). Second, ethical leaders are self-disciplined and consistent in their pursuit of clear ethical standards, which they refuse to compromise even in the face of uncertainty or pressure (Brown et al., 2005). This **moral manager** aspect of ethical leader-

ship involves making “ethics an explicit part of their leadership agenda by communicating an ethics and values message, by visibly and intentionally role modeling ethical behavior” (Brown & Treviño, 2006: 597).

A review of the literature reveals some conceptual overlap between the constructs of authentic and ethical leadership (Brown et al., 2005; Brown & Treviño, 2006), as well as some notable distinctions. As Table 3 indicates, both theories describe leaders as moral persons who exhibit honesty, integrity, and openness and a desire to do the right thing. Moreover, authentic leadership shares the focus on ethical role modeling that is central to the moral manager component of ethical leadership (Gardner, Avolio, Luthans, et al., 2005); hence, we expect a positive relationship between authentic and ethical leadership. However, as Brown and Treviño noted, ethical leadership involves a moral transactional focus on moral management that involves “using the reward system (rewards and discipline) to hold followers accountable for ethical conduct” (597). Thus, the moral manager component of ethical leadership as conceptualized by Brown and Treviño is only partially reflected in authentic leadership theory.

Authentic leadership theory likewise contains distinctive components that are not considered by ethical leadership theory, as Table 3 indicates. Specifically, the focus on self-awareness, relational transparency, and balanced processing all represent features of authentic leadership not captured in operational definitions of ethical leadership. Self-awareness, for example, is particularly important because demonstrating that one is aware of one’s strengths and weaknesses helps one to be true to oneself and is critical to being authentic. In addition, developing self-awareness alludes to a deeper process of discovering who one is, that is, learning one’s self-concept and self-views, how past events shape current perceptions and behaviors, and how one tends to make meaning of personal experiences. This kind of self-awareness reflects an underlying developmental process that results in more inclusive perspectives over time (Kegan, 1982). As such, we see authentic leadership as being different in scope than what has been defined as comprising and operationally measured as the construct of ethical leadership. Ethical behavior on the part of the leader would appear to be a necessary condition for the establishment of authentic leadership, but this alone is not sufficient. Thus, authentic leadership encompasses more than being ethical; one needs to develop the other three components as well.

Transformational leadership. As is the case with ethical leadership, there is some conceptual overlap between authentic and transformational leadership (see Table 3). Transformational leadership is composed of five components: attributed charisma, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Avolio, 1999; Bass, 1998). However, attributed charisma has been described as representing leadership impact and reflecting followers’ attributions, and not necessarily leader behavior (Yukl, 2006), and thus is not part of the transformational leadership conceptualization utilized here in that our focus is on measuring behaviors as a starting point for measuring authentic leadership.

Leaders with idealized influence tend to place followers’ needs over their own needs, share risks with followers, and demonstrate devotion to a set of underlying principles and values. Such leaders are “role models for followers to emulate; can be counted on to do the right thing; and display high standards of ethical and

moral conduct" (Avolio, 1999: 43). Inspirational motivation involves motivating and inspiring followers by providing meaning, mutual understanding, and challenge to their work. Intellectual stimulation entails stimulating followers to question assumptions, reframe problems, and approach old situations in completely new ways. Leaders who provide individualized consideration are seen as ones who pay attention to followers' individual needs for achievement and growth by acting as a coach or mentor, creating learning opportunities, and fostering a supportive climate for individual growth.

Although authentic leadership is closely related to the four behavioral dimensions of transformational leadership, we also contend that the proposed dimensions of authentic leadership are not explicitly encompassed by transformational leadership, as Table 3 indicates. Indeed, we believe a key distinction is that authentic leaders are anchored by their own deep sense of self (self-awareness); they know where they stand on important issues, values, and beliefs, and they are transparent with those they interact with and lead. With that base, they display internalized moral perspective and self-regulation by staying their course through difficult challenges and convey to others, oftentimes through actions and words, what they represent in terms of principles, values, and ethics (Ilies et al., 2005). Moreover, because authentic leaders know themselves and remain true to their values, they choose leadership roles that are consistent with internal self-concepts and goals, such that over time they create high alignment between their internal core beliefs, their self-identity, and their leader role and actions. In this way, authentic leaders serve both themselves and their constituencies in a simultaneous manner driven by core consistent values (George, 2003).

Although the outcomes of authentic leadership for organizations, followers, and other stakeholders will reflect the internal values of the leader, they will not necessarily match the outcomes for transformational leadership, which is often described as developing followers into leaders (Avolio, 1999; Bass, 1985, 1998). To the contrary, authentic leaders are posited to focus on follower development (Gardner, Avolio, Luthans, et al., 2005a; Luthans & Avolio, 2003) toward achieving authenticity, which may or may not involve serving in a leadership role. Moreover, although authentic leaders build enduring relationships and lead with purpose, meaning, and value, they may not be described as charismatic or inspirational by others (Avolio & Gardner, 2005; George, 2003). Because authentic leaders are transparent when dealing with challenges, the process by which followers internalize their beliefs and values may be based less on inspirational appeals, dramatic presentations, symbolism, or other forms of impression management (Gardner & Avolio, 1998), and more on their character, personal example, and dedication. In contrast, transformational leaders have been shown to transform others and organizations through a powerful, positive vision; an intellectually stimulating idea; attention to uplifting the needs of followers individually; and having a clear sense of purpose.

Without a doubt, transformational leaders may also have a deep sense of ethical values. For example, Avolio (1999) described transformational leaders as those who can be counted to do the right thing and have high standards of ethical behavior—behaviors consistent with the internalized moral perspective of authentic leadership, although some scholars have questioned this moral and ethical aspect of transformational leadership (e.g., Stevens, D'Intino, & Victor, 1995). For this reason, Bass and Steidlmeier (1999) introduced the term **authentic** to distinguish between pseudo- and genuine transformational leadership. However, Bass and Steidlmeier

argued that even “authentic transformational leaders may have to be manipulative at times for what they judge to be the common good” (186). It is important to note that this argument is inconsistent with the notion of leader authenticity as conceptualized by Gardner, Avolio, Luthans, et al. (2005) and others (e.g., Ilies et al., 2005; Shamir & Eilam, 2005). Indeed, a core prediction of authentic leadership theory is that the leaders’ espoused values/beliefs and actions become aligned over time and across varying situational challenges. The values and actions also become synonymous with how a leader views himself or herself, which is why we argue that such leaders do not have the inclination to be manipulative. They cannot create an impression with others of being something other than who they are to themselves.

In sum, despite Bass and Steidlmeier’s (1999) efforts to distinguish authentic from pseudotransformational leadership, neither their work nor the original theory and research on transformational leadership reflect the focal components of leader authenticity that we intend to operationalize through the construct and measure of authentic leadership. Also, a close review of the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 2004), one of the main instruments used to measure transformational leadership, indicates that it does not include items that capture the four dimensions of authentic leadership construct. Similarly, authentic leadership does not explicitly operationalize the components of transformational leadership identified by Avolio (1999) and Bass (1985, 1998), although there is clear overlap with the ethical role modeling encompassed by the idealized influence dimension. Thus, it appears there is meaningful but only partial theoretical overlap between authentic leadership and transformational leadership.

Predictive validity. Both ethical leadership (Brown et al., 2005) and transformational leadership (Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996) have been shown to be related to a number of organizationally relevant outcomes, including organizational citizenship behavior (OCB), organizational commitment, and follower satisfaction with one’s supervisor. Because this is a first attempt to empirically test the construct of authentic leadership, we have chosen to use these outcomes as a base to test for the discriminant validity of our newly proposed higher order, multidimensional authentic leadership measure given their prominence in the literature on both ethical and transformational leadership. Because of the conceptual differences and overlap previously discussed, we anticipate that authentic leadership will be positively related to ethical and transformational leadership while being empirically distinct.

Although no direct empirical evidence relating authentic leadership to the follower work outcomes of OCB, organizational commitment, and satisfaction with one’s supervisor is available, such relationships are supported and predicted by theory. For example, Avolio et al. (2004) argued for both direct effects of authentic leadership on follower work attitudes, including organizational commitment, job satisfaction, work meaningfulness, and engagement, and indirect effects through identification (personal and social) processes. In arguing for direct effects, we likewise posit that the balanced processing of information, transparency in relationships, and consistency between values, words, and deeds (i.e., internalized moral perspective and regulation) exhibited by authentic leaders instills elevated levels of commitment, willingness to perform extra-role behaviors (e.g., citizenship), and satisfaction with the supervisor among followers.

In terms of indirect effects, Avolio et al. (2004) asserted that authentic leaders lead by example (e.g., role modeling) as they display high moral standards, honesty, and integrity, thereby causing followers to personally identify with them. Here, personal identification refers to the process whereby one's beliefs about a person (e.g., a leader), become self-defining and self-referential. Thus, as followers model authentic leaders, they come to view themselves as honest persons of high moral standards and integrity. Social identification refers to a process through which individuals come to identify with a group, take pride in belonging, and see group membership as an important part of their identity (Kark & Shamir, 2002). Authentic leaders "increase followers' social identification by creating a deeper sense of high moral values and expressing high levels of honesty and integrity in their dealings with followers" (Avolio et al., 2004: 807). Here, the leader's values and moral standards become associated with a collective with whom followers likewise identify. Identification with a leader and an associated collective that display high levels of transparency, integrity, and moral standards is posited to produce elevated levels of trust, hope, positive emotions, and optimism among followers, which in turn elicit increases in commitment, satisfaction, and other positive work outcomes (e.g., engagement, meaningfulness, well-being; Avolio et al., 2004; Gardner, Avolio, Luthans, et al., 2005; Ilies et al., 2005).

In sum, because authentic leaders use both ethical and other aspects of transformational leadership, as well as behaviors that are unique to authentic leadership (e.g., relational transparency, balanced processing; Avolio et al., 2004; Avolio & Gardner, 2005; Ilies et al., 2005), we expect authentic leadership to account for variance in citizenship behaviors, commitment, and follower satisfaction with supervisor beyond that explained by ethical or transformational leadership. Based on this reasoning, we advance the following:

Hypothesis 1: Authentic leadership is positively related to ethical leadership and transformational leadership, respectively.

Hypothesis 2: Authentic leadership is positively related to organizational citizenship behavior, organizational commitment, and follower satisfaction with supervisor when controlling for (a) ethical leadership and (b) transformational leadership, respectively.

Participants and Procedures

We collected data from two independent samples from a large southwestern U.S. university over a span of two semesters. We used two independent samples because we wanted to avoid having all of the focal measures completed by one set of raters, which would have affected our response rate and reliability (Hinkin, 1995). Extra credit was given in exchange for participation. Sample 1 was used to further explore the construct validity and predictive validity of our authentic leadership measure relative to ethical leadership. We surveyed working MBA and evening adult students. Only those students who were currently employed full time were included in the final sample. Potential respondents who were unemployed or had part-time jobs were asked to return the survey with an indication of their employment status. In all, 178 usable surveys were obtained (a response rate of 81%).

The average age of participants was 26 years ($SD = 7.23$), with 3.44 mean years ($SD = 3.17$) of work experience; 56% of the participants were female. This survey

was collected during class time over a period of 3 weeks. Respondents were asked to focus on their immediate supervisor at work and to judge how frequently each statement fits him or her using a 5-point scale (see the appendix). In addition, participants provided their university identification number so we could match their responses at Week 2 and Week 3. However, they were assured that their identification numbers would be used strictly for research purposes and their participation would not affect their performance in class. In Week 1, respondents completed a measure of authentic leadership for their immediate supervisor and provided personal information (e.g., age, gender, and work experience). In Week 2, participants completed a measure of ethical leadership, and in Week 3, they completed measures of OCB, organizational commitment, and their satisfaction with supervisor.

Sample 2 (collected a semester later) was used to further assess the construct validity and predictive validity of the authentic leadership construct relative to transformational leadership. We collected a sample of 236 surveys from adult evening students with full-time jobs. The average age of the participants was 24.49 years ($SD = 5.92$), with 3.28 years ($SD = 2.55$) of work experience; 48% were female. In Week 1, respondents completed the ALQ and provided demographic information. Week 2 participants completed a measure of transformational leadership, and in Week 3 they completed measures of OCB, organizational commitment, and satisfaction with supervisor. Collecting data at three different points further allowed us to reduce potential problems associated with common source/method bias (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003).

Measures

Leadership variables. In addition to administering the ALQ, we used a 10-item scale developed and validated by Brown et al. (2005) to measure ethical leadership. Responses were made on a 5-point scale from 1 (*highly unlikely*) to 5 (*highly likely*). A sample item is "Discusses business ethics or values with employees." The estimated Cronbach's alpha was .91. We used 16 items from the MLQ Form 5X (Bass & Avolio, 2004) to measure transformational leadership including idealized influence ($\alpha = .81$), individualized consideration ($\alpha = .83$), inspirational motivation ($\alpha = .87$), and intellectual stimulation ($\alpha = .86$), anchored on a 5-point scale from 0 (*not at all*) to 4 (*frequently, if not always*). A sample item is "Articulates a compelling vision of the future." A recent large scale study of the MLQ fully supported its proposed multidimensional structure (Antonakis, Avolio, & Sivasubramaniam, 2003). Thus, we looked at transformational leadership as a latent construct.

Organizational citizenship behavior (OCB). We used a 6-item scale employed by Wayne, Shore, and Liden (1997) and originally developed by Smith, Organ, and Near (1983) to measure OCB. Although supervisors' ratings have been the primary source of OCB assessments in the literature, in our study participants evaluated their own perceptions of OCB because we did not have access to their immediate supervisors. Williams (1988) found few measurement differences between supervisor ratings and self-report ratings of OCB and suggested that self-report is only a problem when relationships among job attitudes and OCB are explored. A sample item is "I help other employees with their work when they have been absent even when I am not required to do so." Responses were anchored on a 5-point scale from 1 (*never*) to 5 (*always*). The Cronbach's alpha of this scale was .72.

Organizational commitment. Organizational commitment ($\alpha = .92$) was measured using a 10-item scale from Mowday, Steers, and Porter (1979), which assesses one's attachment to and identification with a particular organization. This scale relates highly to Meyer and Allen's (1997) concept of Affective Commitment (Allen & Meyer, 1990). A sample item is "I would be happy to spend the rest of my career with this organization." A 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*) was employed.

Satisfaction with supervisor. We used nine items from Smith, Kendall, and Hulin's (1969) Job Descriptive Index to capture follower satisfaction with supervisor ($\alpha = .92$). Participants were asked to respond to a series of statements describing their supervisors at work using a 3-point scale, ranging from 1 (if the item did not describe his or her supervisor), 2 (if he or she could not decide), and 3 (if the item described his or her supervisor). A sample item is "My leader praises good work."

These outcome variables were selected because they are (a) theoretically relevant to authentic (Avolio et al., 2004; Gardner, Avolio, Luthans, et al., 2005; Ilies et al., 2005), ethical (Brown et al., 2005; Treviño, Brown, & Hartman, 2003), and transformational leadership (Bass, 1985, 1998); and (b) are heavily researched and have been found to be positively associated with related leadership variables (Brown et al., 2005; Judge & Piccolo, 2004; Lowe et al., 1996; Yukl, 2006).

Results

Table 4 includes the means, standard deviations, correlations, and internal reliabilities for all Study 2 measures. The zero-order correlations among the four measures and outcome variables provide initial evidence that the core authentic leadership construct possesses a good degree of predictive validity. All of the internal consistency estimates are above the commonly accepted .70 level (Nunnally & Bernstein, 1994). We first examined a measurement model with all the variables included in each study to assess the relationships between latent variables and the manifest items that serve as their indicators. The results of this model test produced a good fit to our data: Student Sample 1 ($\chi^2 = 1865.31$, $df = 1214$, $\chi^2/df = 1.54$, $p < .01$, CFI = .97, RMSEA = .05) and Student Sample 2 ($\chi^2 = 2622.23$, $df = 1522$, $\chi^2/df = 1.72$, $p < .01$, CFI = .96, RMSEA = .06).

Discriminant validity. We expected the authentic leadership measure would be significantly related to ethical leadership and transformational leadership measures. As shown in Table 4, the four dimensions of the authentic leadership are positive and significantly correlated with ethical leadership and the four dimensions of transformational leadership, providing initial support for Hypothesis 1.

Discriminant validity can be established if the average variance extracted value of the factor in question (e.g., authentic leadership measure) is greater than the squared correlation between that factor and another factor (in our study, ethical or transformational for Samples 1 and 2, respectively; Netemeyer, Johnston, & Burton, 1990). The average variance extracted when all variables are included (again using items as indicators) in the same equation were .52 (Sample 1) and .67 (Sample 2).

Table 4. Means, Reliabilities, Standard Deviations, and Correlations

Sample 1 Variables ^a	M	SD	1	2	3	4	5	6	7	8			
1. Self-awareness	2.53	.97	.85										
2. Relational transparency	2.81	.76	.65**	.74									
3. Internalized moral perspective	2.87	.84	.68**	.66**	.82								
4. Balanced processing	2.46	.88	.65**	.66**	.68**	.74							
5. Ethical leadership	3.58	.80	.58**	.53**	.55**	.51**	.91						
6. Organizational citizenship behavior	3.96	.58	.22**	.20**	.18**	.17*	.15*	.72					
7. Organizational commitment	3.33	.88	.42**	.26**	.31**	.26**	.37**	.29**	.92				
8. Satisfaction with supervisor	1.71	.85	.49**	.44**	.33**	.41**	.45**	.20**	.44**	.88			
Sample 2 Variables ^b	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Self-awareness	2.18	.99	.85										
2. Relational transparency	2.52	.89	.66**	.78									
3. Internalized moral perspective	2.55	.92	.67**	.67**	.78								
4. Balanced processing	2.05	.99	.69**	.65**	.63**	.77							
5. Idealized influence	2.31	.98	.58**	.45**	.49**	.54**	.81						
6. Individualized consideration	2.37	.99	.54**	.56**	.58**	.53**	.70**	.83					
7. Inspirational motivation	2.68	.97	.51**	.42**	.52**	.47**	.75**	.65**	.86				
8. Intellectual stimulation	2.23	.99	.59**	.47**	.54**	.55**	.71**	.78**	.65**	.86			
9. Organizational citizenship behavior	2.89	.52	.32**	.31**	.38**	.34**	.34**	.34**	.28**	.31**	.70		
10. Organizational commitment	3.30	.91	.44**	.48**	.51**	.42**	.42**	.46**	.33**	.45**	.44**	.92	
11. Satisfaction with supervisor	1.98	.52	.58**	.55**	.50**	.52**	.46**	.48**	.45**	.47**	.26**	.42**	.85

Coefficient alpha reliabilities appear in the diagonal.

a. $n = 178$.

b. $n = 236$.

** $p < .01$ (two-tailed)

We conducted additional tests to establish discriminant validity following Venkatraman (1989). To do this, the correlation of authentic leadership with ethical or transformational leadership was freely estimated in the first model (i.e., unconstrained model), whereas it was set to 1.00 in the second model (i.e., a constrained model). According to Venkatraman, discriminant validity is evidenced if the unconstrained measurement model fits the data better than the constrained model. That is, "a significantly lower χ^2 value for the model with the unconstrained correlation, when compared with the constrained model, provides support for discriminant validity" (Venkatraman, 1989: 954). The results were as follows: ALQ and ethical leadership (unconstrained correlation, $\chi^2(298) = 629.77$; constrained correlation, $\chi^2(299) = 685.46$; $\Delta\chi^2 = 55.69$, $p < .01$) and authentic leadership and transformational leadership (unconstrained correlation, $\chi^2(458) = 1107.02$; constrained correlation, $\chi^2(459) = 1131.51$; $\Delta\chi^2 = 24$, $p < .01$). These results, together with the CFA results, provide evidence that the authentic leadership is positively related to ethical and transformational leadership while also significantly distinguishable from these two leadership behaviors, lending support for Hypothesis 1.

Predictive validity. Hypothesis 2 predicted that the higher order authentic leadership measure would be positively related to OCB, organizational commitment, and follower satisfaction with supervisor when controlling for ethical leadership (H2a) and for transformational leadership (H2b). To test these hypotheses, we used SEM to account for the measurement error, once again using items as indicators of each construct. We used student Sample 1 to test Hypothesis 2a and Sample 2 to test Hypothesis 2b. Results from these analyses are reported in Figure 1. The results revealed that the higher order authentic leadership measure predicted OCB ($\beta = .30$, $p < .01$), organizational commitment ($\beta = .28$, $p < .01$), and follower satisfaction with supervisor ($\beta = .26$, $p < .01$), controlling for ethical leadership. Hypothesis 2a was thus supported (Figure 1a). Similarly, we found that authentic leadership measure predicted OCB ($\beta = .29$, $p < .01$), organizational commitment ($\beta = .34$, $p < .01$), and follower satisfaction with supervisor ($\beta = .33$, $p < .01$), controlling for transformational leadership. Therefore, Hypothesis 2b was supported (Figure 1b).

To determine the incremental predictive power of authentic leadership beyond what ethical and transformational leadership offer, we examined two nested models—one in which the path from ethical or transformational leadership to the criterion variables (i.e., OCB, organizational commitment, satisfaction with supervisor) was fixed to zero and one in which the path from authentic leadership to the criterion variables (i.e., OCB, organizational commitment, satisfaction with supervisor) was fixed to zero.

In our first submodel, using Student Sample 1 ($n = 178$), dropping the path from ethical leadership to the criterion variables did not significantly degrade model fit ($\Delta\chi^2 = 2.89$, ns; $\Delta df = 3$). In contrast, dropping the path from authentic leadership to the criterion variables resulted in substantially worse fit to our data ($\Delta\chi^2 = 10.53$; $\Delta df = 3$, $p < .05$). Similarly, using Student Sample 2 ($n = 236$), dropping the path from transformational leadership to the criterion variable did not significantly degrade model fit ($\Delta\chi^2 = 1.59$, ns; $\Delta df = 3$). In contrast, dropping the path from authentic leadership to the criterion variables resulted in a substantially worse fit to our data ($\Delta\chi^2 = 8.04$; $\Delta df = 3$, $p < .05$). Taken together, the results support the incremental validity of authentic leadership in our data.

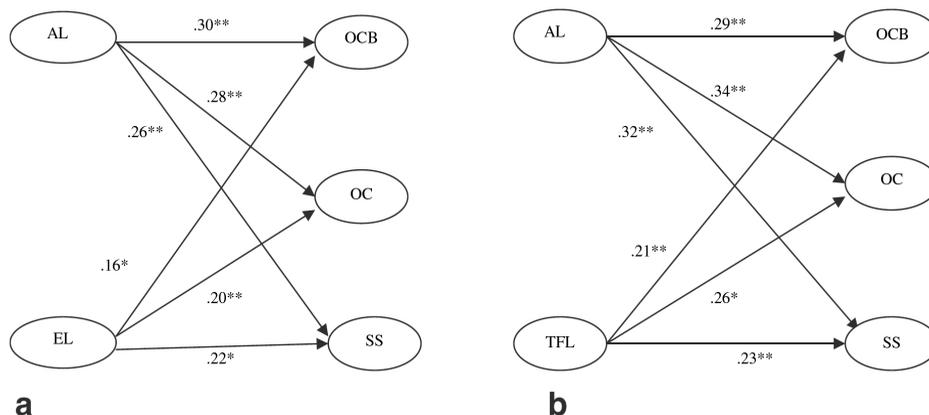


Figure 1. Study 2: Relationships Among Authentic, Ethical and Transformational Leadership, and Outcome Variables. AL = authentic leadership; EL = ethical leadership; TFL = transformational leadership; OCB = organizational citizenship behavior; OC = organization commitment; SS = satisfaction with supervisor. Results are standardized coefficients. * $p < .05$ (two-tailed); ** $p < .01$ (two-tailed).

Discussion

The results of Study 2 indicate positive relationships between the four underlying dimensions of authentic leadership and measures of ethical leadership (Brown et al., 2005) and transformational leadership (Bass & Avolio, 2004). In addition, the CFA confirmed that the authentic leadership construct as operationalized is distinct from these related leadership variables. Thus, Study 2 provided further evidence of construct validity to add to the support for the content and convergent validity of the higher order. More important, a closer look at the correlations presented in Table 4 suggests that the four dimensions of authentic leadership correlated positively with ethical leadership and the dimensions of transformational leadership but not so highly as to indicate construct redundancy. Indeed, McCornack (1956) argued that constructs can be very highly correlated while still maintaining distinct patterns of associations with other variables.

We also found that the higher order authentic leadership measure accounted for variance in a diverse set of frequently researched work outcomes beyond that explained by ethical and transformational leadership dimensions. Specifically, the authentic leadership was shown to account for additional unique variance in OCB, organizational commitment, and satisfaction with supervisor. Thus, evidence was obtained of the value added by considering the effects of authentic leadership on commonly researched organizational variables beyond existing measures of related leadership constructs.

We suggest that the incremental validity displayed by using the authentic leadership measure does not necessarily indicate that it will be a better predictor of performance across all organizational domains. The extent to which these findings are generalizable should await further confirmation. We would also suggest that there may

be some performance domains for each of these measures where one may out predict the other. For example, transformational leadership may be more predictive than authentic leadership when predicting performance excellence that far exceeds normal or conventional standards of performance (Lim & Ployhart, 2004). It would certainly be interesting to explore how each of these unique leadership measures predicts a range of unique performance criteria across organizational contexts and culture.

Although the Study 2 results are consistent with our predictions in terms of the relationship between the core authentic leadership measures and outcome variables, it is possible that aspects of the samples could have biased the results. For example, the leader evaluation came from working adults in evening and MBA classes. It is possible that the relationship between workers going to school is completely different from those who work full time. Second, the supportive results of the structural model may be a function of the specific set of outcomes investigated in Study 1. To address these potential concerns, Study 3 used a field setting and a different set of outcome variables.

Study 3

Authentic Leadership, Follower Job Satisfaction, and Individual Job Performance

Although direct empirical evidence of the relationship between authentic leadership and follower job satisfaction and individual performance is thus far absent, theory suggests that authentic leadership should be positively related to job satisfaction and job performance (Gardner, Avolio, Luthans, et al., 2005). For example, Ilies et al. (2005) suggested that authentic leaders are likely to have a positive influence on followers' behaviors because such leaders provide support for followers' self-determination. Research has shown that leaders who engage in these behaviors are more effective at fostering intrinsic worker motivation (Deci, Connell, & Ryan, 1989), which should result in higher follower job satisfaction and performance. Similarly, Gardner, Avolio, Luthans, et al. used self-determination theory (Ryan & Deci, 2001, 2003) to predict that positive modeling by authentic leaders would foster internalized regulation processes among followers, which have in turn been shown to contribute to elevated levels of follower well-being, engagement, and performance (Deci et al., 1989; J. K. Harter, Schmidt, & Hayes, 2002).

George (2003) suggested that one way to motivate employees is with a sense of purpose to deliver innovative products, superior services, and unsurpassed product quality over a long haul. Authentic leaders are more interested in empowering their followers to make a difference by fostering high-quality relationships based on the principles of social exchange rather than economic exchange (Ilies et al., 2005). From a social exchange perspective (Blau, 1964), we expect followers of authentic leaders to be willing to put extra effort into their work to reciprocate the highly valued relationships with their leader. Brown et al. (2005) found that ethical leader behavior (a critical component of authentic leadership) predicted supervisor effectiveness, defined as follower satisfaction with supervisor, willingness to put forward extra effort, and willingness to report problems. Theory and research has also suggested that authenticity is predictive of service performance. For example, Grandey et al. (2005) found evidence that service provider authenticity is a factor that enhances core performance.

Authentic leaders are also said to be more effective in conveying their authentic self to followers and in projecting their values and vision onto followers (Ilies et al., 2005). The time spent with followers goes beyond merely trying to reinforce positive and reduce negative outcomes. Instead, time is spent trying to comprehend what caused outcomes, thereby helping followers to understand what can legitimately be attributed to internal versus external causes of performance (Gardner, Avolio, Luthans, et al., 2005). By setting a personal example of high moral standards of integrity, authentic leaders are expected to evoke a deeper sense of personal commitment among followers and, in the process, elevate followers' self-awareness about what can be accomplished with increased effort.

Over time, followers come to internalize many of the leader's values and perspectives, including a focus on self-discovery, which in turn facilitates the development of internal guiding points for making effective decisions about their work and subsequently individual follower performance. Also, by promoting and building transparent relationships, we expect more rapid and accurate transfer of information that should facilitate more effective follower performance. Note that the aforementioned reasoning compliments and reinforces our theoretical rationale for Hypothesis 2, which posited positive relationships between authentic leadership and follower OCB, organizational commitment, and satisfaction with one's supervisor.

Thus, on the basis of theory and related findings, we advance these hypotheses:

Hypothesis 3: Authentic leadership is positively associated with individual follower job satisfaction.

Hypothesis 4: Authentic leadership is positively associated with individual follower job performance.

Participants and Procedures

We distributed 610 instrument packets to working adults drawn from 11 diverse U.S. multinational companies operating in Kenya, Africa, with the help of each participating company's human resource department. Approximately 98% of respondents indicated they were Africans. The questionnaire was written in English, as this is the official language of Kenya. A total of 505 employees returned completed surveys. Of these, the data for 27 employees could not be matched, and these respondents were excluded from the study, reducing the sample to 478 (effective response rate of 83%).

Data were collected at two points separated by approximately 6 weeks. At Time 1, participants were asked to complete information about themselves (personal information such as age, gender, tenure, etc.) and the 16 items of the ALQ rating their immediate supervisor. At Time 2, the same respondents completed a measure of job satisfaction. Participants were asked to provide their names so that we could match their responses at Time 1 and Time 2 and job performance as rated by their immediate supervisors. However, they were assured in a cover letter from the researchers and endorsed by senior management that their names would be used strictly for research purposes and that all identifying information would be removed. The average age of employees was 32.81 years ($SD = 7.90$), with mean work experience of 5.58 years ($SD = 3.90$). Sixty-three percent of the respondents were male. With respect to education, 54% had at least a college diploma (equivalent of U.S. community college diploma), and 46% had a college degree.

After obtaining data from direct reports, we contacted the immediate supervisors of the 478 employees with complete data ($n = 104$). All supervisors were guaranteed confidentiality in a cover letter from the researchers and endorsed by senior management. The letter explained the evaluations could be used to help the company identify areas for future training programs but would not be provided back to individual employees. The average age of supervisors was 36.49 years ($SD = 6.88$), with mean work experience of 7.17 years ($SD = 5.05$); all had a college degree. On average, each supervisor rated four employees. All of the 104 supervisors contacted completed and returned their questionnaires (66% were male).

Measures

Authentic leadership. Authentic leadership was measured using the 16-item authentic leadership confirmed in Studies 1 and 2. Once again, we conducted a CFA and results showed that the higher order ALQ model fit the data well, $\chi^2(41, N = 478) = 247.97, p < .01$ ($df = 95, \chi^2/df = 2.61$; CFI = .97, RMSEA = .06). The internal consistency reliability for each ALQ measure was as follows: self-awareness .73; relational transparency, .77; internalized moral perspective, .73; and balanced processing, .70.

Follower job satisfaction. Job satisfaction was measured using five items taken from the Brayfield Rothe scale (Brayfield & Rothe, 1951), with a 5-point response scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale is reliable and has recently been used by Judge and colleagues (Bono & Judge, 2003; Judge, Bono, & Locke, 2000; Judge & Colquitt, 2004). Sample items are "I feel fairly satisfied with my present job" and "I find real enjoyment in my work." The internal consistency for this scale was .82.

Follower individual job performance. We used a 10-item measure of job performance, including personal initiative, self-direction, and innovation. Each supervisor was asked to provide a rating of his or her direct report(s) on a 5-point response scale from 1 (*needs improvement*) to 5 (*excellent*). Personal initiative (four items) was measured by a scale developed by Bono and Judge (2003). Self-direction was measured using three items adapted from Bono and Judge based on a scale developed by Stewart, Carson, and Cardy (1996). Finally, innovation was measured using three items adapted from the Role-Based Performance Scale (Welbourne, Johnson, & Erez, 1998). We averaged responses to the items to form an overall job performance scale score. Sample items regarding what the employee would do include "Take initiative and do whatever is necessary" (personal initiative), "Challenge things in his or her work in order to improve it" (self-direction), and "Come up with new, original ideas for handling his or her work" (innovation).

Because we combined items drawn from three different scales to measure individual performance, we conducted a CFA on the 10 items, allowing items to load onto one single performance. The results showed a very good fit to the data, $\chi^2(24, N = 478) = 66.27, p < .01$ ($df = 31, \chi^2/df = 2.14$; CFI = .98, RMSEA = .05), altogether explaining 66% of the variance in the items. The internal consistency reliability for

the combined scale was .88, suggesting that these items formed a reliable scale as a single factor. Finally, because our data came from two sources (i.e., direct reports and their immediate supervisors), we also assessed the independence of our data. To do this, we calculated the Intraclass Correlation Coefficient(1) (ICC[1]) which decomposes the variance in supervisor ratings into within and between supervisor variance (LaHuis & Avis, 2007). Although there is no agreed-upon cutoff, high levels of ICC(1) as indicated by an appreciable ICC(1) value (.20 or higher) would suggest that the data are not independent and that there are some rater (e.g., supervisor) effects. The ICC(1) was .06, $F(103, 372) = 2.01, p < .001$, suggesting that our data are independent.

Control variable. Because theory and research suggests that organization climate or culture may enhance or mitigate perceptions of authentic leader behavior (Avolio et al., 2004; Luthans & Avolio, 2003), we controlled for organization climate in this study. Direct reports were asked to rate the climate of the organization using a 5-item Benevolence Dimension Scale (Victor & Cullen, 1988). Responses were anchored on a 5-point Likert scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). A sample item was "In this organization, people look out for each other's good." The internal consistency of this scale was .73.

Results

Table 5 provides the means, standard deviations, and zero-order correlations of the study variables. We also examined the relationships between followers' demographic characteristics (e.g., age, sex, tenure) and our focal variables. No significant relationships were identified. Next, we performed an analysis of variance to test for significant differences in the predictor and criterion variables across firms and found that none emerged. Accordingly, we made a decision not to include them in the analyses.

We tested our hypotheses with SEM using items as indicators of the focal construct, because SEM's latent variable approach includes attenuation for measurement error, which results in a more accurate estimate of the relationship between structural model components. Prior to testing our structural model, we also examined a measurement model to assess the relationship between latent variables and the manifest items that serve as their indicators. Fit indexes showed a very good fit to the data, $\chi^2(86, N = 478) = 1248.31, p < .01$ ($df = 580, \chi^2/df = 2.15$; CFI = .97, RMSEA = .05).

Hypotheses 3 and 4 stated that follower perceptions of the leader's authentic leadership behaviors would be positively related to individual follower job satisfaction and job performance. Results are shown in Figure 2. The fit indexes for this model showed a very good fit to the data as well, $\chi^2(85, N = 478) = 1265.19, p < .01$ ($df = 581, \chi^2/df = 2.18$; CFI = .97, RMSEA = .05). As shown in Figure 2, we found statistically significant and positive coefficients for the paths from authentic leadership to individual follower job satisfaction ($\beta = .19, p < .05$) and job performance ($\beta = .44, p < .01$), controlling for organization climate. Thus, Hypotheses 3 and 4 are supported by our data.

Table 5. Means, Reliabilities, Standard Deviations, and Correlations among Study Variables

Variables	M	SD	1	2	3	4	5	6	7
1. Organization climate	3.37	.51	.75						
2. Self-awareness	2.00	.99	.08	.73					
3. Relational transparency	2.13	.88	.16**	.66**	.77				
4. Internalized moral perspective	2.28	.89	.20**	.60**	.68**	.73			
5. Balanced processing	2.19	.99	.07	.54**	.65**	.54**	.70		
6. Follower job satisfaction	3.57	.74	.29**	.15*	.23**	.17**	.14*	.82	
7. Follower job performance	3.43	.76	.32**	.33*	.42**	.38**	.34**	.32**	.88

n = 478. Coefficient alpha reliabilities appear in the diagonal.

** *p* < .01 (two-tailed).

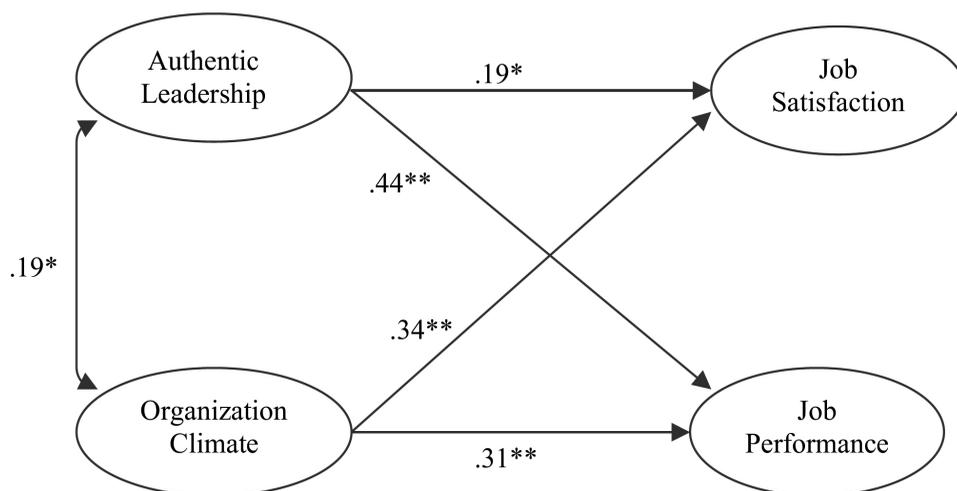


Figure 2. Results of Structural Equation Modeling; * $p < .05$; ** $p < .01$.

Discussion

Results of Study 3 indicate that follower perceptions of the leaders' authentic leadership was positively related to individual follower job satisfaction and rated job performance, controlling for the effect of organization climate. Thus, our findings offer some initial insights regarding the potential relationship between authentic leadership and follower job satisfaction and rated job performance. This finding highlights the need to consider factors, such as leader authenticity, that we suspect enhance individual followers' trust in the leader and consequently result in job satisfaction and job performance. Results for this study are also important for several reasons. First, we tested our measurement model using CFA. Results were consistent with theoretical predictions. Second, data for this study came from two independent sources and were collected at two points in time. Employees provided measures of authentic leadership, organization climate, and job satisfaction, and supervisors rated job performance of their immediate direct reports. Finally, we used items rather than item parcels as indicators for each latent variable in our analyses. This is particularly important because item parceling can conceal factor structure and produce biased structural parameter estimates (Little, Cunningham, Shahar, & Widaman, 2002). These design features enhance our confidence in the results.

General Discussion

As stated at the outset, this research was driven by three main objectives: (a) to develop and test a higher order authentic leadership measure, (b) to demonstrate the utility of authentic leadership as a construct by documenting its ability to explain additional variance in key organizational outcomes beyond ethical and transformational leadership, and (c) to provide insight into the relationship between authentic leadership and follower job satisfaction and performance. To accomplish these objectives, five independent samples were employed—two from a university setting and three from field settings. Of the field studies, one was conducted in the West (United States) and the others in developing economies (China and Kenya) using a sample of state-owned and multinational firms, respectively. The use of such diverse samples enhances the potential generalizability of the findings while bringing into focus the context in which leadership is embedded (Avolio, Sosik, Jung, & Berson, 2003).

Theoretical Contributions, Future Research Directions, and Limitations

The development of the ALQ has implications for future research on authentic leadership in the workplace. Although there has been considerable attention focused on the topic in recent years, empirical research on authentic leadership has been limited. One possible explanation of this shortage of research is the inherent difficulty involved in measuring authentic leadership behavior (Cooper et al., 2005). On the basis of our preliminary findings, we offer a theory-driven higher order authentic leadership measure (the ALQ) that has initial evidence to support its reliability and validity, consequently providing future researchers with one method for assessing authentic leadership. Our results suggest that it is possible to discriminate the authentic leadership measure from other related leadership orientations (e.g., ethical leadership and transformational leadership).

Exploring the validity of a construct involves demonstrating that the pattern of relationships with other construct measures adheres to theoretical explanations (Hinkin, 1995; Nunnally & Bernstein, 1994). At this early stage in the development of the ALQ, we considered differentiating the authentic leadership construct from ethical and transformational leadership to be the more important priority. Although the overall findings are encouraging, it should be noted that they only represent a first step, providing initial evidence of construct validity. Because scale validation is a continuous process, additional research is necessary to further assess the discriminant, convergent, and predictive validity of these component scales with a much broader range of samples and contexts. Such research should consider other variables in the construct's nomological network, including related leadership variables, such as servant leadership and spiritual leadership, and additional outcome variables, such as workplace safety, employee engagement, well-being, and withdrawal behaviors (Avolio et al., 2004; Avolio & Walumbwa, 2006; Gardner, Avolio, Luthans, et al., 2005; Ilies et al., 2005), that merit investigation.

It is also important to recognize that the ALQ shares a number of measurement limitations that are inherent to measures of leadership in general (see Avolio et al., 2003), such as not accounting for contextual influences on leadership. Nevertheless, it is encouraging to note that the basic factor structure of the ALQ held up across the Chinese, Kenyan, and American settings, suggesting that the core components of authentic leadership may generalize across cultural contexts.

Future research may consider theoretically integrating authentic leadership with other related leadership literatures such as ethical, leader-member exchange, transformational, servant, and spiritual leadership by testing the potential mediating roles of these leadership behaviors in the relationship between authentic leadership and various organizational outcomes. Such studies call for longitudinal research designs wherein both qualitative and quantitative data are collected over repeated observations to provide greater insights into the dynamics by which authentic leadership behaviors influence followers' attitudes and behaviors.

To further our understanding of the authentic leadership construct, we also encourage researchers to use experimental and quasi-experimental designs. Such designs would make it possible to better isolate the causal effects of authentic leadership, along with its antecedents and consequences. In addition, alternatives to the survey-based measure of authentic leadership presented in this article should certainly be developed, because these provide only a limited view of the construct. That is, future research should use other methods to assess authentic leadership, including observational methods and content coding of speeches, e-mail, scenarios, videotapes, and other correspondence to confirm the results produced by using survey measures. It would also be useful to adopt less subjective measures of individual performance that focus on outcomes of competently performed work. These performance measures should include as broad a range of outcomes as possible to tap into the higher order impact effects of authentic leadership, as well as higher order effects for both transformational and ethical leadership. It would also be interesting for future research to examine whether authentic leadership has an impact on the performance of the supervisor, unit, or overall organization.

Consistent with recent theorizing on authentic leadership and the idea that authentic leaders are especially interested in empowering their followers to make a difference (Avolio et al., 2004; Gardner, Avolio, Luthans, et al., 2005; George & Sims, 2007; Ilies et al., 2005; Luthans & Avolio, 2003), we have chosen to define the higher order construct of authentic leadership at the individual level of analysis. This individual level is not intended to rule out the potential for dyadic, group, or organizational levels of analysis for a type of "collective" authentic leadership in the future. Indeed, there is ample evidence that leadership in general has strong theoretical and empirical bases to be conceptualized at multiple levels of analysis (Yammarino, Dionne, Chun, & Dansereau, 2005). For example, in most organizations followers are nested within leaders, and because organizations are typically comprised of multiple levels of leaders, a multilevel approach to investigating leadership is certainly a plausible strategy that should be pursued.

As with any new measure, further research is needed to refine the construct, as scale development is an iterative process. Second, although two samples were used in Study 2, a limitation in both samples was the reliance on self-report variables measured from the same source. Although we attempted to address concerns about self-report biases by collecting data at different points in time (Podsakoff et al., 2003), our choice of methods still raises some concern with effect size inflation because of same source bias. Future research could collect ratings from multiple samples and sources or include experimental designs in which key variables can be manipulated and causality assessed under more tightly controlled circumstances. Alternatively, the measure could be validated using a multitrait-multimethod matrix (see Podsakoff et al., 2003).

Another limitation is the preliminary status of the nomological network. As we previously pointed out, the model most likely does not include all relevant or important constructs. Given that authentic leadership theory is in its early stages of development, we did not attempt to advance and test specific hypotheses about the relationships of the authentic leadership dimensions with other constructs. We recommend researchers remain open to developing more detailed nomological networks for the component dimensions of authentic leadership (i.e., other related constructs and organizational outcomes), each of which most likely has somewhat different consequences depending on the focal dimension and the construct to which it is being related. Hence, future research is needed that begins to hypothesize different relationships for each of the four authentic leadership dimensions with relevant organizational outcomes, while also keeping in mind that there may be missing components in our overall construct of authentic leadership.

In addition, potential moderators such as organizational culture (Luthans & Avolio, 2003), efficacy beliefs (Bandura, 2000; Kark & Shamir, 2002), and identification processes (Kark & Shamir, 2002) that may influence the relationships found in this study should be examined in future research. Finally, the validity of a scale may be challenged if it is prone to response bias. We encourage future researchers to examine the extent to which the higher order, multidimensional authentic leadership measure is susceptible to such biases. For example, researchers may need to correlate leader ratings with the leader's responses to social desirable behaviors such as self-deception and impression management (Paulhus, 1984).

The study has, however, notable strengths. First, the conceptualization and operational definition of the new authentic leadership were theoretically driven. Thus, although results from CFAs suggested that the measure could be further improved, it is unlikely that the basic conceptualization will expand to include additional major subdimensions. Other strengths include the use of multiple samples of followers and leaders from a broad spectrum of organizations and cultures and relatively large sample sizes for the testing and cross-validation of the instrument.

Finally, our measure of authentic leadership is based on the assumption that there are general or perhaps universal facets of what constitutes authentic leadership that consistently define such leaders as self-aware, ethical, balanced decision makers and transparent. Yet we also suggest that future researchers consider that the nuances of authentic leadership may vary as one considers what is ethical in one culture versus another, just as one considers what it means to be transparent or self-aware or balanced. Our position is that there will be greater consistency in what is associated with authentic leadership than differences, as has been shown with transformational leadership (Bass, 1998). However, it is important to determine whether there are nuanced differences within and between different cultural contexts when examining such complex constructs as those comprising authentic leadership.

Practical Implications

This research has practical implications for organizations interested in authentic leadership development. Given sweeping concerns regarding ethics and leadership (Avolio & Walumbwa, 2006; Brown et al., 2005; Cooper et al., 2005; George, 2003) as well as an increase in leadership accountability (Dealy & Thomas, 2006), our theoretical model and measure can serve as a practical means through which organi-

zations seeking to provide authentic leadership development training can begin to design programs and interventions (Cooper et al., 2005). That is, the scales offer organizational human resource professionals one reliable and valid instrument for examining the level of authentic leadership exhibited by its managers. The conceptual model offers some of the critical content that training should focus on to “create” authentic leadership.

The findings that the higher order authentic leadership measure was positively related to a variety of follower outcomes, including supervisor-rated follower performance, suggest that training leaders to be more authentic may provide positive returns on the investment. Specifically, beyond direct performance outcomes, the notion that authentic leaders may possess the ability to enhance follower commitment and citizenship behaviors is very promising, especially given the positive relationship between these constructs and performance (Bachrach, Powell, Bendoy, & Richey, 2006). Indeed, by combining authentic, ethical, and transformational leadership into our training regimens, we may be able to provide some of the strongest positive impacts on long-term motivation and sustaining high levels of performance.

Overall, given recent attention being paid to the role that leaders play in follower engagement at work, and suggestions that engagement at work is best enhanced when employees feel they are supported, recognized, and developed by their managers (J. K. Harter et al., 2002), our findings may be especially timely and relevant to practitioners. Moreover, given the spate of high-profile unethical cases of leadership, the authentic leadership may prove to be a useful means of providing early evidence to identify those leaders who may not always adhere to the highest ethical and moral principles in terms of their decisions, actions, and behaviors. Such data could be used as the basis for recommending further leadership development or for more closely monitoring of the leader to avoid ethical meltdowns in organizations.

Appendix

Authentic Leadership Questionnaire Sample Items Self-Awareness

Self-Awareness

1. Seeks feedback to improve interactions with others.
2. Accurately describes how others view his or her capabilities.

Relational Transparency

3. Says exactly what he or she means.
4. Is willing to admit mistakes when they are made.

Internalized Moral Perspective

5. Demonstrates beliefs that are consistent with actions.
6. Makes decisions based on his/her core beliefs.

Balanced Processing

7. Solicits views that challenge his or her deeply held positions.
 8. Listens carefully to different points of view before coming to conclusions.
-

Note

1. The research reported here focuses on the development and validation of a scale designed to measure the authentic leadership side of the relationship, as opposed to authentic followership; future scale development efforts designed to extend this research by operationalizing the construct of authentic followership are merited.

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