



AUTHENTICITY IN CHINESE LEADERSHIP: A QUANTITATIVE STUDY COMPARING WESTERN NOTIONS OF AUTHENTIC CONSTRUCTS WITH CHINESE RESPONSES TO AN AUTHENTICITY INSTRUMENT

Gordon E. Whitehead
Captus5—Leadership Consultancy, USA

Marley Brown
George Fox University, USA

A great deal of theoretical discussion exists in the literature regarding authenticity in leadership. However, empirical studies attempting to resolve data-driven factors operationalizing the construct of authenticity in leadership are scarce. In this article, the authors introduce a discussion pertaining to Chinese leadership styles and relevance to existing authenticity in leadership theories. The vast theoretical arguments regarding authenticity in leadership are synthesized into a 49-item instrument, which was introduced and piloted with 200 Chinese university students. The Leadership Authenticity Rating Scale (LARS) achieved high reliability with Cronbach's *alpha* of .84. Data were factor analyzed using exploratory analysis, resulting in two factors contributing to the authenticity construct with reliability measures of .82 and .75 respectively. While cultural differences exist between Eastern and Western notions of leadership, evidence supporting the theory of authentic leadership as a part of the Chinese view of leadership is supported, indicating high potential for a common definition of authenticity regardless of ethnic orientation.

This article introduces the Leadership Authenticity Rating Scale (LARS), a 49-item instrument developed from a leadership authenticity literature review (Whitehead, in press). The LARS development followed the pattern outlined by DeVellis (2003) and Hinkin (2005) and attempts to operationalize authenticity in leadership. Using exploratory research techniques, the instrument was administered to 200 Chinese university students as a pilot test of the LARS in order to: (a) take a step towards psychometric adequacy, and (b) examine cross-cultural implications regarding a largely Western theory of authenticity and the construct of Chinese leadership.

The Chinese culture places high value on leaders, leadership processes, community, and sincere interpersonal interactions (Wenquan, Chia, & Liluo, 2000; Wong, 2001). Authentic leadership theory suggests attributions of self-awareness and understanding, empathy for others, building trust, and an affinity for building affiliation and supporting the community all lead to authenticity in leadership (Whitehead, in press). Parallels between Chinese leadership constructs and theorized authenticity constructs are introduced in this article. The importance of understanding a Chinese-authenticity connection is underscored by two key points: (a) U.S. firms suffer premature return of expatriate managers because of inability to discern the subtleties of foreign business environments (Katz & Seifer, 1996; Rawwas, 2003); and (b) managers capable of coaching in foreign environments have a positive organizational impact (Rawwas; Salters, 1997). Thus, examining authentic leadership in relation to Chinese leadership philosophies creates enhanced cross-cultural opportunities.

Authentic leadership theories received extensive theoretical development in leadership literature (Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Bhindi & Duignan, 1997; Brumbaugh, 1971; Churchill, Ford, & Walker, 1974; Cohen, Taylor, Zonta, Vestal, & Schuster, 2007; Duignan & Bhindi, 1997; Ferrara, 1998; Ilies, Morgeson, & Nahrgang, 2005; Novicevic, Harvey, Buckley, Brown, & Evans, 2006; Starratt, 2007; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008; Woods, 2007). A brief summary of authentic theory follows. Authentic leaders possess commitment to self-core enhancement by being in tune with and true to self (Bhindi & Duignan, 1997; Starratt, 2007). However, authenticity concerns more than self-reflection and self-focus (Cohen et al., 2007; Ferrara, 1998). Authentic leaders retain an inner confidence (Brumbaugh, 1971; Goffee & Jones, 2000; Jensen & Luthans, 2006), exhibit rational psychological capital, and foster resilience in self and others (Avolio, Bass, & Jung, 1999; Harland, Harrison, Jones, & Reiter-Palmon, 2005; Jensen & Luthans, 2006). Authentic leadership facilitates mutual value between leader and follower (Bhindi & Duignan, 1997), which results in increased resilience in self and others (Avolio et al., 1999; Harland et al., 2005; Jensen & Luthans, 2006). Therefore, developing authentic capacity in others also resonates as an attribution of authentic leaders (Goffee & Jones, 2000; Helland & Winston, 2005; Jensen & Luthans; Walumbwa et al., 2008) by removing privilege barriers (Goffee & Jones) and demonstrating interest in the talents of followers (Starratt, 2007; Woods, 2007). The result of the authentic self coupled with an authentic reach toward others increases trust (Bhindi & Duignan, 1997). Authentic leaders build hope-driven trust (Knowles, 1986) by fostering ethical behavior (Barnard, 1938; Novicevic et al., 2006) and avoiding appearances of hypocrisy (Goffee & Jones; Helland & Winston). Authentic leaders reach beyond self and followers by recognizing community and culture customs, histories, and traditions; thus, authentic leaders tend to create responsive social structures leading to self, follower, community, and organizational success (Boerner, Eisenbeiss, & Griesser, 2007; Brumbaugh; Goffee & Jones; Helland & Winston; Spreier, Fontaine, & Malloy, 2006).

Unfortunately, few empirical studies operationalizing theorized constructs of authenticity have existed (Ilies et al., 2005) until recently. During the same time the LARS development and testing occurred, two other instruments also surfaced and are reported in the literature (Tate, 2008; Walumbwa et al., 2008). Unfortunately, neither the Tate nor the Walumbwa et al. instruments were included in the LARS content development because of timing and availability.

Tate (2008) examined authenticity in leadership, constructing an instrument from George's (2003) five dimensions of authentic leadership: self-discipline, lead from the heart, establish enduring relationships, practice solid values, and passion for a purpose. The instrument, administered to 69 US university students, was factor analyzed with loadings on three factors: (a)

self-discipline and ethical standards, (b) establishing positive relationships, and (c) passion for a purpose. An overall reliability alpha coefficient of .89 was reported. While these findings are promising, the study does not necessarily produce a psychometrically adequate instrument. However, the Tate study generated an important pioneering effort, contributing empirical data needed to refine leadership authenticity theories.

Walumbwa et al. (2008) also developed an instrument designed to measure authentic leadership. The instrument, derived from a broad body of literature, followed instrument development best practices (DeVellis, 2003) and argued support for validity and therefore psychometric adequacy. An initial 35-item pool reduced to a final 16-item instrument from two independent administrations among business people; over 200 US respondents and over 200 Chinese respondents supported psychometric adequacy criteria (Oakland et al., 1996). Confirmatory factor analysis supported the hypothesized four-factor structure with high reliability: (a) self-awareness, .92; (b) relational transparency, .87; (c) internalized moral perspective, .76; and (d) balanced processing, .81. Ultimately, Walumbwa et al. concluded authenticity comprised those four factors; however, they also noted a second order factor accounted for the dependence between each of the four factors, with the inter-factor correlation averaging over .69. Thus, they opened the door for additional latent factors of authenticity to exist. The Walumbwa et al. study specifically addressed validity questions by examining hypothesized relationships to authentic leadership for (convergent and discriminate) construct support. Using independently validated instruments, they included measures of ethics and organizational citizenship as a means to derive construct validity arguments. A strong significant correlation between authenticity factors and ethics surfaced, while only a moderate significant correlation with organizational citizenship existed.

The LARS instrument design and intent differed from both Tate (2008) and Walumbwa et al. (2008) in two important ways. First, while Tate also researched authenticity in leadership among university students, Tate's instrument's theoretical basis stemmed primarily from George's (2003) work. The LARS attempted a broader set of context underlying the constructs measured (Whitehead, in press). Second, Walumbwa et al. administered their instrument to business respondents where employees assessed superiors' authentic leadership. In contrast, the LARS was a self-rating instrument attempting to capture self-reflection, and specifically integrated design oriented towards younger university students and adolescent populations.

Article Organization

This article examines Chinese leadership from a historical and cultural perspective. The article then discusses largely Western theories of authenticity in leadership relative to Chinese leadership application. The study's method and procedure, along with a discussion of the formulation of the LARS instrument, are then briefly outlined. The results of an exploratory factor analysis follow. Finally, the article concludes with a discussion of the findings and recommendations for additional research.

Examining Chinese Leadership

The Nature of Chinese Leadership

Leadership behavior varies with cultural influences (House & Aditya, 1997). However, some leadership fundamentals consistently apply across cultures. For example, the fundamental notion that leadership is a relationship between leader and follower (Ciulla, 2004; Kellerman, 2004) is not only a Western ideal. While Western studies on leadership suggest leaders receive power from both peers and followers (Carmeli & Schaubroeck, 2007; Carter, Bennetts, & Carter, 2003; Paunonen, Lonqvist, Verkasalo, Leikas, & Nissinen, 2006); this same ideal holds for Chinese leadership notions as well (Shafer, Vieregge, & Youngsoo, 2005). Leader-follower relationships prevail regardless of culture, and one must specifically avoid adopting a single baseline for judging or understanding leadership ideals of other cultures (Rawwas, 2003; Wenquan et al., 2000; Wong, 2001) by using one's own preconditioned lens (Hofstede, 1980). In fact, an inability to discern and operationalize cultural leadership differences is one explanation for expatriate failures (Rawwas). Unraveling the leader-follower complexities and interpreting leader-follower or follower-leader signals ingrained in a culture requires investigation of a culture's leadership evolution.

The Chinese leadership patterns align with a collectivist (Wong, 2001) culture, which respects cooperation, affiliation, and subordination (Ping Ping, Hau-siu Chow, & Yuli, 2001; Rawwas, 2003). In fact, Chinese people rank high in willingness to subordinate personal objectives to a group purpose (Rawwas). Collectivism attributes include high power distance, divisions of wealth and power, limits to risk and uncertainty, low levels of individualism, and high degrees of loyalty to family, friends, and organization (Rawwas). Research suggests high power-distant cultures gravitate towards autocratic leadership (Hofstede, 1980; Rawwas). This is somewhat paradoxical because studies (e.g., Ping Ping et al.) show autocratic leadership is not preferred by followers (neither Chinese nor American), nor does it produce a high quality work motivation. While autocratic leadership demands a respect for authority and subordination to management, autocratic leaders may therefore resort to embarrassment tactics or power-based tactics to force worker compliance (Rawwas). Such embarrassment contributes to a low and ineffective form of motivation (Misumi & Seki, 1971). While autocratic techniques are assumed to exist only in high-power distance countries like China, ironically the data (Rawwas) show autocratic forms of leadership also prevail in low power distance cultures such as the United States. Therefore, while Chinese align with collectivism, it is a mistake to assume collectivist approaches to organizational management simply equate to autocratic leadership. The relationships are far more complex than to support such a simple hypothesis.

For example, Chinese managers are often far more engaged with relationship issues, such as conflict management, than their American counterparts (Rawwas, 2003). Chinese leaders are generally interested in the holistic development of those they lead and not simply focused on achieving a production target (Guan, McBride, & Xiang, 2005; Wenquan et al., 2000; Wong, 2001). Unfortunately, the notion of iron-hand rule often associates with Chinese leadership. However, a firm grip is only true to a limited extent and where directive influence is needed to protect a community or organizational objective. In reality, a high degree of self-directed activity occurs within Chinese organizations (Ping Ping et al., 2001). Thus, from the lens of the Chinese culture, participatory relationships in organizational leadership are not at all unique. Perhaps it is rather the manner of how the interaction occurs which leads to misinterpretation by Western observers. Potentially confusing to those outside of the Chinese culture are the paradoxes of Chinese society, and in particular of Chinese leadership.

Chinese leadership is paradoxical in that both authoritarian and benevolent attributes are observable in the same leader. For example, one study (Ping Ping et al., 2001) compared leadership effectiveness in a rural (Fuyang) and cosmopolitan-like (Tianjin) Chinese Township

and Village (TVE), yielding three results of interest for this topic. First, autocratic leadership is the least preferred leadership style among Chinese followers and leaders. Second, an authoritative decision making style is not preferred. Interestingly, selling and consultative approaches to decision making are far more popular and expected. Third, people in both rural and urban townships had more motivation when working under a participatory style of leadership. Ping Ping et al. provided strong evidence for a people-oriented leadership correlating with high worker satisfaction. The best Chinese leaders seem to be high in both people and task orientation.

At first glance, these leader-follower attributions sound quite Western. However, the paradox surfaces by reviewing the results of a study by Wenquan, Chia, and Liluo (2000). Conditions arise when desired leadership attributes simultaneously contain both directive and authoritarian natures. Thus, the condition of subordinating to the collective greater good may be a cause for misunderstanding and oversimplified labeling, such as the false notion that Chinese leaders are only autocratic. Hence the paradox: authoritarian and participatory methods co-exist, representing the complexity of the collectivist environment. In such environments, there is both a need and a desire for opportunity to participate; yet, there is also recognition that the needs of the group, community, or organization prevail over the individual. Thus, a primary leader may feel forced into authoritative direction, but on behalf of the group, out of necessity, and only to achieve balance. In other words, authoritarian behavior can be viewed as a community duty at times. The Chinese collectivist model represents an interesting balance in both authoritarian rule and participatory leadership, thus satisfying the needs of both people and organizations and resulting in both paradox and harmony.

Quantitative Testing of Chinese Leadership

Many of the quantitative studies published on Chinese leadership involve translated instruments (Chan, 2000; Guan et al., 2005; Rawwas, 2003; Shafer et al., 2005). For example, Chan used the Roet's Rating Scale for Leadership (RRSL) to assess general leadership capabilities of gifted secondary students in Hong Kong. This 26-item scale was normed against 1057 U.S. adolescents and has reported a reliability using Spearman-Brown's split-half formula of $r = .85$ (Karnes & Bean, 2005; Shaunessy & Karnes, 2004). Chan's study reports high internal reliability using Cronbach's *alpha* coefficient of .88. Chan's study drew correlations between respondents who scored high on the RRSL and high on other self-ratings related to achievement, leadership, and level of energy. The results reflected Chinese students' prioritization of an American view of leadership characteristics. Chan identified: (a) task orientation, (b) self-perceived competence in leadership, and (c) interpersonal skills as emerging factors. Students rated high in areas relating to achievement, aspiration to leadership, openness, balanced perspective, and high energy. Students scored low in satisfaction levels with decisions of superiors.

Wenquan, Chia, and Liluo (2000) took a different approach by developing and validating a leadership indicator scale specifically for Chinese. The instrument was developed by having 133 respondents identify the 25 most important factors of leadership. The data were distilled from 2500 terms to 163 testable items. In a follow-on study, the researchers administered the instrument to 622 Chinese respondents. The resultant conceptualization of leadership included four categories: (a) personal morality, (b) goal effectiveness, (c) interpersonal competence, and (d) versatility. Personal morality included loadings on service orientation, integrity, honesty, truth seeking, fairness, being a role-model, accepting criticism, and self-awareness. Goal

effectiveness was comprised of vision, strategy, perception, open mindedness, character to do what is right, decisiveness, proficiency, scientific method, and insight to use the ability of others. Interpersonal competence consisted of maturity, social skills, persuasiveness, and charm. Versatility included elements such as command of knowledge, multi-talented, broad interests, imaginative and creative, risk taker, sense of humor, and approachability.

Interestingly, the American translated instrument used in Chan's (2000) study emphasized achievement-type factors, while the Chinese developed study (Wenquan et al., 2000) emerged factors demonstrating depth of interpersonal character, a desire to contribute to the leadership process, and sincerity. Thus, a hint arises indicating potential theoretical alignment of Chinese leadership ideals with principles of authenticity in leadership, as seen in the underlying Chinese view that leadership reflects principles of self, others, and community.

A close inspection of the Wenquan et al. (2000) study further suggests certain elements of Chinese leadership and American leadership enjoy common ground. Both cultures seek leaders who are responsive, receptive, embracing, and participatory, but who also know how to take charge and accomplish difficult group-oriented tasks. Chinese value faithfulness, morality, loyalty, and service, while paying strong attention to effort and education (Wong, 2001). Such traits align with authentic theories, which consider the social order to be at least as important as the individual (Cohen et al., 2007). Woods (2007) discussed authentic leadership within the bureau-enterprise culture, reasoning that the authentic leader takes into consideration the social order and historical contexts in which he or she belongs. Woods stated, "different identities may share the necessary characteristics yet, because they are in different contexts or times, differ in their substance" (p. 298). Characteristics necessary to authenticity in leadership may exist within overall leadership frameworks or models which are as different as night and day (e.g., collective vs. individual). Yet, principles of authentic behavior can exist in both frameworks. For example, if authenticity factors comprise both self and social elements, the degree of authentic behavior may manifest itself differently depending on the nature of the social framework in place. For Chinese, the authentic behavior may be demonstrated by the degree to which social, historical, and paternal values are integrated into the model. On the other hand, American authenticity may be demonstrated by the degree to which individual voice and true-to-self constructs are manifest. In either case, the essence of authenticity is nevertheless detectible regardless of the framework if authenticity has a scope that includes both a social orientation as well as a true-to-self orientation.

Global Cultural Differences May be in Decline

Important cultural differences exist between western and eastern leadership philosophies; however, the differences are subtly disappearing due to the effects of post-modern internationalism (Shafer et al., 2005). In a study (Shafer et al.) of 200 international students, 46% of US respondents did not differ significantly from their Asian counterparts in attitudes about leadership. Thus, attempting to measure leadership constructs such as authenticity across multi-cultural borders is possible. However, differences nevertheless do exist and cannot be ignored. Hofstede's (1980) original work is quite relevant to this discussion therefore, because culture no doubt plays a significant role in how one may view authentic behavior.

Religious and philosophical influences on Chinese leadership. Cultures are guided by religious and philosophical moorings (Walker & Shuangye, 2007); therefore, differences between Chinese and American views on leadership are not surprising (Guan et al., 2005).

Wong's (2001) essay on "Chinese Culture and Leadership" identified several important east-west differences. While logic is an important part of western culture, the Chinese are less abstract and put thoughts into physical terms. This manifests in both the actions and speech of individuals. For example, rather than saying a horse is fast, one may describe a "thousand mile horse" (Wong, p. 309).

Understanding Chinese leadership theory requires one to grapple with the connection between the cultural past and traditions, which reveal a strong moral basis in leadership (Wong, 2001). Wenquan, Chia, and Liluo (2000) described personal morality as one of four primary Chinese leadership factors. According to their data, Chinese expect leaders to possess integrity, honesty, and fairness, and to be truth-seeking, consistent, and service oriented. This moral basis of leadership contributes to stronger ethical leanings (Ciulla, 2004) and contains the kernel of authentic leadership (Novicevic et al., 2006).

The Chinese are able to embrace multiple philosophies without a sense of conflict, which is an uncomfortable paradox for Westerners. Wong (2001) stated Chinese may be completely comfortable with Catholicism, Protestantism, Buddhism, etc., all at the same time. They see all truth pointing toward the inward growth of the individual. Seeming conflicts are reconcilable because Confucian and Buddhist influences in the Chinese culture teach truth is often irrational, paradoxical, and illogical (Wong). Thus, the focus on human activities and individual contribution to the group dominates philosophical orientation. Wong asserted that the philosophies of Confucianism, Taoism, and Buddhism play a significant role in the cultural focus on life, faithfulness, loyalty, and service. Chinese place high value on effort and education, and their religious philosophies focus an inward energy on the power of the individual. In China, the power of salvation is an inward concept; individuals focus on being in tune with one's own nature (Wong). Ironically, the religious and philosophical moorings of the Chinese culture place important emphasis on individual or self-orientation, but do so from the perspective of being true to one's own nature. Thus, the authenticity construct of true-to-self should be detectable among Chinese leaders.

Authentic Ties to Chinese Leadership

Do Chinese forms of leadership encourage a concept known as authenticity? According to the literature (Whitehead, in press), the attributes of authentic leaders may be summarized as: (a) Know self well, self-confident, not overly egoistic, seek self improvement, know strengths and weaknesses, place professional role secondary to role as an individual, and are true to inner nature (Brumbaugh, 1971; Goffee & Jones, 2000; Jensen & Luthans, 2006); (b) strong positive leaders, exhibit hope, possess strong psychological capital, foster resilience in self and others (Avolio et al., 1999; Harland et al., 2005; Jensen & Luthans, 2006); (c) expand the horizons of others; concerned about developing followers in a way that allow followers to achieve their own leadership goals (Goffee & Jones, 2000; Helland & Winston, 2005; Jensen & Luthans); (d) close the gap between the social differences of high ranking leaders and the lowest ranking follower by removing barriers to understanding and opportunity (Goffee & Jones); (e) build trust, foster ethical and moral behavior (Novicevic et al., 2006), and recognize that mismatched actions and statements are perilous to loyal followership (Goffee & Jones; Helland & Winston); and (f) a deep sense of community, history, and organizational values (Brumbaugh; Goffee & Jones; Helland & Winston). The Chinese leadership attributions surfaced in the review of Chinese leadership point to components of authenticity, with the one lone exception being that of power distance (item d) (Avolio et al., 1999; Chan, 2000; Walker & Shuangye, 2007; Wong, 2001).

Therefore, administering an instrument which attempts to quantitatively identify leadership authenticity among Chinese respondents is possible, given that the attributes of theorized authenticity align with leadership philosophies in Chinese thought.

Methodology

The primary purpose of this study was to field test the Leadership Authenticity Rating Scale (LARS) instrument and evaluate authenticity in leadership as a construct among Chinese respondents. The key question evaluated was to determine factors comprising authentic leadership given the responses of Chinese university students.

Participants

Participants were drawn from freshman and sophomore English majors at Wuhan University of Technology in China. Wuhan is located in the Hubei Province and is a national key school for the Chinese education system (<http://www.whut.edu.cn/english/index.html>). Chinese key schools receive priority funding, are considered top universities, and entrance is highly competitive (Tsang, 2000). A convenience (Passmore & Baker, 2005) sampling methodology was used by one of the researchers while serving as a visiting professor for the Spring 2007 term. Surveys were issued to 219 students between the ages of 17 to 23.

Procedure

Survey process. The researchers worked with the assistant dean of the School of Foreign Languages, who reviewed the survey instrument and granted permission to administer it to all freshman and sophomore English majors. Each survey was given a control number to assure no duplication of data entry. The instrument administration process involved visiting each classroom and requesting permission to survey the students first from the professor and then from the students.

Consent process. Studies involving University students in China do not typically require individual respondent consent; rather, consent for data collection is provided by a school official. The consent process used for this research was carefully completed in order to maintain the good working relationship between Wuhan University of Technology and George Fox University. The process for gaining consent consisted of (a) translating a copy of the human subjects consent form for review by university authorities, (b) receiving verbal permission from the instructors of the classes to be surveyed, and (c) providing a verbal explanation of the consent form and instrument purpose to students. The university did not require an individual signature by each student. Rather, students were informed of their rights to privacy and how the data would be protected. Students were told the survey would require approximately 20 minutes, and participation was optional. A comprehensive consent form emphasizing the protection and privacy of all individual data was then signed by university officials.

Questionnaire

Survey development. The survey was developed using a literature review on the topic of leadership authenticity (Whitehead, in press). At the time of development, and to the researchers' knowledge, no psychometrically adequate (Oakland et al., 1996) instrument existed measuring

levels of authenticity in leadership attitudes. The LARS' item-pool covered 24 derived constructs (Figure 1) of authenticity, resulting in 49 items (Appendix A-1).

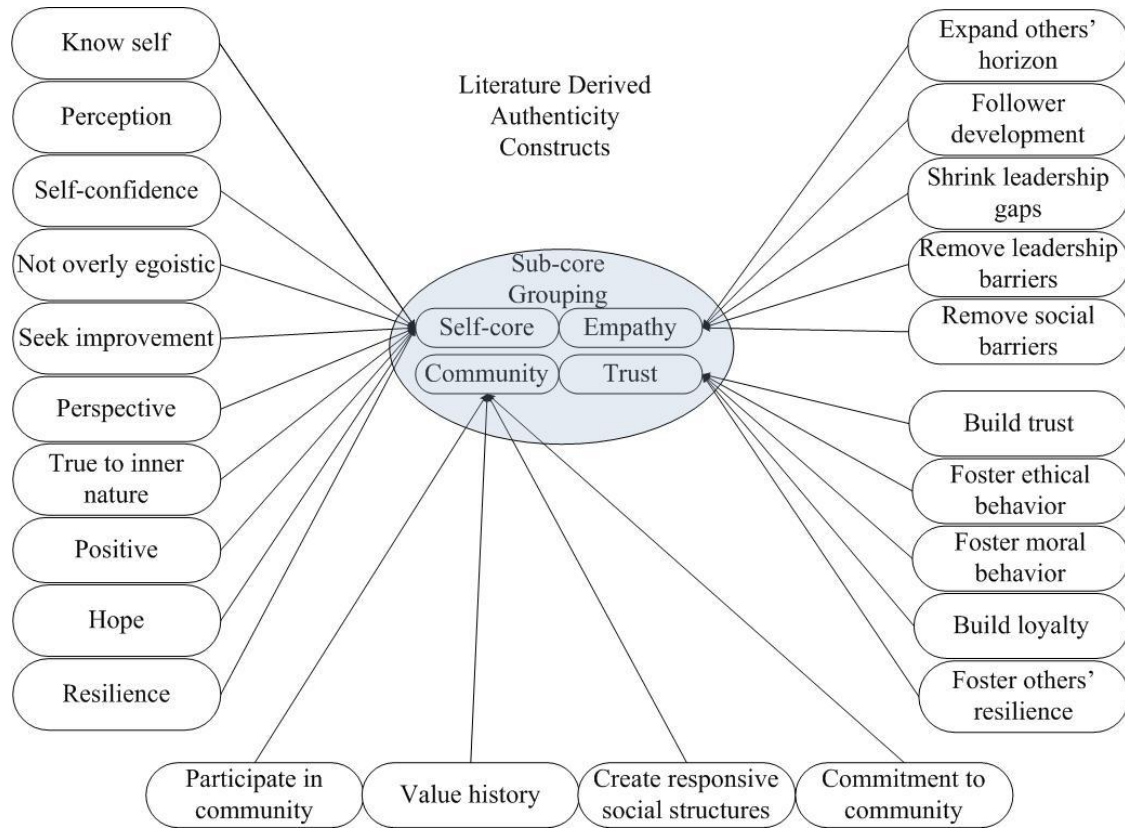


Figure 1. Literature derived authenticity in leadership constructs.

Whether the elements of authentic leadership represented in Figure 1 are latent variables predicting authenticity in leadership or antecedent results describing or indicating authenticity in leadership remains unclear at this stage of the authenticity theory evolution. Item pool development for the LARS followed the process of identifying attributes of authenticity in the literature and categorizing topically in order to create item-statements. Cronbach and Meehl (1955) stated that instruments should measure the phenomenon purported in theory development. Thus, given the early-stage state of the theory and the exploratory nature of empirical research, the LARS item-pool attempted to incorporate a large group of possible items derived from theoretical discussions in the literature.

The LARS relies on self-reporting, which is an accepted method for social science research (DeVellis, 2003; Guccione et al., 2005; Shek, 2005). Initial field testing and content validation was conducted with American high school and university students. All statements were randomly ordered, with 20% of the items negatively framed to avoid pattern detection by respondents (Appendix A-3). Negative statements were re-coded into positive scores when imported to SPSS. An 8-point Likert scale was used to force a committed leaning and disallow

middle or non-committal responses (Spector, 1976). Respondents were asked to rate the level to which they resembled the statement on a range of one (low) to eight (high).

Translation. The practice of translating the survey into Chinese and then reverse translating it back into English for comparative purposes was followed (Chan, 2000). Each survey statement was assigned to a Chinese student majoring in English as a Foreign Language for translation into Chinese. First, the English survey was copied, adding space for translation. Question numbers were added for ease in putting the translated version back together in the same order and matching the translated questions with the English version of the question. Each question was cut from the English version and distributed. The students put their names on their work as they were informed that their translation would be graded. After translating each statement, the students submitted their slip of paper containing both the original English version and their Chinese translation. Chinese professors then graded and edited the Chinese translations.

Both the student names and their grades were removed from the strips of paper to avoid this information being included in the Chinese version of the survey. The instructions and questions were then taped back together in the original order. A copy was then made of each page of the reassembled survey that contained both the original English instructions and questions along with the edited Chinese translations. A graduate Chinese student working on her master's degree in English then typed the Chinese version of the survey using Chinese characters. The Chinese version of the survey was then copied with spaces between each sentence of instruction and each question so they once again could be separated into small sections for reverse translation.

Reverse translations were done by Chinese undergraduate students who were ending their junior year as English majors. Small groups reverse translated five questions each from Chinese characters back into English. The typed Chinese character version and the handwritten English version were then reassembled into complete pages. The reverse translated English version was compared to the original version. Minor differences were noted, discussed, and resolved with the assistance of a senior translator.

The final Chinese version of the instrument was reviewed by a graduate student who teaches English and was in her third year of an English master's program. The reverse translation was compared with the original English version. While some of the English reverse-translations were not identical to the original, translators confirmed the Chinese translation expressed the correct intent. The final Chinese version of the survey was then typed by the graduate assistant using Chinese characters, and the numbering scales were added back in. Due to time constraints, the survey had to be administered in paper format. Upon completion of each survey, the researchers manually entered the raw data into excel, where the data were prepared for exportation into SPSS.

Scoring. Section I was scored by valuing each response with 1-8 points depending on the selection of the respondent. Statement scores were aggregated into an overall leadership authenticity score, as well as composite scores for the hypothesized structure (Figure 1).

Results

Descriptive

Out of 219 surveys administered, 216 responses were collected. The respondents were drawn from freshmen (57%) and sophomore (43%) classes ranging from 17 to 23 years old, with a mean age of 19.7. Sixty-two percent of respondents were female. A majority of students came

from Hubei Province (65%) with the remaining individuals coming from 21 other locations in China, Fiji, and Inner Mongolia.

The overall authenticity mean was 271.29 and ranged from 101 to 345, with a standard deviation of 33.97. Scores approximated a normal distribution with a slight negative skew (Figure 2). The initial data appeared to be reasonable with no anomalies.

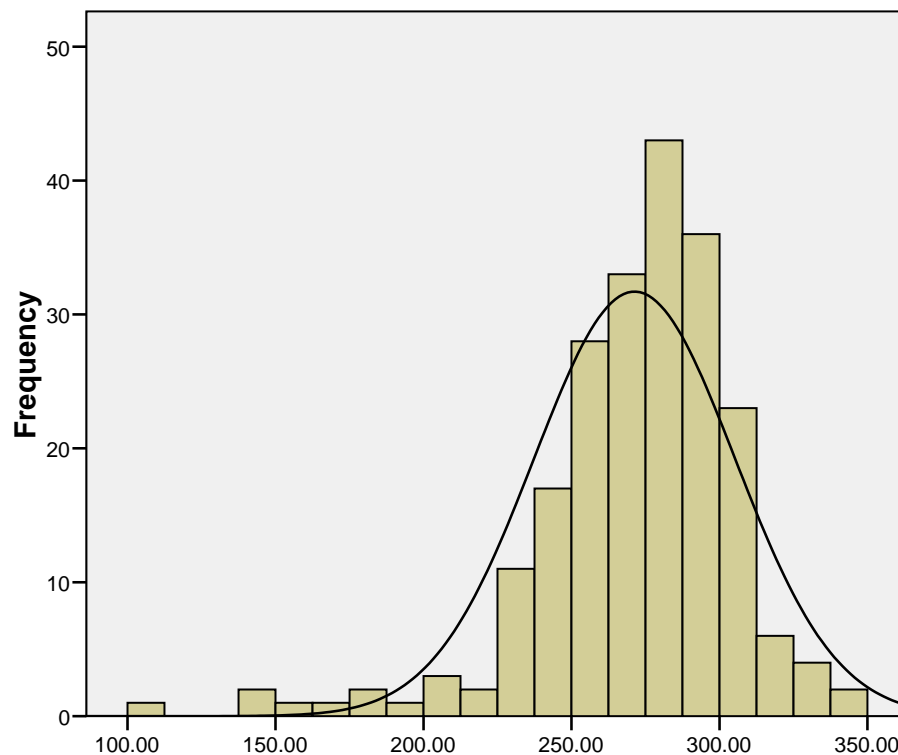


Figure 2. Authenticity score distribution

Factor Analysis and Reliability

Factor analysis reduces interrelated variables to a manageable quantity of latent dimensions (Tinsley & Tinsley, 1987). Various factor analyses are possible. Because the LARS pilot was exploratory in nature, exploratory factor analysis (EFA) was chosen for applicability in the early stage instrument development and discovering underlying patterns in variable relationships (Benson & Nasser, 1998; Yang, 2005). Two techniques for EFA include: (a) principle component analysis (PCA), or (b) common factor (CF) analysis, also known as principle axis factoring (Pett, Lackey, & Sullivan, 2003). While PCA reduces variables to components capturing as many variations as possible, CF analysis uncovers latent structures of observed variables by identifying factors influencing measured variables. Thus, CF is a better choice for identifying latent and underlying variables that contribute to common variance (Benson & Nasser, 1998; Yang, 2005). A factor structure was hypothesized initially suggesting the appropriateness of PCA; however, the authors elected to exercise CF given the underlying intent of identifying true latent structures. Therefore, this study followed recommendations of Yang (2005) and Tinsley and Tinsley (1987), using principal axis as the extraction method,

which is appropriate for common factor analysis. Exploratory factor analysis does not require a priori hypothesis of the number factors; the analysis itself surfaces the factors. Using Cattell's screen plot test (Gian, David, Timothy, & Sarah, 2006; Tinsley & Tinsley, 1987) on the unrotated extraction (Benson & Nasser, 1998; DeVellis, 2003), four factors were initially determined for rotation.

Variables in the LARS are assumed to have an interrelationship and inter-item correlation, and to approximate a simple structure (Hinkin, 2005). Therefore, an oblique rotation was chosen (Benson & Nasser, 1998; DeVellis, 2003; Gian et al., 2006). Tinsley and Tinsley (1987) argued promax represented the best method for oblique rotations. Furthermore, they suggested if the underlying dimensions are either slightly correlated or not at all correlated, a varimax rotation may also produce a solution comparable to an oblique rotation in a simple structure. This was confirmed by DeVellis (2003), who suggested an orthogonal rotation may result in a simpler model. Both methods were applied. An inspection of the results revealed little noticeable difference; thus, the promax rotation was used in the analysis. Four factors were extracted, using .40 as the criterion for factor loading (Hanson, Colton, & Hammer, 2006; Hinkin, 2005; Tinsley & Tinsley, 1987).

Internal reliability tests were conducted on the entire instrument and each factor. Overall, the LARS possessed a psychometrically adequate internal reliability with Cronbach's *alpha* of .79, and a split-half *alpha* of .79 (Table 1). Coefficient *alpha* above .70 is identified in the literature as acceptable for early-stage instrument development (Hinkin, 2005; Nunnally & Bernstein, 1994). An item analysis revealed, however, the instrument's overall reliability could be improved to .84 by eliminating five items from the overall scale: (a) I am not shy about taking credit, (b) traditions are annoying; I would rather discover a new way of doing things, (c) my existing talents and strengths are all that I need to be a good leader, (d) I look confident, but inside I doubt myself, and (e) having hope is not part of my leadership attitude.

Table 1
Authenticity Factor Extraction Results

	Alpha	Items
Composite Instrument	.787	49
Composite Instrument after Item Reduction	.836	44
Factor 1	.875	21
Factor 2	.665	8
Factor 3	.296	2
Factor 4	.291	2

Table 2
Common Factor Structure of the LARS

Item	Factor 1-a	Factor 1-b
1. Other people grow their talents because of my leadership.	0.72	0.02
2. I am confident that I can achieve whatever task is given to me regardless of training or experience.	0.68	(0.14)
3. I follow my instincts and listen to my inner-voice when making a leadership decision.	0.65	(0.16)

4. The criticisms and doubts of others do not present obstacles to my personal success.	0.61	(0.08)
5. I am positive most of the time.	0.55	(0.04)
6. I try to make sure others know important traditions.	0.49	0.17
7. My leadership style creates situations where people's lives are better.	0.43	0.30
8. I help others see the bigger picture.	0.42	0.26
9. I regularly attend extracurricular school activities because I want to support my school.	0.40	0.17
10. I help others to be ethical.	(0.21)	0.88
11. People are loyal to me because I consistently do what I say I will do.	(0.18)	0.72
12. I am known as someone who helps others to become resilient.	0.21	0.53
13. When I know something is right, I forge ahead regardless of criticism.	0.10	0.45
14. I am perceived by others to be sincere.	0.06	0.45
15. I help others to be self-reliant.	0.05	0.43
16. Leaders have a social responsibility to create opportunity for others.	(0.03)	0.40
17. If I say I will do something, I always follow through.	0.13	0.35
18. I seek to eliminate differences between the socially privileged and those with less social status.	0.20	0.35
19. When I help someone develop a skill, I try to do it in a way that fits their personal objective.	0.23	0.20
20. I continuously evaluate my strengths and weaknesses.	0.29	0.17
21. I know myself very well.	0.39	0.14

The four factors were then explored for internal reliability, but only factor-1 achieved adequate reliability. The score for the primary factor was extremely high (.88) and was given the title of authenticity. Factors two, three, and four were discarded because of low reliability and inconsistent content (DeVellis, 2003). Further exploration of the primary factor revealed 21-items with adequate loading (Table 2). These items were further factor analyzed using the same procedures identified above. Two sub-factors resulted, each containing strong internal reliability with an alpha of .82 for factor 1-a, and .75 for factor 1-b. The two sub constructs were further analyzed and given titles of: (a) confident, instinctive, and improve life focus; and (b) ethics, resilience, and loyalty focus.

Correlations

Table 3 shows correlation coefficients among nine items of interest. Using the Bonferroni approach to control for Type I error across the nine correlations, a *p* value of less than .05 was required for significance. The results of the correlational analysis presented in table 4 shows only

two correlations with authenticity as statistically significant, and only one greater than or equal to .35. In general, authenticity was strongly positively correlated and varied significantly with one main item: the degree of leadership declaration ($r=.48, p<.01$). Leadership declaration contained two variables: (a) I consider myself to be a leader; and (b) others consider me to be a leader.

Additional correlational analysis evaluated authenticity in relation to measures of prosociality, gender, grade point average, antisocial behavior, and having participated in secondary school varsity athletics. These measures were chosen as part of the exploratory process searching for linkages between authentic leadership behavior and other measurable outcomes in order to ultimately assert construct forms of validity in future studies (Peter, 1981). None of these correlations rose above the .35 measure. However, prosociality, a measure indicating the degree to which individuals align with social norms (Whitehead, in press), varied significantly with authenticity at $r=.27, p<.01$. While modest, the correlation proved interesting given that respondents came from a collectivist culture. Additionally, while also modest, GPA varied with factor 1-b at $r=.18, p<.05$. Potentially, the degree of ethics, resiliency, and loyalty focus relates to the level of self-investment as measured by the GPA. In other words, individuals with high GPAs and prosocial tendencies also tended to score higher on the authenticity scale. On the other hand, anti-social behavior was insignificant and unrelated to measures of authenticity.

Table 3
Correlatives of Authenticity

	1	2	3	4	5	6	7	8	9
1. Authenticity	1.00								
2. Factor 1-a	0.90**	1.00							
3. Factor 1-b	0.82**	0.54**	1.00						
4. Prosocial	0.27**	0.28	0.20	1.00					
5. Gender	-0.14*	-0.20**	-0.04	0.10	1.00				
6. GPA	0.13	0.06	0.18*	0.01	0.25	1.00			
7. Declaration	0.48**	0.52**	0.28**	0.34**	-0.08	0.20**	1.00		
8. Anti-social	0.08	0.07	0.07	0.44**	-0.16*	-0.09	0.09	1.00	
9. Varsity	0.08	0.09	0.06	0.15*	-0.19*	-0.17*	0.04	0.32**	1.00

** $p < .01$, * $p < .05$ level

Hypotheses Results

Authenticity constructs. We hypothesized authentic leadership existed in the Chinese culture. Unfortunately, the hypothesis was not fully testable because this was the first execution of the LARS instrument, and construct and criterion validity are difficult to achieve without several iterations (Carmines & Zeller, 1979; Holton & Burnett, 2005). A gold standard for evaluating authenticity in leadership does not yet exist. However, by observing the data and evaluating the raw scores, we continue to believe authentic leadership does exist in the Chinese culture. For example, the overall mean for the 49-item authenticity construct was 271 with a range of 101 to 345. A strong distribution about the mean was a positive sign. Furthermore, the 21-item reduced scale (factor 1 = authenticity) had a mean score of 113 with a range of 34-165.

In compiling the 49-item authenticity instrument, 24 constructs (Figure 1) were extracted from the literature (Whitehead, in press). The high and low construct means are presented in

Table 4. The authenticity concepts were inspected, revealing similar distributions to the overall authenticity composite (a slight negative skew and a positive kurtosis). Not surprising were high scores for fostering moral behavior, trust building, creating a perception of good leadership, and removing barriers for others to achieve success. The social structures in China support these ideals even though much has been made of their cultural autocratic and power-distance overtones (Ping Ping et al., 2001). Somewhat surprising, however, was the consistently lower score for valuing organizational history and community participation given the collectivist and communal nature of the Chinese culture (Rawwas, 2003).

Table 4

Sub-core Trends of Authentic Leadership

Concept	High Concept Means
Foster moral behavior	6.51
Build trust	6.40
Perception of authenticity	6.31
Remove barriers for have-nots	6.31
Positive approach	6.30
Commitment to community	6.29
Remove barriers for follower success	6.23
Possessing hope	6.12
	Low Concept Means
Value organizational history	4.58
Participate in community	4.27

Authenticity factors. The four factor hypothesized structure of authentic leadership failed to materialize. While four factors initially surfaced, three of the four failed to meet factor qualifications (DeVellis, 2003). However, refactoring the first factor indicated two underlying constructs. A visual inspection of the data presented in Figure 3 demonstrated factor loadings of .50 focused on self-core and empathy constructs. Factor-1a (confident, instinctive, and improve life focus) represented empathy for others, a commitment to building and understanding one's self-core, and an appreciation for community. Factor-1b (ethics, resilience, and loyalty focus) represented the trust-building element of authenticity, building of the self-core, and community responsibility. Thus, to some degree the hypothesized factors were present in the latent construct of authenticity. However, the four hypothesized factors did not manifest as clear, unidimensional factors in this study.

A construct of Chinese leadership presented by Wenquan, Chia, and Liluo (2000) of personal morality, goal effectiveness, interpersonal competence, and versatility was potentially represented in the LARS factors. Specifically, constructs of morality and goal effectiveness were apparent in such constructs as ethics, loyalty, valuing history, and creating responsive social structures. However, a criticism of the LARS may well be that it did not fully represent the intense passion the Chinese have for goal effectiveness and interpersonal competence. This construct was captured by Tate (2008), who identified support for passion for a purpose as a factor of authentic leadership. Perhaps a Chinese view of authenticity should also include such a factor.

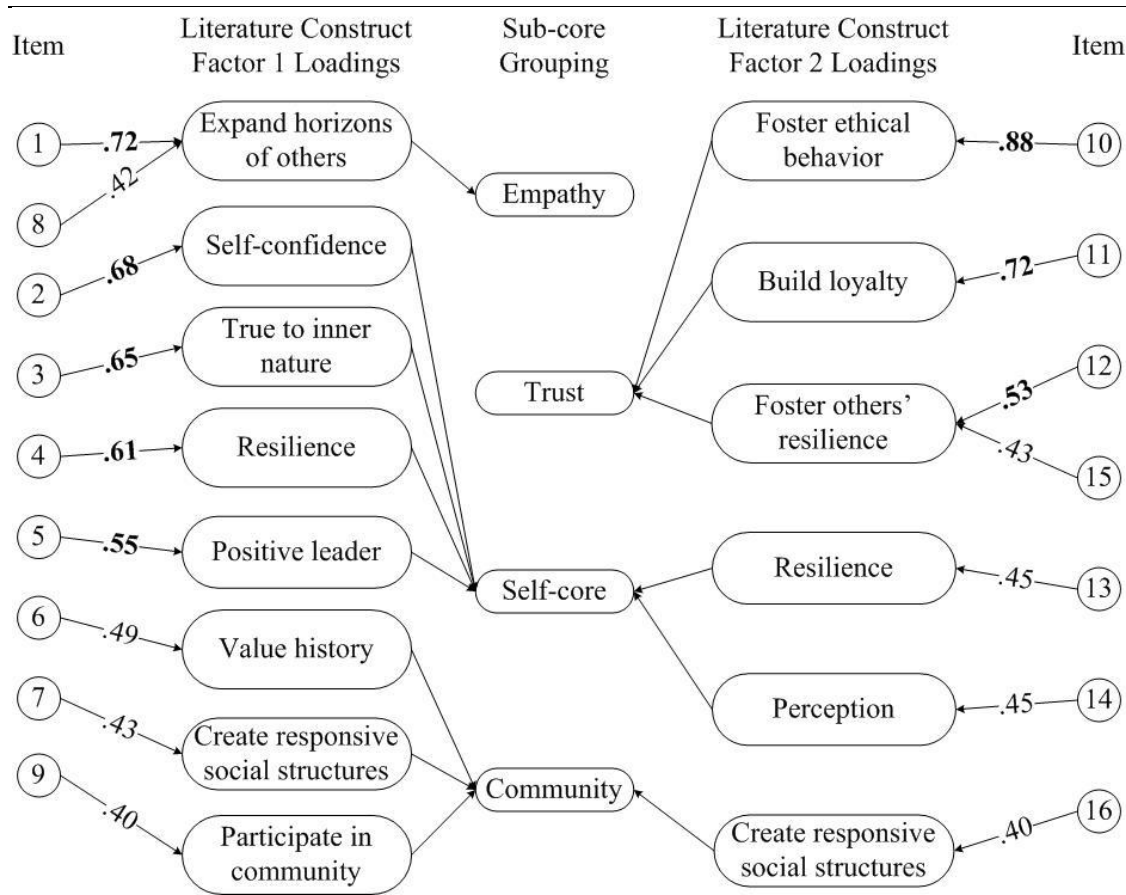


Figure 3: Common factor loadings mapped to core authenticity constructs

Discussion

Overview of Key Findings

The primary purpose of this study was an exploratory research initiative pilot testing the LARS instrument among Chinese college students. The hypothesized factor structure failed to garner empirical support. However, the core constructs identified in the literature regarding authenticity in leadership, including empathy, self-core, trust, and community as hypothesized by Whitehead (in press) were present in the latent structure. While the emerging factor structure included four factors, three failed to substantiate adequate internal reliability. Thus, the first factor, identified as authenticity and the 21-item short scale, received analytic focus, revealing two underlying constructs related to authentic leadership: (a) confident, instinctive, and improve life focus, and (b) ethics, resilience, and loyalty focus. The implications of the findings support recent empirical research on authenticity.

Walumbwa et al. (2008) found invariant support for their hypothesized structure across both U.S. and Chinese respondents. While factor loadings across the board were higher in their U.S. sample, the implication nevertheless supported a cross-cultural commonality, to some degree, regarding authentic leadership. The strongest loadings in the Walumbwa et al. study for Chinese respondents occurred with the self-awareness factor. Therefore, consistent with their

findings, this study also surfaced the notion that confidence, instinctive leadership, ethics, and leadership oriented toward improving lives of others as important authentic ideals. Walumbwa et al. indicated authentic leadership enjoys a convergent relationship with ethics. The result of this study indicates ethical behavior may not only be convergent, but an actual element of authenticity.

An interesting trend was discovered in this study. Students who self-declared as leaders scored higher in authenticity composites. Additional research is needed to analyze the differences between those who rate themselves high as leaders and those that are modest in their leadership ratings to determine if authenticity variation exists. Early indications suggest those scoring high in authenticity in the LARS recognize and accept responsibility as a leader. Whether or not this finding is a phenomenon specific to the respondent's age group is unclear. However, a number of theorists suggest authentic leaders embrace stewardships and assume responsibility for work at hand (Bhindi & Duignan, 1997; Mullen & Tuten, 2004), understand that ideals and social order transcend individual objectives (Woods, 2007), and have an awareness of self in relation to others coupled with strong psychological capital (Avolio & Gardner, 2005); thus, finding leaders who willingly indicate acceptance of their role and also score high on authenticity is not necessarily surprising.

DeVellis (2003) indicated one purpose for exploratory research and factor analysis is to surface latent structures represented in the data. This study supports theoretical notions which identify authentic leaders as those who are: (a) self-aware (Avolio et al., 2004), seeking improvement (Ilies et al., 2005), aware of those being led (Starratt, 2007), looking out for the welfare of others (Novicevic et al., 2006; Woods, 2007); and (b) fostering high degrees of trust by building an ethical and moral leadership framework (Michie & Gooty, 2005; Price, 2003). Furthermore, this study also provides a basis for asserting commonality in intercultural definitions of authentic leadership. Authentic leadership facilitates followership, which also takes on authentic properties (Avolio & Gardner, 2005). When authentic leadership exists, both leader and follower reflect transparency in action (Walumbwa et al., 2008). Indications present in this study's data suggest Chinese respondents exude levels of authenticity in leadership according to the LARS instrument. However, whether the LARS measures authenticity in leadership or some other construct remains unproven and requires investigation of what it means to achieve technical validity.

Validity of results. While the LARS enjoyed high internal reliability, which Cronbach and Meehl (1955) indicated as an initial form of validity, the validity question remains whether or not the LARS measured levels of authenticity. Three common forms of validity are (a) criterion, (b) content, and (c) construct (Carmines & Zeller, 1979; DeVellis, 2003; Hinkin, 2005; Holton & Burnett, 2005). Criterion validity is the ability for a measure to predict the dependent variable (Carmines & Zeller, 1979; Holton & Burnett, 2005). Instruments attempting to measure abstract theoretical constructs, such as authenticity, are difficult to assess for criterion validity because there is an inability to affix a precise measure for abstract variables (Carmines & Zeller, 1979).

Content validity exists to the extent a measurement accurately reflects the domain of content. While measurable in objective instruments, such as an arithmetic test, content validity measurement is difficult to achieve in instruments where no agreed criterion exists. Thus, the burden of content validity is theory laden to the extent that (a) the theoretical concepts are specified; (b) empirical relationships between measures are examinable; and (c) empirical evidence is interpreted to clarify the construct validity of a measure (Carmines & Zeller, 1979). The ultimate burden of content validity falls to logic and reasoning that the content has been

adequately sampled and cast into testable items (Nunnally & Bernstein, 1994). The LARS instrument attempts to measure authentic leadership. If the items of the LARS are content valid, these same items would therefore be present in genuine authentic leadership. Approximating content validity requires an appeal to reason, exhaustive literature reviews, and construct derivation in a logical method that is represented in a clear instrument (Carmines & Zeller, 1979). The administration of the instrument in China was an initial step in moving through these processes.

In the social sciences, the focus on validating instruments takes the form of construct validity where theoretical constructs are observable and measurable (Carmines & Zeller, 1979). Often this is accomplished by comparing study results with a gold-standard (Cortina, 1993; DeVellis, 2003; Holton & Burnett, 2005). Construct validity, therefore, is the extent a measure performs relative to theoretical belief (Carmines & Zeller, 1979). For example, if certain hypotheses were founded as a result of the literature on authentic leadership, and those hypotheses could be operationally measured, then the LARS instrument could achieve content validation. Embedded within the current version of the LARS are indicators of prosocial behavior. If the LARS authenticity component correlated highly to prosocial behaviors, and if prosocial behaviors are a theoretical construct of authenticity (Whitehead, in press), then an argument for initial content validity advances. Unfortunately, the development of the prosocial scale used in the current version of the LARS lacked adequate reliability measures (Cronbach's *alpha* of .47) and may not be an anchoring standard for content validity without additional refinement.

Future Research and Existing Limitations

A number of limiting constraints affected this study. First, the study was compressed into a 90-day window, which impacted the sampling method and eliminated the ability to conduct qualitative interviews on the findings. The latter was unfortunate because the authors hoped to investigate quantitative findings with follow-up qualitative inquiry.

The sampling method used was convenience sampling. While convenience sampling can provide insight for exploratory research, it is recognized as the least accurate method for drawing conclusions about the broader population (Swanson & Holton, 2005). Therefore, caution should be exercised when generalizing the findings of this study. Furthermore, the sample size was not adequate for achieving psychometric adequacy. DeVellis (2003) indicated a sample between 300-400 is an appropriate size for instrument development, though instruments have been developed with smaller samples, such as 200 (Nunnally & Bernstein, 1994).

Another limitation was the nature of the sample itself. Freshman and sophomore English-major respondents provide a narrow segment of the potential Chinese population. Casting a broader research net is a next step in further testing and validation of the instrument. A number of concerns arise from using undergraduates from the age range of 17-24. First, in order to assess one's leadership ability, experience-driven recall of exercised leadership must occur (Mullen & Tuten, 2004; Schneider, Paul, White, & Holcombe, 1999). Second, leadership studies presume respondents possess a leadership philosophy and a stable leadership framework (Dobosz & Beaty, 1999). Again, some degree of concern occurs in leadership research when respondents likely possess limited experience from which to create a leadership philosophy sufficient to incorporate complex theories such as authenticity. On the other hand, two mitigating factors existed. First, while attitudes concerning leadership differ between adults and college-age youth, the literature also indicates youth, including adolescents, possess a perspective on leadership

(Carter et al., 2003; Martinek, Schilling, & Hellison, 2006). Second, the LARS instrument's design focuses on youth's perspective of authenticity. In other words, the instrument's design targets populations that by their nature have less experience in leadership.

In research involving leadership, particularly an inward-focused theoretical concept such as authenticity, it is helpful to follow the data analysis with a qualitative method such as a phenomenological project involving a subset of respondents. Sanders (1982) suggested phenomenological methods can validate and explain emerging themes from a quantitative study. This study was limited in certain data points available. For example, Shek (2005) found social and leadership attitudinal differences varied with gender by economic circumstance. Identifying non-self-report variables such as grades, economic conditions, and perception by others may enhance the quality of the study, along with the addition of a short social desirability scale (King & Bruner, 2000).

Finally, translating the instrument into Chinese was a major challenge. Due to time constraints, some of the reverse translations did not match exactly with the original English version. The authors elected to push forward with the study since the general meanings were synchronized and deemed close enough. More time on translation and qualitative analysis of authenticity as a construct with Chinese focus groups would have been preferable prior to administering the instrument. Ultimately, the research proved fruitful, as a 21-item short scale of the LARS was potentially identified. However, further testing is needed to explore construct validity.

Conclusion

As a result of this research, we continue to maintain the proposition that authentic leadership as a construct is well supported by the Chinese culture. However, levels of authenticity may not only be difficult to assess (Cooper, Scandura, & Schriesheim, 2005) but also may be a moving target. For example, Walker and Shuangye (2007) concluded authenticity would be difficult to operationalize and institutionalize, and Ferrara (1998) pointed out the difficulty in applying universality in measuring constructs across cultures. Authentic leadership is potentially influenced by the culture. As cultures shift and change resulting from international influence or pressure, the very construct of what is authentic as a community may also change. One example cited by Walker and Shuangye is the growth of international schools across the world and their shift from catering to the cultural elite to broader groups of ethnically diversified societies. This merging of cultural influence is sure to have an impact on authentic leadership, which makes it all the more important to press forward with obtaining data from a variety of cultures for comparative study.

In this study, we identified dominant factors that contribute to leadership authenticity as: (a) confident, instinctive, and improve life focus; and (b) ethics, resilience, and loyalty focus. These two factors accounted for 16% of the overall variability and included concepts of building a community of followers who are afforded opportunities to expand their horizons, are loyal, self-reliant, capable, growth-oriented, and also build authentic followership. To this end, the Wenquan et al. (2000) study is the most interesting to us because they attributed personal morality to be 35% of the Chinese leadership philosophy. Wenquan et al.'s definition of personal morality included public service orientation, integrity, honesty, consistency, truth seeking, fairness, being a role-model, self-critical, and accepting of criticism. This definition of personal morality fits well with the theoretical constructs of authentic leadership.

The Chinese culture may have two advantages when it comes to authenticity in leadership. First, one of the most striking differences between American and Chinese cultures is the notion of individualism versus collectivism (Xu, Farver, Schwartz, & Chang, 2003). This difference may favor Chinese in authentic concepts because authenticity requires a measure of self-abandonment on behalf of others (Michie & Gooty, 2005). Second, authentic leaders possess an ability to harbor both belief and doubt in their skills, capabilities, and knowledge (Walker & Shuangye, 2007), which fosters lower levels of egoism and seeds of humility. In essence, authentic leaders are paradoxical. They are both strong and weak, both humble and aggressive, and able to build both self and others. Interestingly, Chinese are adroitly adept at maintaining complex paradoxes as a result of their long history and multiple influences of religious and cultural philosophies (Wong, 2001). Harmonizing multiple opposing ideals is an old game in China. Though this study was limited in scope, we find evidence in the data that leadership authenticity constructs exist in the Chinese respondents.

About the Authors:

Gordon E. Whitehead is with Captus5, a leadership consultancy practice in Pleasant Grove, Utah.

Email: gordon.whitehead@captus5.com

Marley Brown is an assistant professor of finance and accounting in the George Fox University School of Management in Newberg, Oregon.

Email: mbrown@georgefox.edu

References

- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, 72, 441-462.
- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *Leadership Quarterly*, 16(3), 315-338.
- Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *Leadership Quarterly*, 15(6), 801-823.
- Barnard, C. (1938). *The functions of the executive*. Cambridge: Harvard University Press.
- Benson, J., & Nasser, F. (1998). On the use of factor analysis as a research tool. *Journal of Vocational Education Research*, 23(1), 13-33.
- Bhindi, N., & Duignan, P. (1997). Leadership for a new century: Authenticity, intentionality, spirituality and sensibility. *Educational Management Administration & Leadership*, 25(2), 117-132.
- Boerner, S., Eisenbeiss, S. A., & Griesser, D. (2007). Follower behavior and organizational performance: The impact of transformational leaders. *Journal of Leadership & Organizational Studies*, 13(3), 15.
- Brumbaugh, R. B. (1971). Authenticity and theories of administrative behavior. *Administrative Science Quarterly*, 16(1), 108-112.

- Carmeli, A., & Schaubroeck, J. (2007). The influence of leaders' and other referents' normative expectations on individual involvement in creative work. *The Leadership Quarterly*, 18(1), 35-48.
- Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment*. Thousand Oaks: Sage Publications, Inc.
- Carter, D. S. G., Bennetts, C., & Carter, S. M. (2003). 'We're not sheep': Illuminating the nature of the adolescent peer group in effecting lifestyle choice. *British Journal of Sociology of Education*, 24(2), 225-241.
- Casimir, G., Waldman, D., Bartram, T., & Yang, S. (2006). Trust and the relationship between leadership and follower performance: Opening the black box in Australia and China. *Journal of Leadership & Organizational Studies*, 12(3), 68.
- Chan, D. W. (2000). Assessing leadership among Chinese secondary students in Hong Kong: The use of the Roets Rating. *Gifted Child Quarterly*, 44(2), 115-122.
- Churchill, G. A., Jr., Ford, N. M., & Walker, O. C., Jr. (1974). Measuring the job satisfaction of industrial salesmen. *Journal of Marketing Research (JMR)*, 11(3), 254-260.
- Ciulla, J. B. (Ed.). (2004). *Ethics, the heart of leadership* (2nd ed.). Westport: Praeger Publishers.
- Cohen, D. A., Taylor, S. L., Zonta, M., & Vestal, K. D. (2007). Availability of high school extracurricular sports programs and high-risk behaviors. *Journal of School Health*, 77(2), 80.
- Cooper, C., Scandura, T., & Schriesheim, C. (2005). Looking forward but learning from our past: Potential challenges to developing authentic leadership theory and authentic leaders. *Leadership Quarterly*, 16(3), 475-493.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52(4), 281-302.
- DeVellis, R. F. (2003). *Scale development: Theory and applications* (2nd ed., Vol. 26). Thousand Oaks: Sage Publications.
- Dobosz, R. P., & Beaty, L. A. (1999). The relationship between athletic participation and high school students' leadership ability. *Adolescence*, 34(133), 215-220.
- Duignan, P. A., & Bhindi, N. (1997). Authenticity in leadership: An emerging perspective. *Journal of Educational Administration*, 35(3), 195.
- Ferrara, A. (1998). *Reflective authenticity: Rethinking the project of modernity*. London and New York: Routledge.
- George, B. (2003). *Authentic leadership: Rediscovering the secrets to creating lasting value*. New York: Wiley, John & Sons, Incorporated.
- Goffee, R., & Jones, G. (2000). Why should anyone be led by you. *Harvard Business Review*, 78(5), 62-70.
- Guan, J., McBride, R., & Xiang, P. (2005). Chinese teachers' attitudes toward teaching physical activity and fitness. *Asia-Pacific Journal of Teacher Education*, 33(2), 147-157.
- Guccione, A. A., et al. (2005). Development and testing of a self-report instrument to measure actions: Outpatient physical therapy improvement in movement assessment log (optimal). *Physical Therapy*, 85(6), 515-530.
- Hanson, G. C., Colton, C. L., & Hammer, L. B. (2006). Development and validation of a multidimensional scale of perceived work of family positive spillover. *Journal of Occupational Health Psychology*, 3, 249-265.

- Harland, L., Harrison, W., Jones, J. R., & Reiter-Palmon, R. (2005). Leadership behaviors and subordinate resilience. *Journal of Leadership & Organizational Studies*, 11(2), 2-14.
- Helland, M. R., & Winston, B. E. (2005). Towards a deeper understanding of hope and leadership. *Journal of Leadership & Organizational Studies*, 12(2), 42-54.
- Hinkin, T. R. (2005). Scale development principles and practices. In R. A. Swanson & E. F. I. Holton (Eds.), *Research in Organizations: Foundations and Methods of Inquiry* (1st ed., pp. 161-179). San Francisco: Berrett-Koehler Publishers, Inc.
- Hofstede, G. (1980). Motivation, leadership, and organization: Do American theories apply abroad? *Organizational Dynamics*, 9(1), 42-63.
- Holton, E. F. I., & Burnett, M. (2005). The basics of quantitative research. In R. A. Swanson & E. F. I. Holton (Eds.), *Research in Organizations: Foundations and Methods of Inquiry* (1st ed., pp. 29-55). San Francisco: Berrett-Koehler Publishers, Inc.
- House, R. J., & Aditya, R. N. (1997). The social scientific study of leadership: Quo Vadis? *Journal of Management*, 23(3), 409-473.
- Ilies, R., Morgeson, F., & Nahrgang, J. (2005). Authentic leadership and eudaemonic well-being: Understanding leader-follower outcomes. *The Leadership Quarterly*, 16, 373-394.
- Jensen, S. M., & Luthans, F. (2006). Relationship between entrepreneurs' psychological capital and their authentic leadership. *Journal of Managerial Issues*, 18(2), 254-273.
- Karnes, F. A., & Bean, S. M. (2005). *Methods and materials for teaching the gifted*. Waco: Prufrock Press, Inc.
- Katz, J. P., & Seifer, D. M. (1996). It's a different world out there: Planning for expatriate success through selection, pre-departure training and on-site socialization. *Human Resource Planning*, 19(2), 32-47.
- Kellerman, B. (2004). *Bad leadership; What it is, how it happens, why it matters*. Boston: Harvard Business School Press.
- King, M. F., & Bruner, G. C. (2000). Social desirability bias: A neglected aspect of validity testing. *Psychology & Marketing*, 17(2), 79-103.
- Knowles, R. T. (1986). *Human development and human possibility*. Lanham: University Press of America Inc.
- Martinek, T., Schilling, T., & Hellison, D. (2006). The development of compassionate and caring leadership among adolescents. *Physical Education and Sport Pedagogy*, 11(2), 141-157.
- Michie, S., & Gooty, J. (2005). Values, emotions, and authenticity: Will the real leader please stand up? *The Leadership Quarterly*, 16, 441-457.
- Misumi, J., & Seki, F. (1971). Effects of achievement motivation on the effectiveness of leadership patterns. *Administrative Science Quarterly*, 16(1), 51.
- Mullen, C. A., & Tuten, E. M. (2004). A case study of adolescent female leadership: Exploring the "light" of change. *Journal of Educational Thought*, 38(3), 287-320.
- Novicevic, M. M., Harvey, M. G., Ronald, M., & Brown-Radford, J. A. (2006). Authentic leadership: A historical perspective. *Journal of Leadership & Organizational Studies*, 13(1), 64-76.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Oakland, T., Falkenberg, B. A., & Oakland, C. (1996). Assessment of leadership in children, youth and adults. *Gifted Child Quarterly*, 40(3), 138-146.
- Passmore, D., & Baker, R. (2005). Sampling strategies and power analysis. In R. A. Swanson & E. F. I. Holton (Eds.), *Research in Organizations: Foundations and Methods of Inquiry* (1st ed., pp. 45-56). San Francisco: Berrett-Koehler Publishers, Inc.

- Paunonen, S. V., Lonnqvist, J., Verkasalo, M., Leikas, S., & Nissinen, V. (2006). Narcissism and emergent leadership in military cadets. *The Leadership Quarterly*, 17, 476-486.
- Peter, J. P. (1981). Construct validity: A review of basic issues and marketing practices. *Journal of Marketing Research (JMR)*, 18(2), 133-145.
- Pett, M. A., Lackey, N. R., & Sullivan, J. J. (2003). *Making sense of factor analysis: The use of factor analysis for instrument development in health care research*. Thousand Oaks: Sage Publications, Inc.
- Ping Ping, F., Hau-siu Chow, I., & Yuli, Z. (2001). Leadership approaches and perceived leadership effectiveness in Chinese township and village. *Journal of Asian Business*, 17(1), 1-15.
- Price, T. L. (2003). The ethics of authentic transformational leadership. *Leadership Quarterly*, 14(1), 67.
- Rawwas, M. Y. A. (2003). The influence of leadership styles, conflict management, and individual characteristics on motivation: A cross cultural study of business Supervisors. *Journal of Asian Business*, 19(1), 37-65.
- Salters, L. (1997). Coaching and counseling for peak performance. *Business & Economic Review*, 44(1), 26.
- Sanders, P. (1982). Phenomenology: A new way of viewing organizational research. *Academy of Management Review*, 7(3), 353-360.
- Schneider, B., Paul, M. C., White, S. S., & Holcombe, K. M. (1999). Understanding high school student leaders, I: Predicting teacher ratings of leader behavior. *Leadership Quarterly*, 10(4), 609-636.
- Shafer, E. L., Vieregge, M., & Youngsoo, C. (2005). Cultural differences in perceived leadership styles. *International Journal of Hospitality & Tourism Administration*, 6(3), 65-84.
- Shaunessy, E., & Karnes, F. A. (2004). Instruments for measuring leadership in children and youth. *Gifted Child Today*, 27(1), 42.
- Shek, D. T. L. (2005). A longitudinal study of perceived family functioning and adolescent adjustment in Chinese adolescents with economic disadvantage. *Journal of Family Issues*, 26(4), 518-543.
- Spector, P. E. (1976). Choosing response categories for summated rating scales. *Journal of Applied Psychology*, 61(3), 374-375.
- Spreier, S. W., Fontaine, M. H., & Malloy, R. L. (2006). Leadership run amok. *Harvard Business Review*, 84(6), 72-82.
- Starratt, R. J. (2007). Leading a community of learners. *Educational Management Administration & Leadership*, 35(2), 165-183.
- Swanson, R. A., & Holton, E. F. I. (Eds.). (2005). *Research in organizations: Foundations and methods of inquiry* (First ed.). San Francisco: Berrett-Koehler Publishers, Inc.
- Tate, B. (2008). A longitudinal study of the relationships among self-monitoring, authentic leadership, and perceptions of leadership. *Journal of Leadership & Organizational Studies*, 5(1), 16-29.
- Tinsley, H. E. A., & Tinsley, D. J. (1987). Uses of factor analysis in counseling psychology research. *Journal of Counseling Psychology*, 34(4), 414-424.
- Tsang, M. C. (2000). Education and national development in China since 1949: Oscillating policies and enduring dilemmas. Retrieved July 3, 2007, from http://www.teacherscollege.edu/centers/coce/pdf_files/d1.pdf
- Walker, A., & Shuangye, C. (2007). Leader authenticity in intercultural school contexts. *Educational Management Administration & Leadership*, 35(2), 185-204.

- Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. A., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34(1), 89-126.
- Wenquan, L., Chia, R. C., & Liluo, F. (2000). Chinese Implicit leadership theory. *Journal of Social Psychology*, 140(6), 729-739.
- Whitehead, G. E. (in press). Adolescent leadership development: Building a case for an authenticity framework. *Educational Management, Administration and Leadership*.
- Wong, K.-C. (2001). Chinese culture and leadership. *International Journal of Leadership in Education*, 4(4), 309-319.
- Woods, P. A. (2007). Authenticity in the bureau-enterprise culture. *Educational Management Administration & Leadership*, 35(2), 295-320.
- Xu, Y., Farver, J. A. M., Schwartz, D., & Chang, L. (2003). Identifying aggressive victims in Chinese children's peer groups. *International Journal of Behavioral Development*, 27(3), 243-252.
- Yang, B. (2005). Factor analysis methods. In R. A. Swanson & E. F. I. Holton (Eds.), *Research in Organizations: Foundations and Methods of Inquiry* (1st ed., pp. 181-199). San Francisco: Berrett-Koehler Publishers, Inc.

Appendix: LARS Instrument

Table A-1: 49-Item Authenticity Instrument

Core	Sub-core variable	Statement
Self-core	Know-self variable	I know myself well
		I continuously evaluate my strengths and weaknesses.
	Perception variable (others perceive me to be authentic)	I am perceived by others to be sincere.
		I am perceived by others to be someone who acts in conjunction with my core beliefs.
	Self-confidence variable	I am confident that I can achieve whatever task is given to me regardless of training or experience.
		I look confident, but inside I doubt myself.
	Not overly egoistic variable	I am not shy about taking credit.
		I prefer to give others credit for the work I do.
	Seek self-improvement variable	I want to improve as a leader.
		My existing talents and strengths are all that I need to be a good leader.
	Perspective (organization vs. individual) variable	I am willing to sacrifice personal happiness to achieve success.
		My personal health and welfare is more important to me than social or professional success.
	True to inner nature variable	I cannot identify my core personal values.
		I follow my instincts and listen to my inner-voice when making a leadership decision.
Positive leader variable	I am a positive person most of the time.	
	I am negative most of the time.	
Hope variable	Having hope is not a part of my leadership attitude.	

Core	Sub-core variable	Statement
Core	Self-resilience variable	I believe something good is always about to happen.
		When I know something is right, I forge ahead regardless of criticism.
Core	Foster others' self-resilience variable	The criticisms and doubts of others do not present obstacles to my personal success.
		I help others to be self-reliant.
Core	Foster others' self-resilience variable	I am known as someone who helps others to become resilient.
Empathetic-core	Expand horizons of others variable	Other people grow their talents because of my leadership.
		I help others see the bigger picture.
	Follower development authenticity variable (developing authenticity in others)	When I help someone develop a skill, I try to do it in a way that fits their personal objective.
		The people that follow me do not always know what is best for them.
	Close gap variable	I seek to eliminate differences between the socially privileged and those with less social status.
		I feel those who are not in a social or leadership position of privilege do not deserve it.
	Remove barriers between leaders and followers variable	A good leader does not socialize with subordinates.
I feel leaders must maintain a social distance from followers.		
Remove barriers between haves and have-nots variable	Being popular improves my ability to be a good leader.	
	I believe in eliminating wealth and privilege barriers between people.	
Trust-building-core	Build trust variable	I think it is ok to be deceptive if the greater good is at stake.
		I feel trust is an important characteristic of a good leader.
	Foster ethical behavior variable	When faced with a dilemma I am willing to sacrifice my own personal benefit for the group's benefit.
		I help others to be ethical.
Foster moral behavior	I regularly create situations that cause or encourage others to break their moral code.	
	I try to follow a religious or specific moral code to the best of my ability.	
Builds loyalty variable	If I say I will do something, I always follow through.	
	People are loyal to me because I consistently do what I say I will do.	
Community-core	Participate in community variable	I regularly attend extracurricular school activities because I want to support my school.
		I only attend the extracurricular activities that benefit or interest me.
	Value organizational	Traditions are important to me.

Core	Sub-core variable	Statement
	history variable	Traditions are annoying; I would rather discover a new way of doing things. I try to make sure others know important traditions.
	Create responsive social structures variable	Leaders have a social responsibility to create opportunity for others. My leadership style creates situations where people's lives are better.
	Commitment to community success variable	I do not owe the school or my community anything. I am focused on my own success. Team or group success is more important than my personal success.

Table A-2: Self-Declaration Statements

Declaration Variables	Statement
Leadership declaration	I consider myself a leader. Others consider me to be a leader.
Athletes make better leaders	I would follow a leader who was an athlete before I would follow someone who is not an athlete. Athletes are not always leaders.
Gender	In general, I think girls make better leaders than boys.
Authenticity declaration	I consider myself to be authentic The perceived responsibilities of my leadership role heavily influences my decisions I yield to stereotyped rules.

Table A-3: Negative Statement Transformations

Statement
Hope is not part of my leadership attitude
Traditions are annoying, I would rather discover a new way of doing things
A good leader does not socialize with subordinates
I am not shy about taking credit
I regularly do things to cause or encourage others to break their moral code
I do not owe my school or community, I am focused on my own success
It is OK to be deceptive if the greater good is at stake
People that follow me do not always know what is best for them (or When it comes to helping others, I am able to direct them for their own good)
I only attend the extra curricular activities that benefit or interest me
Leaders must maintain social distance from followers
I am negative most of the time
I cannot identify my core values
I feel those who are not in a social or leadership position of privilege do not deserve it.
I am willing to sacrifice personal happiness to achieve success.
My existing talents and strengths are all that I need to be a good leader
Athletes are not always leaders.

The perceived responsibilities of my leadership role heavily influences my decisions
I yield to stereotyped rules.
