Journal of Educational Leadership in Action

Volume 8 | Issue 2

Article 1

11-29-2022

Examining Perceptions of Good Leadership in Confucian Contexts: A Study of South Korean University Faculty

Andrew Schenck State University of New York, Korea

Follow this and additional works at: https://digitalcommons.lindenwood.edu/ela

Part of the Curriculum and Instruction Commons, Educational Administration and Supervision Commons, and the Educational Assessment, Evaluation, and Research Commons

Recommended Citation

Schenck, Andrew (2022) "Examining Perceptions of Good Leadership in Confucian Contexts: A Study of South Korean University Faculty," *Journal of Educational Leadership in Action*: Vol. 8: Iss. 2, Article 1. DOI: https://doi.org/10.62608/2164-1102.1121 Available at: https://digitalcommons.lindenwood.edu/ela/vol8/iss2/1

This Article is brought to you for free and open access by the Journals at Digital Commons@Lindenwood University. It has been accepted for inclusion in Journal of Educational Leadership in Action by an authorized editor of Digital Commons@Lindenwood University. For more information, please contact phuffman@lindenwood.edu.

Examining Perceptions of Good Leadership in Confucian Contexts:

A Study of South Korean University Faculty

Andrew Schenck

Within the contemporary corpus of leadership research, techniques for empowerment and group decision-making are highly valued (Bass et al., 2003; Crowther et al., 2009; Delgado, 2014; Foels et al., 2000; Judge & Piccolo, 2004; Saadi et al., 2009), yet they are not equally effective in all contexts. Research suggests that the efficacy of a leadership style is highly dependent upon geographical and cultural settings of implementation (House et al., 1999, 2002, 2004). Because most modern leadership paradigms were traditionally assessed through experimentation within Anglophone countries (House, 2004), adaption to other cultural contexts may be problematic or even unsuccessful. As pointed out by Eacott and Asuga (2014), for example, leadership programs funded by the global north often shape African development "in a manner that is exclusive of localized knowledge" (p. 919). Through application of Anglocentric paradigms, without key consideration of local cultural values, adaptation of different types of leadership may be challenging.

Some research has attempted to better understand the impact of local cultural values on the efficacy, or inefficacy, of various leadership models. Most notably is a project referred to as the Global Leadership and Organizational Behavior Effectiveness (GLOBE) research program, which examined leadership traits in over 62 different countries. The study revealed that cultural factors such as uncertainty avoidance (a tendency to seek out precise guidelines before taking action) and power distance (the degree to which members of a group accept unequal power relationships) have different influences on the perception and implementation of leadership styles (House et al., 1999, 2002, 2004; Northouse, 2016). Subsequent research revealed that

these cultural factors do indeed impact the effectiveness of paradigms like transformational leadership. In a recent meta-analysis using data from over 57,000 individuals from 34 countries, results revealed that transformational leadership and employee performance were both moderated by cultural values; the study further suggested that countries in Africa, the Middle East, South America and parts of Asia may utilize transformational leadership more effectively than Anglophone countries (Crede et al., 2019). Findings from this study may reflect a relationship between uncertainty avoidance and transformational leadership (Ergeneli et al., 2007). Western countries tend to have larger values for uncertainty avoidance. The United States, for example, received a value of 85 out of a total score of 100 on the GLOBE scale for uncertainty avoidance. Asian countries, in contrast, tend to have lower scores for this factor. As an illustration, South Korea had only a 46 out of a total score of 100 ("Hofstede Insights," 2021). Because Western countries like the United States tend to avoid uncertainty, transformational strategies requiring a great deal of independent thinking and innovation on the part of subordinates may be less favorable.

While research reveals a clear link between leadership styles and cultural values, our understanding of the interaction between these two variables is still limited. Whereas prior studies suggest that uncertainty avoidance is negatively correlated to transformational leadership, another meta-analysis suggests that transformational leadership may be more beneficial in countries with higher uncertainty avoidance (Watts et al., 2020). Yet other research suggests that uncertainty avoidance is a negligible factor regarding transformational leadership and individual learning behavior (Zaman, & Abbasi, 2020). Overall, inconsistency of results reveals that further study of local cultural variables is needed to better understand how they impact the leadership process.

Adapting New Leadership Strategies in a Confucian Educational Context

Confucianism is a core belief system influencing leadership in countries like South Korea, China, and Japan. These countries have cultural traditions that differ significantly from those found in Anglophone contexts. In South Korea, for example, education has been closely linked to Confucianism. First introduced in 108 A.D. through the Han Chinese empire, the philosophy has become firmly established in Korea, dominating political, social, and educational institutions from the fourteenth century to modern times (S.H. Kim, 2013; Yang & Henderson, 1959). It has served as "the chief intellectual concern" and "fixation" of Korean society (Yang & Henderson, 1958, p. 89), stressing harmony of group members through obedience to authority and adherence to social norms (S. Kim, 2013; Park & Chesla, 2007). Because Confucian philosophy places value on autocratic control and submission to authority, educational leaders in Korean society have wielded considerable power. Traditionally, teachers were afforded the same rights and responsibilities as parents (S. Kim, 2013). While authority has waned somewhat, educators continue to maintain a great deal of control through more autocratic, teacher-centered pedagogical approaches. Drill and rote memorization are used to impose teacher authority, as well as promote common societal ideals about the learning process.

Roles and strict hierarchical relationships in educational contexts like South Korea are defined by several basic virtues of Confucianism such as *Li* and *Ren*. Whereas *Li* defines a hierarchy of social relationships (father and son; husband and wife; older brother and younger brother; and friends), *Ren* asserts that all members of society should adhere to group norms, exemplifying both benevolence and altruism (Park & Chesla, 2007). *Yi*, *Zhi*, and *Xin* stress righteousness, an individual's ability to distinguish between good and evil, and a sense of trust in others (S. Kim, 2013; Park & Chesla, 2007). A reliance on moral absolutes has cultivated a

respect for authority, as well as the predominant view that group behavior and beliefs should be uniform (S.H. Kim, 2013). Thus, students may accept highly standardized curricula in core subject areas and, due to Confucian pressures to conform, put forth tremendous effort to maintain scores commensurate with peers (Cheng & Wong, 1996). This culturally-driven scholastic effort has, in turn, led to widespread achievement on standardized exams. In 2012, for example, Korean learners outperformed their international peers on the Programme for International Student Assessment (PISA), scoring high in all three subject areas: reading, mathematics, and science (Center on International Education Benchmarking, 2015).

While leading to widespread achievement on standardized exams, Confucian traditions that emphasize autocratic authority and group norms may impact innovation and creativity in a negative way. Students from Confucian contexts are often reluctant to participate in activities that require discussion, creativity and critical thinking (DeWaelsche, 2015; McGuire, 2007; Niederhauser, 2012). Having higher positional power and prestige, teachers or other educational leaders may also discourage, rather than encourage, divergent opinions among those they consider subordinate. This perspective is exemplified by an attempt to implement the policy called Brain Korea 21 in 1999 (Lee, 2015). This policy, which mandated the development of research consortia from multiple universities, was not constructed through input from members of the higher educational community. Moreover, public hearings were not held before the initial announcement of the project, leading to extensive dissatisfaction among university professors (Lee, 2015). As this example illustrates, maintenance of autocratic authority and common group norms may limit innovative development of education and leadership strategies (S. Kim, 2013; Lee, 2015). Overall, cultural foundations in South Korean contexts appear to support more autocratic forms of leadership. Rather than group participation in decision-making, which is

highly characteristic of American leadership strategies (Northouse, 2016), Asian societies such as South Korea, China, and Japan often utilize dictatorial control and strict hierarchical relationships to govern organizational performance (Ishibashi & Kottke, 2009; S. Kim, 2013; Northouse, 2016). A tendency to use autocratic rule is ultimately fueled by Confucian values, which clearly delineate status and authority for both superiors and subordinates.

Due to potential problems with innovation and group participation, more transformational leadership practices may be needed. Such techniques could empower group members in Confucian contexts, making them more active participants in decision-making and group activities. Transformational leadership relies on *idealized influence*, where the leader serves as a role model to influence group behavior. It also relies on *inspirational motivation*, whereby leaders communicate high expectations and emotional appeals to enhance team spirit. Finally, transformational leaders are supposed to provide both *individualized consideration*, a supportive environment that is sensitive to individual needs of group members, and *intellectual stimulation*, which describes "leadership that stimulates followers to be creative and innovative and to challenge their own beliefs and values as well as those of the leader and the organization" (Northouse, 2016, p. 169). While a transformational approach seems to be one way to garner involvement in the educational process, there are potential problems. Not all elements of the approach may complement Confucian cultural beliefs, explaining why more teacher-centered educational practices continue to be employed, despite evidence that more student-centered activities can be more beneficial (Egitim, 2021). Idealized influence, for example, may somewhat correlate to role differentiation associated with Li, yet it does not appear to support autocratic and hierarchical relationships mandated by this same Confucian virtue. Individualized consideration and intellectual stimulation may also violate Confucian beliefs in some ways. Individualized

consideration appears to place an individual's needs above those of a group, in violation of Confucian values that enforce group cohesion and unity (*Ren*). In the case of *intellectual stimulation*, it encourages employees to be innovative and creative, thereby challenging the values of the leader and organization, which may also go against Confucian values that enforce common group norms and adherence to authority.

In addition to complexities associated with the adaption of transformational leadership, the utilization of more democratic leadership techniques may be challenging in a Confucian context. Virtues like Li and Ren appear to support more autocratic leadership that promotes adherence to group goals and behavioral norms. However, other Confucian values like Yi, Zhi, and Xin may allow the individual to develop their own personal sense of virtue and righteousness. The duality of group vs. individual Confucian values makes adaption of various leadership styles highly complex. Research suggests that the implementation of transformational and democratic leadership strategies is often problematic in Confucian countries like China, which exhibit difficulty accepting leadership paradigms created primarily in an Anglo-American context (Liu et al., 2015). Similar problems have been reported for Japan, where language teachers continue to rely on teacher-centric methods like rote memorization and drill, rather than student-oriented, communicative methods that are known to be more effective (Egitim, 2021). Although not often addressed, some researchers like House (2004) have pointed out an Anglo-American cultural bias in leadership studies. A study by Eagly et al. (2003), further exemplifies this bias. Of the 44 studies examined within the research study, 36 came from Western contexts.

Differences in education and leadership in countries like South Korea have often been considered obstacles to be overcome. In reality, they represent key cultural assets, which can help foster educational improvement. The true problem appears to lie in unilateral application of

Western concepts in Confucian contexts. This view is exemplified by Wang and Torrisi-Steele (2015), who found that critical thinking could be developed among some Asian learners by abandoning Western values on andragogy and integrating traditional learning strategies from Confucian contexts. To develop more effective strategies for education and leadership, it is essential that multiple cultural perspectives are clearly understood. Currently, research has examined some cultural beliefs associated with educational leadership in Confucian countries like South Korea (Schenck, 2018), yet it has not provided a comprehensive view of how individuals cognitively conceptualize good leadership, nor has it adequately defined an individual's perceptions of how multiple leadership styles and strategies are interrelated.

Review of past literature suggests that Confucianism has a large impact on educational organizations and group behavior, yet little is known about how such a belief system influences conceptualization of good leadership. Without a clear understanding of how leadership is conceptualized in specific cultural contexts, adaptation of new organizational reforms may be unsuccessful. Because additional research is needed, this study was designed to investigate conceptions of good leadership in South Korea. Through such research, new forms of leadership may be developed to serve the unique cultural and contextual needs of Confucian educational institutions.

Research Questions

To further understand conceptions of leadership in Confucian contexts like South Korea, the following two questions were posed:

1. How do South Korean educational faculty conceptualize good leadership? Is this conceptualization similar to that of American educational faculty?

7

2. How is conceptualization of good leadership in South Korea different from that found

in Western contexts like the United States? In what ways could differences reflect the

Confucian cultural traditions prevalent in South Korea?

First, similarities in preferences for leadership were explored. In this way, common conceptions which lack a clear cultural influence could be discerned. Next, distinct differences in conceptions among Korean faculty were explored and analyzed according to a Confucian paradigm. Through addressing the questions listed above, it was hoped that more effective techniques for cultivating new leadership strategies could be developed for Confucian educational settings.

Method

Instrument

To examine differences between Anglophone and Asian leadership styles, a 27-item assessment, called the Vannsimpco Leadership Survey (VLS) was utilized (Vann et al., 2014). Using this survey, a comprehensive view of leadership strategies may be obtained through examination of nine categorical types: transactional, democratic, autocratic, autocratictransformational, autocratic-transactional, democratic-transformational, democratictransactional, transformational, and laissez-faire leadership (See Appendix A for more information). While servant leadership is not explicitly measured, it is similar to transformational leadership. Both styles focus on cultivation of employee motivation and satisfaction. In addition, they utilize charismatic governance to cultivate belief in a leader and group vision (Choudhary et al., 2013; Graham, 1991; Smith et al., 2004; Washington et al., 2014). The instrument poses various questions on a Likert scale to examine feelings about leadership style and decisionmaking. In addition to validity, the instrument is a reliable measure, yielding a test/retest value of r[108] = .91, p < .001 (Vann et al., 2014). To ensure the most accurate Korean representation of the survey, for use with Korean participants, a government certified agency for translation was utilized. The resulting instrument was then reviewed by a bilingual researcher to further confirm correct translation of technical vocabulary and descriptive phrases.

Participants

To examine how Chinese traditional values may impact Korean faculty, participants from both Korean and American universities were selected for study. Survey results from American respondents served as a tool for comparison, revealing differences in thought between Anglophone and Asian contexts. Faculty came from universities that primarily served a regional population of undergraduates. After Institutional Review Board (IRB) approval was obtained, 459 participants were given a survey: 291 from the Korean institution and 168 from the American institution. After the survey was left open for three weeks, a reminder was sent every seven days (for a total of two reminders). In total, 95 surveys were returned, along with the respondent's consent: 48 from the Korean university and 47 from the American university. Return rates were 16 percent and 28 percent respectively. Respondents varied in both age and gender. The age distribution for both groups was as follows in Table 1:

Age Distribution of Respondents								
		Grou	р Туре	Total				
		Korean	American					
Age	21-29	0	3	3				
	30-39	5	10	15				
	40-49	14	12	26				
	50-59	21	12	33				
	60	8	10	18				
Total		48	47	95				

Table 1

Table 1 reveals that respondents from the American university were more evenly distributed among age groups. All age groups averaged from 10-12 participants, except for age group 21-29,

which had only 3. Within the Korean group, there were no respondents from ages 21 to 29.

Furthermore, most respondents ranged in age from 40 to 59.

There were some notable differences in gender. Concerning the Korean university, more than half of the respondents were male (see Table 2).

Table 2

Gender Distributions of Respondents								
		Grou	р Туре	Total				
		Korean	American					
Gender	Male	34	22	56				
	Female	14	24	38				
Total		48	46	94				

Females comprised only 29% of the faculty who responded. A lack of female participants may reflect influences from a male-dominated Confucian culture, which promotes submissive roles for women. Within the American university, the male-to-female ratio neared 50%. Results revealed that 52% of the faculty were female.

Data Analysis

To see how cultural factors may impact perceptions of good leadership, factor analysis was conducted using the survey results. First, data was separated into two groups: faculty from the United States and faculty from Korea. Next, the data was statistically analyzed using factor analysis. Factor loadings were rotated and, in accordance with recommendations by Field (2013), small coefficients under .30 were suppressed. All of the factors from each group were analyzed and compared to those obtained from the other group. To address research question one, similarities between factors were examined and explained. Next, differences between the factors of the two groups were analyzed to address research question two.

Results and Discussion

Research Question One: Similarities between Factors

Results of factor analysis revealed many similarities in conceptualization of leadership between university professors from South Korea and the United States. These similarities are summarized in Table 3 (See Appendices B and C for correlation values of survey questions to each factor). The degree to which factors explained variance in survey responses was also similar for both groups (See Appendices D and E). Cumulatively, factors explained 75% of variance in the responses on Korean surveys (total of 7 factors), and 77% of variance on American surveys (total of 8 factors).

Table 3

Factor Number	Leadership Preferences: Korean	Factor Number	Leadership Preferences: American
1	Democratic, transformational, and transactional hybrid – More autocratic emphasis	1	Democratic, transformational, and transactional hybrid – Some autocratic emphasis
2	Largely laissez-faire	2	Largely laissez-faire
3	Autocratic transactional approach	3	Autocratic transactional approach
4	Almost all democratic and transactional	4	Almost all democratic with some transactional and transformational elements
5	Mixed autocratic and democratic elements of leadership – Autocratic authority that allows for democratic agency of subordinates in a specified role		
6	Largely transactional and a little democratic transformational	5	Almost completely transactional with mixed autocratic elements. One purely democratic element is negatively correlated (students should give staff authority)
7	Autocratic-transformational emphasis	6	More autocratic and a little transformational
		7	Autocratic, democratic, and transformational elements mixed
		8	Democratic and transactional emphasis

Leadership Preferences Associated with Each Factor (Separated by Group)

Many of the factors from both groups appeared to parallel each other. Factor 1, for example, revealed a kind of hybrid approach, which emphasized qualities from transformational, democratic, and transactional leadership. According to the preferences of both groups, good leadership was defined through positive interaction with employees. Both groups preferred developing the strength and commitment of staff members (transformational survey questions 23 and 24); seeking input and discussion with group members to build consensus (democratictransactional questions 19, 20, and 21); and listening and cultivating ideas so that employees can contribute to decisions (democratic-transformational questions 16, 17, and 18). Both groups also included one autocratic-transactional factor (survey question 12), which specified a preference for a leader that is responsible for operating the department and cultivating competencies of personnel. Both groups also preferred one transformational factor (question 13), which described the leader as having responsibility for decision-making and the provision of incentives/disincentives for staff. Overall, Factor 1 defined the roles of good leaders and their subordinates. Whereas good leaders take responsibility by managing the department, developing competencies, and providing transactional resources, they also give subordinates opportunities to provide input and develop their own competencies.

Whereas Factor 1 denotes a distributed form of leadership that uses democratic, transformational, and transactional leadership to ensure commitment and productivity of subordinates, Factor 2 represents largely laissez-faire attributes of leadership. All three laissezfaire questions (questions 25, 26, and 27) were favored for this factor in both groups, which described the ideal leader as viewing the "big picture," while providing little or no direction to subordinates. A good leader was regarded as hiring employees that are highly skilled and competent so that a leader does not need to worry about "day-to-day" decisions. A transformational preference for leadership was also included in this factor (transformational question 22), whereby good leaders rely on personal influence and relationship building to get subordinates to work. In Factor 2, the role of the leader is very limited. They rely on their interpersonal skills to serve in a specified organizational role.

Factor 3 revealed a more autocratic and transactional approach. For both groups, all three autocratic-transactional practices were preferred (questions 13, 14, and 15), which denoted a leader's responsibility for decision-making, providing incentives, stating incentives, maximizing oversight, and making sure that promises about incentives are kept. One purely autocratic practice was also included in both groups (question 7), which described leaders as having the ultimate responsibility to specify tasks and achieve goals.

Unlike Factors 1 to 3, subsequent factors did not include a clear correlation between individual Vannsimpco questions. Although there were not very clear parallels between survey questions included in each of the factors from 4 to 8, there did seem to be a correlation with general preferences for leadership styles. Factor 4, for example, appeared to be democratic and transactional for both groups. Korean respondents preferred democratic questions 4, 5, and 6, along with transactional question 3 and democratic-transactional question 21. American respondents preferred democratic questions 5 and 6, along with democratic-transactional question 20. Autocratic-transactional survey question 13 was negatively correlated to Factor 4 for the American group. This survey question, which suggests that leaders should have responsibility for decision-making and provide incentives/disincentives for staff based on the work completed, was not favored by the American respondents. This more "anti-democratic" leadership practice, whereby a leader more strictly controls both decision-making and distribution of rewards and punishments, may not align with conceptualization of transactional

leadership in US contexts. American respondents may be less tolerant of unequal power relationships used for the control of rewards. A dislike of unequal power relationships or autocratic role differences is further suggested by support for democratic-transformational question 16 and transformational question 22 among American faculty. Both leadership preferences support group decision-making and influence through relationships, rather than positional power.

Factor 8 for American faculty also appeared to be highly focused on both democratic and transactional leadership practices. It included democratic-transactional preferences (survey questions 19 and 21) for group input and consensus, as well as an autocratic-transactional preference (question 13) for leaders who retain authority to make decisions and provide incentives. It also included one purely transactional preference (question 1) for rewarding staff who achieve educational goals, along with one purely democratic preference (question 4) for giving staff authority to make important decisions.

Factor 6 for the Korean group and Factor 5 for the American group both appeared to emphasize transactional leadership. Korea's Factor 6 included all three transactional preferences (questions 1, 2, and 3), as well as an additional preference for democratic-transformational question 17, which supported leaders who are open to others' ideas, yet in control of guiding "employees to become stronger workers." Factor 5 for American faculty was also highly transactional. It included democratic-transactional questions 19 and 20, as well as autocratictransactional questions 13 and 15. These preferences emphasized seeking out input from employees, yet emphasized strict guidance from the leader, who oversees decision-making and management of incentives/disincentives. Factor 5 for American respondents included a negative correlation to democratic question 4, which supported allowing staff members to make important decisions. Overall, Factor 6 for Korean faculty and Factor 5 for American faculty suggest a conception of leadership based on transactional distribution of resources. Control of transactional resources according to this conception appears to be more autocratic among American respondents, who showed more autocratic-transactional preferences than their Korean counterparts.

A final similarity appears to be between Korean Factor 7 and American Factor 6, which both appear to be autocratic and transformational. Korean Factor 7 includes all autocratictransformational preferences 10, 11, and 12. American Factor 6 had some transformational elements, including transformational question 23 (leaders should develop the staff's competence and commitment) and autocratic-transformational question 12 (leaders are responsible for organization and personnel development), yet this factor was even more highly autocratic. It included questions 7, 8, and 9, all purely autocratic preferences giving the leader higher authority to control operation of an organization, task assignment, and decision-making.

Research Question Two: Differences between Factors

Despite several key similarities between groups, there were also distinct differences, which may yield insights concerning cultural conceptions of leadership. Although Factor 1 from both groups included ten of the same preferences from the Vannsimpco Leadership Survey, there were some leadership preferences that were exclusive to either the Korean or American faculty. Korean respondents, for example, revealed a stronger autocratic preference for leadership. Inclusion of survey questions 10, 11, and 14 in Factor 1 for Korean respondents suggests that leaders should have a stronger role in establishing goals, making critical decisions, providing feedback, and controlling incentives/disincentives. Through this finding, a preference for heightened power distance among South Korean participants appears to be revealed (See Table

4).

Table 4

Leadership Preferences Supported by Korean Respondents in Factor 1

10	Autocratic	Supervisors should provide the goal for the organization and allow staff
	Transformational	to work towards achieving the goal, making sure to offer them feedback
		concerning their efforts.
11	Autocratic	Supervisors should retain control of decision making, but they should
	Transformational	encourage high morale so followers can more effectively implement
		change.
14	Autocratic	Supervisors should state clearly the incentives and disincentives to
	Transactional	followers while maximizing oversight on the most critical decisions

In contrast to Korean respondents, Factor 1 for American respondents showed a heightened

preference for egalitarian relationships between leader and subordinate. Each of these

preferences highlight the importance of giving authority to staff or students to make decisions,

provide input, and implement new policies (See Table 5).

Table 5

Leadership Preferences Supported by American Respondents in Factor 1

4	Democratic	Supervisors should give staff authority to make important
		decisions.
5	Democratic	Supervisors should seek input from staff when formulating policies
		and procedures for implementing them.
6	Democratic	To solve problems, supervisors should have meetings with staff
		members before correcting issues.
22	Transformation	Supervisors should rely on personal influence and relationship
	al	building rather than on position or title to get staff to do work tasks.

Whereas Korean respondents appear to favor positional power associated with a strict hierarchical role, American respondents preferred personal influence and relationship building in Factor 1. Discrepancies in this factor appear to be explained by Korea's Confucian traditions. According to *Li*, leaders take on a more autocratic role which requires maximizing oversight and providing feedback to staff or students. Under *Ren*, group consensus and harmony are important, explaining Korean preferences for cultivating morale. Results from Factor 1 suggest that stronger positional power is favored by Korean leaders, yet concern for subordinates is also considered important as a means of building consensus and harmony. Promoting both the leader's position and subordinate's happiness appear to align with Confucian tenets of *Li* and *Ren*, respectively.

As in Factor 1, Factor 2 reveals a difference in how the role of a leader is conceptualized. Korean respondents did not favor a leader who was responsible for the organization of a department or the development of staff competencies. This perspective is supported by a negative correlation to autocratic-transformational question 12, which suggests that a leader should not be solely responsible for the operation of a department, development of staff competencies, or commitment of personnel. While Korean respondents favored discussion with employees, they also retained the power to make decisions over provision of incentives and disincentives (democratic-transactional survey question 20). According to this perspective, employees appear to bear responsibility for organizational success. Essentially, a Korean sense of leadership appears to support a shared sense of responsibility for the group, which may ultimately reflect Confucian values that support group cohesion.

Factor 2 for American respondents differed from the preferences of Korean faculty. American faculty preferred the autocratic-transactional leadership practice outlined in survey question 15, which stated that "Supervisors make the key decisions for the organization and get most of the credit or blame, but they should make sure that their promises for rewards and disincentives made to workers are kept." This ideal does not simply reflect an autocratic leader's power to make decisions. It reflects a leader's responsibilities toward staff. American perspectives on leadership appear to clearly outline the responsibilities of a leader, who is

culpable for the decisions they make, as well as the distribution of incentives and disincentives. Overall, there appears to be a difference between how leaders are envisioned in Factor 2. More precisely, there appears to be a distinct difference in how autocratic leadership is expressed. Whereas Korean respondents seem to support a group sense of shared responsibility, American leaders appear to prefer a more top-down conception of responsibility. This finding appears to reflect differences in power distance and positional authority between groups. In a Korean context, leaders may maintain their authority through positional power, thereby decreasing the need to accept responsibility for failures. American faculty, however, may rely on interpersonal skills to influence employee behaviors, which essentially ties success or failure of a subordinate's actions more directly to leadership practice. This perspective may explain why American respondents felt a personal sense of responsibility for failures.

Factor 3, which appeared to favor an autocratic and transactional approach, also differed based on the group. For Korean faculty, a preference was revealed for leaders who directly assign tasks to group members (autocratic survey question 9). This preference appears to reveal the influence of power distance since it reflects an affinity for positional power that is used to manage task assignments and responsibilities. Unlike their counterparts, American respondents had preferences that empowered employees through clear communication and support. Transactional questions 2 and 3, for example, favored letting staff members know about rewards, goals, consequences, and major deadlines. Democratic transactional question 19 was also favored, suggesting a preference for working with groups to seek input while providing incentives and disincentives. Interestingly, transformational question 22 (leaders should rely on personal influence and relationship building) was negatively correlated to Factor 3 for American respondents, suggesting some reliance on positional authority. This finding may suggest that

transactional leadership (which is reflected in Factor 3) is often conceived as a top-down, autocratic process in a US leadership context. Although both groups appear to support autocratic control of resources used for a transactional approach, the rights of subordinates to participate in this process appears different. American faculty prefer more egalitarian strategies that involve subordinates, whereas Korean faculty support more stringent hierarchical control of tasks by a leader. The Korean conception of leadership for Factor 3 appears to align with Confucian principles like *Li*, which validates asymmetrical power relationships, respect for authority, and adherence to one's duty in a specified role. Concerning the differences in Factor 3, they appear to represent a cultural dissimilarity in perception of power distance between a leader and their subordinate.

Korean Factor 5 did not clearly align with any other factor from the American group. It included several seemingly unrelated leadership strategies (democratic-transformational question 16, laissez-faire question 25, autocratic question 8, and democratic question 4). The eclectic mixture of leadership approaches may compliment complex Confucian norms, which promote positional authority while simultaneously encouraging subordinates to develop agency within a specified role. According to this factor, positional power is "placed on reserve" through autocratic survey question 8, which conceptualizes leadership as an ultimate authority that can be utilized in emergency situations. Just as the authority of a leader is clearly defined, so is the agency of subordinates. Laissez-faire preference 25, where little or no direction of staff members is considered necessary, gives subordinates agency to act in their specified role, as does democratic question 4, which reveals a preference to give staff authority to make decisions. Democratic transformational question 16 also gives employees an ability to become involved in decision-making during times of change. Essentially, the leader retains ultimate authority, yet subordinates have a say in the decision-making process. Collectively, the values expressed in Factor 5 appear to reflect complex Confucian social systems, which must maintain autocratic status hierarchies, while simultaneously supporting democratic values that promote harmony and group involvement. Factor 5 appears to be a kind of "hybrid" approach, whereby autocratic and democratic rights are tied to status, position, and role in the organization.

Korean Factor 6 and American Factor 5 reveal a similar preference for transactional leadership, yet they also reveal differences between groups. Factor 6 from the Korean university had a more democratic perspective of transactional leadership. Along with all three purely transactional preferences (questions 1, 2, and 3), Korean respondents approved of democratic transformational question 17, which supported leaders who are "open to others' ideas" as employees are guided to become stronger workers. Although American Factor 5 was also highly transactional, including democratic-transactional questions 19 and 20, it was more highly autocratic, including autocratic-transactional questions 13 and 15. These preferences emphasized seeking out input from employees, yet emphasized more strict guidance from the leader, who is in charge of decision-making and management of incentives/disincentives. Factor 5 for American participants was also negatively correlated to the strategy of allowing staff to make important decisions (Democratic question 4). Overall, Factor 5 from the American university was a more autocratic perspective on transactional distribution of resources, whereas Factor 6 from the Korean university appeared to have a more democratic perspective of transactional leadership. As for Korean respondents, the difference may reflect Confucian values concerning the importance of group consensus, benevolence, and sense of trust. It may represent a Confucian ethic to share the reward and punishment associated with organization success or failure as a group.

A final difference is between Korean Factor 7 and American Factor 6. Korean Factor 7 includes all autocratic-transformational preferences 10, 11, and 12, as well as transactional question 1. As in Factor 1, autocratic-transformational leadership preferences were more common among Korean respondents than preferences that were either "purely" transformational or autocratic. In line with Confucian conceptions of leadership, these autocratic-transformational preferences maintain positional authority of the leader, while attending to needs of subordinates. The leader maintains strict authority through setting goals and providing feedback yet works hard to cultivate a group vision and positive morale among subordinates. Leaders maintain status and power distance, while attending to attitudes and sense of belonging of group members. A preference for positional power in a Korean context is further exemplified by a negative correlation to democratic-transactional question 20 (issues should be discussed with employees before giving incentives/disincentives). While American Factor 6 did have some transformational elements, including transformational question 23 (leaders should develop the staff's competence and commitment) and autocratic-transformational question 12 (leaders are responsible for organization and personnel development), the factor was largely comprised of purely autocratic preferences (survey questions 7, 8, and 9). The presence of "pure" autocratic values may reflect American conceptions of authority and autocratic leadership, whereas mixed leadership strategies more accurately reflect Korean cultural perceptions of leadership, which rely on a highly complex cultural belief system that governs society.

Conclusion

The study of leadership values in both Confucian and Western contexts has yielded several insights. While many conceptions of good leadership appear to align across contexts, distinct differences emerge, which may reflect cultural influences. Collective review of results reveals that there is a distinct dichotomy of perceptions about the leader's role. As for Korean respondents, the ideal leader was envisioned as a person who relies on positional authority to make decisions, assign tasks, and promote good morale. Through having a more absolute rank, subordinates could be given more freedom for independent action or decision-making in their limited roles. In contrast to more autocratic perspectives concerning relationships between the leader and employee, Korean conceptions of resource control appear to be less autocratic than their American counterparts. This finding may reflect a Confucian value placed on collective action and benevolence, which promotes sharing of rewards, as well as punishment.

Distinct differences in conception of good leadership have implications for the adaption of leadership strategies in Confucian contexts. When choosing to implement a new strategy, power distance must be strictly maintained. In addition, close interpersonal relationships that obfuscate boundaries between a leader and subordinate will need to be avoided. Due to this need to maintain autocratic authority and distance, aspects of some leadership styles may become problematic when implemented in South Korea. *Individualized consideration*, for example, which is a hallmark of transformational leadership, requires close interpersonal interaction that may coopt power distance between a leader and subordinate. *Intellectual stimulation*, which encourages subordinates to challenge the beliefs of a leader and organization, may also decrease power distance and threaten Confucian norms that mandate adherence to authority. To address issues such as these, subordinates in contexts like South Korea may be given freedom to develop and innovate only within their limited role. Such a strategy combines democratic values (which are limited by role in an organization) with autocratic authority.

While human relationships in a Korean context may require maintenance of positional authority, management of transactional resources may require less autocracy. Preferences for

democratic control of resource distribution may represent collective Confucian virtues, which value benevolence towards others, mutual trust, and group action. Rather than being something the individual earns, incentives and disincentives may be regarded as the result of group effort. Through this conception of transactional resources, all members may share responsibility for success or failure, thereby mitigating blame being placed on just one individual.

Implementation of leadership reforms in a Confucian context like South Korea is highly complex. Aspects of autocratic authority that reinforce *Li* are needed, while morale building strategies and overall group satisfaction is needed according to *Ren*. Whereas American respondents appear able to bestow more decision-making power in an organization, Korean respondents appear reluctant to give up strict autocratic control. These clear differences may have clear implications for promoting leadership among both teachers and educational administrators in South Korea. Unilateral adaptation of democratic leadership paradigms which support innovation, creativity, and decision-making of subordinates may not be successful unless they are modified to accommodate Confucian norms. There are clear expectations for positional authority and guidance from a leader. At the same time, Confucian values for group cohesion and achievement, along with absolute values promoting trust and harmony, may allow employees to make decisions and innovate within a specified organizational role. Essentially, democratic approaches to leadership may be possible only when they respect well-defined status hierarchies in Confucian educational institutions.

The present study suggests that understanding complex Confucian traditions, as well as associated influences on leadership, may lead to more effective strategies for educational administration in South Korea. From a broader perspective, results also suggest that examination of cultural influences is essential when adapting any new leadership style. In a modern age where global educational ventures span several different national and geographical borders, more culturally sensitive approaches are essential. They may lead to substantial improvements in educational leadership, which subsequently improve the performance of faculty, staff, and students.

References

- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology*, 88(2), 207.
- Center on International Education Benchmarking. (2015). *South Korea overview*. Retrieved from http://www.ncee.org/programs-affiliates/center-on-international-education-benchmarking/top-performing-countries/south-korea-overview/
- Cheng, K. M., & Wong, K. C. (1996). School effectiveness in East Asia: Concepts, origins and implications. *Journal of Educational Administration*, *34*(5), 32-49.
- Choudhary, A. I., Akhtar, S. A., & Zaheer, A. (2013). Impact of transformational and servant leadership on organizational performance: A comparative analysis. *Journal of Business Ethics*, 116(2), 433-440.
- Crede, M., Jong, J., & Harms, P. (2019). The generalizability of transformational leadership across cultures: a meta-analysis, *Journal of Managerial Psychology*, 34(3), 139-155. https://doi.org/10.1108/JMP-11-2018-0506
- Crowther, F., Ferguson, M., & Hann, L. (2009). *Developing teacher leaders: How teacher leadership enhances school success* (2nd ed). Thousand Oaks, CA: Corwin Press.

- Delgado, M. L. (2014). Democratic leadership in middle schools of Chihuahua Mexico:
 Improving middle schools through democracy. *Journal of International Education and Leadership Volume*, 4(1).
- DeWaelsche, S. A. (2015). Critical thinking, questioning and student engagement in Korean university English courses. *Linguistics and Education*, *32*, 131-147.
- Eacott, S., & Asuga, G. N. (2014). School leadership preparation and development in Africa: A critical insight. *Educational Management Administration & Leadership*, 42(6), 919–934. https://doi.org/10.1177/1741143214523013
- Eagly, A. H., Johannesen-Schmidt, M. C., & Van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569-591.
- Egitim, S. (2021) Collaborative leadership in English language classrooms: engaging learners in leaderful classroom practices and strategies, *International Journal of Leadership in Education*, 1-21. DOI: 10.1080/13603124.2021.1990413
- Ergeneli, A., Gohar, R., & Temirbekova, Z. (2007). Transformational leadership: Its relationship to culture value dimensions. *International Journal of Intercultural Relations*, 31(6), 703-724.
- Field, A. (2013). Discovering statistics using SPSS, 4th ed. London: SAGE.
- Foels, R., Driskell, J. E., Mullen, B., & Salas, E. (2000). The effects of democratic leadership on group member satisfaction an integration. *Small Group Research*, *31*(6), 676-701.
- Graham, J. W. (1991). Servant-leadership in organizations: Inspirational and moral. *Leadership Quarterly*, *2*, 105-119.

- Hofstede Insights. (2021). Country comparison: South Korea and the United States. *Hofstede Insights*. https://www.hofstede-insights.com/country-comparison/south-korea,the-usa/
- House, R. J. (2004) Preface. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman & V.Gupta (Eds.), Culture, leadership, and organizations: The GLOBE study of 62 societies (pp. xxii-xxviii). Thousand Oaks, CA: Sage.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). Culture, leadership, and organizations: The GLOBE study of 62 societies. New York: Sage publications.
- House, R. J., Hanges, P. J., Ruiz-Quintanilla, S. A., Dorfman, P. W., Javidan, M., Dickson, M.,
 & Gupta, V. (1999). "Cultural influences on leadership and organizations: Project
 GLOBE." Advances in Global Leadership, 1, 171-233.
- House, R., Javidan, M., Hanges, P., & Dorfman, P. (2002). "Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE." *Journal of World Business*, 37(1), 3-10.
- Ishibashi, Y., & Kottke, J. (2009). "Confucianism, personality traits, and effective leaders in Japan and the United States." In Annual Conference of the Association for Psychological Science. San Francisco, CA: Association of Psychological Science.
- Judge, T. A., & Piccolo, R. F. (2004). "Transformational and transactional leadership: a metaanalytic test of their relative validity." *Journal of Applied Psychology*, *89*(5), 755.
- Kim, S. (2013). Confucianism and acceptable inequalities. *Philosophy & Social Criticism*, 39(10), 983-1004.
- Kim, S.H. (2013). The Problem of authority: What can Korean education learn from Dewey?. *Education and Culture*, 29(1), 64-83.

- Lee, G. (2015). Brain Korea 21: A development-oriented national policy in Korean higher education. *International Higher Education*, 19, 24-25.
- Liu, B., Hu, W., & Cheng, Y. C. (2015). From the west to the east validating servant leadership in the Chinese public sector. *Public Personnel Management*, *44*(1), 25-45.
- McGuire, J. M. (2007). Why has the critical thinking movement not come to Korea?. *Asia Pacific Education Review*, 8(2), 224-232.
- Niederhauser, J. S. (2012). Motivating learners at South Korean universities. *English Teaching Forum*, 50(3), 28-31.
- Northouse, P. G. (2016). *Leadership: Theory and practice* (7th ed.). Thousand, Oaks, California: Sage Publications, Inc.
- Park, M., & Chesla, C. (2007). Revisiting Confucianism as a conceptual framework for Asian family study. *Journal of Family Nursing*, 13(3), 293-311.
- Saadi, A. M., Hussain, A., Bhutta, R. N., Perveen, N., Kazmi, U., & Ahmad, N. (2009).
 "Democratic and distributed leadership for school improvement: Case studies from Pakistan." *International Journal of Learning*, *16*(2).
- Schenck, A. (2018). Investigating the relationship between Confucianism and leadership: A comparative study of university faculty. *International Journal of Adult Vocational Education and Technology (IJAVET)*, 9(3), 35-46.
- Smith, B.N., Montagno, R.V., & Kuzmenko, T.N. (2004). "Transformational and servant leadership: Content and contextual comparisons." *Journal of Leadership & Organizational Studies*, 10(4), 80-91.

- Vann, B. A., Coleman, A. N., & Simpson, J. A. (2014). "Development of the Vannsimpco Leadership Survey: A delineation of hybrid leadership styles." SBS Journal of Applied Business Research (JABR), 3, 28-39.
- Wang, V. C., & Torrisi-Steele, G. (2015). Confucian and Western teaching and learning.
 International Journal of Adult Vocational Education and Technology (IJAVET), 6(1), 52-64.
- Washington, R. R., Sutton, C. D., & Sauser Jr, W. I. (2014). How distinct is servant leadership theory? Empirical comparisons with competing theories. *Journal of Leadership, Accountability and Ethics*, 11(1), 11.
- Watts, L. L., Steele, L. M., & Den Hartog, D. N. (2020). Uncertainty avoidance moderates the relationship between transformational leadership and innovation: A metaanalysis. *Journal of International Business Studies*, 51(1), 138-145.
- Yang, K. P., & Henderson, G. (1958). An outline history of Korean Confucianism Part I: The early period and Yi factionalism. *The Journal of Asian Studies*, 18(01), 81-101.
- Yang, K. P., & Henderson, G. (1959). An outline history of Korean Confucianism Part II: The schools of Yi Confucianism. *The Journal of Asian Studies*, 18(02), 259-276.
- Zaman, U., & Abbasi, M. (2020). Linking transformational leadership and individual learning behavior: Role of psychological safety and uncertainty avoidance. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 14(1), 167-201.

Number	Leadership Style	Survey Question
1	Transactional	Supervisors should make it a point to reward staff for achieving organizational goals.
2	Transactional	Supervisors should let staff members know what to expect as rewards for achieving goals.
3	Transactional	Supervisors should set deadlines and clearly state the positive or negative consequences of staff members' not meeting defined goals
4	Democratic	Supervisors should give staff authority to make important decisions.
5	Democratic	Supervisors should seek input from staff when formulating policies and procedures for implementing them.
6	Democratic	To solve problems, supervisors should have meetings with staff members before correcting issues.
7	Autocratic	It is the supervisor's ultimate responsibility for whether the organization achieves its goals.
8	Autocratic	Supervisors should make quick decisions in times of urgency and be more deliberate in making decisions during times of less urgency.
9	Autocratic	Supervisors should assign specific tasks to key staff members in order to achieve specific goals.
10	Autocratic Transformational	Supervisors should provide the goal for the organization and allow staff to work towards achieving the goal, making sure to offer them feedback concerning their efforts.
11	Autocratic Transformational	Supervisors should retain control of decision making, but they should encourage high morale so followers can more effectively implement change.
12	Autocratic Transformational	Supervisors are responsible for the operation of the organization or department, which includes the development of the competencies and commitment of personnel.
13	Autocratic Transactional	In addition to having responsibility for decision-making, it is essential for a supervisor to provide incentives and disincentives for staff with respect to work they have done on assigned projects
14	Autocratic Transactional	Supervisors should state clearly the incentives and disincentives to followers while maximizing oversight on the most critical decisions
15	Autocratic Transactional	Supervisors make the key decisions for the organization and get most of the credit or blame, but they should make sure that their promises for rewards and disincentives made to workers are kept.
16	Democratic Transformational	Supervisors should provide opportunities for staff members to be involved in decision making while serving as mentors during times of change.
17	Democratic Transformational	Supervisors should be open to others' ideas, yet he or she should guide employees to become stronger workers.
18	Democratic Transformational	Supervisors should be highly concerned about developing staff's ability to contribute to making important organizational decisions.

Appendix A Vannsimpco Leadership Survey

19	Democratic	Supervisors should be comfortable working with groups to seek their
	Transactional	input in making decisions while providing incentives and disincentives for the quality of their work.
20	Democratic Transational	In order to make decisions, supervisors should discuss issues with all of
	Transactional	the staff members while considering which incentives and disincentives should be used in response to the quality of their work.
21	Democratic	Supervisors should be concerned about building consensus among staff
	Transactional	members while making sure they understand the timelines, as well as
		their benefits and penalties in relation to achieving goals.
22	Transformational	Supervisors should rely on personal influence and relationship building
		rather than on position or title to get staff to do work tasks.
23	Transformational	Supervisors should develop strategies to develop the staff's competence
		and commitment.
24	Transformational	Supervisors should look for ways to develop the strengths of staff members.
25	Laissez Faire	Supervisors' jobs are to read reports and "see the big picture;" nearly all of their work should involve little or no direction of the staff members who make point of contact decisions
26	Laissez Faire	Staff members should be hired with skills necessary to make decisions in the workplace. If staff members need direct supervision, they should not be working in the organization.
27	Laissez Faire	Supervisors should hire competent and committed staff members, which relieves the "manager" from making most of the day-to-day decisions.

Appendix B Korean

Rotated Component Matrix ^a							
				Factor			
	1	2	3	4	5	6	7
Question 24	.856						
Question 19	.846						
Question 23	.802						
Question 18	.795						
Question 13	.783		.391				
Question 17	.766					.308	
Question 21	.745			.409			
Question 16	.739				.313		
Question 11	.645						.546
Question 10	.635						.544
Question 12	.583	302					.398
Question 20	.558	.435					401
Question 5	.548			.475			
Question 26		.880					
Question 27		.733			309		
Question 22		.683					
Question 25		.671			.353		
Question 15			.840				
Question 14	.379		.790				
Question 7			.638				
Question 9	.370		.577	.317			
Question 6				.867			
Question 3				.616		.318	
Question 8					.804		
Question 4				.431	.595		
Question 1						.810	.317
Question 2	.337					.765	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 8 iterations.

Appendix C American

Rotated Component Matrix^a

				Fac	ctor			
	1	2	3	4	5	6	7	8
Question 24	.862							
Question 18	.839							
Question 23	.820					.331		
Question 17	.672						.300	
Question 16	.571			.325			.355	
Question 19	.534		.302		.411			.352
Question 21	.495							.398
Question 26		.875						
Question 27		.844						
Question 25		.776						
Question 3			.826					
Question 2			.800					
Question 14			.639					
Question 13	.382		.442	397	.346			.392
Question 12	.367		.429			.350		
Question 6	.313			.833				
Question 5	.306			.789				
Question 22	.365	.356	416	.494				
Question 11					.839			
Question 20	.372			.466	.548			
Question 15		.422	.302		.489		.325	
Question 8						.799		
Question 7			.409			.627		
Question 10							.790	
Question 9						.522	.707	
Question 1								.838
Question 4	.378				301		.382	.481

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 17 iterations.

Appendix D Korean

Total Variance Explained

				Extraction Sums of Squared			Rotation Sums of Squared		
	Initial Eigenvalues				Loadings			Loadings	
		% of	Cumulat		% of	Cumulat		% of	Cumulat
Factor	Total	Variance	ive %	Total	Variance	ive %	Total	Variance	ive %
1	9.627	35.657	35.657	9.627	35.657	35.657	7.519	27.846	27.846
2	2.974	11.016	46.674	2.974	11.016	46.674	2.767	10.247	38.093
3	2.081	7.707	54.381	2.081	7.707	54.381	2.717	10.063	48.156
4	1.712	6.339	60.720	1.712	6.339	60.720	2.265	8.387	56.543
5	1.487	5.508	66.227	1.487	5.508	66.227	1.823	6.753	63.296
6	1.254	4.643	70.871	1.254	4.643	70.871	1.747	6.469	69.766
7	1.058	3.917	74.788	1.058	3.917	74.788	1.356	5.022	74.788
8	.919	3.402	78.190						
9	.866	3.206	81.396						
10	.719	2.664	84.060						
11	.611	2.262	86.322						
12	.542	2.009	88.331						
13	.437	1.619	89.949						
14	.409	1.516	91.465						
15	.357	1.324	92.789						
16	.341	1.264	94.053						
17	.332	1.231	95.284						
18	.284	1.050	96.334						
19	.216	.799	97.133						
20	.188	.698	97.830						
21	.160	.592	98.423						
22	.134	.496	98.919						
23	.108	.401	99.319						
24	.062	.231	99.550						
25	.058	.215	99.765						
26	.043	.161	99.926						
27	.020	.074	100.000						

Extraction Method: Principal Component Analysis.

Appendix E American

Total Variance Explained

	Extraction Sums o				of Squared Rotation Sums of Squared					
	Initial Eigenvalues				Loadings			Loadings		
		% of	Cumulati		% of	Cumulati		% of	Cumulati	
Factor	Total	Variance	ve %	Total	Variance	ve %	Total	Variance	ve %	
1	7.756	28.726	28.726	7.756	28.726	28.726	4.555	16.872	16.872	
2	3.252	12.046	40.772	3.252	12.046	40.772	2.954	10.940	27.812	
3	2.906	10.762	51.534	2.906	10.762	51.534	2.906	10.764	38.576	
4	1.698	6.288	57.822	1.698	6.288	57.822	2.494	9.239	47.815	
5	1.600	5.927	63.749	1.600	5.927	63.749	2.083	7.716	55.530	
6	1.491	5.524	69.273	1.491	5.524	69.273	2.051	7.597	63.127	
7	1.118	4.142	73.415	1.118	4.142	73.415	1.941	7.191	70.318	
8	1.064	3.941	77.357	1.064	3.941	77.357	1.901	7.039	77.357	
9	.889	3.291	80.648							
10	.748	2.770	83.418							
11	.718	2.658	86.076							
12	.569	2.108	88.184							
13	.519	1.922	90.105							
14	.489	1.812	91.917							
15	.375	1.388	93.305							
16	.352	1.302	94.607							
17	.279	1.033	95.640							
18	.257	.950	96.590							
19	.209	.772	97.363							
20	.178	.659	98.022							
21	.160	.593	98.615							
22	.126	.466	99.081							
23	.086	.320	99.401							
24	.063	.233	99.634							
25	.060	.221	99.855							
26	.031	.115	99.970							
27	.008	.030	100.000							

Extraction Method: Principal Component Analysis.