

Leadership Attitudes and Beliefs of Incoming First-Year College Students: A Multi-institutional Study of Gender Differences

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Abstract

Incoming first-year college students ($N = 4,292$) were surveyed regarding attitudes and beliefs about leadership. Students' opinions about their leadership ability were high and were related to having an outgoing personality, as well as the number of high school activities in which they had been involved. In addition, students' understanding of leadership was largely hierarchical and unsophisticated. Gender was strongly related to beliefs about leadership, with males indicating a stronger belief in hierarchical leadership, and females indicating a stronger belief in systemic leadership. The results indicated men and women are most likely to be anchored in Komives et al.'s (2009) Stages 2 and 3

whereas women also show some characteristics of Stage 4. It was argued these results support a modular approach to leadership development in which students acquire credits toward a certificate in leadership and where some components of the training activities involve separating the genders.

Introduction

Institutions of higher learning are uniquely positioned to promote leadership development and encourage interest in leadership (Astin & Astin, 2000; Boatwright & Egidio, 2003; Thompson, 2006). However, despite its importance, limited resources are available for leadership development programming at colleges and universities (Astin & Astin, 2000). Therefore, a better understanding of the leadership attitudes and beliefs of incoming first-year students may allow institutions to more effectively meet their needs, and efficiently use institutional resources to develop effective leadership programs (Fischer, Overland, & Adams, 2010).

We have found that the ecological model is effective for helping students think about and develop their approach to leadership. This model of leadership (Allen, Stelzner, & Wielkiewicz, 1998; Wielkiewicz & Stelzner, 2005) proposes a tension between an ecological (collaborative) approach and an industrial (hierarchical) approach to leadership processes. More recently, we have been referring to this model as balanced leadership. Positional leaders remain important in this model, but their decision-making should include a diversity of outlooks so there is a chance for the organization to comprehend its situational opportunities and constraints. When consensus cannot be obtained after reasonable efforts, leaders need to make decisions in an effective, timely manner. Relying exclusively on collaborative leadership can lead to an organization's collapse, because the amount of available information addressing a challenge is almost infinite, constantly being updated, and could engage the organization indefinitely. The best leaders balance the industrial and ecological approaches and optimize this tension based on group or organizational circumstances (Wielkiewicz & Stelzner, 2005). Although Wielkiewicz and Stelzner describe how leadership operates at the organizational or group level, they do not address the process through which an individual's identity as a leader might develop.

Komives et al. (2009) have proposed a developmental model of leadership identity consisting of six stages they call the Leadership Identity Development Model (LID). In summary, the model proposes a sequence of six stages through which an individual progresses as their identity as a leader develops. Each of the six stages is briefly described below (see Komives et al., 2009, Figure 1, p. 15, and Figure 2, pp. 17-20, for their summary of the model).

- *Awareness* (Stage 1): In this stage the child becomes aware of the concept of leadership. That is, there is a developing recognition that leadership is “out there” and that certain people in their environment such as political leaders, teachers, and school principals are “leaders.”
- *Exploration/Engagement* (Stage 2): In this stage the individual becomes involved with groups, usually to form friendships. As group members they have some responsibilities to the group whether it is in sports, scouting, clubs, or class projects. They are learning to interact with others and engage in group processes.
- *Leader Identified* (Stage 3): At the beginning of Stage 3, the individual is learning about the dynamics of groups. They see that there are various roles in groups and that the leader is a key person who takes responsibility for getting the group’s tasks done. In the middle of this stage, they identify the leaders as the key individuals holding positional roles and see them as being “in charge” of groups. Wielkiewicz and Stelzner (2005) characterize this as the “default” model of leadership for most of society. However, according to the LID model, individuals can transition out of this stage as they begin to recognize the complexities of leadership processes and understand that leaders cannot do everything themselves. The transition out of this stage may result from a “crisis” that leads them to question the hierarchical model of leadership. On the other hand, Komives et al. recognized that many individuals fail to transition out of Stage 3 holding on to a hierarchical view of leadership.
- *Leadership Differentiated* (Stage 4): In this stage the focus shifts from the identified leader to viewing leadership as a process that is not controlled exclusively by positional leaders. Leadership is now seen as a shared group process. Positional leaders remain important, but they have a facilitative role and do not control the group or organization. In sum, students in this stage see leadership as a process spread throughout the group or organization, not merely “owned” by positional leaders. Interpersonal connections take precedence over command and control. Transitions out of this stage are the result of looking toward developing the group or organization, serving society, and planning for the sustainability of the group.
- *Generativity* (Stage 5): In this stage, the individual actively contributes to the development of others and the sustainability of the organization. They

have developed a set of core beliefs that sustains them and guides their own behavior.

- *Integration/Synthesis* (Stage 6): One of the main themes in this stage is the process of lifelong learning. Individuals become aware of their own developmental processes and are capable of “recycling” through the stages of the LID model. With their awareness of the stages of leadership development, they can assist others through the developmental process and particularly help others through the inevitable crises that are a key to growth.

Komives et al. (2009) suggest that individuals proceed sequentially through the stages and that they need to explore earlier stages before transitioning into later stages. As noted above, a key crisis occurs in Stage 3 to Stage 4. In Stage 3 individuals view leadership as being focused upon positional leaders who function in a hierarchical organizational structure. Furthermore, they suggest moving beyond Stage 3 would take the individual to a more balanced perspective in which non-hierarchical and systemic views of leadership begin to take shape. We hypothesize that incoming first-year students would be most likely to show characteristics of Stage 3 of Komives et al.’s Leadership Identity Development (LID) model. High school students have been exposed mainly to hierarchical leadership structures such as the typical school administration with the school principal near the top of a well-defined hierarchy and with teachers having the primary leadership role in the classroom. Although some high school students may experience crises or events moving them away from the leader-centered perspective, we think it would take more deliberate, programmed experiences and guidance in the interpretation of such experiences to move students beyond Stage 3 thinking into a non-hierarchical and systemic view of leadership. However, it is possible incoming first-year students might be more characteristic of Komives et al.’s Stage 2 (Exploration) in which being involved in organizations and activities is the dominant theme. Because the marketing theme of many higher education institutions centers around the wide variety of opportunities for involvement at each institution, there may be encouragement to remain stuck in this stage. In sum, we hypothesize that incoming first-year students will show characteristics of Stages 2 and 3 of Komives et al.’s Leadership Identity Development theory.

The Leadership Attitudes and Beliefs Scale (LABS) was created in order to assess an individual’s beliefs and inclinations toward hierarchical or industrial thinking and systemic or ecological thinking about leadership (Wielkiewicz, 2000; Wielkiewicz, 2002). The LABS has two scales: the Hierarchical Thinking scale consists of 14 items, tailored to the belief that organizational leadership should be allocated by position, and positional leaders are responsible for the success or

failure of the organization. The Systemic Thinking scale also consists of 14 items, tailored to the belief that organizational leadership should be every individual's responsibility and the idea that open communication and adaptability provide a stronger chance for an organization's success (Wielkiewicz, 2000; Wielkiewicz, 2002). Because the LABS assesses the hierarchical (individual) and systemic (relational) components of leadership, the instrument is likely to provide an accurate snapshot of incoming first-year students' leadership identity (Komives, Owen, Lingerbeam, Mainella, & Osteen, 2005). Komives et al. found that hierarchical thinking characterized students in Stage 3 whereas systemic thinking emerged in Stage 4. Theoretically, a skilled leader at Stage 5 or Stage 6 would be characterized by a tendency toward both Hierarchical Thinking and Systemic Thinking, i.e., embracing both hierarchical and systemic forms of leadership (Wielkiewicz & Stelzner, 2005). The current study used the LABS as the primary assessment device.

It has been suggested all leadership research should investigate how gender relates to leadership, because it is an important moderator of leadership beliefs and behaviors (Sanchez-Hucles & Davis, 2010; Eagly & Johnson, 1990). Leadership should be viewed as a socially constructed process based on life experiences (Arminio, et al., 2000; Astin & Astin, 2000; Kupers & Wiebler, 2008) with self-identity and the expectations others communicate to the individual as important components of their life experience (Komives et al., 2005; Sanchez-Hucles & Davis, 2010). Society's gender role expectations influence an individual's leadership attitudes and beliefs (Chin & Sanchez-Hucles, 2007; Kezar & Moriarty, 2000; Peters, Kinsey & Malloy, 2004). Studies have found descriptors such as cooperative, participatory, interpersonal, and relationship-oriented are thought of as primarily feminine styles of leadership (Chin & Sanchez-Hucles, 2007; Eagly & Johnson, 1990; Kezar & Moriarty, 2000; Rosenbusch & Townsend, 2004). Descriptions such as task-oriented, hierarchical, and competitive are thought of as masculine styles (Murphy, Eckstat, & Parker, 1995). Women have also been found to rate their own leadership abilities significantly lower than men do (Bass & Avolio, 1994; McCormick, Tanguma, & Sohn, 2003; Sax & Harper, 2007) and women hold drastically fewer top leadership positions than men (Boatwright & Egidio, 2003; Peters, Kinsey, & Malloy, 2004; Kawakami, White, & Langer, 2000; Sanchez-Hucles & Davis, 2010). On the other hand, women have shown the relational, less hierarchical style of leadership many organizations are realizing might be the key to better leadership (Bass & Avolio, 1994; Boatwright & Egidio, 2003; Portman & Garrett, 2005). We need to know more about leadership and gender so leadership development can be customized to the needs of both males and females. Fischer, Overland, and Adams (2010) suggested that understanding the leadership attitudes and beliefs of incoming first-year students, within the context of the

ecological model of leadership, may be useful in developing effective leadership programming. However, because the sample was limited to two small, private, Catholic, liberal arts colleges, there is a question as to whether the results of Fischer et al. (2010) can be extrapolated to the larger population. The current study builds upon the research of Fischer et al. (2010) by examining leadership from both a hierarchical (industrial) and systemic (ecological) perspective, in combination with information about gender, personality, academic behavior, self-perceptions of leadership ability, and other demographic variables. The current study also broadens the sample to include incoming first-year students from a variety of colleges/universities throughout the United States. With this study, we intended to develop a generalizable description of incoming first-year students before they had been exposed to college life. The results of the study are discussed within the context of both the ecological model of leadership and the leadership identity development model described by Komives et al. (2009). We hypothesized that incoming first-year students will show characteristics of Stages 2 and 3 of Komives et al.'s Leadership Identity Development theory.

Method

Participants

Solicitation of participants occurred in two phases. In the first phase, cooperation of institutions was solicited through administrative contacts and announcements on list serves. Institutions were invited to participate in a multi-institutional study that would provide them with information to improve leadership development programs. Table 1 shows characteristics of the 22 institutions and the percentage of each incoming first-year class participating in the survey. On average, 27.2% of incoming first-year students at the participating institutions completed the survey. To be eligible to participate in the fall 2009 LABS-MI study, institutions agreed to distribute three emails containing a link to an electronic version of the survey to all incoming first-year students within three weeks prior to the first day of classes. The survey took approximately 15 minutes to complete.

Table 1
Demographics of Participating Institutions

Instit.	Number in sample(% Participation ¹)	M	F	Public/Private	Lib. Arts	Religious Affiliation	Single Sex/Co-Ed	2-year or 4-year
1	40 (21.7%)	21	19	Private	Yes	Lutheran	Co-Ed	4-year
2	254 (31.0%)	81	173	Private	Yes	Catholic	Co-Ed	4-year
3	134 (22.6%)	40	94	Private	Yes	Lutheran	Co-Ed	4-year
4	136 (37.8%)	46	90	Private	Yes	Christian	Co-Ed	4-year
5	295 (28.0%)	85	208	Private	Yes	Non-sectarian	Co-Ed	4-year
6	36 (20.5%)	0	36	Private	Yes	Indepen't	SSex (F)	4-year
7	87 (49.7%)	0	87	Private	Yes	Indepen't	SSex (F)	2-year
8	47 (13.4%)	18	29	Private	Yes	Catholic	Co-Ed	4-year
9	236 (17.2%)	88	147	Private	Yes	Indepen't	Co-Ed	4-year
10	81 (12.0%)	30	50	Private	Yes	Methodist	Co-Ed	4-year
11	608 (34.3%)	168	437	Public	No	None	Co-Ed	4-year
12	42 (16.8%)	13	29	Private	Yes	Methodist	Co-Ed	4-year
13	55 (14.8%)	14	41	Private	Yes	Christian	Co-Ed	4-year
14	183 (21.6%)	78	105	Public	No	None	Co-Ed	4-year
15	590 (16.3%)	224	362	Public	No	None	Co-Ed	4-year
16	109 (17.3%)	37	69	Private	Yes	Lutheran	Co-Ed	4-year
17	191 (20.6%)	65	123	Private	Yes	None	Co-Ed	4-year
18	66 (16.3%)	12	54	Public	Yes	None	Co-Ed	4-year
19	86 (13.1%)	34	51	Private	Yes	Catholic	Co-Ed	4-year
20	171 (19.0%)	40	130	Private	Yes	Catholic	Co-Ed	4-year
21	561 (100.0%)	0	561	Private	Yes	Catholic	SSex (F)	4-year
22	255 (54.4%)	253	2	Private	Yes	Catholic	SSex (M)	4-year
None	28	14	14					
Total	4291 (25.1%)	1361	2911					

1. Percent of first-year class from the institution participating in the study.

The sample ($N = 4,292$) was designed to represent college students in the United States and can be compared to national characteristics of the college student population. In this study, 31.7% of participants were male, which is lower than the national percentage of 44.6. Caucasian students were overrepresented at 83.4% compared to the national percentage of 77.3, while Students of Color

(11.5%) were underrepresented compared to the national percentage of 21.2%. A representative sample of international students was obtained at 2.5% compared to 3.06% nationally (NASPA, 2008). Younger college students were also overrepresented: in this sample, 91.4% of the first-year students surveyed were between the ages of 18 and 19, compared with 60.0% of first-year students nationally. In this study 65.6% of participants attended private schools, while nationally only 20.9% of students do (U.S. Census Bureau, 2010). While the sample did not represent college students proportionally by age, gender, and culture, it had substantial numbers in each subgroup, increasing the likelihood that the findings represent the behaviors/attitudes of these groups.

Measures

The survey included questions about cultural background, a general question asking the respondent to rate their own leadership ability on a 5-point scale, a checklist of activities in which they might have been involved while in high school, the LABS (Wielkiewicz, 2000), the Leadership Tensions Scale (unpublished), the Mini-IPIP Scales (Donnellan, Oswald, Baird, & Lucas, 2006), and demographic questions.

The LABS (Wielkiewicz, 2000) consists of 28 statements related to leadership and organizational adaptability. It has two subscales, Hierarchical Thinking (14 items) and Systemic Thinking (14 items) with alpha coefficients of .88 and .84, respectively (Wielkiewicz, 2000). Response options were *strongly agree* (1 point), *agree*, *neither agree nor disagree*, *disagree*, and *strongly disagree* (5 point). Consequently, lower scores in Systemic Thinking and Hierarchical Thinking are associated with stronger beliefs in each area. The convergent and discriminative validity of the Systemic and Hierarchical Thinking scales have been established (Wielkiewicz, 2002). Previous research using the LABS shows it is a valid tool for evaluating and understanding leadership in college students (Fischer, Overland, & Adams, 2010; Thompson, 2006; Wielkiewicz, 2000; Wielkiewicz, 2002).

The Leadership Tensions Scale (LTS) was developed especially for the present study. Originally, the scale contained 19 items, but 3 items were eliminated because they did not contribute to the reliability of the scale. The scale was designed to reflect the current version of the theory that had inspired the LABS scale (see Wielkiewicz & Stelzner, 2005). Instead of treating Hierarchical and Systemic Thinking as independent dimensions, the LTS asks respondents to look at a particular leadership tension (e.g., *Maximize profit vs. Make ethical issues the highest priority*; *Focus on the decision making process vs. Focus on making decisions as quickly as possible*) and then mark a location on a 9-point scale

representing “the appropriate relative weight or balance that these characteristics would have in a successful organization.” Half of the items were reverse-scored.

The Mini-IPIP Scales (Donnellan et al., 2006) is a 20-item public domain measure of the Five Factor Model of Personality (e.g., Goldberg, 1992). It measures the five dimensions of the Big Five Model (Extraversion, Agreeableness, Conscientiousness, Neuroticism, & Intellect/Imagination) with four items per dimension, while maintaining good subscale reliabilities.

Results

General

Table 2 shows characteristics of the scale variables in the study. Student ratings of their own leadership ability were high with 15.1% ($N = 646$) rating their ability as “Very High.” In response to a question asking whether they were a leader, 83.1% ($N = 3,476$) said “Yes.”

Table 3 shows bivariate correlations among the quantitative variables in the study. A stepwise multiple regression analysis was used to determine the most important influences upon Self-Rated Leadership.

The results ($N = 2,908$) are shown in Table 4. Fifteen variables (High School GPA, Total Number of Activities, Religious Participation, Socio-economic Status, Liberalism versus Conservatism rating, Extraversion, Agreeableness, Conscientiousness, Neuroticism, Intellect/Imagination, Systemic Thinking, Hierarchical Thinking, Leadership Tensions Scale, Gender, & Hours per Week of Reading for Pleasure) were entered into the initial analysis and eight variables made significant contributions to predicting Self-Rated leadership Ability. Three replications of this analysis were conducted using randomly selected subsets (70%, 50%, & 30%) of the entire sample. In these analyses, and separate analyses of males and females, Extraversion and Total Number of Activities were always the first two variables to enter the regression equation and made the most stable contribution to predicting Self-rated Leadership Ability.

Table 2
Means, Standard Deviations, and Alphas for Variables in the Study

	Mean	<i>N</i>	<i>SD</i>	Cronbach's Alpha
Hierarchical Thinking	36.85	3,827	7.73	.850
Systemic Thinking	26.62	3,796	6.09	.857
Extraversion	13.68	4,009	3.51	.808
Agreeableness	16.49	3,996	2.58	.717
Conscientiousness	14.47	3,976	2.98	.678
Neuroticism	10.53	3,977	3.00	.636
Intellect	15.02	3,975	2.91	.723
LTS_16	99.01	3,729	14.75	.840
Standardized HS GPA	3.56	4,159	.38	
Self-rated Leadership (5-pt scale)	3.80	4,192	.77	
Number of Activities	7.03	4,291	3.02	
Religious Attendance	2.61	4,145	1.71	
Socio-economic Status	5.17	4,154	1.04	
HS study hours per week	8.93	4,114	8.61	
Liberal-conservative rating	3.87	4,017	1.56	

Table 3
Bivariate Correlations among Key Variables in the Study

	Hierarchical Thinking	Systemic Thinking	LTS_16	Self-Rated Leadership ¹
Hierarchical Thinking	1.00	.393***	.342***	-.062***
Systemic Thinking	.393***	1.00	-.253***	-.199***
Extraversion	-.064***	-.188***	.014	.405***
Agreeableness	.069***	-.242***	.288***	.144***
Conscientiousness	-.131***	-.105***	-.032	.144***
Neuroticism	-.018	.043**	-.021	-.075***
Intellect	.079***	-.226***	.251***	.170***
LTS_16	.342***	-.253***	1.00	.058***
HS GPA (4.0 Scale)	.137***	-.005	.085***	.061***
Self-rated Leadership	-.062***	-.199***	.058***	1.00
Number of Activities	.062***	-.155***	.097***	.337***
Religious Attendance	.019	-.045**	-.018	.085***
Socio-Economic Status	-.018	.005	-.055***	.072***
HS study hours per week	-.006	-.111***	.063***	.054**
Liberal-conservative rating	-.106***	.090***	-.264***	.002

Note. All *Ns* > 3,471. ¹ Student ratings of their own leadership abilities on a scale of 1 (*very low*) to 5 (*very strong*). * $p < .05$; ** $p < .01$; *** $p < .001$

Table 4
Multiple Regression of Self-Rated Leadership Ability

	<i>B</i>	β	Part <i>r</i>	<i>t</i>	Significance
Extraversion	.073	.338	.322	20.19	.000
Number of Activities	.065	.234	.221	13.88	.000
Systemic Thinking	-.011	-.082	-.079	-4.93	.000
Conscientiousness	.026	.101	.100	6.29	.000
Gender	-.162	-.100	-.099	-6.19	.000
Hours/wk Pleasure Reading	.006	.057	.055	3.42	.001
Intellect	.015	.057	.053	3.33	.001
Religious Attendance	.014	.032	.031	1.98	.048

$R^2 = .263$; Adjusted $R^2 = .262$; $R = .514$, $p = .000$; $N = 2,908$

Table 5
Gender Differences for Variables in the Study

	Male		Female		<i>t</i>	<i>p</i>	Effect Size <i>d</i>
	Mean	<i>SD</i>	Mean	<i>SD</i>			
Hierarchical Thinking	35.44	7.75	37.54	6.62	7.92	.000	.274
Systemic Thinking	26.40	6.23	26.74	6.02	1.62	.104	.056
Extraversion	13.38	3.48	13.82	3.51	3.78	.000	.128
Agreeableness	15.78	2.64	16.83	2.48	12.14	.000	.411
Conscientiousness	14.17	2.83	14.62	3.04	4.46	.000	.151
Neuroticism	9.49	2.86	11.03	2.93	.907	.000	.530
Intellect	15.13	2.96	14.96	2.89	.147	.092	.057
LTS_16	95.87	14.88	100.6	14.42	9.175	.000	.321
Standardized HS GPA	3.48	.402	3.60	.362	9.96	.000	.33
Self-rated Leadership (5-pt scale)	3.85	.755	3.77	.769	2.80	.005	.105
Number of Activities	6.73	2.85	7.16	3.09	4.34	.000	.143
Religious Attendance	2.49	1.71	2.67	1.70	3.16	.002	.106
Socio-economic Status	5.23	1.07	5.14	1.02	2.60	.009	.087
HS study hours per week	7.32	7.33	9.67	8.97	8.33	.000	.277
Liberal-conservative rating	4.01	1.57	3.81	1.55	3.97	.000	.129

Note. For males, all N 's were greater than 1,211. For females, all N 's were greater than 2,500.

Gender Differences

Table 5 shows means for males and females, statistical significance, and effect sizes for the major quantitative variables in the study. Because lower scores on the Hierarchical Thinking and Systemic Thinking scales indicate stronger beliefs in that style of leadership, the significant difference between men and women on Hierarchical Thinking shows men have a stronger tendency to think hierarchically about leadership than women as found by Fischer et al. (2010) with comparable effect sizes for the two studies. Consistent with Fischer et al. (2010), males and females did not differ significantly in Systemic Thinking scores in the present study. The Leadership Tensions Scale is constructed so higher scores indicate the individual was more inclined toward the systemic side of the tension. Thus, these results show females tend to prefer the systemic side of the tension relative to males, although the interpretation that men had more affinity toward the hierarchical side of the tension is just as valid. The sample also provided an opportunity to compare females from single-sex institutions versus females from coed institutions. The only statistically significant difference in mean scores for the leadership measures was Hierarchical Thinking, $t(2,569) = 2.63, p = .009$, but the effect size was only .125.

Student Perceptions of Influences upon Their Leadership Development

Responses to an open-ended question asking students to describe an event or activity that was most influential in the development of their leadership ability were categorized according to whether the activity had both leader and follower roles. For activities that could be so divided, means were compared for those who reported being in leadership positions versus those who only mentioned participation in the activity. Statistically significant results with self-rated leadership ability as the dependent variable were as follows. Leadership in a sports activity ($M = 3.91, SD = .679$) differed significantly from participation ($M = 3.76, SD = .754$), $t(1099) = 3.63, p = .000, ES = .21$. Leadership in a non-school group ($M = 4.19, SD = .76$) differed significantly from participation ($M = 3.78, SD = .792$), $t(75) = 2.29, p = .025, ES = .53$. Leadership in the National Honor Society ($M = 4.24, SD = .577$) differed significantly from participation ($M = 3.83, SD = .696$), $t(69) = 2.60, p = .011, ES = .63$. Leadership in school government ($M = 4.15, SD = .626$) differed significantly from participation ($M = 3.88, SD = .732$), $t(248) = 3.08, p = .002, ES = .40$

Differences across Institutions

Table 6 shows means, SDs, and effect sizes for differences among the institutions included in the sample when they were classified as being Catholic, other religious, or non-religious institutions according to the information on their websites. These data provide a comparison of the magnitude of differences between institutions versus differences across subgroups within institutions. Finally, Table 7 shows the results and effect sizes for analyses of variance with the 22 institutions as the independent variable.

Table 6
Means (SDs) and Effect Sizes for Catholic, Other Religious, and Non-Religious Institutions in the Sample

Test Variable	Catholic (A)	Other Religious (B)	Non- Religious (C)	<i>F</i> -Ratio	<i>p</i>	<i>ES</i>
						<i>A vs. B / A vs. C / B vs. C</i>
Heirarch Th	36.9 (7.8)	35.9 (8.0)	37.0 (7.6)	4.53	.011	.13 / .01 / .14
Systemic Th	26.4 (6.0)	26.9 (6.4)	26.7 (6.1)	1.23	.291	.08 / .05 / .03
LTS ¹	99.0 (14.6)	97.32 (14.1)	99.4 (14.9)	4.44	.012	.12 / .03 / .14
Relig Attend ²	2.8 (1.5)	3.2 (1.8)	2.3 (1.7)	76.01	.000	.25 / .31 / .52
Lib vs. Cons ³	4.0 (1.5)	4.3 (1.6)	3.7 (1.5)	35.94	.000	.20 / .20 / .39
Econ. Status ⁴	5.3 (1.0)	5.0 (1.0)	5.1 (1.0)	11.49	.000	.30 / .20 / .10

¹Leadership Tensions Scale ²Religious Activity Attendance 0 = Never; 1 = Once or twice/yr; 2 = Several times/yr; 3 = A couple of times /month; 4 = Once / week. ³ 1 = Liberal; 7 = Conservative.

⁴Socio-economic status: 1 = Very Poor; 5 = mid class; 9 = Elite

Table 7
One-way Analyses of Variance by Institutions

	df	SS _{Bet.} ; SS _{w/i}	F	p	Effect Size ¹	Effect Size ²
Hierarchical Thinking	21, 3778	11144; 215,992	9.28	.000	0.85	.049
Systemic Thinking	21, 3748	2,215; 137,889	2.86	.000	0.69	.016
High School GPA	21, 4109	86; 508	33.15	.000	1.93	.145
Self-Rated Leadership Ability	21, 4140	31.6; 2,404.5	2.59	.000	0.63	.013
Socioeconomic Status	21, 4102	190.5; 4,260.0	8.74	.000	1.15	.043
HS Weekly Study Hours	21, 4062	12,418; 290,576	8.25	.000	0.87	.041
Liberal/Conservative	21, 3966	584.3; 9,105.7	12.12	.000	1.31	.060
Leadership Tensions Scale	21, 3684	24,218; 779,565	5.45	.000	0.80	.030
Extraversion	21, 3959	844.8; 48,132.0	3.31	.000	0.59	.017
Agreeableness	21, 3947	424.4; 26,011.8	3.07	.000	0.72	.016
Conscientiousness	21, 3927	566.0; 34,425.3	3.08	.000	0.63	.016
Neuroticism	21, 3929	950.8; 34,565.4	5.15	.000	0.76	.027
Intellect/Imagination	21, 3925	701.9; 32,740.7	4.01	.000	0.58	.021
Total Number of Activities	21,4239	1,652.7; 37,192.8	8.97	.000	0.78	.043
Religious Participation	21, 4093	1,138.5; 10,843.4	20.46	.000	1.82	.095
Weekly Pleasure Reading	21, 3949	4,777; 198,446	4.53	.000	0.94	.024

¹ Standardized –difference effect size, Grissom & Kim (2005), Formula 6.3; shows the difference between the largest and smallest mean. Similar to Cohen's *d*.

² ω^2 , percent of variance accounted for.

Discussion

Generalizability of the Sample

The current study provided a snapshot of leadership attitudes and beliefs of incoming first-year students with a large sample size ($N = 4,292$) and reliable measures. These results should generalize to a wide range of student development situations, even though the sample may not have proportionally represented all the demographic characteristics of incoming undergraduates, because the subgroups were represented by reasonable sample sizes. The present sample over-represented the Midwest, the east coast, and Catholic institutions. The sample under-represented the west coast and institutions serving high proportions of students of color. Table 7 shows that effect sizes of the differences between scores on the leadership variables (Hierarchical Thinking, Systemic Thinking, & the Leadership Tensions Scale) ranged from .01 to .14 between schools. Differences across institutions are large when the two most extreme means are compared, but the proportion of variance accounted for by institutions is relatively small, typically less than 5%.

Student development practitioners will likely find the variations within the student populations they serve (e.g., gender differences) are more important than identifying how their own institution might be uniquely different from other institutions. This implies that adapting leadership development programs from other institutions would be a reasonable strategy for any institution. On the other hand, expecting a leadership development program to function in the same way with men and women may not be realistic. Instead, institutions may need to make adjustments so their programs can be effective with all subgroups on their campuses.

Student Opinions about Their own Leadership Ability

Incoming first-year students, both men and women, think very highly of their own leadership abilities and the data showed the most robust predictors of students' self-ratings of their leadership ability were the number of activities in which they had participated and having a more outgoing (extraverted) personality (Table 4). This result suggests that incoming first-year students generally show the characteristics of Komives et al.'s (2009) Stages 2 and 3. They seem motivated to engage in a wide range of activities and their self-identity as leaders is most strongly correlated with the number of activities in which they have engaged. Yet, their own identity as leaders is not associated with more sophisticated beliefs about the nature of leadership. In fact, these data suggest students have an

unsophisticated view of leadership, because variables measuring leadership beliefs or attitudes did not correlate consistently with self-ratings of leadership. Furthermore, students who had a leadership role in an activity that was important to their understanding of leadership had higher self-rated leadership ability. In other words, experiences such as being club president or team captain lead to more confidence in their own leadership ability. Yet, the experience did not lead to a deeper understanding of leadership. They remain committed to hierarchical beliefs while they have not had opportunities to thoroughly explore hierarchical leadership, let alone alternative approaches to leadership.

As first-year students become involved in activities and experiences available in college, extroverted students with prior experience in positions of leadership and high opinions of their own leadership ability may be the most likely to run for the various elected leadership positions in student affairs and be appointed to other positions. These individuals are initially likely to take a hierarchical approach to leadership and take on most of the responsibility for the direction of the organization or project. While taking on leadership responsibilities under the belief that they are “the leader” of the group or organization, such individuals may not engage in behaviors and actions promoting the sustainability of the group, project, or organization. Some individuals who take the role of “leader” seriously may attempt to do everything themselves without significant input from other stakeholders. The result is an inefficient or ineffective group. The challenge for leadership development staff is to provide appropriate experiences intended to challenge students to think differently about leadership.

Komives et al. (2009) suggest that as students move from Stages 2 (Exploration) through 3 (Leader Identified) and on to Stage 4 (Leadership Differentiated) they need to encounter experiences and mentors that help them to see that contributions to leadership can emerge from all members of an organization. Emerging leaders may need help recognizing they cannot do everything for the organization by themselves and it takes contributions from many group members to develop a successful organization or club. Similarly, the balanced model of leadership posits that leadership may emerge from a variety of areas within the organization based on the situation (Wielkiewicz & Stelzner, 2005) and understanding this model also requires emerging leaders move beyond the Leader Identified stage. Therefore, it makes sense for colleges to provide structured learning opportunities that will nurture the students’ ability and motivation to engage in leadership and invite other group members to contribute (Avolio & Hannah, 2008). They note that student development staff must also be ready to provide the mentorship and social support necessary for burgeoning leaders to be willing to take risks and explore alternative solutions to problems). Such activities might include instruction and practice in group decision making, exercises

increasing appreciation for diversity, structured assessment of beliefs and attitudes about leadership, examination of leadership theories, time and stress management, study abroad, and making presentations. However, student development staff must also account for the facts that (a) most incoming students hold strong hierarchal beliefs about leadership that need to be challenged, (b) incoming students already see themselves as good or excellent leaders, and (c) students' own ideas about leadership development may consist of adding more activities and roles to their résumé's.

From the perspective of Leadership Identity Development (Komives et al., 2009) the main challenge is to help students move from Stage 3 in which they see leadership as mainly hierarchical and the responsibility of positional leaders to Stage 4 in which leadership can be seen as a collaborative process. According to Komives et al. students in Stage 3 need to thoroughly explore the hierarchical perspective of leadership and experience a "crisis" causing them to be open to a more collaborative approach in which leadership can be seen as a process. This crisis may be one actually experienced by the student or it can be vicariously created through appropriate group experiences such as viewing movies or reading and discussing case studies. We also suggest that an examination of current political issues, especially those directly relevant to students, might assist in creating a crisis which causes the student to reconsider hierarchical views of leadership. For this reason we believe leadership development programs consisting of a series of independent but structured activities leading to a leadership certificate may be an optimal approach for college students. It taps into their desire for a variety of additional activities while presenting opportunities for real growth. Most important, however, the activities leading to a certificate need to be sequenced appropriately. A sophisticated presentation about balanced leadership theory (Wielkiewicz & Stelzner, 2005) is unlikely to be successful if the students are still in Stage 3 and have not thoroughly explored hierarchical leadership so they can understand both its flaws and advantages. The leadership development activities need to be developmentally appropriate so in-coming first-year students can successfully transition from Stage 3 to Stage 4.

This leads to a question that needs to be vigorously debated and researched by leadership development staff members. Is it the responsibility of leadership development staff to provide experiences that can cause students to question and move beyond hierarchical beliefs, or should staff wait for teachable moments and opportunities to help the student recognize the challenges as they occur and coach the students through the leadership process? This is a point that, while subtle, is important. It moves us away from programming specific leadership development events which the student may view as artificial and unimportant (i.e., it is not a "real crisis"). These artificial events may not provide a sufficient context to

motivate students to integrate the leadership concepts into their own leadership identity. The challenge for leadership development staff is to create a culture wherein students “see” opportunities to challenge their currently held beliefs and leadership style. A key question is whether students can develop the emotional intelligence and self-regulation skills to recognize their need to explore alternatives to the traditional hierarchical model on their own. Perhaps this could be accomplished by creating a leadership development curriculum emphasizing emotional intelligence or this hypothesis could be explored by relating measures of emotional intelligence to the LID model. We are somewhat pessimistic about the possibilities of students choosing their own leadership education path because the hierarchical model has become the default mode for so much of United States society (Wielkiewicz & Stelzner, 2005).

Gender Differences among Incoming First-Year Students

Table 5 shows gender differences for the variables in the study with 13 out of 15 differences being statistically significant. Incoming first-year women tended to be significantly more “neurotic” and agreeable than the males, with medium effect sizes. These two characteristics are probably related, and suggest the young women in this sample tend to react more to events in their daily lives than men. Furthermore, with their significantly higher scores on Agreeableness, it is likely relationships are responsible for some of this stress. As shown in Table 3, higher scores on Agreeableness were associated with a more systemic approach to leadership. These data are consistent with other evidence that women tend to take a more cooperative approach to leadership (e.g., Chin & Sanchez-Hucles, 2007; Eagly & Johnson, 1990; Kezar & Moriarty, 2000). Consequently, incoming first-year women may have characteristics of Komives et al.’s (2009) Stage 4 (Differentiated) not shared by their male cohorts who tend to be more firmly anchored in Stages 2 and 3. Women also tended to be slightly more extraverted and conscientious than males. Consistent with their greater conscientiousness, women also studied more hours per week. Men tended to be more hierarchical in the way they think about leadership and tended to balance leadership processes toward the hierarchical side on the Leadership Tensions Scale. Although the effect sizes were small ($d = .105$), males rated themselves as better leaders and reported more participation in activities ($d = .143$) than females, consistent with prior research (e.g., Murphy, Eckstat, & Parker, 1995).

These results indicate incoming first-year men and women differ in personality and their understanding of leadership. Therefore, similar to the conclusions of Vinnicombe and Singh (2003) and Hopkins, O’Neil, Passarelli, and Bilimoria (2008), leadership development processes for men and women are not the same. Colleges and universities need to recognize these gendered differences in

leadership development and provide strategic programs to address the unique needs of young men and women in developing their leadership potential. With its emphasis on cooperation, consensus building, and careful consideration of the alternatives, it is likely a systemic or ecological approach will be more appealing to women. Women also tend to be less hierarchical in their thinking about leadership, as shown by scores on the Hierarchical Thinking scale and the Leadership Tensions Scale. However, it is important to remember balanced leadership theory proposes a *tension* between the two leadership processes. It is important that the hierarchical and the systemic sides of the tension remain balanced. Consequently, when sufficient information has been gathered and it is time to make and execute a decision, emerging women leaders may benefit from the support of a mentor or coach to help shift to the hierarchical side and either make a decision for the group or push toward a final consensus. Various fears and anxiety, a desire to maintain relationships, and a systemic orientation toward leadership processes would all work against making timely and appropriate decisions t going against the wishes of some group members.

Men, on the other hand, are more likely to enter a leadership situation with less concern for the thoughts and feelings of others and a stronger hierarchical orientation toward leadership, which is the default approach reinforced in American society (Wielkiewicz & Stelzner, 2005). Leadership development programming for male college students, therefore, should provide education about the value of systemic leadership and support mechanisms that will enable young men to practice a more balanced approach. Thus, the results of the current study and the theoretical perspective of balanced leadership suggest males and females may need different leadership education and support mechanisms to reach their full leadership potential. Males need to move toward the systemic or ecological perspective and females need to move toward the hierarchical perspective. At the same time, both sexes need to learn that leadership processes operate most effectively when organization members strive to appropriately balance the two leadership perspectives. This may be most effectively accomplished in single-sex workshops or leadership development experiences rather than coeducational settings.

Our experience and observations, especially of those who gravitate toward elected or appointed leadership positions, suggest it may be productive to separate men and women for at least some portions of leadership development programs where each gender can learn strategies for working with the other gender. Furthermore, women will be working in a world dominated by a hierarchical approach to leadership. How do they learn to hold true to their beliefs when the hierarchal approach is dominant and to incorporate hierarchical strategies into their own leadership when it is necessary? Evidence suggests women who evince

hierarchical leadership characteristics are judged much more negatively than men who evince the same behaviors (Kawakami et al., 2000; Sanchez-Hucles & Davis, 2010). Yet, there appears to be a subgroup of such women who perceive they are very successful in leadership roles despite the negative feedback they receive (Ward, DiPaolo, & Popson, 2009). Ward et al. described what they labeled the alpha female. Their phenomenological study of 13 individuals described a subgroup of bold, confident females eager to take on leadership roles. However, these women evince a dominant, self-confident, and controlling approach to leadership. We argue the confidence and dominance of these individuals in leadership roles represents an unbalanced approach that might be effective in highly task oriented situations such as clubs and study groups but would be ineffective in meeting adaptive challenges where a broader, systemic approach is needed. In our view, the emergence of this subgroup is problematic because it signals a trend toward an unbalanced approach to leadership inadequate for addressing the systemic problems of our environment and society. This is a challenge to researchers who need to discover what underlies these phenomena and a challenge to women and men who need to learn new strategies for developing their own leadership capacities, but in different ways. We need an expansion of the systemic and relational capacities of both males and alpha females so the complexity of leadership practices aligns with the complexity of the problems that need to be addressed. On the other hand, the typical female may need an expansion of her ability to bring the hierarchical side of leadership processes into the foreground when needed.

General Conclusions

The present study develops a snapshot of incoming first-year students' characteristics related to leadership. The general conclusion is first-year students have not yet developed a very sophisticated understanding of leadership. In general terms, males and females seem to be in Stages 2 (Exploration) and 3 (Leader Identified) of Komives et al.'s (2009) Leadership Identity Development process, whereas women also show characteristics of Stage 4 (Differentiated). Yet, almost all of these students consider themselves high or very high in leadership ability. We found institutions are relatively similar to each other, while group differences within institutions are likely to be very influential in terms of what students think about leadership and how they might react to leadership programming. Almost all institutions are likely to find men and women differ substantially in various dimensions related to leadership and different approaches to leadership development for men and women may be needed.

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