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# What Contributes to College Students' Cheating? A Study of Individual Factors

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To better understand the multiple individual factors that contribute to college cheating, we undertook a multivariate analysis of a national sample of 2,503 college students. Our findings indicated that demographic characteristics (e.g., gender, socioeconomic status, and year in college), character qualities (e.g., lack of self-control, others-oriented life purpose), college experience (e.g., academic preparation, extracurricular activities involvement, and working), and student perceptions and attitudes (e.g., attitude toward academic cheating, perception of faculty's actions against cheating and cheating environment) are all significantly associated with academic cheating.

Keywords: academic cheating, attitude and perception, gender, life purpose, self-control

Fifty years ago, William Bowers (1964) launched his seminal work on academic misconduct in college students across the nation. He undertook a large-scale, multicampus study of about 5,000 students in 99 colleges and universities. According to his findings, educational leaders greatly underestimated the magnitude of academic cheating (we use the terms *academic misconduct* and *cheating* interchangeably throughout this article). He found that three fourths of students

admitted to at least one form of cheating and that more than half admitted to two forms. Today, the percentage of students who report academic misconduct remains high (Davis, Drinan, & Bertram Gallant, 2009; Levy & Rakovski, 2006; Pulvers & Diekhoff, 1999). In a recent book on academic cheating, McCabe, Butterfield, and Treviño (2012) noted that they consistently found that more than two thirds of college students report being involved in incidents of academic misconduct.

Scholars have undertaken a variety of studies of individual factors (e.g., age, gender, social class, ethically desirable traits, religiosity) and institutional factors (e.g., honor code, peers' behaviors, understanding and acceptance of integrity policy, faculty behavior and actions) that are linked with student academic misconduct (e.g., Bloodgood, Turnley, & Mudrack, 2008; Bolin, 2004; Bowers, 1964; Gibson, Khey, & Schreck, 2008; Hensley, Kirkpatrick, & Burgoon, 2013; Huelsman, Piroch, & Wasieleski, 2006; McCabe et al., 2012; McCabe & Treviño, 1993; Murdock & Anderman, 2006; Mustaine & Tewksbury, 2005; Rettinger & Jordan, 2005; Rettinger & Kramer, 2009; Stern & Havlicek, 1986; Whitley, 1998). Some scholars believe that we do not know enough about the role of individual factors. For instance, McCabe et al. (2012) noted, regarding the influence of various individual differences on student cheating, "Although we know quite a bit, we often don't have enough high-quality research to make strong claims about such relationships. Clearly, more studies are needed" (p. 89). In light of this need, we undertook this study with the aim of increasing our current understanding of the relationships between academic misconduct and certain individual student background characteristics, beliefs, experiences, and perceptions.

To address these matters we devised a research instrument with the following specific areas of inquiry in mind:

1. Whether and to what extent student background characteristics (gender, race/ethnicity, year in college, social class) are associated with student academic cheating.
2. Whether and to what extent student belief-related identities (political and religious identification) or attributes (self-control and purpose) are associated with student academic cheating.
3. Whether and to what extent the involvement of cocurricular activities on and off campus (student participation in work, fraternity or sorority life, level of social activity, etc.) is significantly associated with student academic cheating.
4. Whether and to what extent certain student attitudes and perceptions of cheating and the cheating environment are associated with academic cheating.

Although the extant literature has addressed some of these areas, as McCabe et al. (2012) noted, we need a thorough national study that can help us understand the relationship between these factors. Moreover, because much of the recent literature used samples from students at one or two college campuses, we obtained a large, national sample of 2,503 college students to respond to our research instrument.

## REVIEW OF THE LITERATURE

One important challenge when measuring academic misconduct is that researchers have different definitions of the term and measure it differently (Eve & Bromley, 1981; Haines, Diekhoff,

LaBeff, & Clark, 1986; McCabe et al., 2012). For instance, Brown and Emmett (2001) suspected that studies reporting a high cheating rate among college students simply defined the term too broadly. In this study, we defined academic misconduct as behaviors that undermine the common rules and norms governing learning at higher education institutions. As is detailed in the Method section, we identified the problematic behaviors using a nine-question instrument initially created by Bowers (1964) and used by McCabe et al. (2012).

As mentioned earlier, this study focused primarily on individual student characteristics and not institutional factors, such as the role of institutional honor codes. We did decide to include students' perceptions of contextual/institutional factors that might influence academic misconduct. There were two reasons for this dual focus. First, relatively few studies included an extensive list of student characteristics when examining the relationship between individual-level factors and student academic misconduct. In contrast, we examined several possible predictors, enabling us to compare their relationships with academic misconduct. Second, although we need additional knowledge about the role of individual student characteristics, individual differences alone have been shown to be weak predictors of academic misconduct (McCabe et al., 2012). Consequently, we believed that additional knowledge about students' engagement with and perceptions of the wider academic culture would likely provide insight into effective institutional interventions over which administrators may have some control. As mentioned earlier, we focused upon the associations between individual student background characteristics, students' beliefs or character, cocurricular factors, students' perceptions and attitudes, and academic misconduct.

### Individual Student Background Characteristics

When discussing relevant student demographics, various studies have identified gender, age or class level, and economic status or social class as relevant variables related to self-reports of cheating as well as official reports of student cheating (Beasley, 2016; McCabe et al., 2012; Wideman, 2008). With regard to gender, the most comprehensive studies have found that men self-report more cheating than women (Bowers, 1964; Davis, Grover, Becker, & McGregor, 1992; Hensley et al., 2013; McCabe & Treviño, 1997; Tibbetts, 1999), although some smaller studies have reported that women cheat as much as men (Baird, 1980; Ward & Beck, 1990). Several studies even found that women report more academic misconduct than men (Antion & Michael, 1983; Graham, Monday, O' Brien, & Steffen, 1994; Leming, 1980), although one meta-analysis confirmed the tendency of women to self-report less cheating (Whitley, Nelson, & Jones, 1999). Within the same major, gender difference is minimal (McCabe, Trevino, & Butterfield, 2001), suggesting the interaction (moderation) effect needs to be investigated when exploring the relationship between gender and academic misconduct.

When it comes to the characteristic of age or class level, scholars have consistently reported that younger college students cheat more than their older peers (Klein, Levenburg, McKendall, & Mothersell, 2007; McCabe & Treviño, 1997; Mustaine & Tewksbury, 2005; Olafson, Schraw, Nadelson, Nadelson, & Kehrwald, 2013). There is some lack of clarity regarding whether age or class (e.g., 1st, 2nd, 3rd, or 4th year) is the key factor, as the two are highly correlated. One explanation for this finding is that 1st-year or 2nd-year students are more likely to be at early stages of cognitive and moral development, where they are swayed by peer influences and are therefore less likely to develop their own ideas and take appropriate actions (Baxter Magolda,

1999; Evans, Forney, & Guido-DiBrito, 1998). This explanation would help clarify why young students entering college are less inclined to cheat, but they are then easily swayed by their peer culture to engage in cheating (McCabe et al., 2012).

In addition, extant research provides less information about whether economic or social class plays a role. With regard to social class, previous studies focused upon students' report of their parents' education and not on their income level. One study found that the students with college-educated parents cheat more (Bowers, 1964; Kirkvliet, 1994), although another study did not find this factor significant (McCabe & Treviño, 1997).

### Students' Beliefs or Character

Existing research provides only limited information about whether other individual beliefs or character (e.g., political identity, moral virtues, self-control and purpose, and religious identity and behavior) are associated with academic misconduct. To our knowledge, there is no study that has explored the relationship between academic misconduct and political identity. There is also relatively little research examining the role of particular virtues in academic misconduct. Some researchers have discovered a decrease in academic misconduct correlated with an emphasis upon moral identity (Wowra, 2007) or certain ethically desirable traits such as self-control (Bolin, 2004; Ward & Beck, 1990). Indeed, as a result of some of our limited knowledge regarding individual student characteristics in this area, McCabe et al. (2012) called for additional studies. In particular, they noted the need to study stable psychological dispositions such as "locus of control" (p. 90).

With regard to religion, studies divide fairly evenly between older publications finding that religiousness has little or no effect on academic cheating intentions or behaviors (Bruggeman & Hart, 1996; DeVries & Ajzen, 1971; Michaels & Miethe, 1989; Smith, Ryan, & Digging, 1972) and the more recent research claiming that religious behavior (e.g., religious service attendance) is positively associated with academic honesty (Bloodgood et al., 2008; Burton, Talpade, & Haynes, 2011; Perrin, 2000; Rettinger & Jordan, 2005). For instance, when examining the relationships among religion, motivation, and college cheating, Rettinger and Jordan (2005) reported an association between a high level of religiosity and increased self-reports of academic honesty among religious students. Similarly, Burton et al. (2011) found that more frequent religious service attendance is associated with less student engagement in unethical practices of academic cheating. Research also suggests that there is a significant interaction between gender and organizational religiosity, as female and male students self-reported similarly high rates of academic misconduct (Storch & Storch, 2002).

### Cocurricular Factors

Research is more abundant in regard to the cocurricular activities of students, although gaps in the literature still exist. A number of studies have found that students involved in cocurricular activities report higher incidents of cheating (Bowers, 1964; Haines et al., 1986; McCabe & Treviño, 1997; Mustaine & Tewksbury, 2005). In particular, researchers discovered that students involved in both athletics and Greek life are more likely to self-report cheating/academic misconduct (Bowers, 1964; Haines et al., 1986; McCabe & Treviño, 1993, 1997; Mustaine & Tewksbury, 2005; Storch & Storch, 2002; Whitley, 1998; Williams & Janosik, 2007).

## Students' Perceptions and Attitudes

The literature on students' attitudes toward cheating, students' perceptions of the cheating environment, and students' perceptions of faculty attitudes and actions toward cheating is also more extensive. Not surprisingly, scholars have found a positive relationship between cheating behavior and students with a positive attitude toward cheating (Haines et al., 1986; Whitley, 1998). In addition, prior research has consistently reported that perceptions of peer influence was one of the most important factors in either preventing or reinforcing cheating (Bowers, 1964; McCabe et al., 2012; McCabe & Treviño, 1993). Regarding the perceptions of faculty's attitudes and actions toward cheating, Broeckelman-Post (2008) found that students were less likely to report engaging in academic dishonesty incidents if their professors spend time discussing various standards and consequences related to academic honesty. Similarly, McCabe et al. (2012), based on their previous findings, hypothesized that "a campus that works hard to achieve a high level of understanding and acceptance of its academic integrity policies among both students and faculty will significantly affect the behavior of students" (p. 122).

Overall, although we know quite a bit about the various student factors associated with student cheating, as McCabe et al. (2012) indicated, our understanding of the relationship between these factors is limited. This study seeks to bolster our understanding of both these factors and their relationship by undertaking a large, national study of the four areas mentioned.

## METHOD

### Participants

Data were drawn from the Gallup daily tracking sample that is a nationally representative sample of U.S. adults ages 18 and older conducted by Gallup every day, 350 days per year. Interviews were conducted with these respondents on landline telephones and cellular phones. Landline and cellular telephone numbers were selected using random-digit-dial methods. Landline respondents were chosen at random within each household on the basis of which member had the most recent birthday. All U.S. adults with access to a cell phone or landline device have an equal and nonzero probability of selection. The sample is stratified by time zone within region to ensure that the sample is representative of individuals throughout the United States. The sample weights were created to minimize bias in the survey-based estimates. The weighting process involved corrections for unequal probability of selection of the sampled cases, nonresponse adjustments, and double coverage of landline and cell phone users in the two sampling frames. Additional information is available on the Gallup (2015) website.

Respondents who agreed to be contacted again and who were of the sample ages between 18 and 23 years old were contacted and recruited to participate in the study during the spring of 2014. We limited our sample to college-age students who are currently enrolled in institutions of higher education (e.g., public or private 2-year colleges, public or private 4-year colleges or universities). Those who were not currently enrolled in institutions of higher education during the time of survey were excluded from the selected sample. Respondents were also asked whether the college or university they attended was a 2- or 4-year institution and whether the institution was public or private.

The project was generally handled by the Gallup premier team with 165 interviewers working on the project at some point. Matching a priori was not conducted for this particular study. If an interviewer sensed discomfort, they transferred the survey to an interviewer of a different gender. The average interviewer was approximately 30 years old; however, no direct matching based on age was conducted for this study. A total of 14,119 student phone numbers were ultimately dialed for this study. A total of 1,508 numbers were screener failures—meaning that when Gallup called back, the contact was someone else or the person was not still enrolled in college (13 additional also hung up during the screening process). A total of 1,927 were refusals—meaning that the students were deemed eligible after the screening but refused to continue with the survey. There were 120 individuals who were ineligible due to hearing disabilities or language barriers. There were 267 who were ineligible because the number was no longer assigned to that person. There were 52 who started but did not complete the interview and did not make it far enough into the survey for Gallup to count them as complete. In addition, there were 7,729 numbers that were not used for a variety of other issues (busy signals, fax machines, no answers, etc.).

The final sample included a total of 2,503 college-age students. As indicated in Table 1, 1,451 of them (58%) were male students, whereas 1,052 (42%) were female students. Of these students, 1,578 (63.0%) were White, 402 (16.1%) were Hispanic Americans, 300 (12.0%) were African Americans, 171 (6.8%) were Asian Americans, 33 (1.3%) were others that include American Indian or Alaska Native and Native Hawaiian or Pacific Islander, and 19 responses were missing this information. Table 2 presents means, standard deviations, and Cronbach's alpha coefficients for the variables of interest. Variables such as academic misconduct ( $\alpha = .77$ ), lack of self-control ( $\alpha = .8$ ), self-focused purpose in life ( $\alpha = .71$ ), others-focused purpose in life ( $\alpha = .65$ ), and transformation-focused purpose in life ( $\alpha = .55$ ) were measured by scales with multiple survey items. Table 3 presents correlations among all variables of interest.

### Survey Instrument and Key Measures

In creating our survey, we chose to draw from items in instruments used in the extant literature pertaining to academic misconduct, purpose in life, and level of self-control. Utilizing established instruments also allowed us to make comparisons to the findings of others. To accurately measure *academic misconduct*, we asked students about nine types of academic misconduct behaviors found in the work of Bowers (1964) and McCabe et al. (2012). We made one change to an item that asked students whether they had “used crib notes during an exam” (McCabe et al., 2012, p. 62). We updated this language to read, “Taken unauthorized material, such as notes, into an exam.” *Academic misconduct* was the dependent variable, which was determined by using a composite measure. Respondents were asked to self-report the frequency of their engagement with nine types of cheating on a 4-point Likert scale: 1 (*very often*), 2 (*often*), 3 (*rarely*), 4 (*never*). The items included the following: (a) Copied a few sentences of material without footnoting it in a paper; (b) Padded a bibliography or included sources in a bibliography that you did not use in the paper or project; (c) Plagiarized from public materials on papers; (d) Gotten questions or answers from someone who had already taken the exam; (e) Worked on the same homework with several other students when the teacher did not allow it; (f) Turned in papers done entirely or in part by other students; (g) Given answers to other students during an exam; (h) Copied off of another student during an exam; (i) Taken unauthorized material, such as notes, into an exam. Student scores on these nine items were summated to one composite

TABLE 1  
Demographic Characteristics

<i>Variable Name</i>	<i>Category</i>	<i>Frequency</i>	<i>%</i>
Gender	Male	1,451	58.00%
	Female	1,052	42.00%
Race/Ethnicity	White	1,578	63.00%
	African American	300	12.00%
	Hispanic	402	16.10%
	Asian American	171	6.80%
	Other race	33	1.30%
	Missing	19	0.80%
Types of institution attended	Public 2-year college	553	22.1%
	Private 2-year college	35	1.4%
	Public 4-year college	1,319	52.7%
	Private 4-year college	596	23.8%
Year in college	First year	326	13.00%
	Second year	692	27.60%
	Third year	729	29.10%
	Fourth year or above	747	29.80%
	Missing	9	0.40%
Family financial situation	Above average	722	28.80%
	Average	1,376	55.00%
	Below average	405	16.20%
Religion affiliation	Catholic	293	11.7%
	Mainline Protestant	434	17.3%
	Evangelical	194	7.8%
	Nonreligious	381	15.2%
	Other religions	104	4.2%
	Other list	1,097	43.8%
Political affiliation	Republican	536	21.4%
	Democrats	805	32.2%
	Independent	1,057	42.2%
	Other party/others	105	4.2%

Note.  $N = 2,503$ .

score to indicate the student level of academic honesty. The dependent variable was reversely coded to facilitate the interpretation of the analytical results. We also log transformed this variable to address the assumption violations.

Purpose in life was measured using eight items from a 17-item instrument—*Categories of Identified Purpose*—developed by Bundick et al. (2006). Respondents were asked to rate their level of agreement with the importance of the following items using a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale included 17: (a) Make money; (b) Have a fulfilling career; (c) Be happy; (d) Produce new and original work such as a book or a piece of art; (e) Help others; (f) Change the way people think; (g) Do the right thing; (h) Care for a family; (i) Maintain a comfortable standard of living; (j) Make the world a better place; (k) Live with no regrets; (l) Build lasting friendships; (m) Achieve success in my career; (n) Love God or a higher power; (o) Experience life to the fullest; (p) Serve my community and country; (q) Discover new things about the world. We created four variables under this construct: self-focused purpose in life



TABLE 2  
Summary of Means, Standard Deviations, Cronbach's Alpha for Variables of Interest

<i>Variable Names</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>Items</i>	<i>α</i>
Dishonestylog10	1.073	.102	2503	9	.772
Gender (female)	.420	.494	2503	NA	NA
Race (African American)	.128	23.097	2484	NA	NA
Race (Asian American)	.067	17.258	2484	NA	NA
Race (Hispanic American)	.168	25.809	2484	NA	NA
Race (other race/ethnicity)	.0133	.115	2484	NA	NA
Financial situation (above average)	.289	.453	2503	NA	NA
Financial situation (average)	.550	.498	2503	NA	NA
Year in college	2.751	1.033	2503	NA	NA
Institution type (Public 4)	.527	.499	2503	NA	NA
Institution type (Private 4)	.238	.426	2503	NA	NA
Lack of self-control	38.039	5.397	2503	13	.802
Life purpose (self-focused)	35.689	4.963	2503	9	.709
Life purpose (others focused)	17.178	2.524	2503	4	.647
Life purpose (God focused)	3.266	1.642	2503	NA	NA
Life purpose (transformation focused)	7.974	1.678	2503	2	.550
Political affiliation (Republican)	.21	.410	2503	NA	NA
Political affiliation (Independent)	.42	.494	2503	NA	NA
Political affiliation (other party/others)	.04	.201	2503	NA	NA
Religious affiliation (Catholic)	.117	.322	2503	NA	NA
Religious affiliation (Protestant)	.173	.379	2503	NA	NA
Religious affiliation (Evangelical)	.0775	.267	2503	NA	NA
Religious affiliation (non-religions)	.152	.359	2503	NA	NA
Religious affiliation (other religions)	.0416	.199	2503	NA	NA
Religion importance (very important)	.318	.466	2503	NA	NA
Religion importance (fairly important)	.259	.438	2503	NA	NA
College experience (attending class)	14.369	8.898	2503	NA	NA
College experience (academic preparation)	13.331	11.847	2503	NA	NA
College experience (extracurricular activities)	4.691	7.884	2503	NA	NA
College experience (socializing events)	11.400	12.167	2503	NA	NA
College experience (working)	14.340	15.070	2503	NA	NA
Perception of academic cheating	2.348	1.094	2503	NA	NA
Approval of academic cheating	1.3600	.798	2503	NA	NA
Perception of faculty attitude toward academic misconduct	4.407	.992	2503	NA	NA
Perception of faculty action toward academic misconduct	3.659	1.088	2503	NA	NA

(Items 1, 2, 3, 4, 9, 11, 13, 15, 17), others-focused purpose in life (Items 5, 8, 12, and 16), Transformation-focused purpose in life (Items 6 and 10), and God-focused purpose in life (Item 14). We should note that this type of distinction is often made in recent studies of purpose, although a number of recent scholars would argue that self-focused purposes should not be considered part of a proper definition of purpose (Bronk, 2014; Damon, 2008). Each variable was measured by summing the respondent's score(s) on relevant items.

*Lack of self-control* was also determined by using a composite measure. We used the Brief Self Control Scale developed and validated by Tangney, Baumeister, and Boone (2004) to measure lack of self-control. They had earlier developed a 36-question Total Self Control

TABLE 3  
Intercorrelations Among Variables of Interest

	1	2	3	4	5	6	7	8	9	10	11	12
Dishonesty log10	1											
Gender (Female)	-.110**	1										
Race (African American)	.007	.033	1									
Race (Asian American)	.013	.020	-.101**	1								
Race (Hispanic American)	.015	-.008	-.163**	-.119**	1							
Race (other race/ethnicity)	.029	.001	-.043*	-.032	-.051*	1						
Financial situation (above average)	-.015	-.154**	-.041*	.019	-.011	-.012	1					
Financial situation (average)	.017	.121**	.006	.010	.014	.013	.084**	1				
Institution type (Public 4)	.058**	-.023	-.005	.014	-.024	-.017	.084**	-.021	1			
Institution type (Private 4)	.034	-.022	-.002	.010	.014	-.024	.026	.018	.185**	1		
Lack of self-control	-.009	-.016	.013	.008	-.005	.001	.095**	-.050*	.132**	.132**	1	
Life purpose (self-focused)	.193**	-.062**	.004	-.007	.019	-.019	.000	-.029	-.038	-.012	-.030	1
Life purpose (others focused)	.033	.061**	.028	.001	-.011	-.037	-.139**	.095**	-.098**	.013	-.132**	-.057**
Life purpose (God focused)	-.077**	.098**	.010	.017	-.003	.014	-.093**	.090**	.010	.027	-.018	-.036
Life purpose (transformation focused)	-.048*	.106**	-.010	.021	.005	.032	-.138**	.114**	-.056**	-.029	-.016	-.070**
Political affiliation (Republican)	-.047*	.067**	.002	-.003	-.003	.006	-.064**	.027	.008	.015	.002	.027
Political affiliation (Independent)	.028	-.048*	-.008	.028	-.025	.033	.076**	.001	.019	-.005	.031	-.051*
Political affiliation (other party/others)	-.021	-.056**	.009	-.029	.006	-.028	-.018	.010	-.016	.052**	-.066**	-.033
Religious affiliation (Catholic)	-.026	-.001	.015	.007	-.021	.011	-.045*	.009	-.007	-.005	-.037	-.033
Religious affiliation (Protestant)	.007	.063**	-.020	-.020	-.011	.023	-.026	.032	.019	-.001	.001	-.027
Religious affiliation (Evangelical)	.023	-.052**	.016	.022	-.011	-.007	-.026	.031	-.004	-.016	.016	-.003
Religious affiliation (nonreligious)	-.022	.050*	.003	.010	-.001	.019	-.013	.022	-.001	.008	-.004	-.001
Religious importance (very important)	.001	-.063**	-.002	-.026	-.012	.000	.010	-.010	.013	.043*	-.025	.025
Religious importance (fairly important)	.023	.013	-.002	.007	.018	.011	.031	-.037	.023	-.027	.043*	.011
Attending class	-.047*	.081**	.002	.043*	-.023	.034	-.080**	.076**	-.040*	-.034	.011	-.085**
Academic preparation	.008	.033	.007	-.019	.011	-.028	-.013	.012	.015	.006	.008	.016
Extracurricular activities	-.004	.004	.012	-.001	.015	.004	.014	-.003	.012	.041*	.030	-.033
Socializing events	-.078**	.045*	.012	-.015	-.012	-.014	.069**	-.064**	.063**	.005	.086**	-.046*
Working	.087**	-.067**	.031	.025	-.009	-.003	.080**	-.045*	.068**	.002	.167**	-.006
Perception	.118**	-.074**	-.009	.007	.013	-.024	.067**	-.013	.007	.015	.060**	-.084**
	.019	.042*	.032	-.034	.000	-.013	-.125**	.043*	-.041*	-.091**	-.157**	.000
	.212**	-.118**	-.008	.021	.002	.005	.102**	-.058**	.095**	.057**	-.007	.132**

(Continued)

TABLE 3 (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12
Approval	.233**	-.067**	.047*	-.027	-.006	.035	-.009	.025	.000	-.014	.018	.117**
Perception of faculty attitude toward academic misconduct	-.117**	.022	-.014	.029	-.004	-.012	-.025	.002	.001	-.021	.055**	-.027
Perception of faculty action toward academic misconduct	-.190**	.136**	.016	-.023	-.002	.020	-.113**	.066**	-.072**	-.031	-.022	-.050*
<hr/>												
Dishonestylog10	.13	.14	.15	.16	.17	.18	.19	.20	.21	.22	.23	.24
<hr/>												
Gender (Female)												
Race (African American)												
Race (Asian American)												
Race (Hispanic American)												
Race (other race/ethnicity)												
Financial situation (above average)												
Financial situation (average)												
Year in college												
Institution type (Public 4)												
Institution type (Private 4)												
Lack of self-control	1											
Life purpose (self-focused)	.437**	1										
Life purpose (others focused)	.120**	.391**	1									
Life purpose (God focused)	.343**	.486**	.194**	1								
Life purpose (transformation focused)	-.042*	.095**	.259**	-.074**	1							
Political affiliation (Republican)	.010	-.054**	-.099**	.030	-.446**	1						
Political affiliation (Independent)	-.024	.007	.088**	.009	-.109**	-.179**	1					
Political affiliation (other party/others)	.086**	.073**	.108**	.015	.089**	-.047*	-.033	1				
Religious affiliation (Catholic)	-.018	.025	.214**	-.002	.103**	-.030	-.006	-.167**	1			
Religious affiliation (Protestant)	.017	.089**	.183**	.044*	.038	-.003	-.016	-.106**	-.133**	1		
Religious affiliation (Evangelical)	-.025	-.171**	-.411**	-.044*	-.172**	.095**	-.028	-.154**	-.194**	-.123**	1	
Religious affiliation (nonreligious)	-.016	.011	-.029	.001	-.035	-.032	-.024	-.076**	-.095**	-.060**	-.088**	1
Religious affiliation (other religions)	-.061**	.220**	.636**	.098**	.238**	-.107**	.050*	-.008	.148**	.158**	-.265**	-.022
Religion importance (very important)	.077**	.071**	.173**	.029	.021	.000	-.014	.140**	.079**	-.014	-.184**	.051*
Religion importance (fairly important)	.039*	.031	.018	.029	.025	-.009	-.008	.011	.002	-.005	.001	.005
Attending class	-.009	.055**	.012	.028	.017	.005	.025	-.008	-.008	-.016	-.006	.054**
Academic preparation	-.021	.068**	.012	.044*	.024	-.031	-.016	.013	.051*	.020	-.032	-.005
Extracurricular activities	.059**	.051*	-.069**	.021	-.004	.016	-.039*	.022	-.025	.009	.042*	.004
Socializing events	.094**	.021	.071**	.009	.020	.018	.020	.006	.027	.031	-.028	-.005
Working												

	25	26	27	28	29	30	31	32	33	34	35	
Perception	-.118**	-.137**	-.129**	-.056**	-.042*	.038	-.010	-.061**	-.031	-.002	.076**	.011
Approval	-.012	-.072**	-.007	-.036	-.011	-.014	-.002	.023	-.010	.002	.007	.006
Perception of faculty attitude toward academic misconduct	.127**	.167**	.068**	.121**	.020	.003	.017	.022	.004	.024	-.017	.003
Perception of faculty action toward academic misconduct	.205**	.203**	.158**	.121**	.030	-.008	.025	.065**	.035	.019	-.074**	-.025
Dishonestylog10												
Gender (Female)												
Race (African American)												
Race (Asian American)												
Race (Hispanic American)												
Race (other race/ethnicity)												
Financial situation (above average)												
Financial situation (average)												
Year in college												
Institution type (Public 4)												
Institution type (Private 4)												
Lack of self-control												
Life purpose (self-focused)												
Life purpose (others focused)												
Life purpose (God focused)												
Life purpose (transformation focused)												
Political affiliation (Republican)												
Political affiliation (Independent)												
Political affiliation (other party/others)												
Religious affiliation (Catholic)												
Religious affiliation (Protestant)												
Religious affiliation (Evangelical)												
Religious affiliation (nonreligious)												
Religious affiliation (other religions)												
Religion importance (very important)												
Religion importance (fairly important)												
Attending class												
Academic preparation												
Extracurricular activities												
Socializing events												
Working												
Perception												
Approval												
Perception of faculty attitude toward academic misconduct												
Perception of faculty action toward academic misconduct												

Scale, which they used to make a shorter, 13-question Brief Self-Control Scale that ascertains the same content as their Total Self Control Scale. The scale focuses on thought, emotion, and impulse control, as well as habit breaking and performance regulation as the primary measures of self-control. Respondents were asked to rate their level of agreement on survey items using a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The 13 items included (a) I am good at resisting temptation; (b) I have a hard time breaking bad habits; (c) I am lazy; (d) I say inappropriate things; (e) I do certain things that are bad for me, if they are fun; (f) I refuse things that are bad for me; (g) I wish I had more self-discipline; (h) People say that I have iron self-discipline; (i) Pleasure and fun sometimes keep me from getting work done; (j) I have trouble concentrating; (k) I am able to work effectively toward long-term goals; (l) Sometimes, I can't stop myself from doing something, even if I know it is wrong; (m) I often act without thinking through all of the alternatives.

*Perception of the frequency of cheating environment* was measured by a 5-point Likert scale from 5 (*strongly agree*) to 1 (*strongly disagree*): Cheating is very easy to get away with at your school. We devised our survey question based on DuPree and Sattler's (2010) research report. Attitude toward cheating was measured by a 5-point Likert scale from 5 (*strongly agree*) to 1 (*strongly disagree*): Cheating is necessary to keep up. Perception of faculty and staff attitudes toward cheating was measured by a 5-point Likert scale from 5 (*strongly agree*) to 1 (*strongly disagree*): Faculty and staff at your school take cheating very seriously. Perception of faculty and staff action toward cheating was measured by one 5-point Likert scale from 5 (*strongly agree*) to 1 (*strongly disagree*): Faculty and staff go above and beyond to prevent students from cheating.

*Religious affiliation* was measured by one survey item asking respondent's religious identity: Catholic, Protestant, Evangelical, Nonreligious, Other Religions, and Other List. The religious affiliation categories utilized in the present study were commonly used by the General Social Survey, Pew, and other national surveys, including the Baylor Religion Surveys. In particular, the basis for our categorization of particular Protestant denominations was derived from categorizations of denominations used in sociology of religion studies (Dougherty, Johnson, & Polson, 2007; Wuthnow, 2007). *Religious service attendance* was measured by asking the frequency of the respondent's attendance at a church, mosque, synagogue, or other place of worship (*never*, *rarely*, *several times a month*, and *several times a week*). *Religious importance* was measured by asking the respondent to rate the significance of religion in one's life (*very important*, *fairly important*, and *not very important*). Due to a technical problem with the survey response instrument, we were unable to capture the specific denominations of the "Other" religious respondents as we had originally intended. Future studies would benefit from more specific religious identification of the "Other" category.

### Hierarchical Multiple Regression Analysis

We conducted a series of hierarchical multiple regression analyses to examine the relationship between various student-level factors and academic misconduct. Given the selected sample was a weighted sample, we accounted for projected weights (projected to the total population) when conducting this regression analysis. The dependent variable was student academic misconduct (log transformed). Four different blocks of independent variables were entered sequentially in this proposed model (student demographic characteristics, student belief identifies, student cocurricular and extracurricular activities, student attitudes toward academic misconduct and

student perceptions of faculty and staff's attitude and actions toward academic misconduct). The hierarchical multiple regression model is presented as follows:

$$Y_{academic\ misconduct} = \beta_0 + \hat{\beta}_{i,WLS}X_i + \varepsilon,$$

where  $Y_{academic\ misconduct}$  represents the dependent variable, student academic misconduct during their college;  $\beta_0$  represents the intercept;  $\hat{\beta}_{i,WLS}$  represents weighted least squares estimates for independent variables;  $X_i$  represents different blocks of independent variables; and  $\varepsilon$  represents error term. We used IBM SPSS 21.0 to conduct the hierarchical multiple regression analyses.

### Assumptions

Because violations in multiple regression assumptions can make the regression analysis misleading, we tested four major regression assumptions (Independence, Normality, Homoscedasticity, and Linearity). We also tested the multicollinearity (whether the proposed independent variables are highly collinear). All the VIF values (less than 4.0) were much less than the threshold value (VIF = 10), indicating this was not a significant problem. Regression diagnostics indicated the proposed hierarchical multiple regression model met these assumptions, which justified our interpretation of the regression results (standardized regression coefficients).

## RESULTS

As indicated by Table 4, in Block 1, we entered student background characteristics (gender, race/ethnicity, socioeconomic status [SES], year in college, type of institutions they have attended) in the regression model. The overall model explained 2.2% of the variance in academic misconduct,  $F(10, 2483) = 6.556, p < .001, R_{adj}^2 = .022$ . As indicated by Table 4, gender, and SES are significant contributors to academic misconduct. Specifically, we found that female students were less likely than male students to report being involved in academic misconduct ( $-.142, p < .001$ ). On average, students coming from high-income (above-average) families were less likely to report being engaged in academic misconduct than their peers coming from low-income (below-average) families ( $-.057, p < .05$ ).

We then entered Block 2 variables, which are related to student belief-related identities and attributes (lack of self-control, self-focused purpose in life, others-focused purpose in life, God-focused purpose in life, transformation-focused purpose in life, political affiliations, and religious affiliation, as well as the importance of religion in one's life). After adding this block of variables, the proposed model explained academic misconduct to a much greater extent. It accounted for about 7.8% of the variance in academic misconduct,  $F(25, 2483) = 9.372, p < .001, R_{adj}^2 = .078$ . In addition to the significant predictors identified in the first model (gender, race, year in college, family financial background), we found that lack of self-control was positively associated with student academic cheating (.218,  $p < .001$ ). Students with a high level of self-focused purpose in life were also more likely to be engaged in academic misconduct (.074,  $p < .01$ ), whereas students with a high level of others-focused purpose in life were less likely to do so ( $-.073, p < .01$ ). In addition, year in college is positively associated with student

academic misconduct (.047,  $p < .01$ ). As students stay longer in college, they are more prone to be engaged in academic misconduct.

After including Block 3 variables that are related to cocurricular activities on and off campus (attending class, academic preparation for class, extracurricular activities involvement, socializing event involvement, working, and religious service attendance), the model explained about 10.3% of the variance in academic misconduct,  $F(30, 2483) = 10.474$ ,  $p < .001$ ,  $R^2_{adj} = .103$ . In addition to the significant factors identified by the previous models (gender, race, year in college, family financial background, lack of self-control, purpose in life, religious affiliations, and religion's importance), we found that academic preparation was adversely related to academic misconduct ( $-.089$ ,  $p < .001$ ). This finding highlights the importance of preparation in reducing academic misconduct. On the other hand, involvement in extracurricular activities (.071,  $p < .001$ ), socializing events (.114,  $p < .001$ ), and working part-time (.046,  $p < .05$ ) were positively associated with academic misconduct.

As a final step, we entered students' perception of the cheating environment, students' attitude toward academic misconduct, and students' perceptions of faculty and staff's attitudes and actions toward academic misconduct. Overall, the model explained about 16.4% of variance in academic misconduct,  $F(34, 2483) = 15.304$ ,  $p < .001$ ,  $R^2_{adj} = .164$ . In addition to the variables just identified, we found that students' perception of the cheating environment (.099,  $p < .001$ ) and their favorable attitude toward cheating (.150,  $p < .001$ ) were positively associated with academic misconduct. On the other hand, student perception of faculty action toward cheating was negatively associated with academic misconduct ( $-.123$ ,  $p < .001$ ). In addition, we tested a range of interactions among different groups of variables. Because these interactions were nonsignificant, we excluded these interactions in the proposed hierarchical multiple regression models.

## LIMITATIONS

As is usually the case with student surveys of academic misconduct, we suggest that readers interpret the results with caution, as the level of academic misconduct was derived from respondents' self-reports (Bertram Gallant, 2008; Davis et al., 2009). In addition, respondents may not accurately report the number of academic misconduct incidents (e.g., participants may have different interpretations of the rating scales for academic cheating), which may have influenced parameter estimation.

All of our latent variable scales were reliable based upon Cronbach's alpha except for the transformation-focused purpose in life variable ( $\alpha = .55$ ). This variable, however, was not significant and was not retained in our final model. Although the proposed model explains more than 16.4% of variance in academic misconduct, it stills leaves nearly 83.6% unaccounted for. This finding offers empirical support for the argument that academic misconduct should be explained by multiple-level factors (Bertram Gallant, 2008; McCabe et al., 2001). Although the reported adjusted  $R^2$  is relatively small, it is nevertheless consistent with those reported in prior studies (Bloodgood et al., 2008; McCabe, Butterfield, & Treviño, 2006; McCabe & Treviño, 1993).

TABLE 4  
Variables Predicting Academic Misconduct Among College Students

<i>Variables</i>	<i>Model 1: Demographics</i>		<i>Model 2: Demographics + Student Belief Identities</i>		<i>Model 3: Demographics + Student Belief Identities+ Cocurricular Activities</i>		<i>Model 4: Demographics + Student Belief Identities+ Cocurricular Activities+ Attitudes and Perceptions</i>	
	<i>b</i>	$\beta$	<i>b</i>	$\beta$	<i>b</i>	$\beta$	<i>b</i>	$\beta$
Gender reference group: Male	-.029*** (.004)	-.142***	-.026*** (.004)	-.127***	-.023*** (.004)	-.111***	-.017*** (.004)	-.082***
Race/ethnicity reference group: White	.003 (.006)	.010	.002 (.006)	.008	.002 (.006)	.008	.000 (.006)	-.001
	.006 (.008)	.015	.007 (.008)	.016	.006 (.008)	.014	.006 (.008)	.016
	.010 (.006)	.035	.009 (.005)	.032	.007 (.005)	.027	.008 (.005)	.029
	.013 (.018)	.014	.016 (.017)	.018	.018 (.017)	.021	.011 (.016)	.012
Financial situation reference group: Below average	-.013* (.006)	-.057*	-.010 (.006)	-.045	-.012 (.006)	-.054	-.018** (.006)	-.078**
	-.006 (.006)	-.027	-.002 (.006)	-.009	-.003 (.005)	-.016	-.007 (.005)	-.033
	.003 (.002)	.034	.005** (.002)	.047**	.005** (.002)	.050**	.003 (.002)	.034
Institutions attended reference group: 2-year institution	.009 (.005)	.043	.012* (.005)	.059*	.012* (.005)	.057*	.012 (.005)	.059*
	.000 (.006)	-.001	.005 (.006)	.021	.003 (.006)	.011	.005 (.006)	.019
			.004*** (.000)	.218***	.004*** (.000)	.204***	.003*** (.000)	.173***
Lack of self-control			.002** (.000)	.074**	.001** (.000)	.064**	.002*** (.000)	.098***
Self-focused purpose			-.003** (.001)	-.073**	-.003** (.001)	-.081**	-.002 (.001)	-.047
Others-focused purpose								

(Continued)





	Very important	.002	.011	.002	.008	.009	.040
	Fairly important	(.008)	(.008)	(.002)	(.006)	(.007)	(.025)
		.002	.008	.002	.009	.006	.025
		(.006)	(.006)	(.006)	(.006)	(.006)	(.006)
Attending class		.000	.011	2.240E-05	.002		
		(.000)	(.000)	(.000)	(.000)		
Preparation		-.001***	-.089***	-.001***	-.075***		
		(.000)	(.000)	(.000)	(.000)		
Extracurricular activities		.001**	.071**	.001**	.060**		
		(.000)	(.000)	(.000)	(.000)		
Socializing events		.001***	.114***	.001***	.089***		
		(.000)	(.000)	(.000)	(.000)		
Working		.000*	.046*	.000*	.044*		
		(.000)	(.000)	(.000)	(.000)		
Perception of the frequency of cheating environment		.009***		.009***	.099***		
		(.002)		(.002)	(.002)		
Attitude towards cheating		.019***		.019***	.150***		
		(.002)		(.002)	(.002)		
Perception of faculty attitude toward academic misconduct		-.002		-.002	-.022		
		(.002)		(.002)	(.002)		
Perception of faculty action toward academic misconduct		-.011***		-.011***	-.123***		
		(.002)		(.002)	(.002)		
<i>R</i>		.161		.295	.337		
<i>R</i> <sup>2</sup>		.026		.087	.114		
<i>R</i> <sub>adj</sub> square change		.022		.078	.103		

Note. *N* = 2,484. Dependent variable = Dishonesty/log 10. Weighted Least Squares Regression—Weighted by PROJW.T.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

## DISCUSSION

This study builds upon prior studies by investigating an extensive list of student-level factors that are reported to be associated with academic misconduct. Through a series of hierarchical multiple regression analyses of a large sample of college-age students, we identified significant student-level factors associated with academic misconduct. Our findings proved particularly noteworthy with regard to the previously unexplored relationship between academic misconduct and life purpose. We found that college-age students who have a strong self-oriented purpose in life are also more likely to engage in academic misconduct incidents. However, those who have a stronger level of beyond-the-self focused purpose in life are less likely to be engaged in academic misconduct. This finding reinforces the importance of the distinction that many scholars are currently making between self-oriented purposes and pro-social purposes (Bronk, 2014; Damon, 2008). In addition, this study provides some empirical support to prior findings that the lack of self-control is significantly associated with student academic dishonesty (Gibson et al., 2008; Whitley, 1998). In light of both of these findings, we suggest that interventions meant to help students foster the character strengths or virtues of self-control and purpose would likely have an influence upon the rate of academic misconduct. In fact, we would hypothesize that the research supporting the positive influence of honor codes likely reinforces the importance of self-control (McCabe et al., 2012). Similarly, Lang's (2013) suggestion that an effective faculty strategy for helping curb academic misconduct is to foster intrinsic motivation likely relates to the cultivation of beyond-the-self focused purpose types in life (i.e., others-focused, God and transformation-oriented purposes). Indeed, to better cultivate self-control and life purpose, effective interventions should be in place well before college (Bolin, 2004; Bronk, Hill, Lapsley, Talib, & Finch, 2009).

Another notable finding is that student attitudes and perception of the frequency of academic misconduct are closely associated with academic misconduct. Not surprisingly, students who hold a lenient/tolerant view toward cheating were more prone to be engaged in academic misconduct. This finding offers empirical support to the argument that students rationalize or "neutralize" their cheating behaviors by keeping pace with peers who are involved with academic misconduct (Bolin, 2004; Daniel, Blount, & Ferrell, 1991; Davis et al., 2009; Murdock & Stephens, 2007). This finding reinforces the claim that the implementation of honor code across college campus would be a viable approach to addressing students' lenient attitudes toward cheating (see McCabe et al., 2012; McCabe & Treviño, 1993). Furthermore, this finding reinforces previous findings about the importance of perceptions of peer influence in reinforcing cheating (Bowers, 1964; McCabe et al., 2012; McCabe & Treviño, 1993). Student perception of faculty and staff's actions toward academic misconduct were adversely related to academic misconduct. This finding highlights the possible role of faculty and staff in preventing or reducing academic misconduct through cultivating a healthy environment for academic honesty (Murdock, Miller, & Goetzinger, 2007). In this regard, the suggestions made by Lang (2013) that focus on the importance of faculty and how they conduct the classroom were reinforced by our study. Indeed, student cheating can be significantly reduced if faculty members are serious about student academic misconduct and communicate clearly with their students regarding academic honesty (Bertram Gallant, 2008).

We also find that there is a positive association between student involvement in cocurricular and extracurricular activities and academic misconduct. The range of these activities includes working and socializing. The likely explanation is that students who spend too much time in

nonacademic activities have insufficient time for their academic studies. To keep up with their peers, these students are more prone to be involved with academic cheating. This finding suggests that although involvement in cocurricular activities enriches college experiences, excessive involvement adversely influences academic honesty (see Bowers, 1964; McCabe et al., 2012; Williams & Janosik, 2007). In contrast, we found that students who spend more time preparing for class, not surprisingly, are less likely to be involved with academic misconduct incidents. Faculty and staff should encourage students to balance participating in extracurricular activities with their commitment to academic studies. Student affairs professionals can play a key role in helping students find this balance and in assisting students to find cocurricular experiences that connect to their academic interests (Shushok, Henry, Blalock, & Sriram, 2009).

Although a few of our findings regarding background characteristics confirm aspects of past research, some of our findings add something new to the conversation. Consistent with past large-scale, multiple-campus studies (Bowers, 1964; McCabe & Treviño, 1997) and one meta-analysis (Whitley et al., 1999), we found a gender difference in academic misconduct. Female students have fewer self-reported incidents of academic misconduct than their male peers. Students coming from high-income families are less likely to engage in academic misconduct incidents than their peers from low social class backgrounds. In addition, SES is adversely associated with academic misconduct. This finding is consistent with research studies conducted by Bowers (1964) and Kirkvliet (1994) that focused on the related criteria of the educational attainment of the parents. We would surmise that students coming from high-income families, like those from parents with college degrees, have better academic preparation and a better understanding of college academic expectations, and are therefore less likely to experience pressures to cheat within the academic environment. Campus efforts to ensure that students from low SES backgrounds have adequate support and the ability to acquire academic capital can be crucial to preventing academic misconduct (Winkler & Sriram, 2015). Finally, we note that factors such as racial and political affiliation were not associated with academic misconduct. In other words, academic misconduct does not vary significantly based upon ethnicity and political party affiliation (or nonaffiliation). In addition, we also found no statistically significant association between either religious affiliation or the stated importance of religion and student academic misconduct. This finding supports other studies that found no direct association between religious *identity* and *belief* and moral behaviors such as academic cheating (Huelsman et al., 2006; Smith et al., 1972). Nonetheless, it does not answer the question whether there is a relationship between religious *behavior* and academic integrity noted by other scholars (Bloodgood et al., 2008; Burton et al., 2011; Huelsman et al., 2006; Perrin, 2000; Rettinger & Jordan, 2005). Further research is needed to examine the relationship between religious beliefs and students' actual cheating behaviors.

In summation, this study fills a research gap by studying various student- and institutional-level factors associated with academic misconduct. In particular, we find that beyond-the-self oriented purposes in life (i.e., others-oriented, God, or transformational), academic preparation, perception of faculty and staff's action toward academic misconduct, and lack of self-control are closely associated with academic misconduct. These factors should be considered when designing organizational or institutional-level initiatives or interventions that aim to address academic misconduct. After all, the integrity of higher education depends in part on the claim that universities can affirm that students actually learn what they are taught.

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