College Student Cheating: The Role of Motivation, Perceived Norms, Attitudes, and Knowledge of Institutional Policy

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Cheaters and noncheaters were assessed on 2 types of motivation (mastery and extrinsic), on perceived social norms regarding cheating, on attitudes about cheating, and on knowledge of institutional policy regarding cheating behavior. All 5 factors were significant predictors of cheating rates. In addition, cheaters were found lower in mastery motivation and higher in extrinsic motivation in courses in which they cheated than in courses in which they did not cheat. Cheaters, in courses in which they cheated, were also lower in mastery motivation and higher in extrinsic motivation than were noncheaters. Finally, cheaters differed from noncheaters on perceived social norms regarding cheating, on their knowledge of institutional policy regarding cheating, and on their attitudes toward cheating. Implications of these findings for institutional interventions are discussed.

Key words: academic dishonesty, cheating, perceived norms

The past 3 decades of research on academic dishonesty were dominated by attempts to answer two very practical questions: Who cheats, and how do we stop them? Those studies that focused on the first question identified a wide range of cheating rates across a variety of colleges and universities (Collison, 1990; Graham, Monday, O’Brien, & Steffen, 1994; McCabe & Treviño, 1993; Tang & Zuo, 1997). Efforts were also made to identify the typical cheater, and so-called profiles of individual factors were identified. These profiles included such characteristics as age (Newstead, Franklyn-Stokes, & Armstead, 1996; Smith, Nolan, & Dai, 1998),

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grade point average (GPA; Tang & Zuo, 1997; Whitley, 1996), self-esteem (Kibler & Kibler, 1993; Tang & Zuo, 1997), gender (Davis, 1993; Davis, Grover, Becker, & McGregor, 1992; Graham et al., 1994; Ward & Beck, 1990), personality type (Perry, Kane, Bernesser, & Spicker, 1990), and sense of alienation (Calabrese & Cochran, 1990). Simultaneously, those researchers focused on the second question began suggesting and testing interventions aimed at curbing cheating (Davis, 1993; May & Loyd, 1993; McCabe & Treviño, 1993).

Three problems continue to plague this research, however. First, cheater profiles are inconsistent. For example, although most studies found that men cheat more than women do (Davis et al., 1992; Michaels & Miethe, 1989; Newstead et al., 1996), others found no gender difference (Fisher, 1970; Stevens & Stevens, 1987; Vitro & Schoer, 1972). Studies that examined cheating rates in relation to age are similarly inconsistent. Some researchers reported that younger students cheat more than do older students (Bowers, 1964; Haines, Diekhoff, LaBeff, & Clark, 1986; Newstead et al., 1996), but at least one study reported higher rates of cheating for older students (Tang & Zuo, 1997).

Second, even when descriptive data appear to be reliable across settings, these descriptions do not in and of themselves suggest any particular intervention strategy (McCabe & Treviño, 1993). Although helping us understand who may be at risk for cheating, these data do not help us reduce that risk.

Third, institutional-level intervention strategies that were adopted have not been particularly effective. For example, even the most popular techniques, such as the introduction of honor codes, may not be effective in the absence of other institutional changes (Cole & McCabe, 1996; May & Loyd, 1993). A wide range of cheating rates was found even among schools with honor codes (Cole & McCabe, 1996).

In some sense, these problems are symptomatic of the questions asked. An emphasis by researchers on high rates of cheating among college students led college administrators to adopt either honor code or policing policies, neither of which were motivated theoretically and neither of which addressed any specific characteristics of cheaters. Thus, a kind of divide developed between what we know about cheating rates and cheater profiles and what institutions do to reduce the incidence of cheating.

To reduce this gap, two additional questions have received increasing emphasis during the last decade: What factors motivate and sustain student cheating and can academic institutions influence these factors? These questions link individual characteristics to institutional climate (Hanson, 1990; McCabe & Treviño, 1997; Whitley, 1998) and may lead to more powerful intervention strategies.

In this article, I review and empirically evaluate four such factors: motivation, perceived social norms, attitudes toward cheating, and knowledge of institutional policy regarding cheating. These factors are hypothesized to influence student cheating and are potentially amenable to institutional influence. I suggest possible institutional responses that make use of these factors.
Several studies have examined the impact of motivation on cheating behavior. This approach typically draws on a distinction among some combination of intrinsic (or mastery) goals, extrinsic goals, and performance goals (Anderman, Griesinger, & Westerfield, 1998; Anderman & Midgley, 1997; Dweck, 1986; Dweck & Leggett, 1988; Newstead et al., 1996). Recent research supports the claim that students who have a desire to learn or master a particular body of information are less likely to cheat than are students motivated by extrinsic or performance factors, such as academic standing, grades, or some other performance evaluation.

For example, Anderman et al. (1998) distinguished between two types of goals (mastery and performance) and three levels of orientation (personal, classroom, and school-wide) among middle school students in sixth through eighth grades. Students’ personal performance goals and their personal mastery goals were measured. In addition, measures were taken of students’ perceptions of classroom and school-wide levels of performance and mastery orientation. These researchers found that the cheating behavior of middle school students correlated positively with performance goals and negatively with mastery goals at all orientation levels. In addition, cheaters displayed significantly higher levels of performance goals and significantly lower levels of mastery goals than did noncheaters at the personal and school-wide orientation levels.

A relation between goal motivation and cheating was reported for college students in the United Kingdom as well (Newstead et al., 1996). In this study, students who identified personal development as a central reason for studying course material reported significantly fewer types of cheating behaviors than did students who studied chiefly to get a better job or for financial gain. Although this research did not measure actual frequencies of cheating behavior and did not explicitly distinguish between cheaters and noncheaters, the hypothesis that mastery goals are associated with a narrower range of cheating behaviors and extrinsic goals with a broader range, was supported. This study also extended the range of extrinsic motivators beyond performance issues, to include such factors as increased standard of living, career development, and career competitiveness. Students who studied primarily for these extrinsic reasons displayed a significantly wider range of cheating behaviors than did mastery-oriented students.

**PERCEIVED SOCIAL NORMS**

For more than 40 years psychologists have investigated the impact peers have on one another (Festinger, 1954; Newcomb, 1943; Newcomb & Wilson, 1966). That peer attitudes and behaviors should influence college student cheating is no surprise, and it has been documented in the literature (Graham et al., 1994; Kibler &
Kibler, 1993; Stevens & Stevens, 1987). Student explanations for cheating often include elements of social comparison (McCabe, Treviño, & Butterfield, 1999).

Typically, however, these comparisons are based on student perceptions of peer norms that may or may not be accurate. As Perkins (1997) pointed out with respect to alcohol use, students’ perceptions of peer norms, whether accurate or not, influence their attitudes and behaviors. For example, as student perceptions of peer alcohol use were lowered through a series of interventions, drinking behavior decreased (Perkins, 1997).

How accurate are student perceptions of peer norms with respect to cheating? Are these perceptions related to the occurrence of cheating? How might institutions use actual norms to influence cheating behavior?

ATTITUDES ABOUT CHEATING

Student attitudes about cheating were identified as an important correlate of cheating behavior in a recent meta-analysis (Whitley, 1998). Three categories of cheating attitudes were examined across 16 studies: neutralizing attitudes (justifying cheating behavior), semantic differential attitudes (in which the concept of cheating is rated positively or negatively), and other attitudes toward cheating that were not classifiable. Effect sizes were impressive for all three categories of cheating attitudes. For example, Haines et al. (1986) found that cheaters endorsed neutralizing attitudes (e.g., “His cheating behavior isn’t hurting anyone”) to a significantly greater extent than did noncheaters. McCabe (1992) found that an overwhelming majority of students who self-identified as cheaters used neutralizing strategies to explain their cheating behavior. Love and Simmons (1998) found a relation between cheating and negative attitudes toward professional standards among graduate students, including attitudes supporting cheating and plagiarism.

KNOWLEDGE OF INSTITUTIONAL POLICY

A final factor, which has received somewhat less attention, concerns the extent to which students understand institutional policy regarding academic integrity. Do students understand college rules and definitions as these apply to cheating behavior? For example, Roig (1997) demonstrated that over 50% of students were unable to correctly identify clear examples of plagiarism. McCabe and Treviño (1993) found a significant relation between academic dishonesty and student perceptions of student and faculty understanding of institutional policy. Lower ratings of understanding were associated with higher levels of academic dishonesty.

The purpose of this study was to investigate motivation, peer social norms, student attitudes, and student familiarity with institutional policy as these relate to
cheating behavior among college students. However, unlike most studies with college students, these factors were related to actual cheating frequencies across the multiple courses that students took during a target semester.

**METHOD**

**Participants**

Participants attended a small, private liberal arts college that has had a formal honor code in effect since 1965. Anonymous surveys were mailed to a random selection of 25% of the student body in the spring semester. One hundred seventy-five students (representing approximately 9% of the student body) completed and returned the surveys (11 additional surveys were returned but were unusable), yielding a return rate of 35%. Women were slightly overrepresented in the sample, at 68%, compared to 51% in the college. Participants were predominately White (90.3%). All class years were represented (26% of the sample were 1st-year students, 22% were sophomores, 19% were juniors, and 33% were seniors).

**Measures**

**Cheating rates.** Participants reviewed 17 different cheating behaviors and indicated how many times they engaged in each behavior during the previous semester. The behavior list was a modified version of lists used by Gardner and Melvin (1988), Newstead et al. (1996), and Sutton and Huba (1995). It included a range of violations, such as copying from another student’s exam, plagiarism, and inventing laboratory data. However, in contrast to previous studies, participants in this study reported cheating behaviors course by course. Thus, if a participant was enrolled in four courses during the target semester, the participant filled out the survey four times, once for each course (to protect identities, department areas, not course names, were requested on the survey). In addition, participants indicated the frequency of each behavior by course.

**Motivation.** Measures of mastery and extrinsic motivation were adapted from scales used by Midgley et al. (1998) and Anderman et al. (1998). These scales included measures of personal mastery motivation, personal extrinsic motivation, course mastery motivation, and course extrinsic motivation. The original scales were worded for middle school students and specified a particular subject (English or science). Our version replaced the subject indicator with a more generic descriptor, such as “course,” and replaced the word “teacher” with “professor.” As with the list of cheating behaviors, participants filled out a motivation scale for each course taken in the previous semester. Response options ranged from 1 (strongly disagree) to 5 (strongly agree).
Perceived social norms. Participants also responded to items soliciting their perception of cheating by other students at the college. Specifically, participants were asked to estimate the frequency of cheating behavior by friends, by members of their residence hall and, more generally, by students at the college.

Attitudes. Three items measured the extent to which participants believed cheating in college is sometimes justified, is justified to pass a course (to stay in school or to graduate), or is justified if a close friend asks for help.

Knowledge. A final set of items asked participants about their knowledge of the honor system used at the college. These items were designed to measure the extent to which students had received, read, and understood the colleges’ honor code.

RESULTS

Cheating Rates

For purposes of this study, participants were classified as cheaters if they responded affirmatively to any of the 17 cheating behaviors in any course during the target semester. Noncheaters were those who reported no cheating in any course during the same period. In our sample, 31.4% reported cheating on at least one paper or exam during the target semester, and an additional 23.5% cheated in other contexts, such as on homework or laboratory work. Thus, 54.9% of participants were classified as cheaters and 45.1% as noncheaters.

Demographics. Initial analyses indicated that cheaters and noncheaters were not distinguishable based on program area of study, gender, or GPA. These variables were dropped from further analysis. In addition, the numbers of students in each class who cheated were not reliably different.

However, differences by class year were found for the number of cheating acts committed. A one-way analysis of variance (ANOVA) was conducted with four levels of class year (1st–4th year) as the independent variable, and cheating score as the dependent variable. The cheating score represented the total number of times a student cheated in the target semester. This analysis was statistically significant, $F(3, 170) = 5.64, p = .01$. Post hoc comparisons of class year using the Tukey approach indicated that the mean cheating score for 1st-year students (5.31) was significantly more than mean cheating score for juniors (1.07) or seniors (2.27). The mean cheating score for sophomores (4.12) was not significantly dif-
different from other groups; juniors and seniors were not significantly different from each other.

**Predictors of cheating rates.** Thirteen items were entered into a principal component extraction (PCA) with varimax rotation. These items included 4 motivation scores (personal mastery, course mastery, personal extrinsic, and course extrinsic motivation, averaged across all courses), 3 items measuring participant attitudes toward cheating, 3 items measuring perceived social norms, and 3 items assessing participants’ familiarity with their college honor system. Five factors were extracted with eigenvalues greater than 1, accounting for 71% of the variance. All items loaded on the predicted factors (see Table 1).

These five factors were regressed on participants’ cheating scores (total number of times a participant cheated across all courses). The model was significant, and all factors were significant predictors of cheating rates (see Table 2). Knowledge of the honor system, mastery motivation, and attitudes toward cheating were the best predictors of cheating rates (respectively), based on standardized beta weights.

### TABLE 1
Factor Loadings, Labels, and Percentage of Variance for Principal Components Extraction and Varimax Rotation

<table>
<thead>
<tr>
<th>Item</th>
<th>Attitude</th>
<th>Norms</th>
<th>Mastery</th>
<th>Knowledge</th>
<th>Extrinsic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheating justified to pass a course</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheating justified to help a friend</td>
<td>.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheating sometimes justified</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived cheating among all students</td>
<td></td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived cheating in residence hall</td>
<td></td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived cheating among friends</td>
<td></td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal mastery motivation</td>
<td></td>
<td></td>
<td>.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course mastery motivation</td>
<td></td>
<td></td>
<td>.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received information on honor system</td>
<td></td>
<td></td>
<td></td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>Read information on honor system</td>
<td></td>
<td></td>
<td></td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>Understand honor system</td>
<td></td>
<td></td>
<td></td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>Personal extrinsic motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.62</td>
</tr>
<tr>
<td>Course extrinsic motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.89</td>
</tr>
<tr>
<td>Eigenvalues</td>
<td>2.48</td>
<td>1.93</td>
<td>1.87</td>
<td>1.48</td>
<td>1.44</td>
</tr>
<tr>
<td>% of variance</td>
<td>19.1</td>
<td>14.8</td>
<td>14.4</td>
<td>11.4</td>
<td>11.1</td>
</tr>
</tbody>
</table>

*a Only loadings greater than .55 are included.*
Differences Between Cheaters and Noncheaters

**Motivation.** Motivation scores for cheaters and noncheaters were compared. Using the two motivation factors extracted in the PCA just mentioned (mastery and extrinsic), two one-way ANOVAs were conducted, with subject type (cheater vs. noncheater) serving as the between-subjects factor. Neither analysis was significant, \( p > .05 \). However, these factors average each type of motivation across all courses, for both cheaters and noncheaters. Because cheaters may differ in their level of motivation in courses in which they cheat, as compared to courses in which they do not cheat and as compared to noncheaters, additional analyses were conducted.

For the next group of analyses, motivation variables (mastery and extrinsic) were calculated for each subject by course. Personal and course-mastery motivation scores were combined to create the following variables: average mastery motivation for cheaters across courses in which they cheated, average mastery motivation for cheaters across courses in which they did not cheat, and average mastery motivation for noncheaters across all courses. This process was repeated for personal and course extrinsic scores. Three types of analyses were conducted using these variables.

First, mastery and extrinsic motivation scores for cheaters, averaged across courses in which they cheated, were compared to motivation scores for noncheaters. A one-way between-subjects ANOVA was conducted for each dependent measure (mastery and extrinsic motivation). For mastery motivation, cheaters scored significantly lower than noncheaters, \( F(1, 173) = 10.23, p = .002 \). In contrast, extrinsic motivation scores were significantly higher for cheaters than for noncheaters, \( F(1, 173) = 8.45, p = .004 \).

Second, the two types of motivation scores for cheaters (mastery and extrinsic), each averaged across courses in which they cheated, were compared to their aver-

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**TABLE 2**
Regression of Attitudes About Cheating, Perceived Social Norms, Mastery Motivation, Knowledge of the Honor System, and Extrinsic Motivation on Cheating

<table>
<thead>
<tr>
<th>Explanatory Variable</th>
<th>( B )</th>
<th>( \beta )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.316</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>1.001</td>
<td>.189</td>
<td>.009</td>
</tr>
<tr>
<td>Norms</td>
<td>0.834</td>
<td>.158</td>
<td>.029</td>
</tr>
<tr>
<td>Mastery motivation</td>
<td>–1.084</td>
<td>–.205</td>
<td>.005</td>
</tr>
<tr>
<td>Knowledge</td>
<td>–1.243</td>
<td>–.235</td>
<td>.001</td>
</tr>
<tr>
<td>Extrinsic motivation</td>
<td>0.841</td>
<td>.159</td>
<td>.027</td>
</tr>
</tbody>
</table>

*Note.* \( R^2 = .183; \) adjusted \( R^2 = .158; \) \( F(5, 165) = 7.180, p < .001 \).

*Variables were derived from the principal component analysis found in Table 1.*
age motivation scores in courses in which they did not cheat. A one-way repeated measures ANOVA was conducted for each type of motivation. Noncheaters were excluded from these analyses. Participants who cheated in every course \((n = 8)\) were also excluded for lack of comparison scores. Mastery motivation scores for cheaters in courses in which they did not cheat were significantly higher than their mastery motivation scores in courses in which they did cheat, \(F(1, 87) = 10.41, p = .002\). In contrast, extrinsic motivation scores were significantly higher in courses in which cheaters cheated than in courses in which cheaters did not cheat, \(F(1, 87) = 8.74, p = .004\).

Finally, cheaters, in courses in which they did not cheat, were compared to noncheaters across each of the motivation variables. Here, neither analysis was significant, \(p > .05\). Thus, in courses in which cheaters did not cheat, their motivation levels were not distinguishable from noncheaters. Table 3 contains means and standard deviations for each of these analyses.

**Perceived social norms.** Cheaters and noncheaters made different estimates of the cheating behavior of their peers. For example, participants were asked to estimate the percentage of students at the college that they believed engaged in cheating each semester. Participants’ estimates of the cheating behavior of others ranged widely, from 1% to 95%, with a mean of 26.2%; as reported, the actual cheating rate was 54.9%. An independent-samples \(t\) test compared cheaters’ estimates to noncheaters’ estimates. As expected, cheaters mean percentage estimates (31.23%) were significantly higher than the estimates made by noncheaters (20.6%). Unexpectedly, both groups underestimated actual cheating levels.

In addition, participants’ cheating scores correlated with their percentage estimates \((R = .331, p < .001)\). Thus, not only did cheaters tend to believe that more of their student peers were cheating than did noncheaters, but the more a participant cheated, the greater the percentage of other students the participant believed also cheated.

<table>
<thead>
<tr>
<th></th>
<th>Cheaters in Courses When Not Cheating</th>
<th>Cheaters in Courses When Cheating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
</tr>
<tr>
<td>Mastery</td>
<td>3.92a</td>
<td>.44</td>
</tr>
<tr>
<td>Extrinsic</td>
<td>2.74a</td>
<td>.57</td>
</tr>
</tbody>
</table>

*Note.* Across rows, means with different subscripts differ at \(p < .01\). Responses were on a 5-point Likert-type scale.
Finally, cheating behavior appeared to be influenced by actual exposure to the cheating of others. In fact, significantly more cheaters (70.8%) reported having seen someone cheat than did noncheaters (40.5%), $\chi^2(1, 175) = 16.28, p < .001$. Moreover, mean cheating scores were significantly higher among those who witnessed cheating (4.70) compared to those who did not witness cheating (1.38), $t(173) = 4.38, p < .001$.

Thus, among cheaters, cheating is something they see around them, and something they believe their peers are doing, to a greater degree than noncheaters. The more cheating a cheater sees and the more cheating a cheater believes peers are doing, the more cheating acts the cheater commits.

**Knowledge of institutional policy.** Cheaters and noncheaters differed in their self-reported understanding of the college honor system. A one-way ANOVA with the knowledge factor (generated in the preceding PCA) as the dependent measure was significant, $F(1, 164) = 5.06, p = .026$, with noncheaters reporting greater understanding than cheaters. This difference, however, did not appear to be due to lack of exposure to the honor code. Nearly 95% of participants agreed (or strongly agreed) that they received information about their college honor system prior to matriculating; 73.1% indicated that they had read the school’s honor code; and 86.3% agreed that the code was fair. Cheaters and noncheaters were not reliably different on these measures ($p > .05$). However, only 40% of participants believed that signing the honor code actually decreased cheating on campus; an additional 37.1% were uncertain about whether signing the honor code had a positive impact. Again, cheaters and noncheaters were not reliably different ($p > .05$).

**Attitudes about cheating.** Only 10.8% of participants agreed (or strongly agreed) that cheating is “sometimes justified in college.” Eighty-five percent did not feel that cheating is justified when a close friend asks for help (an additional 11.5% were uncertain). However, cheaters and noncheaters differed significantly on these types of measures. For example, cheaters and noncheaters were reliably different on the attitudes factor generated in the preceding PCA, $F(1, 164) = 9.26, p = .003$. This factor measured participants’ tendency to justify cheating in various circumstances; cheaters were significantly more likely than noncheaters to endorse justifications of cheating.

**DISCUSSION**

This study supports the hypotheses that motivation variables (extrinsic and mastery motivation), perceived social norms, knowledge of institutional policy, and attitudes about cheating are related to the cheating behavior of college students.
Among these, knowledge of institutional policy was the best predictor of cheating rates, followed by mastery motivation and attitudes about cheating. This finding is important because it reminds college administrators that having an honor system, rules about cheating, or both, and effectively administering that system to students, are not one and the same. Participants in this study who cheated reported significantly less understanding of institutional policy regarding cheating than did noncheating participants.

In addition, this study advances our understanding of the role of motivation in cheating behavior. In particular, mastery and extrinsic motivation do not appear to be uniform across all courses, and this variability is related to cheating. Participants who cheated had lower mastery motivation and higher extrinsic motivation in the courses in which they cheated than in courses in which they did not cheat. Cheaters, in courses in which they cheated, also differed on these two motivation variables from noncheaters. Mastery motivation was lower for cheaters, and extrinsic motivation higher, as compared to noncheaters. However, in courses in which cheaters did not cheat, cheater and noncheater scores were not reliably different. Thus, cheaters reported increases in extrinsic motivation and simultaneous decreases in mastery motivation, but only in courses in which they cheated. Anderman et al. (1998) found a similar relation between mastery and what they called performance goals with middle school students. This study confirms that motivation is an important factor in the cheating behavior of college students as well.

Finally, as expected, cheating behavior was related to perceptions of the behavior of peers and to attitudes about cheating. Both factors were significant predictors of cheating rates. Cheaters believed that more students engaged in cheating behaviors than did noncheaters. Cheaters also justified cheating behavior to a greater extent than did noncheaters. In addition, the more the participants cheated, the higher their estimate of cheating on campus. These findings replicate previous research on the importance of student attitudes and peer norms for understanding, and perhaps influencing, cheating behavior (see Whitley, 1998, for a review).

Of course, these results do not indicate causality. Once students begin to cheat, their motivation levels and their perceptions and experiences of others may change. Alternatively, perhaps low mastery motivation in a course increases a student’s risk for cheating in that course and increases the cheater’s tendency to cheat repeatedly. A student who is uninterested in a course may look for ways to complete the course with the least effort. In addition, high extrinsic motivation may also increase student vulnerability to temptations to cheat. If a student’s purposes for taking a course have little to do with the course and more to do with extrinsic goals, such as grades or career opportunities, cheating may serve those goals. In either case, motivations appear to be course specific.

With respect to perceived norms, cheaters may estimate higher rates of cheating by others, as compared to noncheaters, as a way of preserving their self-image (e.g., false consensus effect; Ross, Green, & House, 1977). They also may be more
alert to the cheating of others in an effort to confirm their perceptions. Either or both of these effects may lead to differences in social perceptions of student behavior. However, the strong positive relation between cheating and witnessing others cheat suggests a role for peer influence as well. When vulnerable students see others cheat, their vulnerability may increase as well as their estimates of cheating by others. Again, a complex interaction of many variables likely contributes to risks for cheating.

Nevertheless, unlike student demographics, which offer little guidance to institutions for curbing cheating (McCabe & Treviño, 1993), motivation, attitudes, knowledge of academic integrity policies, and social comparison factors are potentially open to manipulation. For example, motivation factors might be addressed within a specific course or more globally by the institution. In the context of a specific course, some professors have provided course introductions that incorporate persuasive ethical arguments for student honesty (Taylor, 1999). Similarly, institutions might emphasize for students, particularly 1st-year students, who committed the most cheating acts in this study, coherent, global arguments for honesty through orientation programs. These programs must include information about the institution’s academic policies but also must address motivation issues. Stressing the importance of personal excellence and subject mastery (and their logical connection to professionalism, industry, and honesty), both in specific courses and in the context of the broader academic institution, may help decrease student dishonesty.

Presenting students with data about cheating that researchers often ignore may also influence perceived norms and attitudes. Students already know that a lot of cheating is occurring around them (although our participants underestimated these percentages); global, negative announcements about student dishonesty are uninformative and not likely to decrease cheating rates. What students may not know is how other students feel about cheating and who is doing the most cheating. The overwhelming majority of participants in this study did not believe that cheating is justified in college. Students largely did not believe that cheating is justified to stay in school or to help a friend who asks for help. Thus, most students did not view cheating as acceptable behavior. They need to know this. Presenting students with this type of information about their peers may help them behave in ways true to their values.

Moreover, although 31% of participants cheated on a major exam or paper in the target semester, a small minority of participants committed the vast majority of these honor code violations. A review of the frequency table on cheating indicated that only 8.6% of students committed 75% of all acts of exam or paper cheating. This type of statistic may reinforce or increase principles of honesty and peer accountability that students already hold and may dissuade them from engaging in cheating behavior. Institutions would do well to review this type of data and to share it with students.
In sum, student motivation, knowledge of institutional policy, attitudes, and perceived norms provide contexts for understanding student academic dishonesty and help identify potentially useful intervention programs. Future research might attempt to implement and evaluate intervention programs aimed at influencing these factors, as they relate to academic integrity.

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