TEACHING REPORT

An Empirical Examination of Undergraduate Academic Dishonesty within the Context of Semantics, Environment, and Role

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Abstract

The extent and persistence of academic dishonesty among college students is well-established in published research. This study confirms similarly extensive cheating at a small, Midwestern university using self-reported data collected by surveying students. The empirical analysis identifies evidence of dissonance relating to ***semantics***, ***environment***, and ***role***. The three principle findings are: a distinction between the terms ***cheating*** and ***unauthorized assistance***, reporting academic dishonesty more outside the classroom than in, and acknowledging more ***providing*** than ***receiving*** of unauthorized assistance. The results suggest that students experience competing codes of behavior informed by environment and role. Prescriptions consistent with these finding are presented.

Keywords

Academic Dishonesty, Dissonance, Competing Codes of Behavior

The authors thank Ryan Rahrig for helpful comments and suggestions We find it striking that over decades, survey after survey reveals widespread academic dishonesty. While we celebrate the honesty of reporting dishonest behavior, we must also question to what extent respondents are aware that they are confessing academic dishonesty. Academic dishonesty is not nearly so cut and dried an issue to conclude that all cheating is cheating, especially in the breadth of experiences of college students. Students confront formal and informal codes of behavior in the various areas of their collegiate experience. Those who subscribe to the adage that college is more than academics must acknowledge that students juggle numerous expectations of behavior across their many collegiate pursuits.

This study takes seriously the existence of competing codes of behavior confronting students. Honor codes and academic dishonesty policies clearly articulate academic dishonesty, but these guidelines fail to acknowledge the entire college student experience. Students must choose between the rules explicated in an academic dishonesty policy and the formal and informal social and cultural norms that pervade to campus life. This study does not defend academic dishonesty nor argue that academic dishonesty is an acceptable practice; rather the study presents evidence suggesting that administrators and faculty ought to recognize that academic dishonesty is not always and everywhere evidence of the absence of virtue in modern students or the moral decay of society. Instead, academic dishonesty may be symptomatic of

broader collegiate experiences that necessarily introduce competing codes of behavior that, at times, challenge the traditional and potentially anachronistic definition of academic dishonesty. Albeit not as dramatic as the classic Kantian example of a moral dilemma that asks the moral agent to choose between lying and preventing a murder, college students face competing norms of behavior that emanate from friendship (roommates, dorm life), brother/sisterhood (fraternity, sorority), athletics (teammates) or collegiality (classmates). With an improved understanding of the challenges facing students, solutions can be designed and implemented to serve the institution, faculty, and students.

This study examines the assertion that context matters when identifying and applying competing behavioral codes of conduct. In particular, the degree of academic dishonesty students admit to when asked directly will be compared to their admitted behavior (semantics). Semantics refers to the student distinction between "cheating" and "unauthorized assistance." In addition, their levels of academic dishonestly will be evaluated when comparing activity inside and outside the classroom (environment) as well as providing and receiving unauthorized assistance on an assignment (role). For example, when outside of a classroom, the prevailing code of behavior may emphasize duty and obligation consistent with friendship, fraternity, sisterhood, team unity, or comradery. In the absence of the undeniable spatial cue of a classroom, competing behavioral codes of conduct (cheating/"helping") may be identified and may prevail (environment). A student may perceive "providing" unauthorized assistance to a teammate as "helping" rather than "cheating" (role). Prior work in this area (groups, friendship, providing assistance, etc.) has been conducted by Haines et al. (1986), Davis et al. (1992), Chapman et al. (2004), and Gino et al. (2009). If correct, the popular application of cost-benefit calculation must be reconstituted to reflect greater cost associated with violation of behavioral codes prevailing over an academic dishonesty code of conduct and greater benefit resulting from conforming to alternative behavioral codes of conduct.

This study proceeds with review of relevant literature that establishes the research question. To test the research question, the methodology features a survey of undergraduate students. Survey results addressing semantics, environment and role are presented and discussed. The empirical analysis provides quantitative evidence distinguishing various areas of interest in the academic dishonesty literature. Finally, based on the empirical findings and an understanding of the current state of academic dishonesty, proposals are shared to address concerns that administrators and faculty express in the published literature.

Literature Review

Survey research documents the persistence of academic dishonesty (Baird, 1980; Drake, 1941; Goldsen et al., 1960; Graham et al., 1994; Hollinger & Lanza-Kaduce, 1996; Jendrek, 1989; Jordan, 2001; McCabe, 2005; McClough & Heinfeldt, 2021; Sierles et al., 1980; Slobogin, 2002). Despite studies revealing a rising proportion of students admitting to cheating over time, students may underreport academic dishonesty (Scheers & Dayton, 1987). McClough and Heinfeldt (2021) report that 94.2 percent of an undergraduate sample admits to cheating, unauthorized assistance or behaviors associated with academic dishonesty. The apparent persistence and increase of academic dishonesty have inspired a broad research agenda examining the phenomenon of academic dishonesty.

Academic dishonesty is difficult to define (Franklyn-Stokes & Newstead, 1995). Nonetheless, studies reveal evidence of shared understanding of the more obvious and serious behaviors of academic dishonesty over time (Barnett & Dalton, 1981; Graham et al., 1994; Wright & Kelly, 1974). In contrast, studies also reveal that students underestimate cheating due to difficulty identifying common behaviors as cheating (Gardner et al., 1988). Difficulty identifying cheating behavior may be contextual. In some situations, behavior may be identified as cheating, whereas in a different context the behavior may be viewed more virtuously (e.g., helping).

Taxonomies seek to organize various forms of academic dishonesty (Pavela, 1978; Whitley & Keith-Spiegel, 2002). Colnerud (2006) distinguishes conscious deception, self-deception and ignorant deception. While ignorant deception is self-evident, Ashworth and Bannister (1997) find that students can justify behavior when the official norms are unclear, which is suggestive of conscious deception, albeit motivated by

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lack of clarity. Colnerud and Rosander (2009) report three official Swedish categories of academic dishonesty: cheating, unauthorized collaboration, and plagiarism and fabrication. Burrus et al. (2007) assessed self-reports of cheating before and after exposure to a definition of academic dishonesty. Students reported cheating more after exposure to a definition. In sum, studies suggest that students may be unaware that some behaviors constitute academic dishonesty. For a government to establish a taxonomy specific to academic dishonesty, research seems warranted to examine how context contributes to the uncertainty of meaning specific to academic dishonesty.

While ignorance of academic dishonesty policy likely explains some portion of academic dishonesty, psychological factors influence behavior as well. From the Freudian perspective, cognitive dissonance occurs when the id and superego are in conflict. To resolve the conflict, the ego employs defense mechanisms (Freud & Baines, 1937). Common defense mechanisms include rationalization, denial, repression, projection, and reaction formation (Cramer, 2000). Rationalization ignores the true reasons for behavior. To rationalize one's behavior requires constructing excuses and incorrect explanations. Denial is a refusal to acknowledge what is clear to others. Repression assigns unpleasant feelings to the unconscious. Projection is assignment of one's unacceptable actions to another person. Reaction formation involves substituting opposite feelings for the unacceptable feelings (Barlow & Durand, 2001). The academic dishonesty literature is replete with applications of defense mechanisms (Bandura, 1990).

Festinger (1957) defines cognitive dissonance as the psychological discomfort experienced when actions violate attitudes, beliefs or values. Festinger (1962) posits two possibilities for reducing dissonance. First, individuals can reduce dissonance-causing actions to align actions with attitudes, beliefs or values. In the context of academic dishonesty, students engaging this possibility would cheat less. Second, individuals can change their attitudes, beliefs and values to align with their actions. In the context of academic dishonesty, students engaging this possibility would alter attitudes, beliefs and values to accommodate academic dishonesty. Given the self-reported levels of academic dishonesty, students have ignored the first in favor of the second possibility.

Studies have also explored the influence of peers and the establishment of norms that violate academic dishonesty policies and honor codes. Many studies conclude that students engage in academic dishonesty after observing the behavior of peers (Graham et al., 1994; Jordan, 2001; Kibler & Kibler, 1993; McCabe et al., 1999; Stevens & Stevens, 1987). Gino et al. (2009) find that group membership contributes to unethical behavior. Stephens et al. (2007) find that peer acceptance of cheating and peer cheating behavior are positively correlated with academic dishonesty in traditional and electronic environments. McCabe and Trevino (1997) report peer norms serve as the strongest predictors of academic dishonesty. The existing literature offers compelling evidence that peer behavior establishes norms that challenge academic dishonesty policies. Zhao et al. (2022) conducted a meta-analysis examining 38 studies published between 1941 and 2021. The analysis finds a peer cheating effect of intermediate size but finds that the peer effect is a global effect. Using country-level variables reveals that the effect varies across countries suggesting that culture matters. Of course, distinct cultures can exist within a university and influence student academic behavior. Stephens (2019) contrasts cheating and integrity cultures. Absent from these studies is an examination of the context that accommodates the peerage and the norms identified as essential determinants of acceptance of academically dishonest behavior. Peer relations among college students are contextual. There are classmates, teammates, roommates, club members, co-workers, and formal and informal social groups with distinct, although at times overlapping, norms of behavior. McGrath (2019) argues that academic dishonesty is a fertile topic to apply cognitive dissonance theory. She contends that cognitive dissonance can be applied to address academic dishonesty in academic settings.

A third thread of the existing literature examines perceptions of cheating. Fass (1990) finds that institutions treat equally the provider and the receiver of academic dishonesty. Students, however, contextualize academic dishonesty by distinguishing between helping others and receiving assistance. Haines et al. (1986) contend that to receive assistance is selfish, while to provide assistance is selfless. Houston (1986) finds a positive correlation between cheaters and the degree of acquaintance with the provider of assistance. Chapman et al. (2004) report that 75 percent of students are willing to cheat with a friend

but only 45 percent will cheat with an acquaintance. Davis et al. (1992) report that 76-88 percent of students across 35 campuses were willing to help a friend. Similarly, Whitley and Kost (1999) reveal that students view providing more leniently than receiving assistance. Genereux and McLeod (1995) reveal that acts of helping were reported more commonly than acts of academic dishonesty to benefit oneself. Students also reported more positive attitudes toward abetting a cheater, which they perceived to be more acceptable. Stephens (2017) demonstrates that cognitive dissonance serves dishonest students in a practical manner by eliminating any sense of guilt associated with academic dishonesty.

Specific to defense mechanisms, a fourth thread of the scholarly literature addresses neutralizing behavior, which is positively correlated with cheating (Carpenter et al., 2006, Haines et al., 1986; McCabe & Trevino, 1993; Pulvers & Diekoff, 1999). Rettinger and Kramer (2009) conclude that neutralizing behavior enables rather than causes academic dishonesty. For example, Pulvers and Diekoff (1999) find that students rationalize cheating when asserting, "Everybody else is cheating." Similarly, Haines et al. (1986) find that assisting is easier to neutralize because it is viewed as selfless rather than as selfish. Again, absent from these studies is identification of the context that enables or mistakenly engenders the perception of universal acceptance. Students may assert that everyone is cheating, but it is blatantly not true that everyone is cheating all the time. Cheating may be contextual; this study evaluates that possibility.

Research Question

Our review of the existing literature reveals that the pervasiveness of students' academic dishonesty is explained, in part, by their ignorance and lack of understanding of what constitutes academic dishonesty. In addition, evidence reveals that neutralizing attitudes enable academic dishonesty. Notably, students engage competing codes of conduct. For example, students may be aware that cheating violates a policy; however, helping, in general, is encouraged. As such, we expect students to engage academic dishonesty more when providing assistance than when receiving assistance because receiving assistance is overtly dishonest; whereas providing assistance is more easily reconciled (rationalized) as helping somebody. Similarly, we expect students to engage academic dishonesty more outside the classroom than in class. Completing assignments such as quizzes and exams independently is firmly associated (spatially informed) with a classroom. Engaging in academic dishonesty is more difficult to rationalize or deny while in a classroom. In contrast, academic dishonesty outside the classroom may reflect competing values that are equally obvious given the environment. Dorms and libraries, for example, involve social interactions that influence decisions made in the particular space. This study examines how semantics (cheating and unauthorized assistance), environment (in class and outside class), and role (providing assistance and receiving assistance) influence student perceptions and behaviors.

Methods

Data collection involved development and administration of a survey to undergraduate students enrolled in a small, private university located in the Midwest. Data collection was completed in less than three weeks to minimize any potential impact of external or internal influences that might contaminate the data. Coordination with multiple faculty members facilitated distribution of the survey in courses that enroll first year through fourth year students from the four undergraduate colleges. Review of the initial sample revealed underrepresentation of Juniors and Seniors and Pharmacy students. A second administration of the survey in the main library and in the lobbies of the pharmacy college resulted in a larger sample that reasonably resembles the student population. Two students declined to complete the survey resulting in an overall response rate of 99.27 percent. Administration of the survey resulted in a convenience sample of 275 returned surveys, which represents approximately 12 percent of the undergraduate population of the university. Table 1 presents descriptive statistics of the respondents who submitted surveys.

To encourage respondents to report honestly about dishonest behavior, survey development and administration emphasized anonymity. With the exception of two questions that ask respondents to reply with a specific numerical value and an optional open-ended question, the data collection instrument required respondents simply to circle a single letter in response to each question. Respondents received identical pencils to complete identical surveys. In addition to reminding

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respondents to avoid providing identifiable information, upon completion of the survey, respondents were instructed to insert the survey randomly among the completed surveys in a folder. It is believed that student understanding that the data collection process insured respondent anonymity encouraged truthful responses to questions pertaining to academic behavior.

In addition to questions pertaining to class year, college of enrollment, and gender, the survey asks two questions directly referring to cheating and four questions that refer to unauthorized assistance. Table 2 summarizes the responses to these questions.

A third battery of questions asks respondents to identify specific behaviors from a list of behaviors that may or may not be indicative of academic dishonesty. The survey features thirteen questions intended to explore student behavior. Included among the questions are three behaviors that are not obvious examples of academic dishonesty. These three questions are added to the survey to impose greater cognitive engagement by respondents when assessing each behavior. For all thirteen questions, the survey asked students to respond YES, if the behavior was engaged at least once, or NO, if the behavior was never engaged during their college experience (online, face-to-face, or hybrid). Table 3 summarizes the responses specific to student behaviors.

Results

The three most affirmed behaviors were the three behaviors not commonly associated with academic dishonesty. For this analysis, these behaviors are not considered or coded as cheating. The most confirmed behavior (89.3 percent) is to seek clarification from an instructor. Faculty likely support and encourage this behavior. The second most affirmed behavior (84.1 percent) is to request review of an assignment by another person prior to submitting the assignment for a grade. There is a continuum of review by another to consider. For example, students are encouraged to use tutors and writing lab instructors while others may ask friends and roommates to review an assignment. The third most affirmed behavior (76.7 percent) is to discuss an assignment with another person. Again, a continuum exists. Students may discuss an interesting assignment, or classmates may engage in conversation in which one student benefits more than the other, yet work is completed independently. Nefarious collaboration is possible; however, discussing assignments is not intrinsically academic dishonesty. Moreover, the survey includes questions regarding specific behaviors that distinguish discussion from overtly dishonest behaviors such as having another person complete an assignment, so affirmative responses suggest that discussion with another resides on the benign end of the continuum.

Respondents admitted to familiar behaviors associated with academic dishonesty notably less frequently than to the questions reported above. In descending order, respondents report: copying (60.9 percent), providing answers (60.3 percent), receiving (53.3 percent) and providing/sharing (50.4 percent) graded work, use of a test file (43.0 percent), plagiarize or failure to cite a source (25.4 percent), use of an unauthorized electronic device such as a phone or watch (18.8 percent), altering graded responses with intent to pursue additional credit (14.3 percent), submitting work completed by someone else (11.1 percent), and writing answers on arm, desk or some equivalent (10.7 percent). The observed disparity between the three most affirmed behaviors that are indicative of engaged students and the ten behaviors associated with academic dishonesty suggests that student behavior may be more virtuous overall than implied by studies that report the extent of academic dishonesty. Similar to cheating, the three most affirmed responses are indicative of effort to secure higher scores. It is notable that the more acceptable and productive behaviors are markedly more frequent.

Three survey questions refer to behavior that may not be viewed universally as academic dishonesty. Specifically, 43 percent of the sample acknowledges benefitting from access to a test file, while 50.4 percent provided graded work, and 53.3 percent received graded work. Providing and receiving graded work is a more intimate exchange than using a test file, which is often associated with a membership organization or some other form of group affiliation. Access to a test file and sharing graded material violate the most basic fairness principle. Simply stated, access to graded material is not available to all students. Unless the instructor provides graded work to all students, only those with access to graded work derive an advantage over students without similar access.

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Responses to an open-ended survey question offer support for this normative position and illustrate examples of defense mechanisms. One verbatim response reads, "…getting old exams is a way for me to study not an *intentional* way of cheating" (emphasis added). This student assuages the moral conflict through rationalization. Access to old exams facilitates test preparation, however there is an acknowledgement that this form of test preparation qualifies as a type of cheating. The student neutralizes the conflict by associating the use of old exams as studying rather than as test preparation. Another student seeks reassurance when asking, "Is it really wrong to provide others with old course work…? It's passed back for a reason?" The authors do not challenge the premise that graded work is returned to students for a reason; however, we disagree with the conclusion that the purpose is to share the graded work to the benefit of selective students. The rationalized unambiguous neutrality of this behavior is not as ambiguous as this student strains to portray given yet another verbatim confession, "…passing down old exams/quizzes is the most prominent form of academic dishonesty as it is a very easy way to be discrete about it." In response, the authors note that virtue seldom requires discretion. With these comments, it appears that students recognize that these three behaviors qualify as academic dishonesty.

Analyses and Interpretation

The survey comprises three distinct batteries of questions examining academic dishonesty. Aggregated variables are created from each battery of questions as separate measures of academic dishonesty. Responses to the three batteries differed. While many students admitted to cheating when asked directly, the proportion of affirmative responses to unauthorized assistance is larger. When students are asked to identify behaviors associated with academic dishonesty the proportion of students engaging in academic dishonesty increases yet again. Table 4 summarizes these differences. *Cheat* (75.3 percent) combines respondents that acknowledge *cheating* in class or outside class when asked directly. The proportion (75.3 percent) of respondents that acknowledge *academic dishonesty* when asked directly about cheating is comparable to other published results (Baird, 1980; Davis et al., 1992; McCabe, 2005; Slobogin, 2002;). *Unauthorized Assistance* (82.9 percent) combines respondents that acknowledge receiving or providing unauthorized assistance. *Behaviors* (89.3 percent) reflects the proportion of respondents that admit to at least one of the ten recognized behaviors of academic dishonesty. The most broadly defined aggregate measure of academic dishonesty, *Cheat All*, reflects the proportion (259/275 = 94.2 percent) of respondents that acknowledged academic dishonesty with an affirmative response to any question indicative of cheating that is included among the three batteries of questions. This study does not utilize *Cheat All* in the empirical analysis, but the aggregate measure offers perspective to the extensive admission of academic dishonesty. In short, students admit to cheating in one category (actions) but not in another (when asked directly). However, and more importantly, this study examines the possibility that context (semantics, environment, and role) may matter.

The constructed aggregate variables range from 75.3 to 89.3 percent of respondents conceding to academic dishonesty directly or indirectly by admitting to behavior widely recognized as academic dishonesty. Table 5 reveals that the three aggregate measures are positively correlated with all three correlations between .41 and .45. They are statistically significant at the 1 percent level of significance. The empirical component of this study is motivated by the observed differences between the three aggregate measures. The empirical analysis examines the differences in the aggregate measures and component questions of the three batteries of questions.

The survey responses represent matched pairs reported as proportions. The question of interest is whether the proportions differ. Following Agresti (2007), this study reports 95% Wald confidence intervals for each comparison. A confidence interval that does not include zero indicates that the proportions very likely differ.

Survey questions distinguish cheating and unauthorized assistance (semantics), in and outside a classroom (environment), and providing and receiving (role). Wald confidence intervals are calculated to assess the probability that the proportion of respondents answering these questions differ. Table 6 summarizes the calculations of Wald confidence intervals. To preview the results that follow, the findings of this study are highly suggestive that respondents do not interpret the terms *cheat* and *unauthorized assistance*

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equivalently when presented as part of a survey that clearly addresses academic dishonesty. Specific results are discussed presently.

Two comparisons isolate use of distinct terms, semantics. When comparing the proportion of respondents admitting to cheating in class (.27) and the proportion admitting to (receiving or providing) unauthorized assistance in class (.43), the confidence interval around the difference of sample proportion (-.16) reveals that the probability of a "yes" response was 0.10502 to 0.22225 lower to admit to cheating in class than unauthorized assistance in class. The 95% confidence interval does not include zero, indicating that it is very likely that the proportions differ. Similarly, when comparing the proportion of respondents admitting to cheating outside class (.75) and the proportion admitting to (receiving or providing) unauthorized assistance outside class (.81), the confidence interval around the difference of sample proportion (-.06) reveals that the probability of a "yes" response was 0.11823 to 0.01268 lower for cheat outside class than unauthorized assistance outside class. Again, the 95% confidence interval does not include zero, indicating that it is very likely that the proportions differ. These findings are consistent with the expectation that respondents will report cheating less than academic dishonesty.

Environment, in or outside class, is expected to influence academic dishonesty. Previous studies suggest that expectations of detection outside class may be perceived as lower, so students may be more inclined to engage academic dishonesty outside of the classroom (Genereux & McLeod, 1995; Gerdeman, 2000; McCabe & Trevino, 1996). The survey asks respondents whether they have cheated in or outside class. Similarly, the survey asks respondents about unauthorized assistance in and outside class. We calculate 95% Wald confidence intervals to assess the probability that the proportion of respondents affirming cheating in and outside class and unauthorized assistance in and outside class differ.

The results presented in Table 6 reveal that Environment, in or outside class, matters when students respond to questions specifically referencing cheating. Two comparisons isolate Environment, in and outside class. When comparing the proportion of respondents admitting to cheating in class (.27) and the proportion admitting to cheating outside class (.75), the confidence interval around the difference of sample proportion (.48) reveals that the probability of a "yes" response was 0.419255 to 0.540745 higher for cheat outside class than cheat in class. The 95% confidence interval does not include zero, indicating that it is very likely that the proportions differ. Similarly, when comparing the proportion admitting to unauthorized assistance in class (.43) and the proportion admitting unauthorized assistance outside class (.81), the confidence interval around the difference of sample proportion (-.38) reveals the probability of a "yes" response was 0.4435 to 0.32013 lower for unauthorized assistance in class than unauthorized assistance outside class. Similar findings occur when analyzing providing and receiving unauthorized assistance in and outside class. These findings support the expectation that students acknowledge academic dishonesty more outside the classroom than in it. These findings are presented in Table 6.

Academic dishonesty is not always a solitary pursuit. On occasion, confederates may engage academic dishonesty. If so, schemes may involve collaborators receiving assistance from accomplices providing assistance. The role, receiving assistance or providing assistance, may matter if students do not view providing and receiving assistance equally in terms of academic dishonesty. Studies find that helping a friend is a common reason for cheating (Chapman et al., 2004; Franklyn-Stokes & Newstead, 1995; Genereux & McLeod, 1995; Rettinger & Kramer, 2009). Rettinger and Kramer (2009) explicitly distinguish between "giving and receiving illicit information" (p. 296) to find that the role influences academic dishonesty. The survey developed for the present study asks respondents whether they received (N=182) or provided (N=214) unauthorized assistance. Table 6 presents 95% Wald confidence intervals comparing responses specific to the respondent's Role when acknowledging unauthorized assistance.

The survey asks four questions specific to receiving and providing unauthorized assistance in or outside class. Two aggregate variables are constructed to reflect receiving and providing unauthorized assistance regardless of environment (in or outside class). When comparing the proportion of respondents admitting to receiving unauthorized assistance (.66) and the proportion

admitting to providing unauthorized assistance (.78), the confidence interval around the difference of sample proportion (-.12) reveals that the probability of a "yes" response was 0.16983 to 0.0629 lower for unauthorized assistance received than unauthorized assistance provided. In this instance, the 95% confidence interval does not include zero, indicating that the proportions very likely differ. Similar findings result when comparing providing to receiving unauthorized assistance in and outside class. These findings support the expectation that students report providing unauthorized assistance more than receiving it overall, in the classroom, and outside the classroom. These findings are presented in Table 6.

These results support the contention that providing unauthorized assistance, regardless of environment, may be justified under an alternative behavioral code that elevates cooperation, assistance, and generosity. In contrast, receiving unauthorized assistance may be more difficult to dismiss as academic dishonesty because the individual is acutely aware of benefitting from another. These findings support the expectation that students acknowledge providing unauthorized assistance (N=214) more than receiving it (N=182).

The survey presents behaviors for students to consider. Ten of the thirteen behaviors are clear acts of academic dishonesty; the remaining three are not. Interestingly, these three behaviors were the most frequently identified by respondents. Accordingly, 95% Wald confidence intervals were calculated for each of the ten behaviors associated with academic dishonesty paired with these three behaviors. Table 6 reports the findings. Not a single confidence interval includes zero indicating that the proportions very likely differ. This finding supports the inclusion of the three behaviors often recognized as acceptable behaviors and demonstrates heightened student engagement with the survey. Moreover, these findings suggest that the sample distinguishes generally accepted behaviors from the academically dishonest behaviors.

Discussion

This study uses survey data revealing that more than 94 percent of respondents admit to cheating, unauthorized assistance, or a behavior clearly associated with academic dishonesty. Consistent with previous surveys, three-quarters of the sample admitted to cheating when asked directly. This study provides empirical evidence of systematic differences in student perceptions of academic dishonesty specific to Semantics (cheating and unauthorized assistance); Environment (in class and outside class); and Role (provide and receive). The empirical results offer further insight into the academic dishonesty phenomenon. Similar to many previous studies, the present study does not assess the frequency, magnitude, nor the material impact of academic dishonesty. In addition to the opportunities for future research presented throughout the Results section, subsequent research specific to an estimation of the magnitude and impact of academic dishonesty is needed to contextualize the significance and meaning of academic dishonesty.

This study finds that students admit to academic dishonesty outside the classroom more than in the classroom. Undoubtedly, students assign a lower likelihood of detection outside the classroom than in the classroom. Students' verbatim responses to an open-ended question support this suggestion. However, it is also reasonable to suggest that conflicting academic, social, and cultural norms are more likely to collide outside class and that alternative codes of behavior are elevated and considered outside class. Intuitively, one can imagine that taking an exam in class triggers an elevation of academic norms and the corresponding academic code of behavior above competing social or cultural norms and the corresponding alternative codes of behavior that exist outside a class. Accordingly, one might anticipate that cheating might be more common in courses that feature take-home exams, in part, because students are not present in an environment that establishes the dominance of academic norms over social and cultural norms and the corresponding code of academic behavior.

The empirical findings support the existing evidence that students view receiving and providing unauthorized assistance differently. It may be that receiving assistance is more difficult to acknowledge than providing assistance is difficult to admit on an anonymous survey; however, given previous research, this possibility seems unlikely given the willingness to confess to academic dishonesty more generally. Alternatively, students may acknowledge behavior widely recognized as academic dishonesty yet perceive the behavior positively as altruistic, friendly,

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and helpful – behaviors that most institutions celebrate. This alternative possibility is evidence of cognitive dissonance associated with competing social norms and practices. The empirical results demonstrate that the role of the individual matters in the perception of academic dishonesty. Providing unauthorized assistance may *not* necessarily be viewed as cheating if it is rationalized to represent positive behavior. The survey invited respondents to share thoughts or comments. The verbatim responses to the open-ended question support the expectation that students distinguish receiving from providing assistance. Moreover, the verbatim responses offer qualitative evidence supporting the assertion that students face competing codes of behavior. Verbatim responses are presented below with minimal editing for clarity:

- People like to help others out.
- Helping my friends.
- We are in this together so no one should fail.
- This campus has a very "open" environment based on mutual trust and desire to help one another. It may not always be the moral thing.
- Trying to help fellow classmates/under classmen by giving resources.

Implications and Prescriptions

Embracing the notion that research ought to have practical application, we present prescriptions specific to reducing academic dishonesty. If one chooses to ignore the nuance and subtlety of academic dishonesty addressed by this study, one might act on the finding that students participate in academic dishonesty more outside the classroom. Accordingly, the results suggest that faculty and institutions sincerely concerned with academic dishonesty ought to reduce the proportion of graded assignments and assessments completed outside class in favor of graded assessments completed in class. For disciplines and classes for which work completed outside the classroom is an essential component of the learning experience, the prescription can be modified to reduce the overall weight of assessments completed outside class to reduce the expected benefit motivating academic dishonesty. This prescription violates the common recommendation to reduce the stress and pressure students experience having to complete a number of heavily weighted exams. As with any choice, a trade-off exists, but it is unreasonable to conclude that the pressure to receive high grades is allayed by reducing or limiting heavily weighted exams. Indeed, the proverbial unintended consequence may result when students engage in more academic dishonesty given the opportunity outside class, a response we are inclined to identify as a substitution effect. In the absence of institutional commitment to reducing academic dishonesty, a collective action problem likely undermines the effort of individual faculty who must monitor, enforce, and prosecute academic dishonesty to alter the cost benefit calculation that seemingly encourages academic dishonesty with impunity.

For those who recognize the nuance and subtlety of academic dishonesty, institutional policy initiatives are likely inappropriate, with the exception of an exceptionally well-considered honor code that embraces the existence of competing behavioral codes of conduct that are situationally determined. The alternative may be to harness the positive behaviors associated with competing codes of behavior to encourage collegial learning environments, while simultaneously leveraging the spatial cues in class to maintain the integrity of assessment. In practice, faculty will permit collaboration outside class, but closely monitor in class assessments. Instructional faculty members will have to assign an appropriate weight to graded assignments completed in and outside class. The determining criteria may be a simple algebraic relation expressing the extent that a faculty member, department, school, college, or university is willing to inflate student grades based on graded work completed collaboratively.

If reducing academic dishonesty is desired, verbatim responses to an open-ended question on the survey offer qualitative evidence supporting the prescription to bring assessment into a monitored classroom environment. Student verbatim responses are presented below without editing; however parenthetical comments are added:

- If homework is ungraded, would be less likely to copy any answers for a higher score

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- It is a hard thing to prevent but with diligent watching you can prevent it
- Students only find the need to cheat when they are lazy or the professor does not teach very well
- Most online exams/classes I've taken rarely restrict using external resources to help with assignments or tests. (Are open note exams a concession to the online environment?)
- All assignments should be in class to decrease academic dishonesty
- Everyone wants an edge so long as they don't get caught. Work smarter not harder pal.
- This also depends on the teacher/course. Easy if you think you can get away with it.
- Even though I replied yes to many things, the assistance received on exams was very slim
- Most if not all yes responses pertain to homework assignments
- It is easier to cheat on online quizzes than it is on paper quizzes. Provide more paper and less online.
- It's easy to do and available everywhere
- Anything that is "out of class" (arrow pointing up) the chance of cheating. In class work people rarely cheat. old exams + materials give me a better understanding + help me learn

Student verbatim comments to an open-ended question indicate that academic dishonesty outside the classroom occurs because it can. Moreover, the student verbatim comments reveal that academic dishonesty is, in part, contextual and that environment matters. Outside classrooms, the expected benefits overwhelm the risk-adjusted expected costs of detection and enforcement. This study offers nuance to the cost-benefit explanation, namely competing norms are more likely to collide outside classrooms. Although, beyond the scope of this study, applying these findings to distance learning suggests that academic dishonesty can be expected to worsen in the environment. Further research is needed to explore this possibility.

The survey results confirm that academic dishonesty is pervasive for this sample. As such, efforts to reduce academic dishonesty require careful attention. Cialdini (1981) distinguishes descriptive from injunctive norms. Descriptive norms reflect what most people do. Injunctive norms represent what most people approve or disapprove. Injunctive norms address what should be done rather than what is done. When seeking to reduce academic dishonesty, the message must convey an injunctive norm such as, "do not cheat" or "cheating is unacceptable." However, the message will be less effective if accompanied by a descriptive norm that signals to students that cheating is commonplace and thus acceptable behavior. For example, a campaign to reduce academic dishonesty will be less effective if the "don't cheat" message reveals that 94% of students report cheating. In this instance, Cialdini might predict that cheating will increase as more students feel comfortable cheating and cheating more often. In contrast, a message that challenges the pervasiveness of academic dishonesty reinforces the injunctive norm. For example, the message, "Friends don't make friends cheat; don't cheat" assails the receiver of unauthorized assistance and empowers students to resist invitations to provide unauthorized assistance and challenges the perception that cheating is helping. When combined with a more proactive approach to educating students regarding what is and is not academic dishonesty, the opportunity to reduce academic dishonesty emerges.

Conclusions

With 75.3 percent of the sample directly admitting to cheating, this study confirms the prevalence of academic dishonesty but offers no guidance regarding the frequency or intensity of dishonest behavior. With 82.9 percent of the sample admitting to unauthorized assistance and 89.3 percent identifying a commonly recognized behavior of academic dishonesty, the survey results reveal a disconnection suggestive of dissonance specific to cheating, unauthorized assistance and behaviors widely recognized as academic dishonesty.

Undergraduate Academic Dishonesty *continued*

The survey results are consistent with previously published research. Key findings from the empirical analysis reveal that dissonance exists between different terms for academic dishonesty, the environment in which academic dishonesty transpires, and the role of the respondent. When the results are considered in concert, a narrative emerges that suggests that understanding academic dishonesty requires extending the cost-benefit analysis to reflect the various costs and benefits incurred by students when not explicitly in an academic setting. While instrumental considerations are involved, the emerging narrative suggests that the interaction of the semantics, environment, and role inform a hierarchy of codes of conduct that govern the relative influence of competing codes of conduct that ultimately determine behavior. Adoption of the narrative permits a richer understanding of academic dishonesty that serves the academic and social purposes of administrators, faculty, and students. While ignorance of the law is not a viable defense in the court system, addressing mitigating circumstances is permitted. It seems that an appreciation of the nuance and subtlety of academic dishonesty would inform enlightened policy, practice and overall well-being.

If colleges and universities have sincere interest in reducing academic dishonesty, faculty and administrators must acknowledge that providing assistance differs from receiving assistance, and they must recognize that graded assignments completed outside the classroom are frequently completed by or with the assistance of others. While collaboration serves as a powerful vehicle leveraging knowledge, skills, and abilities (KSAs) to achieve a shared objective, until KSAs are possessed, the communitarian orientation underlying well-intentioned academic dishonesty adversely affects students who forego or are denied learning opportunities however well-meaning the intentions of friends, faculty and higher education administrations may be. Ignoring, momentarily, the frequently cited social consequences of academic dishonesty, the greater tragedy is that the immediate benefits of academic dishonesty portend enduring harm for graduates who failed to acquire essential KSAs for success. More insidiously, academic dishonesty denies graduates satisfaction and confidence derived from independent learning. If higher education professes to instill a foundation to pursue lifetime learning, then ignoring academic dishonesty undermines the institutional mission and diminishes students rather than enriching them.

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Undergraduate Academic Dishonesty *continued*

Table 1: Descriptive Statistics

Characteristic	Valid Responses	Frequency	Proportion (%)*
Class	267		
Freshman		76	28.5
Sophomore		67	25.1
Junior		79	29.6
Senior		45	16.9
College	268		
Arts & Science		59	22.0
Business		104	38.8
Engineering		44	16.4
Pharmacy		61	22.8
Gender	267		
Male		140	52.4
Female		127	47.6

* Percentages may not sum to 100 percent due to rounding.

Table 2: "Cheat" & "Unauthorized Assistance" Frequency

	Valid Responses	Frequency	Proportion (%)
Cheat			
In Class	275	73	26.6
Outside Class	275	205	74.5
Received Unauthorized Assistance			
In Class	275	65	23.6
Outside Class	275	169	61.5
Provided Unauthorized Assistance			
In Class	275	103	37.5
Outside Class	275	207	75.3

Undergraduate Academic Dishonesty *continued*

Table 3: Summary of Student Behaviors

	Valid Responses	Frequency	Proportion (%)
Sought Clarification	271	242	89.3
Discussed Assignment	270	207	76.7
Reviewed by Other	271	228	84.1
Copied	271	165	60.9
Plagiarized	272	69	25.4
Completed by Other	271	30	11.1
Provided Answers	272	164	60.3
Test File	272	117	43.0
Wrote Answers on "Arm"	272	29	10.7
Provided Graded Work	272	137	50.4
Received Graded Work	272	145	53.3
Electronics	272	51	18.8
Altered Graded Response	272	39	14.3

Table 4: Aggregate Measures of Academic Dishonesty Frequencies (Proportion Responding YES)

	Valid Responses	Frequency	Proportion (%)
Cheat	275	207	75.3
Unauthorized Assistance	275	228	82.9
In Class (Prov. or Rec.)	275	118	42.9
Out Class (Prov. or Rec.)	275	223	81.1
Provided (In or Out)	275	214	77.8
Received (In or Out)	275	182	66.2
Behaviors	272	243	89.3

Undergraduate Academic Dishonesty *continued*

Table 5; Correlation of Aggregate Measures of Academic Dishonesty

	Cheat	Unauthorized Assistance	Student Behaviors
Cheat			
Pearson Correlation	1	.434**	.411**
Sig (2-tailed)		<.001	<.001
N	275	275	272
Unauthorized Assistance			
Pearson Correlation		1	.448**
Sig (2-tailed)			<.001
N		275	272
Student Behaviors			
Pearson Correlation			1
Sig (2-tailed)			
N			272

** Correlation is significant at the 0.01 level (2-tailed)

Table 6: Mean Proportions with Confidence Intervals

Aggregate Measures	Row Variable	Marginal Proportion	Column Variable	Marginal Proportion	Difference of Sample Proportion	95% Confidence Interval
	Cheat	.75	Unauthorized Assistance	.83	-.08	(-.12746, -.02527)
	Cheat	.75	Behaviors	.89	-.14	(-.18894, -.09047)
	Behaviors	.89	Unauthorized Assistance	.83	.06	(.019302, .105698)
Semantics						
	Cheat (in)	.27	Unauthorized Assistance (in)	.43	-.16	(-.10502, -.22225)
	Cheat (out)	.75	Unauthorized Assistance (out)	.81	-.06	(-.11823, -.01268)
Environment						
	Cheat (out)	.75	Cheat (in)	.27	.48	(.419255, .540745)
	Unauthorized Assistance (in)	.43	Unauthorized Assistance (out)	.81	-.38	(-.4435, -.32013)
	Unauthorized Assistance Receive (out)	.62	Unauthorized Assistance Receive (in)	.24	.38	(.310316, .446048)
	Unauthorized Assistance Provide (out)	.75	Unauthorized Assistance Provide (in)	.38	.37	(.314966, .441398)

Undergraduate Academic Dishonesty *continued*

Role						
	Unauthorized Assistance Receive	.66	Unauthorized Assistance Provide	.78	-.12	(-.16983, -.0629)
	Unauthorized Assistance Provide (in)	.38	Unauthorized Assistance Receive (in)	.24	.14	(.081724, .19464)
	Unauthorized Assistance Provide (out)	.75	Unauthorized Assistance Receive (out)	.62	.13	(.080831, .195533)
Behaviors						
	Clarification	.89	Copied	.61	.28	(.219034, 351336)
	Clarification	.89	Plagiarized	.25	.64	(.580577, .703555)
	Clarification	.89	Other Completed	.11	.78	(.72908, 833883)
	Clarification	.89	Provided Answers	.60	.29	(.230156, .35287)
	Clarification	.89	Test File	.43	.46	(.398888, .531001)
	Clarification	.89	Wrote on Arm or Desk	.11	.78	(.734031, .837924)
	Clarification	.89	Provided Graded Work	.50	.39	(.325435, .456852)
	Clarification	.89	Received Graded Work	.53	.36	(.296708, .426539)
	Clarification	.89	Electronic Device	.19	.70	(.650641, .766334)
	Clarification	.89	Altered Graded Response	.14	.75	(.696455, .8017)
	Discussed	.77	Copied	.61	.16	(.082245, .222588)
	Discussed	.77	Plagiarized	.25	.52	(.443896, .585733)
	Discussed	.77	Other Completed	.11	.66	(.595937, .720048)
	Discussed	.77	Provided Answers	.60	.17	(.094256, .239078)
	Discussed	.77	Test File	.43	.34	(.254478, .412189))
	Discussed	.77	Wrote on Arm or Desk	.10	.67	(.598716, .72721)
	Discussed	.77	Provided Graded Work	.50	.27	(.188816, .33711)
	Discussed	.77	Received Graded Work	.54	.23	(.157123, .302136)
	Discussed	.77	Electronic Device	.19	.58	(.512096, .64346)
	Discussed	.77	Altered Graded Response	.14	.63	(.55916, .685285)
	Reviewed	.84	Copied	.61	.23	(.160853, .298406)
	Reviewed	.84	Plagiarized	.26	.58	(.523784, .649648)

Undergraduate Academic Dishonesty *continued*

	Reviewed	.84	Other Completed	.11	.73	(.671891, .787368)
	Reviewed	.84	Provided Answers	.61	.23	(.167212, .305112)
	Reviewed	.84	Test File	.43	.41	(.338902, .480286)
	Reviewed	.84	Wrote on Arm or Desk	.11	.73	(.674296, .794339)
	Reviewed	.84	Provided Graded Work	.50	.34	(.271342, .407625)
	Reviewed	.84	Received Graded Work	.53	.31	(.239113, .380813)
	Reviewed	.84	Electronic Device	.19	.65	(.592025, .714248)
	Reviewed	.84	Altered Graded Response	.14	.70	(.639925, .754909)

*