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ABSTRACT

SOCIAL NORMS AND ACADEMIC DISHONESTY

By

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This article aims to evaluate the salience of the perception of the beliefs and behavior of peers as a predictor of students' own beliefs and behaviors regarding academic dishonesty. Particular attention is paid to discerning the relative predictive power of different peers or peer groups (e.g. the average student, your best friend, etc.). Specifically this study offers support for the following conclusions (especially in regards to academic dishonesty): students over-perceive their peers' delinquency; these misperceptions increase as social distance increases; there is a positive correlation between one's perception of his peers' delinquent behavior and one's own; and the strength of this correlation generally lessens as the social distance of the peer group being referenced increases.

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Introduction

It has been well documented that academic dishonesty regularly occurs on college campuses with some reports indicating that almost 90% of college students cheat at least once during their academic career (Brown and Choong 2005; Sims 1993). Although it can be reasoned that academic dishonesty has been around as long as academic institutions have, it seems that the frequency and intensity of the dishonest acts are on the rise (Drake 1941; McCabe and Trevino 1997). In fact, cheating on college campuses has become such a problem that some researchers have deemed it an epidemic (Lambert and Hogan 2004). But what influences student cheating?

There is an abundance of literature that seeks to explain why students commit academically dishonest acts, and a variety of explanations have been offered and tested using various methodologies (Bolin 2004; McCabe 1999; Cochran et al 1999; Michaels and Miethe 1989; etc.). One of the largest studies was conducted by McCabe and Trevino (1997), who ran a multi-campus survey of nine medium-to-large state universities looking to identify contextual and individual factors that influenced academic dishonesty. They discerned that of all the factors that were tested, peer disapproval provided the most influence on academic dishonesty. Specifically, the authors identified that the stronger an individual thought that her peers would disapprove of her cheating, the less often she reported she cheated. This sort of finding corroborated an earlier finding of theirs, which was that self-reports of academic dishonesty are more highly associated with perceptions of peers' behavior than many other factors (McCabe and Trevino 1993).

Many theories and models exist to help one understand the potential logic and mechanisms that cause there to be such a salient relationship between deviant peer

behavior and one's own deviant behavior. One of the most tested and used is social learning theory (Akers and Sellers 2006). The cornerstone of social learning theory is that all human behavior, whether it is deviant or conforming, is learned in the same way. Influenced by symbolic interactionism, social learning theory posits that what sways someone towards conformity or deviance is the type of things that are learned in everyday interaction. Thus, those who associate with deviants are rewarded for being deviant and attach positive meaning to deviance. This, in turn, makes them more likely to commit deviant acts (Akers and Sellers 2004). For example, a person who spends his time socializing with people who steal cars and is rewarded when he himself steals a car will think positively about car stealing and be more likely to steal a car than a person without any car stealing friends who has not been rewarded for being deviant.

A way to explore some of the mechanisms at play in social learning theory more deeply is through the lens of social norms theory (Berkowitz 2004). Social norms theory is harmonious with social learning theory in that it fits under the umbrella of ideas that social learning theory examines but specifically looks at only one element contained under the totality of social learning theory. Social norms theory, like social learning theory, is concerned with differential association. It asserts that the way individuals perceive the behavior and beliefs of their peers influences their own behavior. Thus, those who an individual associates with are a very powerful predictor of what that person's beliefs and actions will be. Unlike social learning theory, which concerns both the normative and interactional dimensions of differential association and the subsequent definitions, reinforcement, and direct imitation that may likely follow (Akers and Sellers 2004), social norms theory concentrates specifically on the influence of perceived peer

norms on an individual. Specifically, it posits that an erroneous overestimation by an individual with regards to the frequency in which his peer group does a particular activity or has a particular opinion will lead to an increased likelihood that he will do that activity or subscribe to that opinion (Berkowitz 2004).

Similarly to social learning theory, there are numerous studies that empirically validate social norms theory (Mattern and Neighbors 2004, Borsari and Carey 2001, Perkins 2002, etc). Most of the empirical research on social norms theory, however, has been done on one substantive area: collegiate alcohol use. Despite the difference in dependent variables, the research that has been done with social norms theory and collegiate alcohol use can possibly help us understand academic dishonesty among college students.

Since the extant research on academic dishonesty points to peer behavior as one of the most salient correlates of self-reported academic dishonesty (Whitley 1998, McCabe and Trevino 1997), and since there is a rapidly expanding literature on social norms theory (complete with validating empirical tests using multiple methods, see Berkowitz 2004), it makes sense to examine collegiate academic dishonesty from the perspective of social norms theory.

Hard, Conway, and Moran (2006) explicitly applied social norms theory to academic dishonesty. Their findings indicate that students overestimated how often their peers were academically dishonest, and that they found a statistically significant positive correlation between what the students thought of their peers and their own self-reported academic misconduct. Following the logic of social norms theory, this misperception is

liable to lead towards a higher frequency of academically dishonest acts being committed (Berkowitz 2004).

A shortcoming of Hard et al.'s (2006) paper is that it measures only one conception of a peer group, specifically "other university students." As Berkowitz (2004) notes, individuals belong to a variety of groups. Each group that a person is a part of is different; thus, an individual is influenced differentially, both in intensity and direction, by the various groups of which he perceives he is a member. For instance, an individual's recreational softball teammates might compel him to spend a couple of hours socializing at the local tavern with them, but that compulsion might be overridden by his membership and allegiance to a religious organization that disapproves of alcohol consumption. So, it is not that measuring self-reported differences between an individual's own behavior and that of "other university students" is not useful; it is rather that a deeper understanding of how peers might influence behavior can be gained by assessing the relative saliencies of the different peer groups to which one belongs.

Some research has been done on comparing the relative misperceptions and correlations of several self-other relationships that differ by reference group. Differences dependent upon the type of peer group referenced were found, underscoring the idea that as social distance increases, so do the size of the misperceptions (Berkowitz 2004, Borsari and Carey 2003). In other words, a person's misperceptions about the thoughts and actions of a distant acquaintance are likely to be greater than misperceptions about a close friend (Borsari and Carey 2003). In addition, current research shows that perceived norms for people who are the least socially distant are stronger predictors of an

individual's beliefs and actions than are the perceived norms for people who are more socially distant (Borsari and Carey 2003, Korcuska and Thombs 2003).

This finding validates the worth of research that distinguishes clearly and specifically the reference group being used as the peer variable since it is clear that an individual's actions and beliefs are differentially related to different peer groups. Furthermore, if one person was asked about his peers, he might think of his three closest friends, while another individual might answer thinking of all others within a couple years of his age who live in his city. These answers to the same question would likely produce disparate results because they are measuring different things. Therefore, along with the need to measure different peer groups in trying to ascertain the effect of peers on individuals, there is also a need for researchers to standardize and use specific terms in assessing peer group influence (e.g. using "The average undergraduate student" rather than "your peers") (Borsari and Carey 2003). This is because it is hard to deduce relationships from a cross-study synthesis without the widespread use of common terms as variables. It cannot be said with much analytic clarity that the predictive power of peers on some phenomenon is X if there is not uniformity in the peer variable. When one study asks students to rate their "peers" and another asks them to rate their "friends" it is hard to compare the findings of the two studies. Also, since it has been illustrated that different peer groups do have varying effects, understanding of the process will be enhanced if there is identification and more thorough understanding of the unique differential effects of specific peer groups on individual behavior and thoughts. Once again, however, most of the research that points towards varying saliency amongst different peer reference groups is based on collegiate alcohol use. Thus, there is a need to

evaluate the relative predictive power of different peer groups on academically dishonest behaviors and thoughts.

Although Jordan (2001) did measure the effect of a variety of peer groups on academic dishonesty, there has not been enough cross-study uniformity of peer variables or congruency of stem questions to make for a critical analysis of the varying predictive power of different peer groups on academic dishonesty. Furthermore, Jordan's study included only three conceptions (all students, students in resident hall, and friends) of peer groups. Thus, even within a singular study it is hard to make conclusions about the varying effects of peer groups. The present study plans to address these needs through the concurrent examination of the relative predictive power of different peer groups using uniform stem questions. Moreover, in the interest of substantiating earlier results and building a literature that can be viewed more as a totality, the study will employ much of the same experimental design as Hard et al. (2006).

Hypotheses

For the following hypotheses the word "peers" will account for the six different peer groups ("Your best friend," "Your significant other," "All of your current and former college roommates [on average]," "The average MSU undergraduate [in your major]," "The average MSU undergraduate [all majors]," and "Your five closest friends on campus [on average].") that were tested and their aggregate. In addition, "social distance" will be seen as a continuum with the ordering of peer groups from least socially distant to most socially distant: "Your significant other," "Your best friend," "Your five closest friends on campus (on average)," "All of your current and former college

roommates (on average)," "The average MSU undergraduate (in your major)," "The average MSU undergraduate (all majors)."

Hypothesis 1: Students over-estimate their peers' ethical approval of academically dishonest acts.

Hypothesis 2: Students over-estimate the frequency in which their peers take part in academically dishonest acts.

Hypothesis 3: The size of the misperceptions students have about their peers' degree of ethical approval of academically dishonest acts increases as peer group social distance increases.

Hypothesis 4: The size of the misperceptions students have about the frequency in which their peers take part in academically dishonest acts increases as peer group social distance increases.

Hypothesis 5: A positive correlation exists between one's own behavior/beliefs regarding academic dishonesty and the behavior/beliefs she perceives her peers participating in and believing.

Hypothesis 6: The predictive power of the perception of peer beliefs and behaviors and one's own beliefs and behaviors regarding academic dishonesty decreases as peer group social distance increases.

Hypothesis 7: Presenting a colloquial definition of what constitutes academic dishonesty may mediate the disparity between students' own beliefs and behavior regarding academic dishonesty and the perception of their peers corresponding beliefs and behaviors.

Besides adding to the literature, this study can serve as a guiding tool in setting up a social norms intervention to reduce academic dishonesty. Social norms interventions seek to correct influential misperceptions that people have about their peers by providing factual information, which is hypothesized to change actual behavior and values (Berkowitz 2004). Much empirical data has been gathered in support of the efficacy of this approach (Mattern and Neighbors 2004, Scher, Bartholow, and Nanda 2001, Berkowitz 2004, etc.), and although social norms interventions have been targeted at correcting a variety of self-other misperceptions, once again, most of the interventions have targeted collegiate alcohol use.

Therefore, there is room for development and testing of a social norms intervention aimed at lowering the documented pervasive over-perception of peers' approval and acting out of academically dishonest acts, which, following social norms theory (Berkowitz 2004), will lead to actual lower approval and misconduct overall. In choosing how to most effectively administer an intervention, it would help to know the relative predictive power of a variety of peer groups and the size of the self-other misperception on each particular group. The knowledge would be even more beneficial if it were specifically based on the particular phenomenon that the intervention is attempting to influence. Knowledge of these principles derived from alcohol use studies is useful, but it is quite worthwhile in attempting to establish the framework of an effective social norms intervention on academic dishonesty to seek information that is solely based upon academic dishonesty.

Methods

In the summer of 2009 several instructors of in-person summer courses at a large public Midwestern university were contacted via email to see if they would be willing to allow their students an opportunity to participate in an anonymous and voluntary survey. Ten instructors agreed to allow the survey to be administered either immediately following or during their class. One instructor offered extra credit to his students for their participation in the study. The courses surveyed tended to be mostly social science classes as the instructors for those classes were both, disproportionately contacted out of convenience, and disproportionally agreed to participate. The students were told by the researcher that a survey was to be administered that seeks to help further understanding of why people both approve of and commit academically dishonest acts. It was explicitly stated that the students' participation was completely voluntary and that their names would in no way be attached to their answers. The great majority of students chose to participate.

Participants

There were 184 surveys turned in. Although not every student answered every question (it was an option not to answer if the question did not apply to the individual), and a few students seemed to just hurriedly mark the same answer for every question, no surveys were excluded from all analyses. The sample was 66.8 percent female and 33.2 percent male, with every respondent declaring their gender. Racially, the sample was 70.1 percent White, 17.9 percent Black, 5.4 percent Asian, 4.3 percent some other race, 1.1 percent two or more races, and .5 percent American Indian. One respondent left the race category blank. As is quite characteristic of in-person summer courses, most of the

respondents were upperclassmen. The sample was 56.0 percent Seniors, 37.5 percent Juniors, 3.3 percent Sophomores and 3.3 percent of the sample responded "Other." Most, 62.0 percent, of the respondents reported having a major in the Social Sciences and 22.8 percent of students marked "Other" when asked about their academic major. All other major areas were thoroughly underrepresented in this sample. The average age of the respondents was 21.2 years old (note that the category of 24 years of age and older was coded as "24").

Survey

Respondents were asked to report their age, class standing, major area, sex and race. Following these demographic questions, on roughly half of the surveys (58.2 percent), was a paragraph that described in colloquial terms what constitutes academic dishonesty (the other surveys had a blank spot where the paragraph was). This paragraph was adapted from Michigan State University's official definition and read:

> A person is being academically dishonest or "cheating" if he does any of the following things: he claims that another's work is his own; obtains an examination or assignment without authorization to do so; he does an assignment or examination for another person; he tampers with the academic work and (or) research of another person, he lies about his data.
>
> (Condensed from https://www.msu.edu/unit/ombud/RegsOrdsPolicies.html) *note that the "he" pronoun was used on the survey but is not used in MSU's official definition.

In the next part of the survey students were asked, to the best of their knowledge, how often they and others had performed certain academically dishonest acts. In all, the

students reported their own behavior and that of six peer groups ("Your best friend," "Your significant other," "All of your current and former college roommates (on average)," "The average MSU undergraduate (in your major)," "The average MSU undergraduate (all majors)," and "Your five closest friends on campus (on average).") on five different types of academic dishonesty. The five types of academic dishonesty were planned and unplanned copying of another's paper, allowing another to copy your paper during an exam, submitting another person's material as your own, and copying information from Internet websites and submitting it as your own. The students were asked to select answers on a five point scale: never, once or twice, three to five times, six to ten times, or more than ten times. Additionally, they were asked to skip a question if it did not apply to them. The types of academic dishonesty and the scale were adapted from Hard et al. (2006) in the interest of comparing earlier results and adding to the literature. Following the section that asked about the frequency of committing academically dishonest acts was a section that inquired about how ethical it was to commit the same acts. The responses in the scale used were as follows: very unethical, unethical, neither ethical nor unethical, ethical, and very ethical. Once again, students were also instructed to skip a question if it did not apply to them.

Results

In order to test the hypotheses put forth in this study more succinctly, some data was aggregated. All peer group responses, in both the frequency and ethical belief section, for each specific form of academic dishonesty were then averaged forming two new variables used in Table 1: "Student Mean Frequency of Behavior Belief of Aggregated Others" and "Student Mean Ethical Belief of Aggregated Others." The average response of all peer groups, across all five forms of academic dishonesty, for

both frequency and ethical belief questions respectively, are designated as the variable "Aggregated Others" in Tables 2 and 3. In Table 4, the peer group data is based upon answers for that particular peer group, in either the frequency or ethical belief categories, across all five forms of academic dishonesty.

Hypothesis 1: Students over-perceive their peers' degree of ethical approval of academically dishonest acts.

Hypothesis 2: Students over-perceive the frequency in which their peers take part in academically dishonest acts.

On average, the results show that students reported that they both committed less often and were more ethically approving of each form of academic dishonesty than their peers (see Table 1). The average difference between the Student Mean Self Frequency of Behavior and the Student Mean Frequency of Behavior Belief of Aggregated Others was .38 with the differences ranging from .36 to .41 depending on the type of academic dishonesty. The average difference between the Student Mean Self Ethical Belief and the Student Mean Ethical Belief of Aggregated Others was .28 with differences ranging from .21 to .36 depending on the type of academic dishonesty.

The act that students reported being involved with most frequently was copying from another's paper. The mean score for students' self report on copying from another's paper was 2.01 (on the response scale a 2 corresponded with having participated in the behavior once or twice). Copying from another's paper was also one of two acts that students were most ethically accepting of receiving a mean score of 1.96 along with the act of allowing another to copy on an exam (a 2 on the ethical response scale represented thinking the behavior was "Unethical" whereas a 1 meant thinking it was "Very

unethical" and a 3 "Neither ethical nor unethical"). For the Aggregated Others scores, answers were only included if the respondent provided an answer for each peer group on that particular form of academic dishonesty.

Table 1

Comparing Student Self-Report Frequency of Misconduct with Their Perceptions of Their Peers across Five Different Forms of Academic Dishonesty (Standard Deviations Appear Parenthetically)

Type of Academic Dishonesty	Student Mean Self Frequency of Behavior	Student Mean Frequency of Behavior Belief of Aggregated Others	Self-Other Mean Frequency of Behavior Difference	Student Mean Self Ethical Belief	Student Mean Ethical Belief of Aggregated Others	Self-Other Mean Ethical Belief Difference
Planned in advance and then copied from another	1.86 (1.08) N=179	2.21 (0.84) N=124	0.36	1.78 (0.85) N=183	2.09 (0.73) N=132	0.31
Copied from another person's paper	2.01 (1.07) N=183	2.42 (0.95) N=126	0.41	1.96 (0.83) N=184	2.17 (0.65) N=132	0.21
Realized during an exam that another student wanted to copy from his or her paper, and allowed that student to copy	1.66 (0.91) N=182	1.99 (0.81) N=130	0.33	1.96 (0.91) N=184	2.17 (0.74) N=132	0.21
Submitted another person's material as one's own	1.24 (0.64) N=182	1.65 (0.61) N=131	0.41	1.39 (0.65) N=184	1.75 (0.65) N=135	0.36
Copied information from Internet websites and submitted it as his or her own work	1.52 (0.83) N=183	1.93 (.076) N=130	0.41	1.63 (0.72) N=183	1.92 (0.67) N=130	0.29

Hypothesis 3: The size of the misperceptions students have about their peers' degree of ethical approval of academically dishonest acts increases as peer group social distance increases.

The "You" mean ethical belief was lower than that of any of the peer groups, although the difference between "You" and "Significant Other" was negligible. The mean perception of each peer group was unique with students perceiving that undergraduates in all majors are the most ethically approving of cheating with a mean score of 2.32 (falling between "Unethical" and "Neither ethical nor unethical" on the scale). Table 2 lists Student Mean Ethical Belief responses for themselves and others on the five different types of academic dishonesty.

Table 2
Self-Report and Perception of Various Peers' Ethical Beliefs on Academic Misconduct

	Mean (Std. Deviation)	N
You	1.74 (.631)	182
Significant Other	1.75 (.663)	128
Best Friend	1.80 (.628)	172
Five Closest Friends On Campus	1.96 (.654)	174
College Roommates	2.05 (.617)	166
Undergraduates In Major	2.20 (.627)	170
Undergraduates All Majors	2.32 (.643)	173
Aggregated Others	1.99 (.574)	122

Further testing yielded an analysis of means derived only from the particular cases that had answers for both the "You" and the specific peer group category across all five forms of academic dishonesty. Analyzing the data this way allowed for a Paired-Samples T Test to be conducted on each self-other difference. The self-other mean ethical difference for "Significant Other" was not found to be statistically significant at the.01 level. The difference between oneself and his or her best friend was found to be significant at the .01 level. The four remaining self-other peer group differences were

found to be significant at the .001 level. The degree to which the ethical mean of each peer group differed from the respondents self-report of his or her own ethics varied. The mean perceived ethical belief of the "Best Friend" was just .080 more than that of "You," whereas the undergraduates in all majors mean was .592 (over a full half-step on the response scale) more than the mean student ethical self-report. All in all, the hypothesis was confirmed as the self-other mean ethical difference increased as the social distance of the peer group increased (note that the difference for "Significant Other" was not found to be statistically significant) (see Table 3).

Table 3
Mean Differences and Correlations of Self-Reports and Perception of Various Peers' Frequency of Academic Misconduct and Related Ethical Beliefs

	Pearson Correlation For Aggregated Frequencies	Self-Other Mean Frequency Difference	Pearson Correlation For Aggregated Ethical Beliefs	Self-Other Mean Ethical Difference	
Significant Other	.617** N=116	.009 N=116	.879** N=127	.050 N=127	
Best Friend	.865** N=157	.110** N=157	.835** N=171	.080* N=171	
Five Closest Friends On Campus	.741** N=163	.345** N=163	.779** N=173	.230** N=173	
College Roommates	.637** N=156	.392** N=156	.630** N=165	.345** N=165	
Undergraduates In Major	.504** N=158	.751** N=158	.538** N=169	.486** N=169	
Undergraduates All Majors	.405** N=159	1.01** N=159	.380** N=172	.592** N=172	
Aggregated Others	.751** N=109	.441** N=109	.807** N=121	.297** N=121	

* denotes significance at the .01 level **denotes significance at the .001 level

Hypothesis 4: The size of the misperceptions students have about the frequency in which their peers take part in academically dishonest acts increases as peer group social distance increases.

Students mean frequency of behavior responses for themselves and others on the five different types of academic dishonesty were calculated. Once again, the N values differed by type due to the fact that not everyone answered every question. All peer variables besides "Significant Other" had mean scores higher than those that the respondents self-reported. Also, as it was with the ethical belief questions, the mean perception of each peer group was unique with students perceiving that undergraduates in all majors are academically dishonest most often. The mean score on the frequency component for undergraduates of all majors was 2.65 (falling between "Once or twice" and "Three to five times" on the frequency of misconduct scale) (see Table 4).

Table 4 Self-Report and Perception of Various Peers' Frequency of Academic Misconduct

	Mean (Std. Deviation)	N
You	1.66 (.664)	177
Significant Other	1.58 (.682)	120
Best Friend	1.74 (.680)	162
Five Closest Friends On Campus	2.00 (.733)	168
College Roommates	2.04 (.747)	161
Undergraduates In Major	2.39 (.754)	163
Undergraduates All Majors	2.65 (.785)	164
Aggregated Others	2.01 (.618)	113

Once again, further analysis of means derived only from the particular cases that had answers for both the "You" and the specific peer group category was performed. The self-other frequency of misconduct difference for "Significant Other" was not found to be statistically significant at the.01 level; however, each of the remaining peer group means were significantly different than the mean self-reported frequency of behavior at the .001 level. The degree to which the frequency of behavior mean of each peer group differed from the respondents self-report of his or her own cheating behavior varied. The mean perceived frequency of misconduct of the "Best Friend" was just .110 more than that of "You," whereas the undergraduates in all majors mean was 1.01 (over a full step on the

scale) more than the mean student self reported frequency of misconduct (see Table 3). The hypothesis was confirmed as the self-other mean frequency difference increased as social distance increased (note that the difference for "Significant Other" was not found to be statistically significant) (see Table 3)

Hypothesis 5: A positive correlation exists between one's own behavior/beliefs regarding academic dishonesty and the behavior/beliefs she perceives her peers participating in and believing.

The aggregated ethical belief and frequency of misconduct mean peer variables were correlated with the mean "You" variable. Results show a strong positive correlation for both the frequency and ethical belief correlations, with a frequency correlation of .751 and an ethical belief correlation of .807. Each of these correlations is significant at the .001 level (see the bottom of Table 3).

Hypothesis 6: The predictive power of the perception of peer beliefs and behaviors regarding academic dishonesty decreases as peer group social distance increases.

Each ethical belief and frequency of misconduct mean peer variable was correlated with its respective mean "You" variable to see the strength of each relationship. The Pearson correlation analysis (Table 3) shows that each relationship that was tested is significant at the .001 level. The strength of these correlations did vary by peer group. For the ethical belief category, "Significant Other" was most strongly correlated with "You" with a correlation of .879 whereas undergraduates of all majors was the least powerful predictor of self-reported ethical belief with a correlation of .380. In the frequency of misconduct category, the weakest correlate was also undergraduates of all majors with a correlation of .405, but the most powerful predictor was "Best

Friend" with a correlation of .865. In this category "Significant Other" was only the fourth strongest correlate with a correlation of .617. The predictive power of the perception of ethical beliefs did decrease as peer group social distance increased. Also, with the exception of the aforementioned "Significant Other" being only the fourth strongest correlate, the predictive power of the perceptions of peer behaviors decreased as peer group social distance increased.

Hypothesis 7: Presenting a colloquial definition of what constitutes academic dishonesty may mediate the disparity between students' own beliefs and behavior regarding academic dishonesty and the perception of their peers corresponding beliefs and behaviors.

The analysis of the data failed to show any important differences dependent on whether or not the respondent received a survey that asked them to read and presented them with a colloquial definition of academic dishonesty.

Discussion:

In general, the analysis yielded the expected results. Students were found to over-perceive both their peers degree of ethical approval of academically dishonest acts and their peers' frequency of committing these acts. The findings are consistent with Hard et al. (2006), and Scanlon and Neumann (2002). Contrary to these findings, a study by Jordan (2001) found that students underestimated the cheating behavior of their peers. This difference in result could be the result of sample differences. The sample in Jordan's study included only members of a small liberal arts school with an honor code that responded to a survey by mail, whereas this study and that of Hard et al. were drawn from surveys conducted in the classroom at a large and medium sized university,

respectfully. The sample in the Scanlon and Neumann study was made up of students on nine campuses. Previous research has confirmed that self-other misperceptions are present for other types of behaviors as well. These behaviors include alcohol use, cigarette smoking, gambling, eating behaviors, and attitudes towards homophobia. Berkowitz (2004:10) sums up the ubiquity of self-other misperceptions by stating that they "have been consistently documented for a variety of behaviors and social contexts and in a variety of student and adult populations and sub-populations in both individual studies and in meta-analyses."

As anticipated, the size of the misperceptions, in both the ethical belief and frequency of misconduct categories, varied depending on which peer group was referenced. This analysis of the distinctive characteristics of different self-other misperceptions is somewhat unique for studies on academic dishonesty and seemingly has never been done with as many as six different peer targets. In the study, the size of the misperceptions grew larger as the social distance from the respondent increased, which corroborates with earlier studies on collegiate alcohol use (Borsari and Carey 2001).

The self-other mean frequency differences were larger in the frequency of behavioral misconduct than in ethical approval. This difference may be attributed to a methodological flaw in the study design. The frequency of misconduct questions preceded the ethical belief questions on every survey. Seemingly, this order of questions had some effect on the data because respondents were more likely to provide straight answers (providing the same response for both the self and all peer group portions of any or all forms of academic dishonesty) on the ethical belief questions. It is hypothesized

that this trend is at least partly the result of students hurrying through the second portion of the survey (which looked very similar to the first) and that this difference would be lessened if the order of the categories was randomized.

A student's beliefs about his or her peers' behavior and ethics regarding academic dishonesty were shown to be strong correlates of that individual's own academically dishonest behavior and related ethical beliefs. This replicated many previous findings on academic dishonesty (Burrus et al. 2007, Hard et al. 2006, McCabe et al. 2001). The strength of the correlations differed by peer group. With only one exception (self-significant other frequency), the strength of the correlations became weaker as social distance increased. The finding that the strength of self-other correlations decreases as social distance increases and self-other misperceptions increase is well documented in the collegiate alcohol use literature (Borsari and Carey 2003). This study adds to that literature in that it shows similar findings for academic dishonesty.

The one exception that was found to these general rules was the relationship between self-frequency of misconduct and perception of the frequency of misconduct of the respondent's significant other. For this self-other category the mean frequency difference was lower than any other, which is to be expected if it is assumed that of all the peer variables there is the least amount of social distance between a respondent and her significant other. What was not expected, however, was that of all six peer groups, the self-significant other correlation was only the fourth strongest. Previous literature and theory would have predicted it much stronger.

There are many possible explanations for this. Perhaps the most parsimonious is to consider the unique values of the significant other as a gendered variable. It may be

that, although socially close, an individual's perception of his or her significant other is relatively less powerful in predicting that individual's behavior because the individual does not see his or her significant other's actions as the norm for people like himself or herself. In other words, a male might be aware of his girlfriend's actions but would not, deliberately or otherwise, in order to fit the social norm, try and align his behavior with hers. Instead he might conclude (consciously or unconsciously) that what she does is just "what girls do" and need not influence his behavior. In this scenario it might be more likely that this individual's behavior would be more correlated with a same-sex best friend who not only is socially close but also does "what guys do." Of course, this analysis is assuming that a majority of couples are heterosexual and best friends are mostly of the same sex. It also doesn't speak to why this difference was not present in the ethical belief category. Further study is needed to indentify the unique influence and potential gender differences in the predictive power of significant others on academic dishonesty.

Limitations

This study is certainly not without limitations. Firstly, the relationship between a person's behavior/beliefs and his perception of his peers' behaviors/beliefs is correlational; thus, causation should not be inferred. It could certainly be the case that law abiding individuals tend to choose other law abiding individuals as friends, significant others, etc. Even if this is the case though, it certainly does not negate the possibility that these peer groups influence an individual's behavior and beliefs after joining their ranks. It is not at all contradictory for a person to both select friends due to

similarities in activities and beliefs and to be influenced by these friends thereafter. More rigorous empirical studies are needed to establish causality.

It is worthwhile to note that methods have been taken in other research in attempts to ascertain the effect that change in a person's perception of their peers has on his or her own behavior and beliefs. Studies have been conducted on alcohol usage in which an experimental group, but not the control group, is privy to information that shows actual drinking norms (which are less than perceived norms). At the end of the intervention, students in the experiment group reported that they personally consumed less alcohol and that they also thought that their peers consumed less alcohol than they did pre-intervention (Peeler et al 2000, Schroeder & Prentice 1998).

Another limitation of this study is that it relies on self-report data. Therefore, answers that are given are subject to social desirability bias (although the promise of anonymity would seem to lessen this) and mediated by memory. Nonetheless, self-report methods are readily used and are seen by many as a reliable way to study delinquent behavior (Harris and Benson 1999, Lab & Allen 1984, Hindelang 1981). Moreover, many of the self-report studies on collegiate alcohol use that have yielded positive correlations between individuals and their peer groups have been validated by research that uses methods that are not self-report. For instance, Foss et al. (2003. 2004) used measures of blood alcohol concentration to measure change in behavior and concluded that after students were shown actual statistics on drinking that they drink less.

A third limitation of this study is that it does not measure what people will do, only what they feel and say they have done. It is possible that although a person truthfully reports what they have done in the past, they may not continue to behave and

perceive the same way in the future. Nonetheless, studies point to past deviant behavior as the best predictor of future deviant behavior (Akers and Sellers 2004). Moreover, one's attitudes about delinquent behavior have been shown to be good predictors of actual behavior (Bolin and Heatherly 2001).

A fourth limitation is that time-order effects were not controlled. Thus, every student was presented with the same set of questions in the exact same order. All of the frequency questions came before the ethical belief questions, and questions asking about individual behavior and beliefs always preceded the questions about one's perception of his various peer groups. Systematic variation of questions should be considered in future research.

The last limitation to be discussed is the study's lack of ecological validity. The results found here may only be generalizable to undergraduates taking summer courses at large public universities who are Juniors or Seniors who are mostly white and female. Still the findings here on the misperception of the cheating behavior of one's peer group and the correlation between self-reports and perception of peers on academic dishonesty corroborate with earlier findings with somewhat different samples. For instance, Hard et al. (2006) also found that students overestimated how often their peers were academically dishonest and that there was a significant positive correlation between student behavior and perception of peer behavior from analyzing data from 421 students in general education courses at a medium sized public university. Conversely, the aforementioned study by Jordan (2001) found that students underestimated their peers' cheating behavior while still finding a strong correlation between student behavior and that of their peers

The findings from this study heed the call of replication put forth by earlier studies (Hard et al. 2006, Berkowitz 2004) and offer substantiation and increased ecological validity of conclusions drawn by many. Specifically this study offers support for the following conclusions (especially in regards to academic dishonesty): students over-perceive their peers' delinquency; these misperceptions increase as social distance increases; there is a positive correlation between one's perception of his peers' delinquent behavior and one's own; and the strength of this correlation generally lessens as the social distance of the peer group being referenced increases.

Implications

The particular findings of this research may be of use in designing a social norms campaign aimed at ultimately lowering the prevalence and severity of academically dishonest acts on college campuses. The theory behind a social norms campaign asserts that people behave in ways that are consistent with their peers. Furthermore, it states that an over-estimation of the behavior of peers may lead to a person increasing her behavior in the same direction as the over-estimation (Whitley 1998). A social norms campaign then seeks to correct these misperceptions by providing accurate information about the norms of peer groups. The correction of the misperception is reasoned to result in the lessening of the behavior (Berkowitz 2004). Thus, the person who believes that the average undergraduate student at his institution cheats fifty times each semester is more likely to be academically dishonest himself than if he thought the average undergraduate never cheated.

Some decisions need to be made when developing a social norms campaign. Perhaps the most important is deciding which norm to seek to correct. This importance is

not lost on Alan Berkowitz, the co-creator of the social norms approach, who reasons, "Selecting the most relevant and salient norms for a particular intervention and the appropriate strategy for changing those norms is an important part of the planning process of a social norms intervention" (Berkowitz 2003:13)

The extant literature shows that self-other misperceptions tend to be greater for injunctive norms (those based on morals or ethics) than they are for descriptive norms (those based upon behavior). The self-other correlations also tend to be stronger for injunctive norms (Borsari and Carey 2003). Despite this, the majority of successful campaigns have used descriptive norms (Berkowitz 2004). One can conclude that either type of norm may be of value in a social norms campaign and thus both were included in this study.

Another factor to consider when looking for the most useful norm to try and correct is whether to use people or institution based norms. The extant literature points to people based norms as being more influential than institution based norms (Borsari and Carey 2003). Thus, this study looked exclusively at people based norms.

So then, what might be taken away from this study as far as knowledge about which norm to attempt to correct in implementing a social norms campaign with the goal of lessening academically dishonest behavior? Ideally, one would choose a norm that is highly correlated with the individual behavior, misperceived to a large degree, easy to correct, and whose correction yields a big change in the perceiver's behavior. Unfortunately, this study did not test for all of these factors, and even if it did it would be unlikely that a single norm exists that fits all of the criteria. What this study does offer is

the point that for academic dishonesty as social distance increases misperceptions increase and the strength of correlations decrease.

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