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Socioeconomic Status and Stress as Factors in Academic Dishonesty

By

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Accepted in Partial Fulfillment

Of the Requirements for the Degree

Master of Science

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MASTER'S THESIS

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Ashton Macaulay

July 13, 2015

Socioeconomic Status and Stress as Factors in Academic Dishonesty

A Thesis

Presented to

The Faculty of

Western Washington University

In Partial Fulfillment

Of the Requirements for the Degree

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Ashton Macaulay

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Abstract

A recent survey demonstrated that over 80% of students admitted to having engaged in academic dishonesty at least once in their time at University (Macaulay & Lemm, 2014). Previous research examining why students cheat has brought to light many different potential reasons behind students' academically dishonest behavior (McCabe, Trevino, & Butterfield, 1999; Curasi, 2013). The present set of studies aimed to examine three potential factors behind why students engage in academic dishonesty. Study 1 examined whether or not high Socioeconomic Status (SES) primes would elicit higher cheating likelihood ratings in a hypothetical scenario. Study 2 examined whether high levels of academic stress and job pressure would increase participants' cheating likelihood ratings. Further, Study 2 also examined whether participants would perceive a cheating action as less morally wrong when it was committed under academic stress or job pressure in comparison to no stress or pressure. Results indicated that SES priming had no effect on cheating likelihood. Both academic stress and job pressure predicted increased cheating likelihood ratings in different samples. The relation between academic stress and cheating likelihood ratings was mediated by moral appraisal. The results support the idea that justification of unethical behavior predicts increased cheating likelihood. Future research will focus on applying these results to prevention of academic dishonesty.

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Socioeconomic Status and Stress as Factors in Academic Dishonesty

Academic dishonesty is rampant in university communities across the nation (McCabe & Trevino, 1993). Last year a USC graduate and Wal-Mart heiress was asked to return her diploma after it was discovered that she paid another student close to \$20,000 to do her homework (Los Angeles Times, 2014). Harvard recently expelled over 60 students for unauthorized collaboration on a take-home final exam (The Boston Globe, 2013). Previous research has demonstrated that upwards of 80% of students have cheated at least once over the course of their academic careers (McCabe & Trevino, 1993). In a recent survey, 25% of students reported that they had invented data on an assignment, 60% said that they had used uncited sources in an academic paper, and 25% said they had copied work from someone else's exam (Macaulay & Lemm, 2014). The present research examined three potential mechanisms behind why acts of academic dishonesty are so prevalent in the current academic culture, focusing specifically on the predictors of socioeconomic status, academic stress, and job pressure.

Academic Dishonesty

A set of studies by McCabe and Trevino (1993; 1997) examined cheating in university students across the United States by surveying how frequently students cheated, and their rationale behind the behavior. As a measure of cheating, the researchers developed an inventory assessing how frequently participants engaged in a series of academically dishonest behaviors. These behaviors ranged from cheating on an in-class exam, considered the most extreme of the cheating behaviors, to engaging in unauthorized collaboration on a homework assignment, considered the least extreme.

McCabe and Trevino's (1993) findings indicated that the strongest predictor for cheating behavior was peers, meaning that in situations where peers were perceived as committing more academically dishonest behaviors, participants were more likely to do as well. The researchers suggested that this correlation could be the result of social learning theory, where participants' own behaviors are influenced by the perceived behaviors of others around them. Cheating also correlated negatively with understanding of academic policies, meaning that when the codes of the university were less understood, students were more likely to cheat.

In their next study, McCabe and Trevino (1997) used a more comprehensive list of predictors. They demonstrated that cheating rates were higher among participants who were younger, which is potentially explained by the less developed locus of control in younger individuals. Higher rates of cheating were demonstrated in men relative to women, which the researchers suggested was the result of gender socialization in which men are less socialized to follow rules than women. They also found a higher rate of cheating in students with lower GPAs, which they thought to be the result of individuals with lower GPAs having more to gain and less to lose academically, and as a result being more willing to take the risk.

It is clear from previous research that cheating rates are high, and that the frequency poses a problem for universities nationwide (Macaulay & Lemm, 2014; McCabe & Trevino 1993; 1997). In order to reduce levels of cheating in the academic system, it is important to understand the reasons behind why students are cheating in the first place. The present research aimed to examine the mechanisms behind why students cheat from two perspectives. Study 1 of the current research examined academic dishonesty in relation to socioeconomic status (SES). Previous research has demonstrated that participants who either

are high SES or are primed to feel high SES commit more unethical acts than those who are low SES or are primed to feel low SES. Study 1 extended this research to the realm of academic dishonesty. Study 2 focused on aspects of academic stress and job pressure as contributors to higher levels of cheating behavior. Both academic stress and job pressure have been listed by students as reasons behind why they cheat (Curasi, 2013; McCabe, Trevino, & Butterfield, 1999). The goal of the present research was to examine the way in which these mechanisms affected students' attitudes on cheating.

SES Predicts Unethical Behavior

Study 1 primarily focused on the effects of SES on students' behavior. Wealth, higher social class, and mere presence of large amounts of money have all been related to higher levels of unethical behavior in participants (Piff et al., 2012; Gino & Pierce, 2009; Piff, Kraus, Cote, & Cheng, 2010). Gino and Pierce (2009) found that participants who were exposed to a stack of money were more likely to cheat on an anagram task for monetary gain in comparison to those who did not see the stack of money. Higher SES participants have also shown lower levels of pro-social behavior in comparison to participants with lower SES (Piff et al., 2010).

Piff and colleagues (2012) conducted a series of experiments to examine unethical behavior in relation to socioeconomic status. The authors first used naturalistic observation at an intersection to record the number of times traffic laws were broken as well as the estimated SES of the driver. They measured SES through noting the make, model, and maintenance level of cars and creating an estimate of value, which in previous studies has been used as a reliable predictor of social rank and wealth (Frank, 1999). Drivers in cars that

were rated by the researchers as more expensive were more likely to break traffic laws in comparison to those in cars rated as less expensive. In their second study, the researchers observed as a confederate attempted to use the crosswalk at the same intersection as the first study. Drivers in cars that were rated as more expensive were more likely to cut off the confederates in contrast to cars that were rated as less expensive.

The researchers then examined whether or not a prime of high SES would elicit unethical behavior in a lab setting. SES priming was accomplished using a form of the MacArthur SES ladder, a measure in which participants are asked to rate their relative SES on a ten-rung ladder, with the bottom of the ladder representing low SES and the top representing high (Adler, Epel, Castellazzo, & Ickovics, 2000). The researcher found that those who compared themselves to the bottom rated themselves higher on the ladder in comparison to participants who were instructed to compare themselves to the top (Piff et al., 2012).

After completing the priming measure, the participants completed filler measures, and on their way out of the study, an experimenter asked them to wait in a hallway and presented them with a jar of candy (Piff et al., 2012). The experimenter told participants that the candy was for the children in the next study, but that the participants could take some if they wanted to. Participants who had been exposed to the high SES prime took significantly more candy in comparison to those in the low SES prime condition. When primed to feel high SES, participants also reported higher levels of unethical decision making in regards to a series of scenarios when compared to those in the low SES condition.

Piff et al. (2012) suggested that this increased level of unethical decision-making behavior in high SES participants might be due to an increased sense of independence in the lifestyle of upper-class individuals in the form of isolation from others of lower SES. The researchers suggested that this lifestyle might lead to a decreased level of awareness in regards to the potential consequences their actions may have on others, and thus might be an explanation for the increased unethical behavior. Piff et al. (2012) based their conclusions on a theory put forth by Galperin, Bennet, & Aquino (2011).

Galperin et al. (2011) proposed that people who experience high SES lifestyles experience a shifting of moral standards, and created a social-cognitive model to explain the high levels of unethical behavior in business settings. They hypothesized that unethical behavior of high status employees could be higher because of social isolation or separation from colleagues who occupy lower status positions in businesses. They hypothesized that social isolation from lower status individuals leads to a compartmentalization of one's self, allowing people to separate themselves from the unethical acts they are committing.

Galperin et al. (2011) also suggested that social isolation leads to the creation of a high SES group identity in which those in the group are separated from others. This privileged group mentality is theorized as one of the ways that those with high SES can distance themselves from their unethical behavior by identifying with their group identity more so than their personal, moral identity. This distancing may explain why the SES prime (Piff et al., 2012) was conducive to unethical behavior. By having participants compare themselves to those who are lower on the ladder, and worse off economically, this distance might become more salient, and prime the participant to feel more morally aligned with a high SES group rather than with their own moral standing. This alignment could be the

reason for increases in the propensity to act in ways that serve the group or themselves with less concern for the welfare of others below them.

While Galperin et al.'s (2011) theory focused specifically on corporate cultures and business, there are aspects of it that apply to unethical behavior in other settings. Galperin and colleagues state that social isolation is the result of environmental cues (executive dining rooms, corner offices, etc.) in an organization that distances those in high paying positions from those in low paying positions. These environmental cues may also affect everyday situations for high SES people outside of the workplace. Previous research has demonstrated that even just a prime of feeling high SES can induce less emotional connection with conversation partners, as well as poorer empathic recognition when conversing with a partner, when compared to participants primed to feel low SES (Kraus, Cote, & Keltner, 2010; Kraus, Piff, & Keltner, 2011). This lack of empathy may also be creating another barrier which separates those in high paying positions from the potential consequences that their actions might have on lower level employees, or people who are beneath their status rank.

If this lack of awareness regarding how their actions might affect others (consequences) carries over through the high SES prime, then this might be a reason why those who are primed to feel high SES would cheat more. In the surveys conducted by McCabe and Trevino (1993) participants who reported less understanding of academic policy also reported higher levels of academic dishonesty. The disregard for consequences in those with high SES could be a potential mechanism behind why certain sub-sections of students cheat. High SES could result in indifference toward learning policies regarding academic dishonesty and as a result higher levels of cheating.

Galperin et al.'s (2011) paper is purely theoretical. Although their theory has not been directly tested, there have been studies that tested similar ideas. Piff et al. (2012) primed participants to feel high SES and cited Galperin et al.'s (2011) model as one of the potential explanations for why participants primed to feel high SES cheated more. Galperin et al. (2011) stated that in situations where high SES is salient, self-standards may be somewhat disabled and instead replaced with a different set of standards for the high SES group. This disabling of morals may be a reason that high SES priming could lead to more cheating in college students.

There has been previous research examining shifting of moral standards in specific situations (Curasi, 2013). It has even been shown that in some cases cheating may be considered justifiable, depending on the context in which it occurs (Curasi, 2013). This shifting of morals based on a personal set of contextual factors, can be identified as what is known as a neutralizing attitude.

Neutralizing Attitudes

A neutralizing attitude is defined as the belief that a behavior is justified even if it violates a rule (in this case academic dishonesty policies) or the beliefs of society at large (Sykes & Matza, 1957). Previous research has demonstrated that participants who rated themselves higher on neutralizing attitude scales were more likely to have cheated in their academic career when compared to those who rated themselves lower (Curasi, 2013). It has also been found that students will often shift the blame for their academically dishonest behavior to outside forces in order to take less moral responsibility (McCabe et al., 1999).

According to Sykes and Matza (1957) there are five types of neutralizing attitudes, but in the current research I focused on one, the appeal to higher loyalties. This attitude involves placing one's own group membership within a smaller collective, above society at large, or above other larger groups as a priority. This category also encompasses situations in which the individual feels that it is necessary to break the law to solve a moral dilemma.

Curasi (2013) found that participants who rated themselves higher on measures assessing appealing to higher loyalties were more likely to cheat on take-home exams, in-class exams and homework assignments in comparison to those who endorsed the attitudes less. Specifically, they used questions that stated: "Cheating is ok when a student is in danger of losing his or her scholarship," and "Cheating is understandable when a student doesn't have time to study because he/she is working to pay for school." While Study 2 focused more heavily on neutralizing attitudes, Study 1 also included a measure of neutralizing attitudes to examine the concept's pertinence to both academic and non-academic situations.

Study 1

Study 1 examined the relationship between academic dishonesty and SES priming using the same method as in Piff et al.'s (2012) study. In order to avoid a reporting bias of participants' own cheating behavior I created two hypothetical cheating scenarios. This measure involved a brief vignette in which a character had an opportunity to cheat in one of two situations. In the first condition a character, Jim is struggling with a math exam when he notices that another student has left their answers visible. I used an in-class exam, as in previous research exam-related cheating was rated as a serious act that is directly identifiable

as dishonest (McCabe, Trevino, & Butterfield, 2001). I used the copying of exam answers to ensure that there was no room for ambiguity regarding the dishonesty of the cheating act.

In the second scenario, participants read a vignette about Jim participating in a psychology study for monetary gain. In the vignette, Jim is being paid for each math problem he can solve during the study. He is struggling with the problems, and similar to the first vignette, notices that another person's answers are visible. This non-academic condition was used to more closely parallel the research by Piff et al. (2012) which focused primarily on non-academic cheating and to allow comparisons between academic and monetary cheating. It is possible that monetary and academic cheating behavior are driven by different motivating factors. Piff et al. (2012) listed greed as a potential reason behind unethical behavior in business settings, in addition to the social barriers built up between high SES and low SES employees. Greed however, may not be as applicable to academically dishonest scenarios as it is in monetary scenarios.

Within each scenario, participants were primed to feel high or low SES using the MacArthur SES ladder (Adler et al., 2000). I hypothesized that participants primed to feel high SES would rate the vignette character as more likely to cheat in comparison to those primed to feel low SES and the no prime condition in both the academic and the monetary scenarios. I also hypothesized that participants primed to feel high SES would find the hypothetical cheating act to be less morally objectionable in comparison to participants in the low SES and no prime conditions.

At the end of the survey, participants also completed a measure assessing their levels of neutralizing attitudes. I included this to examine whether or not neutralizing attitudes

played a role in participants' predicted cheating ratings. In addition to the primary prediction regarding SES, I also hypothesized that higher scores on the neutralizing attitudes scale would predict higher cheating likelihood ratings in both the academic and monetary conditions.

Method

Participants. Participants were collected from two online populations. I initially used Amazon's Mechanical Turk (Mturk) to avoid participant bias toward a university system (underreporting of cheating), but recent research has shown Mturk to be an unstable sample population (Rouse, 2015). Thus, a second sample of data was collected from Western Washington University's undergraduate psychology subject pool (Sona).

Participants Study 1a. The initial sample was 715 participants. Three-hundred and sixty-five participants were not used in the analysis as they either failed one of the attention checks (*e.g. Please answer strongly disagree for this question*), did not finish the survey, or were not located in the United States. After this, I dropped 99 more participants for giving nonsensical free-response answers (*e.g. and now to the Qualtrics.*). The final participants were 274 (140 male, 130 female, 3 Other, 1 Non Response) students drawn from the Mturk subject pool. Participants were ages 18-60 ($M = 24.41$, $SD = 5.97$). Participation was restricted based on education level where only those who reported that they were currently enrolled, or had been enrolled in the previous year in college courses were eligible to participate, as well as restricted to those who currently resided in the United States. Participants were compensated 24 cents for their participation, a pay rate that was typical to

studies of similar length on Mturk. Informed consent was obtained from all participants through a question in the online survey.

Participants Study 1b. The initial sample was 245 participants. Twenty-nine participants were not used in the analysis as they failed one of the manipulation checks or did not finish the survey. After this, I dropped three more participants for giving nonsensical free-response answers. The final participants were 213 (41 male, 172 female) students drawn from Western Washington University's online subject pool using the Sona sign-up system. Participant age ranged from 18 to 46 ($M = 20.64$, $SD = 3.70$). Only participants who spoke English as their first language were allowed to take part in the study. Participants were given one quarter of research participation credit for their participation. Informed consent was obtained from all participants through a question in the online survey.

Design. Study 1 was created as a 3x2 between subjects design with a three-level SES prime condition (*High, Low, No Prime*), and a two-level vignette condition (*Academic or Monetary situation*). This design created six conditions. Participants were randomly assigned to one of these six conditions using the random assignment function provided by the Qualtrics survey tool. The entire survey took place in the Qualtrics system, and upon completion participants were directed to Mturk or Sona to obtain their compensation.

Materials.

Vignettes. The vignettes for this study were created specifically for the present research. Each involves a situation in which a character, Jim, is given an opportunity to engage in a form of dishonest behavior. In one vignette, Jim is described as struggling on a math test when he notices that another student has his answers easily visible. In the other

vignette Jim is described as participating in a psychology study where he is struggling to solve math problems for a monetary reward, and notices that another participant's completed answers are visible. Both vignettes cut off before any actual cheating behavior occurs. Full vignettes are included in Appendix A.

Dependent Measure. After reading the vignettes, participants completed an item assessing how likely they thought Jim would be to cheat in the given situation. Participants rated a statement on a 7-point scale ranging from 1 = *Not at All Likely* to 7 = *Very Likely*. This item was used previously by Rettinger & Kramer (2009) to assess student predictions of dishonest behavior.

Participants also rated a series of three statements assessing how ethical participants thought Jim's decision would be if he took the exam answers (*e.g., If Jim had used the other students' answers to boost his score it would have been right*). Each item was rated on a 6-point scale indicating how much the participant agreed with each statement (*1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Moderately Agree, 6 = Strongly Agree*). One item was reverse coded to reflect a negative ethical appraisal of Jim's actions (*e.g., If Jim had used the other student's answers to boost his score it would have been morally wrong*). Scores were summed with a higher score indicating a more positive ethical appraisal of Jim's actions. These measures can also be found in Appendix A.

Financial Difficulty Questionnaire. The Financial Difficulty Questionnaire (Macaulay & Lemm, 2014) is a 9-item scale that assesses levels of financial worry in everyday life (*e.g., When I think about my financial situation I am worried.*) Each item was

rated on a 6-point scale indicating how much the participant agreed with each statement (1 = *Strongly Disagree*, 2 = *Moderately Disagree*, 3 = *Slightly Disagree*, 4 = *Slightly Agree*, 5 = *Moderately Agree*, 6 = *Strongly Agree*). Two items were reverse coded, indicating a lack of financial worry (e.g., *Money does not play a major factor in my life choices.*). The items were summed to represent an overall level of financial worry, where higher scores indicated higher levels of financial worry. The Financial Difficulty Questionnaire demonstrated high levels of reliability in both the Mturk ($\alpha = .92$) and Sona ($\alpha = .93$) samples of the present study. In previous research, it has also shown strong levels of construct validity when correlated with measures of subjective SES ($r = -.58$), meaning that lower SES students reported higher levels of financial worry (Macaulay & Lemm, 2014). The full scale can be found in Appendix B.

Student Debt Questions. The questions regarding student debt and loans were adapted from previous research by Macaulay and Lemm (2014). I used a 2-item scale that assessed levels of student debt (i.e., *What is your current amount of student loans? What is your current amount of other debt, i.e., Credit card, car loan, etc.*) Each item was rated on a range of values assessing the amount of specific debt the participants had (<\$5,000, \$5,001-\$9,999, \$10,000-\$19,999, \$20,000-\$29,999, \$30,000-\$39,999, \$40,000-\$49,999, >\$50,000). The debt values were entered in ranges as previous research using open-ended questions of debt provided inconsistent responses (Macaulay & Lemm, 2014). The full questionnaire can be found in Appendix C.

Cheating Attitude Questionnaire. The Cheating Attitude Questionnaire (CAQ) is a 9-item scale adapted from Curasi (2013) and McCabe & Trevino (1993) assessing how participants feel about cheating, how often they cheat, as well as their perception of how

often others cheat on campus (*e.g.*, “*I often cheat on exams.*” And “*I have heard of other students at my college frequently turning in plagiarized work*”). It was constructed using four items assessing positive endorsement of cheating from Curasi (2013), four items about peer cheating behavior from McCabe & Trevino (1993), and one additional new item about plagiarism. Each item was rated on a 6-point scale (*1 = Strongly Disagree, 6 = Strongly Agree*) indicating how much the participant agreed with each statement. One item was reverse coded to reflect a negative attitude toward cheating (*e.g.*, *I never plagiarize*). Scores pertaining to one’s own cheating were averaged, with a higher score indicating a more positive attitude toward cheating. Items pertaining to perceived cheating among others were averaged, with a higher score indicating a higher perceived level of other students cheating on campus. The Cheating Attitude Questionnaire demonstrated an acceptable level of reliability in both the Mturk ($\alpha = .74$) and Sona ($\alpha = .73$) samples. The full questionnaire can be found in Appendix D.

Neutralizing Attitudes. The Neutralization Attitudes Scale (NAS) was adapted from the neutralization scales in Curasi (2013). The NAS consists of nine items assessing neutralizing behaviors (*e.g.*, *Cheating is understandable when other students make no attempt to cover their answers during an exam*). Each item was rated on a 6-point scale (*1 = Strongly Disagree 6 = Strongly Agree*) indicating how much the participant agreed with each statement. Scores were averaged with higher scores indicating higher levels of neutralizing attitudes. The Neutralizing Attitudes scale demonstrated excellent reliability in both the Mturk ($\alpha = .92$) and Sona ($\alpha = .90$) samples. The full scale can be found in Appendix E.

Procedure. The questionnaire began with an informed consent form, followed by a socioeconomic status priming measure. Participants were asked to rank themselves in

comparison to those at the bottom of a financial ladder (those who are worst off financially), those at the top of the ladder (the best off financially), or received no SES prime measure. This measure was taken directly from Adler et al. (2001). A full version of the SES ladder priming measure can be found in Appendix F.

After the prime, participants read one of two vignettes (see Appendix A) pertaining to different types of dishonest behavior (cheating on a math test or cheating in a psychology study for monetary gain). In these vignettes, the character had an opportunity to engage in one of the cheating behaviors, but the vignette stopped just before the character made his decision. Participants were then asked to rate how likely the vignette character would be to engage in the behavior, as well as how ethical his decision would be. Finally, participants completed a questionnaire, including scales that assessed financial worry, student loans, attitudes towards academic dishonesty, a measure of neutralizing attitudes, and basic demographic information.

Results

Study 1a

Manipulation Check. In order to assess whether or not participants' perceived socioeconomic status varied as a result of the ladder prime, participants' ratings of their own SES were analyzed for differences across priming group (*High, Low, No Prime*). Participants did not differ significantly on SES rating as a function of prime condition, as indicated by a one-way ANOVA, $F(2,270) = 0.21, p = .81$. When the No Prime condition ($M = 4.36, SD = 4.69$) was removed from the analyses, the high ($M = 4.95, SD = 1.74$) and low prime ($M = 5.11, SD = 1.68$) conditions were still not significantly different $t(1,270) = 0.59, SEM = 0.27$,

$p = .56$. This suggests that the participants' subjective SES was not significantly altered by the ladder prime, thus the manipulation check was unsuccessful in this sample.

SES Effects on Cheating. Although ratings of perceived SES indicated that the SES manipulation was unsuccessful, I nevertheless investigated the effect of the manipulation on the primary dependent variables of morality and likelihood that Jim would cheat as an exploratory analysis. Consistent with the failed manipulation, participants did not differ significantly on their moral appraisal of the vignette character's cheating action as a result of their SES prime condition $F(2,270) = .211, p = .81, \eta^2 = .002$. Also consistent with the failed manipulation, participants did not differ significantly on their ratings of the vignette character's cheating likelihood as a result of their SES prime condition $F(2,266) = 0.11, p = .90, \eta^2 = .001$. Even when the No Prime condition was removed, participants in the high and low SES conditions did not significantly differ on their cheating likelihood ratings $t(1,269) = 0.22, p = .80$.

Academic versus Monetary Cheating. Collapsing across SES condition, there was a main effect of vignette condition on participants' ratings of the vignette character's likelihood to cheat $F(1,266) = 7.49, p = .01, \eta^2 = .03$ where participants rated the vignette character as more likely to cheat in the monetary cheating condition ($M = 4.56, SD = 1.63$) in comparison to the academic condition ($M = 4.01, SD = 1.58$). This finding could mean that the motivations behind academic and monetary cheating are fundamentally different from each other. There was no interaction between the variables of vignette condition and SES prime condition $F(2,266) = 0.11, p = .88, \eta^2 = .001$.

Correlations. Table 1 shows correlations between participants' neutralizing attitude scores with scores of cheating perception, moral appraisal of cheating action, and ratings of vignette character's likelihood to cheat. In line with my hypothesis, all of these items were correlated with neutralizing attitudes, suggesting that these attitudes relate to more positive moral appraisals of cheating behavior, as well as increased likelihood ratings for vignette character cheating. Means and standard deviations for these measures can be found in Table 2.

Study 1(b)

Manipulation Check. In order to assess whether or not participants perceived socioeconomic status change as a result of the ladder prime, participants' scores on the ladder measure were analyzed across priming conditions (*High, Low, No Prime*). Participants did differ significantly on SES score in relation to their prime condition, as indicated by a one-way ANOVA, $F(2,209) = 9.09, p < .001, \eta^2 = .08$. When primed to feel high SES, participants rated themselves higher than those in the low SES prime condition, suggesting that the manipulation was at least partially successful.

SES Effects on Cheating. Contrary to my hypothesis, participants did not differ significantly on their moral appraisal of the vignette character's cheating action as a result of their SES prime condition $F(2,210) = 0.10, p = .91, \eta^2 = .001$. Also contrary to my hypothesis, participants did not differ significantly on their ratings of the vignette character's cheating likelihood as a result of their SES prime condition $F(2,203) = 0.97, p = .38$. Even when the No Prime condition ($M = 3.69, SD = 1.34$) was removed, participants in the high

($M = 4.02$, $SD = 1.44$) and low ($M = 4.06$, $SD = 1.60$) SES conditions did not significantly differ on their cheating likelihood ratings $t(2,203) = 0.08$, $p = .74$.

Academic Versus Monetary Cheating. There was a main effect of vignette condition on participants' cheating rating $F(1,204) = 4.99$, $p = .03$, $\eta^2 = .02$, where participants rated the vignette character as more likely to cheat in the monetary cheating condition ($M = 4.22$, $SD = 1.43$) in comparison to the academic condition ($M = 3.78$, $SD = 1.43$). This finding could mean that participants perceive academic cheating and cheating for monetary gain as different, but once again, further experiments will have to be conducted to determine this. There was no significant interaction between the vignette condition and the SES prime condition $F(2,200) = 0.64$, $p = .53$, $\eta^2 = .01$.

Correlations. Table 1 shows correlations between participants' neutralizing attitude scores with scores of cheating perception, moral appraisal of cheating action, and ratings of vignette character's likelihood to cheat. In line with my hypothesis, all of these items were correlated with neutralizing attitudes, suggesting that these attitudes relate to more positive moral appraisals of cheating behavior, as well as increased likelihood ratings for vignette character cheating. Means and standard deviations for these measures can be found in Table 2.

Discussion

In Study 1, I found no main effect of SES prime (high or low) on cheating likelihood ratings in participants. This lack of effect occurred in both the non-academic and academic cheating conditions, indicating that the priming measure did not affect cheating ratings differently between the two conditions. In the Mturk sample, the prime from Piff et al. (2012)

did not cause participants to feel differently about their own SES. Those who had been primed with high SES rated their relative SES similar to both those in the No Prime and low SES conditions. However, when tested in the Sona sample, the manipulation of SES was partially successful. The high and low SES prime conditions differed from each other on ratings of their subjective SES. Neither of these conditions differed significantly from the No Prime condition.

The prime in the Sona sample did elicit subjective SES change in participants. However, the effect of priming did not affect participants cheating likelihood ratings, as would be expected from previous research (Piff et al., 2012). A potential reason behind this is that Piff et al. (2012) suggested that social barriers as well as greed contribute to high levels of unethical behavior in monetary settings. It is possible that these motivators may not apply to academic situations as heavily, as academic dishonesty may not be driven by greed, but more of a competitive edge (McCabe et al., 1999). It is also worth noting that Piff et al. (2012) administered the prime in an in-person laboratory setting, and data for both of the present samples were collected in a strictly online format. In a personal communication, Piff (February, 2015) stated that he had never been able to effectively replicate this prime in an online setting. In order to fully assess the validity of this prime, it would be necessary to conduct another trial of Study 1 in a laboratory setting to more closely approximate the conditions used by Piff et al. (2012). It is possible that the effect of writing out paper and pencil answers may cause the prime to affect participants more than when they type answers.

There is also the fact that Piff et al. (2012) used the SES prime to examine an in-person action. The researchers examined directly observable unethical behavior, specifically taking candy from a jar labeled “for children.” However, they also included eight

hypothetical measures that asked participants about the likelihood that they would cheat in a given situation. These situations ranged from stealing office supplies to asking for information about a test before taking it. They found that participants who were primed with high SES rated themselves as more likely to commit unethical behaviors in comparison to participants primed with low SES. Our study is very similar in design, and yet demonstrated a non-effect for priming of subjective SES.

A second issue in Study 1 might have been the sample for the first group of data collected. In the Mturk participant pool, I was unable to replicate the SES prime used by Piff et al. (2012). Mturk launched publically in 2005, and initially researchers suggested that their subject pool was a reliable and acceptable sample (Holden, Dennie, & Hicks, 2013). Unfortunately, recent studies have begun to expose some weaknesses in this participant pool (Rouse 2015).

Rouse (2015) conducted a series of eight studies to assess reliability in Mturk populations. Results of these studies were compared to results of similar sample sizes from laboratory settings. Mturk participants showed lower overall reliability when compared to participants in a laboratory setting. Reliability in the Mturk sample was boosted when participants were given the chance to erase their data if they felt they had not paid enough attention. In the present research, Mturk participants took on average around 5 minutes to complete the survey, whereas Sona participants averaged 9 minutes, indicating that the Mturk sample might have been paying less attention.

When using the Mturk sample it was also necessary to omit more participants' data from the analyses. In the end close to 60% of the total data collected had to be dropped.

Reasons for this included failing the attention check, providing unintelligible short response answers, not being enrolled in college, and in one instance a technical glitch. In comparison, only 3% of the Sona sample was dropped from the analyses. These participants were dropped from analyses for not completing the survey, failing the attention check (a measure designed to assess whether participants were actively paying attention to the survey), or providing unintelligible short answer responses. Overall, our Mturk sample was less consistent than the Sona Systems sample, which could have influenced the abnormalities witnessed in the data.

The SES prime manipulation was successful in the Sona sample of Study 1, with the high SES prime group rating themselves higher on the subjective SES ladder (Adler et al., 2000) when compared to the low SES prime group. However, the high and low SES prime groups did not significantly differ on their cheating likelihood ratings. This could again be the result of using an online sample, whereas the previous research used paper-pencil measures in a lab setting (Piff et al., 2012).

There was a significant difference across both samples in cheating likelihood ratings between the monetary and academic cheating conditions, where participants in the monetary condition rated the character in the vignette as more likely to cheat in comparison to the academic condition. Students' morality ratings of monetary and academic cheating did not significantly differ. A possible explanation for this is that the difference between the two conditions might be in a different construct. Unfortunately, there were no other measures in this study to assess why these two groups differed. Future research could include measures about the nature of money versus academic advancement or even a free response to obtain participants' opinions on perceived differences between the scenarios.

Study 1 did find a series of significant correlations consistent with previous literature on neutralizing attitudes. The Neutralizing Attitudes Scale was highly correlated in both studies with participants' ratings of the vignette character's cheating likelihood and moral ratings of the hypothetical cheating behavior. This corroborates previous findings by Curasi (2013) who originally developed the scale. The relationship between neutralizing attitudes and cheating behaviors is examined in more depth in Study 2 of the present research.

Study 2

Study 2 aimed to examine the relationship between neutralizing attitudes and academic dishonesty in more depth. In order to do so, I developed experimental measures to create situations in which there were or were not opportunities for justification of an unethical act through neutralizing attitudes. Specifically, I chose to examine factors of academic stress and job pressure. Curasi (2013) examined both of these factors as items on a scale assessing neutralizing attitude endorsement.

Contextual Factors in Academic Dishonesty

One explanation for why students may cheat is that they do not view certain cheating behaviors as morally objectionable (Curasi, 2013). There are many instances in which students perceive academic dishonesty as a moral grey area, and, in some instances, even view it as a justified way to gain a competitive edge. There is also research that shows higher levels of cheating in situations where students feel pressured or stressed in relation to their academic workload (McCabe et al., 1999). Study 2 focused specifically on the connection between stress factors and moral justifications of cheating behavior in the college student population.

Academic Stress/Job Pressure¹. Academic stress has been cited by students as one of the top reasons behind why they engage in cheating behaviors (McCabe et al., 1999; McCabe et al., 2001). In a study by McCabe et al. (1999), student participants were asked to report on their reasoning behind their cheating behaviors. The most frequent student response provided was related to stress or pressure. Students made comments stating that the pressure to succeed from external motivators was so high that, rather than fail an exam they were ill-prepared for, they would choose to cheat for a higher grade.

Additionally, high academic stress has been demonstrated to be related to higher levels of cheating in high school advanced placement students (Taylor, Pogrebin, & Dodge, 2002). Students in AP (advanced placement) or IB (International Baccalaureate) programs stated that one of the primary reasons behind their cheating behavior was academic stress. Taylor et al. (2002) stated that cheating could be seen as a method of academic survival in an environment where pressure and competition is highly prevalent. In environments where good grades are highly coveted, students have stated that cheating can provide a competitive edge to help them keep up with other students (Taylor et al., 2002). I thought that this would transfer to college situations in which students experience high pressure to achieve, whether it be to attain a good job or move on to higher education. These pressures could be seen as justifying factors for why students engage in cheating behavior.

The purpose of Study 2 was to examine the effect of academic stress and job pressure on cheating behavior in a hypothetical scenario. Participants read vignettes in which a character was experiencing varying levels of academic stress (*High vs Low*) and job pressure

¹ For the purposes of the present research, stress will be used to refer to academics and pressure to refer to job-related activities. This is purely to avoid confusion; stress and pressure are not defined differently.

(*High vs Low*) and then rated the character's likelihood of engaging in a cheating behavior, as well as the morality of this behavior.

For job pressure, Study 2 used a variable similar to the neutralizing question for higher loyalties in Curasi's (2013) study. The Appeal to Higher Loyalties section relates to situations in which a person feels they are obligated to cheat, and the action is not committed out of self-interest. For the present study, I used a situation in which the vignette character is faced with a dilemma where one of the solutions involves breaking a rule. For the conditions where job pressure was manipulated, participants read a vignette about a character under high job demand that did not have adequate time to prepare for a test or about a character that did not have any job demands and did not adequately prepare for a test. Study 2 also incorporated academic stress as a predictor of cheating behaviors. For the manipulation of academic stress, participants read a vignette that involved a character who was either in a very difficult but required math course or in a general requirement math course with a moderate level of difficulty.

Cheating behavior was measured as a rating of how likely the vignette character would be to cheat in the situations mentioned above. Based on previous work examining neutralizing attitudes, I predicted a main effect of job pressure, such that participants who read about a character under high job pressure would rate the character as more likely to cheat relative to a character that experienced low job pressure (Curasi 2013; Sykes & Matza 1957). I also hypothesized that cheating would be seen as more morally acceptable in the situation where the vignette character was experiencing high job pressure in comparison to low pressure. Based on previous work by McCabe and colleagues (1999), I also predicted a main effect of academic stress, such that participants would rate a vignette character who was

struggling in a more difficult class as more likely to cheat than one who is struggling in a less difficult class. I also predicted that in situations where the vignette character was experiencing more academic stress his decision to cheat would be rated as less morally objectionable.

I also examined a potential compounding effect of academic stress and job pressure. Previous research had only examined academic stress and job pressure in correlational studies; as such, my predictions regarding the combined effects were speculative. Individually, academic stress and job pressure have both been demonstrated to predict higher levels of cheating (Curasi, 2013; McCabe et al., 1999). It may be the case that the combination of these two sources of stress will lead to higher expectations of cheating compared to the presence of only one source of stress. I explored the compounding relationship between academic stress and job pressure to determine whether the combination of both variables created a greater source of stress/pressure than either variable alone.

Method

Participants. I used participants from two online samples. I initially used Mturk to avoid participant bias toward a university system (underreporting of cheating) but, as stated previously, recent research has demonstrated Mturk to be an unstable sample population (Rouse, 2015).

Participants Study 2a. The initial sample was 144 participants. Forty participants were not included in the analysis as they either failed one of the manipulation checks, did not finish the survey or were not located in the United States. The final participants were 104 (55 male, 49 female) students drawn from Mturk's subject pool. Participants were ages 18-52 (M

= 24.26, $SD = 5.71$). Participation was restricted based on education level where only those who were currently enrolled or had been enrolled in the previous year in college courses were eligible to participate. The study was also restricted to those who currently resided in the United States and spoke English as a primary language. Participants were compensated 24 cents for their participation, a pay rate that was typical to studies of similar length on Mturk. Informed consent was obtained from all participants through a question in the online survey.

Participants Study 2b. The initial sample was 298 participants. Seventy-Five participants were not used in the analysis as they either failed one of the manipulation checks or did not finish the survey. The final participants were 223 (44 male & 179 female) students drawn from Western Washington University's online subject pool Sona. Participant age ranged from 18 to 50 ($M = 20.98$, $SD = 4.22$). Only participants who spoke English as their first language were allowed to take part in the study. Participants were given .25 research participation credit for their participation. Informed consent was obtained from all participants through a question in the online survey.

Design. Study 2 was created as a 2x2 between subjects design with a two-level academic stress condition (*High, Low*), and a two-level Job Pressure condition (*High, Low*). This design created four conditions. Participants were randomly assigned to one of these four conditions using the random assignment function provided by the Qualtrics survey tool. The entire survey took place in the Qualtrics system, and upon completion participants were directed to Mturk or Sona to obtain their compensation.

Procedure. Study 2 was conducted in the same format as Study 1, using an online questionnaire through Mturk and Western Washington University's Sona systems. Participants read a vignette about a character given an opportunity to cheat. The cheating behavior used in Study 2 was held constant (*using another student's exam answers*); whereas dimensions of academic stress and job level were manipulated. After reading the vignette, participants reported the likelihood of the character to engage in the behavior. Participants then completed a brief questionnaire on the ethicality of the hypothetical action, a demographic questionnaire, and several scales that assessed financial worry, student loans, attitudes towards academic dishonesty, and neutralizing attitudes.

Materials.

Vignettes. The vignettes for Study 2 were created specifically for the present research. The vignettes described a situation in which a character, Jim, was given the opportunity to engage in an academically dishonest behavior (*i.e., using another student's answers on a math exam without permission*). The vignettes varied based on the amount of academic stress the character experienced (*high academic stress* and *low academic stress*) as well as whether the character was in a situation that presented an opportunity for neutralization (*high demand from a job that decreases time to study* or *no job demand*). In the high academic stress conditions, the character was described as being in a demanding calculus class, in comparison to the low academic stress condition where he was described as being enrolled in a basic math class. In the high job pressure conditions, participants read a vignette in which a character was asked to work a double shift the night before an exam. In the low job pressure conditions, the character was experiencing no job related pressure. The full vignettes can be found in Appendix G.

Dependent Measures. After reading the vignettes participants completed two items assessing how likely they thought Jim would be to cheat in the given situation. Participants rated each statement on a 7-point scale ranging from 1 = *Not at All Likely* to 7 = *Very Likely*. These two items were used previously in Rettinger & Kramer's (2009) study to assess student predictions of dishonest behavior.

Participants also rated a series of three statements assessing how ethical participants thought Jim's decision would be if he took the exam answers (e.g., *If Jim had used the other students' answers to boost his score it would have been right*). Each item was rated on a 6-point scale indicating how much the participant agreed with each statement (1 = *Strongly Disagree*, 2 = *Moderately Disagree*, 3 = *Slightly Disagree*, 4 = *Slightly Agree*, 5 = *Moderately Agree*, 6 = *Strongly Agree*). One item was reverse coded to reflect a negative ethical appraisal of Jim's actions (e.g., *If Jim had used the other student's answers to boost his score it would have been morally wrong*). Scores were averaged with a higher score indicating a more positive ethical appraisal of Jim's actions. The full measures can be found in Appendix G.

Manipulation Check. After participants answered the questions regarding cheating likelihood and moral appraisal, they were given a brief 2-item measure assessing how much academic stress and job pressure they perceived the vignette character as experiencing. Answers were given on a scale from 0-*A Lot Less Stress/Pressure* to 10-*A Lot More Stress/Pressure*.

Measures from Study 1. I also included several of the same measures used in Study 1. The Financial Difficulty Questionnaire demonstrated high levels of reliability in both the

Mturk ($\alpha = .92$) and Sona samples ($\alpha = .93$). The Cheating Attitude Questionnaire demonstrated acceptable reliability ($\alpha = .76$) in the Mturk sample, but somewhat poor reliability in the Sona sample ($\alpha = .69$). The Neutralizing Attitudes Scale demonstrated excellent reliability in both the Mturk ($\alpha = .92$) and Sona ($\alpha = .92$) samples.

Results

Study 2(a)

Manipulation Check. In order to examine whether or not Mturk participants perceived the vignette character as being under academic stress and/or job pressure, participants completed two questions assessing their perception of the vignette character's academic stress and job pressure. The manipulation check for academic stress reached marginal significance $F(1,102) = 3.74, p = .06, \eta^2 = .04$, meaning that those who read about a character in either of the high stress conditions ($M = 7.21, SD = 1.78$) rated him as being under higher levels of academic stress relative to the low stress conditions ($M = 6.49, SD = 1.98$). The manipulation of job pressure was significant $F(1, 100) = 83.98, p < .001, \eta^2 = .46$, such that those in the high job pressure conditions ($M = 7.65, SD = 1.55$) rated the vignette character as being under significantly more stress than the low job pressure conditions ($M = 3.94, SD = 2.50$). These results indicate a successful manipulation of job pressure and a marginally successful manipulation of academic stress.

Effects of Academic Stress and Job Pressure. Contrary to my hypothesis, participants did not differ on their predicted cheating scores as a result of the academic stress condition $F(1,100) = 0.54, p = .46, \eta^2 = .01$. Supporting my hypothesis, there was an effect of job pressure condition on predicted cheating $F(1,100) = 4.79, p = .03, \eta^2 = .05$, such that

those who perceived the character as being under high levels of job pressure ($M = 4.8$, $SD = 1.53$) rated the character as more likely to cheat in comparison to those who read about a character under low job pressure ($M = 4.12$, $SD = 1.63$). There was no interaction between academic stress and job pressure $F(1,100) = 0.27$, $p = .60$, $\eta^2 = .003$.

Contrary to my hypothesis, participants did not differ in their moral appraisal of cheating actions as a result of the amount of academic stress the vignette character was experiencing $F(1,100) = 0.09$, $p = .76$, $\eta^2 = .001$ or the amount of job pressure the vignette character was experiencing $F(1,100) = 0.58$, $p = .45$, $\eta^2 = .006$. There was a marginally significant interaction between the variables of academic stress and job pressure on perceived morality of the cheating action $F(1,100) = 3.65$, $p = .06$, $\eta^2 = .04$.

Correlations. Table 1 shows correlations between participants' neutralizing attitude scores with scores of cheating perception, moral appraisal of cheating action, and ratings of vignette character's likelihood to cheat. In line with my hypothesis and replicating Study 1, all of these items were correlated with neutralizing attitudes, suggesting that these attitudes relate to more positive moral appraisals of cheating behavior, as well as increased likelihood ratings for vignette character cheating. Means and standard deviations for these measures can be found in Table 2.

Mediation Analyses. In order to better understand the relationship between job pressure and cheating, analyses were conducted to examine whether the relationship between job pressure and cheating likelihood ratings was mediated by neutralizing attitudes. In order to do this I first analyzed the relation between job pressure and cheating using a linear regression. I then examined the relation between job pressure and neutralizing attitudes.

Finally, I examined a linear regression model in which job pressure was entered first, and then neutralizing attitudes. These analyses did not yield a significant mediation model. This does not support the idea that job pressure would increase cheating likelihood ratings because of neutralizing attitudes. These results could mean that there is another factor at play affecting cheating likelihood.

Study 2(b)

Manipulation Check. In order to examine whether the Sona participants perceived the vignette character as being under academic stress and/or job pressure, participants completed two questions assessing their perception of the vignette character's academic stress and job pressure. The manipulation check for academic stress reached marginal significance $F(1,220) = 3.35, p = .07, \eta^2 = .02$, meaning that those who read about a character in either of the high stress conditions ($M = 6.95, SD = 1.87$) tended to rate him as being under higher levels of academic stress relative to the low conditions ($M = 6.49, SD = 1.87$). The manipulation of job pressure was significant $F(1, 206) = 98.79, p < .001, \eta^2 = .32$, such that those in the high job pressure conditions ($M = 7.65, SD = 1.78$) rated the vignette character as being under significantly more stress than the low job pressure conditions ($M = 4.68, SD = 2.48$). These results indicate that the manipulation of academic stress was marginally successful and the manipulation of job pressure was successful.

Effects of Academic Stress and Job Pressure. In accordance with my hypothesis, there was a significant main effect of academic stress condition on predicted cheating of the vignette character $F(1,219) = 6.27, p = .01, \eta^2 = .03$, where those who read a scenario where the character was under high levels of academic stress ($M = 4.52, SD = 1.27$) rated the

character as more likely to cheat in comparison to the low conditions ($M = 4.09$, $SD = 1.26$). Contrary to my hypothesis participants did not differ in their ratings of vignette character cheating likelihood as a result of the level of job pressure the vignette character was experiencing $F(1,219) = 0.15$, $p = .70$, $\eta^2 = .001$. There was no interaction between academic stress and job pressure on cheating likelihood $F(1,219) = 0.23$, $p = .64$, $\eta^2 = .001$.

In accordance with my hypothesis, there was a significant main effect of academic stress condition $F(1,219) = 7.95$, $p = .01$, $\eta^2 = .04$ and job pressure $F(1,219) = 8.89$, $p < .01$, $\eta^2 = .04$ on perceived morality of the cheating behavior. When the character was experiencing high academic stress ($M = 2.07$, $SD = .97$), participants rated the hypothetical cheating action as more morally agreeable in comparison to those in the low academic stress condition ($M = 1.75$, $SD = 0.88$). When the character was experiencing high job pressure ($M = 2.08$, $SD = 0.97$), participants rated the hypothetical cheating action as more morally agreeable in comparison to those in the low job pressure condition ($M = 1.73$, $SD = 0.88$).

Correlations. Table 1 shows correlations between participants' neutralizing attitude scores with scores of cheating perception, moral appraisal of cheating action, and ratings of vignette character's likelihood to cheat. In line with my hypothesis all of these items were correlated with neutralizing attitudes, suggesting that these attitudes relate to more positive moral appraisals of cheating behavior, as well as increased likelihood ratings for vignette character cheating. Means and standard deviations for these measures can be found in Table 2.

Mediation Analyses. The relationship between stress and cheating scores was mediated by moral appraisal of the cheating action. Figure 1 shows that the regression

coefficient between academic stress condition and cheat score was statistically significant, as was the regression coefficient between academic stress condition and moral appraisal score, and the coefficient between moral appraisal score and cheating score. The standardized indirect effect was $(.17)(.28) = .05$. The significance of this path was tested using bootstrapping procedures. Unstandardized indirect effects were calculated for 5000 bootstrapped samples (Preacher & Hayes, 2008). The bootstrapped unstandardized indirect effect was .12, and the 95% confidence interval ranged from .03 to .25. This indirect effect was statistically significant. In addition, when taken into account, this indirect effect dropped the relation between academic stress and cheating scores to non-significance, providing further support that moral appraisal mediates the relationship between stress and cheating score.

Curasi (2013) found that neutralizing attitudes predicted increased cheating behavior in students. They hypothesized that this was the result of neutralizing attitudes making cheating more morally acceptable. To test this we ran an analysis to examine if the positive relationship between moral appraisal and cheating likelihood was mediated by neutralizing attitudes. Figure 2 shows that the regression coefficient between moral appraisal and cheating scores is statistically significant, and the standardized regression coefficient between moral appraisal and neutralizing attitudes, and the standardized coefficient between neutralizing attitudes and cheating score. The standardized indirect effect was $(.64)(.29) = .19$. The significance of this path was tested using bootstrapping procedures. Unstandardized indirect effects were calculated for 5000 bootstrapped samples. The bootstrapped unstandardized indirect effect was .26, and the 95% confidence interval ranged from .14 to .40. This indirect effect was statistically significant. When this indirect effect was taken into

account, the relationship between moral appraisal and cheating scores dropped to non-significant levels, supporting a partial mediation model. This supports previous research stating that moral appraisal of cheating actions is less negative as a result of justifications (neutralizing attitudes), and that in turn this leads to higher levels of cheating. It is worth noting that moral appraisal was not a manipulated condition and thus causality cannot be inferred from this model. I also tested a third model in which the relation between neutralizing attitudes and cheating likelihood score was mediated by moral appraisal, but this model was not statistically significant, meaning that the model from Figure 2 is likely a better fit.

Discussion

The results of Study 2 were mixed when it came to main effects. In Study 2a, participants reading about a character under job pressure rated the character as more likely to cheat, but this effect was not found in Study 2b. In Study 2a the academic stress of the vignette character did not affect participants' cheating likelihood ratings, but in Study 2b, participants rated a vignette character as more likely to cheat when under academic stress. There are a few potential explanations for this discrepancy in our findings. The first is the difference in sample. Study 2a was conducted in an Mturk population, which on average had more diverse age range than the Sona sample. Study 2b was conducted through Western Washington University's Sona systems with a sample of psychology undergraduates. It is possible that the Mturk sample was better able to identify with a problem related to a job as they were older and could have had more experience working. In comparison, the student sample could have been relating more to the academic problem as they took the study in the context of an academic setting, which the older sample may have been more removed from.

While both samples were intended to be currently enrolled in college, it is possible that participants in Mturk were enrolled in online education. This could have led to a difference in perceptions about academic stress as all of the Sona sample was enrolled at Western Washington University with no online students. There is also the possibility that the disparity in the findings across samples is due once again to the unreliable nature of participants obtained through Mturk. This variability in the sample might have caused the difference between the Sona and Mturk groups.

In both samples of Study 2, ratings of the morality of a cheating behavior were significantly impacted by both job pressure and academic stress, where participants reading about a character experiencing high levels of either job pressure or academic stress rated a hypothetical cheating action as more morally acceptable when compared to the non-stress/pressure conditions. These findings support the theory that situations in which there are opportunities for neutralization allow for more positive moral appraisal of unethical actions (Curasi, 2013). In this case, the two scenarios (high job pressure and high academic stress) mimicked items from Curasi's (2013) Neutralizing Attitudes Scale.

Our hypothesis of compounding job pressure and stress producing higher levels of cheating compared to other conditions was not seen in the data. There are several reasons for why this may be. For one, the predictors of academic stress and job pressure never predicted cheating in the same sample; the manipulations of job pressure and academic stress were each effective in one sample only. For there to be a compounding effect, the variables would have to both be producing effects in the same sample. It could also once again be a function of our sample, where the Mturk population did not find the academic stress relevant, and the Sona sample did not find the job pressure relevant. While both samples were students, it is

still possible that they thought differently on this issue because of their respective life experiences.

I also found a series of correlations that were significant across all four studies. First, high scores on the neutralizing attitudes scale (indicating more positive moral appraisal of unethical actions) correlated strongly with cheating likelihood predictions. This directly replicates the findings of Curasi (2013), where the scale was constructed. Second, higher scores on the moral appraisal measures (indicating more positive moral appraisal of an academic cheating action) also correlated with increased cheating likelihood ratings by participants. Finally, the cheating attitudes measure was highly correlated with increased cheating likelihood as well.

To extend the findings on the relation between neutralizing attitudes and cheating I examined the role that moral appraisal played in the cheating relationship for academic stress and job pressure. Job pressure was only examined in the context of Study 2a, and academic stress was examined in the context of Study 2b, as these were the populations in which the variables significantly predicted cheating behavior. In Study 2a I examined whether the relation between job pressure and cheating behavior (job pressure predicted increased cheating behavior) was mediated by moral appraisal. This mediation model failed to reach significance. I tested a second model to examine whether the relation between job pressure and cheating likelihood was mediated by neutralizing attitudes. This mediation model was also non-significant. Unfortunately, this means that none of my hypotheses could explain why job pressure increased cheating behavior.

In future studies I would like to expand upon this finding by focusing on other aspects specific to job pressure that are unrelated to academics. Specifically the relationship between vignette relatability and cheating likelihood should be assessed to account for the differences between our samples. The interesting factor being that some participants may have had more job experience, and therefore may have been more sympathetic to the scenario involving job pressure. This could be studied by drawing from populations who have been in the work force for at least a year and comparing them to students who have not yet held a job outside of university.

A second mediation model was examined for the relationship between academic stress and cheating, as mediated by moral appraisal in Study 2a. This mediation model was significant, meaning that academic stress was related to positive moral appraisals of hypothetical cheating actions, which in turn predicted increased cheating likelihood ratings by participants. When examining ratings of morality, the relationship between academic stress and cheating became non-significant.

To further examine the hypothesis that increased levels of cheating arise from neutralizing attitudes allowing for more positive moral appraisals of cheating actions, another mediation model was run. This time I examined the relationship between moral appraisal and cheating in the context of neutralizing attitudes. When neutralizing attitudes were accounted for, the relationship between moral appraisal and cheating likelihood became non-significant. Therefore, perception of a person's likelihood to cheat is likely influenced by the opportunities granted for moral justification and use of neutralizing attitudes. This extends previous findings by Curasi (2013), by demonstrating that the relationship between

neutralizing attitudes and cheating is highly related to moral appraisal being changed by stressful situations.

General Discussion

Academic dishonesty is highly prevalent in universities across the country (McCabe & Trevino, 1997). Older policies focused mainly on strict and swift punishment of students who cheated, but this sort of policy is no longer being recommended (McCabe et al., 2001). In fact, in some cases, more severe punishments have actually led to increased levels of academic dishonesty (McCabe & Trevino, 1997). The focus of the present research was the identification of factors that increase cheating behaviors in student populations, in order to ultimately facilitate prevention of academic dishonesty.

Study 1 examined the relation between socioeconomic status and academic dishonesty, based on previous literature connecting high SES individuals to higher levels of unethical behavior (Piff et al., 2012). I did not find this connection in the study. From the results, it is unclear whether this is simply due to error in our sample population. In the future, I would like to replicate this study in more stable samples, as well as in areas that are more economically diverse than Western Washington University's academic population. This would allow me to determine whether the effect of SES priming might differ as an effect of sample background, and the way the study is administrated.

While the predicted main effect of SES was not found in Study 1, the neutralizing attitudes scale was highly correlated with increased cheating predictions in participants. These correlations imply that students who were more likely to endorse justification of unethical behavior also rated a character as being more likely to cheat. This effect was

consistent across all iterations of both Study 1 and Study 2. The neutralizing attitudes scale is a general measure that contains situations representative of all five neutralizing attitude types, and amalgamates them into one overall score. In past research, this scale has been correlated with higher cheating in students. Study 2 identified two specific factors related to The Appeal to Higher Loyalties neutralizing attitude that contributed to cheating likelihood: job pressure and academic stress.

When examining job pressure it is clear that more research will be necessary to understand its connection with academic dishonesty. Study 2 demonstrated that higher levels of perceived job pressure led to higher cheating likelihood predictions. However, contrary to my hypothesis, this was the result of subjects' moral appraisal of the action. It is unclear in the present data why job pressure increased students' cheating likelihood. In order to understand the reason behind this, it would be best to conduct future research specifically in populations who are experienced in working a demanding job at the same time as being enrolled in academic classes. Statements from groups of working students could help further understand what it is about high job pressure that makes students more likely to cheat. Unfortunately, I did not collect any items regarding the employment status of my participants. Future iterations of this study will need to include items assessing how often students are working while enrolled at university, as well as a measure of their current level of job stress. This would allow me to see if working student populations justify unethical behaviors differently in comparison to non-working students, and if their own job pressure has any relation to their likelihood to endorse neutralizing attitudes.

Academic stress is a different story. The present research demonstrated that when students are reading about a character experiencing high academic stress, they are more

likely to rate cheating as less morally objectionable, when compared to students who are reading about a character experiencing low academic stress. This more positive moral appraisal of unethical actions is also associated with a higher endorsement of neutralizing attitudes, meaning that students are rating unethical behaviors in general as less morally objectionable. The current study only examined this in a hypothetical sense. In the future, I would like to examine university populations that are under high academic stress, such as students in honors courses, or in demanding programs. Previous studies have shown that students under high academic stress view cheating as a competitive edge or means of academic survival (Taylor et al., 2002). Examining the effects of stress in further depth could provide more information about when academic stress becomes too much for a student, and increases their likelihood to cheat.

The present research only examined one of the five neutralizing attitudes put forth by Sykes and Matza (1957). Curasi (2013) demonstrated that items representing all five of the neutralizing attitudes correlated with higher levels of cheating. It would be interesting to examine the other four neutralizing attitudes in an experimental setting with university students. Testing the different neutralizing attitude dimensions might help us better identify the specific influences on why students cheat, as well as which attitudes might be more powerful than others. This would help provide a more complete picture for how students are able to justify unethical behaviors and specific areas to focus on for prevention.

The results of the present research demonstrate that moral appraisal of cheating actions can play a role in why students cheat. Students who endorse justification of unethical behavior through neutralizing attitudes predict higher levels of cheating, and are more likely to endorse less negative attitudes about cheating. While the present studies focused purely on

hypothetical vignettes, it is not a stretch to think these attitudes may carry over into real life situations. Previous research has demonstrated that endorsement of neutralizing attitudes was correlated with more unethical behavior in the classroom (Curasi, 2013). With the knowledge that cheating can be justified by students, the next step is to understand how to prevent these attitudes.

One way neutralizing attitudes might be reduced is through a process of shifting responsibility for cheating behavior back to the individual. Previous research has demonstrated that honor code universities tend to have lower cheating rates when compared to non-honor code schools (McCabe et al., 1999). Traditional honor code universities employ a code in which students are responsible for the enforcement of academic dishonesty policies. This can mean that tests may not be proctored and the only source of knowledge regarding academic dishonesty comes from the students. These codes are enforced by a pledge that students sign when they first enter the university, ensuring that they will conduct their academic career honestly.

McCabe et al.'s (1999) research found that honor code students are significantly less likely to rationalize cheating behavior due to outside pressures. It is possible that individual responsibility created by the honor code is responsible for this. However, in order for an honor code to work properly, the students must actively believe in its principles (O'Neill & Pfeiffer, 2012). When two schools with honor codes were compared, it was found that students from the school with a more renowned honor code were less likely to cheat than those with an honor code that was less well-known (O'Neill & Pfeiffer, 2012).

McCabe et al. (2001) suggest the idea of a hidden curriculum to increase ethical responsibility in students. A hidden curriculum involves overt instruction on ethical issues in society, as well as allowing students to participate in ethical debates. They suggest that creating an institution in which students have an engrained sense of ethical responsibility might reduce the rates of cheating in the school. In future research, I would like to examine how a hidden curriculum might reduce levels of cheating through increasing student's self-responsibility for their behaviors at a university. This research has not been conducted in college settings and might provide a way to reduce cheating in university settings and foster a more engaging academic environment overall.

Overall, the present research barely scratched the surface of the reasoning behind why students cheat, but I do have a solid beginning for what to do next. In the future I would like to examine other potential sources of increased neutralizing attitudes, as well as clarifying my findings on job pressure and academic stress. The application of these findings should also be tested in a preventative context, to examine whether these findings can be used to reduce cheating levels in students. Through the identification of more sources of neutralizing attitudes, cheating in the academic culture could be reduced.

Tables and Figures

Table 1.

Correlations with Neutralizing Attitudes

Measure	Study 1(a)	Study 1(b)	Study 2(a)	Study 2(b)
1. Cheating Likelihood	.29**	.27**	.20*	.36**
2. Moral Appraisal	.65**	.51**	.73**	.64**
3. Cheating Attitudes	.73**	.65**	.68**	.63**
4. Cheating Perception	.16**	.16**	.38**	.10

* Correlation is significant at the $p < .05$ level (2-tailed)

** Correlations is significant at $p < .01$ level (2-Tailed)

Table 2.

Means (Standard Deviations) for Measured Variables

Measure	Study 1a	Study 1b	Study 2a	Study 2b
1. Neutralizing Attitudes	2.30 (1.11)	1.86 (0.88)	2.39 (1.12)	1.91 (0.91)
2. Cheating Likelihood	4.27 (1.63)	4.00 (1.45)	4.48 (1.61)	4.29 (1.28)
3. Moral Appraisal	1.96 (1.01)	1.72 (0.81)	2.06 (0.97)	1.90 (0.94)
4. Cheating Attitudes	2.45 (0.96)	2.87 (0.81)	2.66 (0.88)	2.15 (0.79)
5. Cheating Perception	3.44 (1.24)	2.75 (1.20)	3.47 (1.17)	2.46 (1.06)
6. Financial Difficulty	4.29 (1.20)	3.83(1.28)	4.33 (1.13)	3.85 (1.30)

Note: All measures are on a scale from 1-6 with higher scores indicating greater endorsement of the construct.

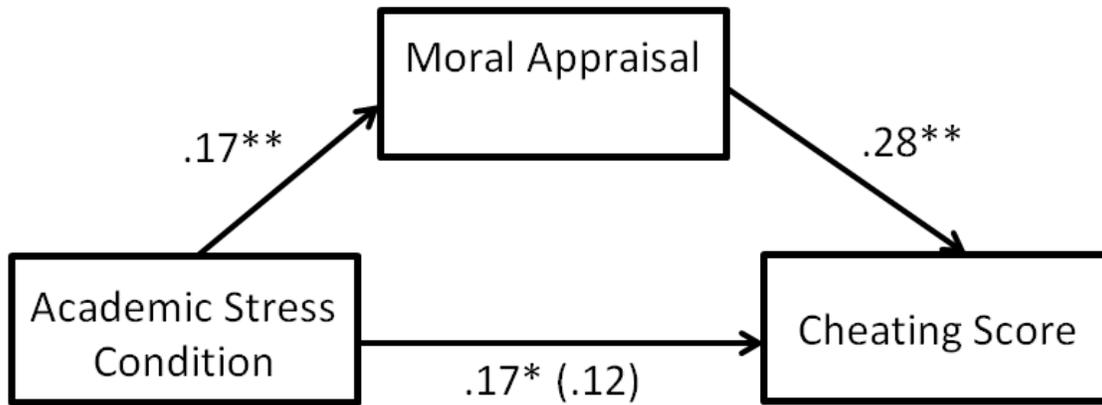


Figure 1. Standardized regression coefficients for the relationship between academic stress condition and predicted cheating score as mediated by moral appraisal in the Study 2b sample. The standardized direct regression coefficient between academic stress condition and cheating score is in parentheses.

* $p < .01$

** $p < .001$

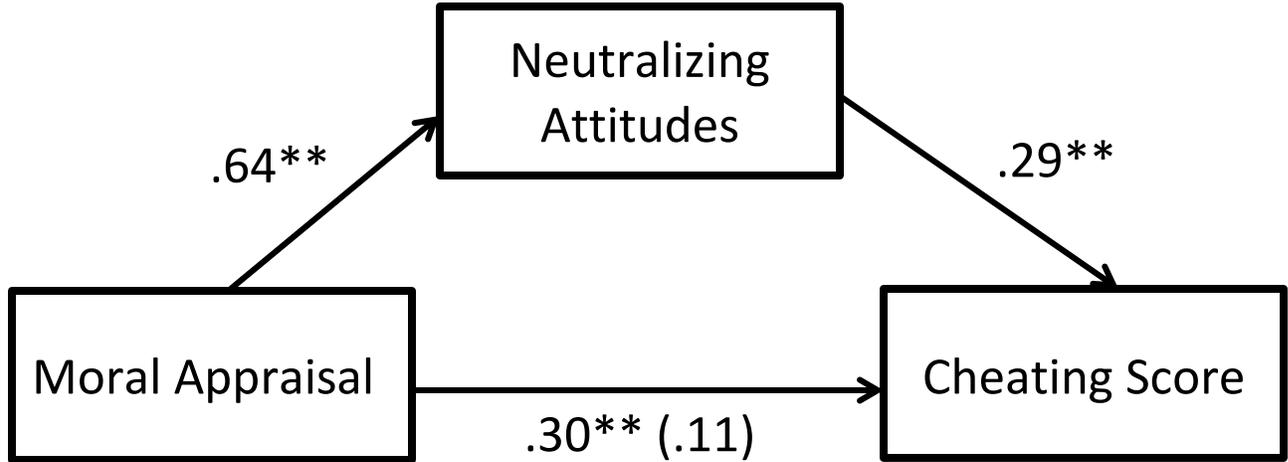


Figure 2. Standardized regression coefficients for the relationship between moral appraisal scores and predicted cheating score as mediated by neutralizing attitudes. The standardized direct regression coefficient between moral score and cheating score is in parentheses.

** $p < .001$

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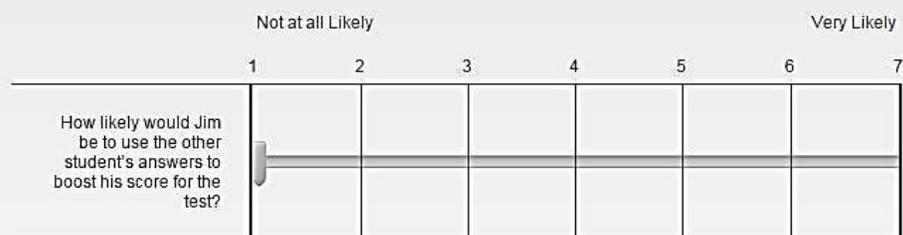
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Appendix A: Vignettes & Cheating Measures Study 1

Condition 1: Copying off of someone's test

Please read the following vignette carefully:

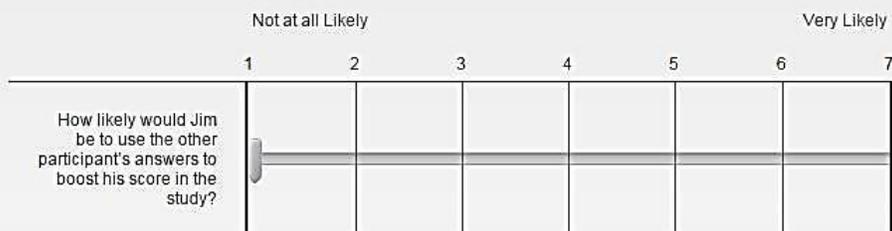
Jim is a sophomore in college. He is currently enrolled in a required math class. During an exam for the class Jim finds that he is unable to complete several of the problems. The student in front of him has already finished and his answers are easily visible.



Condition 2: Cheating on a task for monetary gain

Please read the following vignette carefully:

Jim is a sophomore in college. He is participating in a psychology study in which he is asked to solve math problems. For each math problem solved correctly, he will be given one dollar at the end of the study. He is unable to complete several of the problems when he notices that another participant has already finished the task and his answers are easily visible.



Ethics Questions

After the vignette participants answered three ethics questions about the morality of the cheating act.

If Jim had used the other student's answers to boost his score it would have been right.

- Strongly Disagree
 - Moderately Disagree
 - Slightly Disagree
 - Slightly Agree
 - Moderately Agree
 - Strongly Agree
-

If Jim had used the other student's answers to boost his score it would have been justified.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

If Jim had used the other student's answers to boost his score it would have been morally wrong.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Appendix B: Financial Difficulty Questionnaire

I am currently experiencing financial difficulty.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Money is an everyday stressor for me

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Money does not play a major factor in my life choices.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I find myself thinking about debt often.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Money is a source of anxiety for me.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I generally don't worry too much about money.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I am concerned about paying next quarter's tuition.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

When I think about my financial situation I am worried.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I am worried about paying my rent next month.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Appendix C: Student Loan Questionnaire

What is your current amount of student loans?

- <\$5,000
- \$5,001-\$9,999
- \$10,000-\$19,999
- \$20,000-\$29,999
- \$30,000-\$39,999
- \$40,000-\$49,999
- >\$50,000

What is your current amount of other debt? Ie. Credit card, car loan, etc.

- <\$5,000
- \$5,001-\$9,999
- \$10,000-\$19,999
- \$20,000-\$29,999
- \$30,000-\$39,999
- \$40,000-\$49,999
- >\$50,000

Appendix D: Cheating Attitude Questionnaire

Cheating does not bother me.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I would cheat if I knew I wouldn't get caught.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I have been tempted to cheat on exams and/or assignments.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I often cheat on exams.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I never plagiarize.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I have seen other students at my college cheat on exams frequently.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Please select "Slightly Agree" for this question.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I have seen other students at my college frequently turn in plagiarized work.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I have heard of other students at my college cheating on exams frequently.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

I have heard of other students at my college frequently turning in plagiarized work.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Appendix E: Neutralizing Attitudes

[Note: These measures are from Curasi (2013) which were adapted from Haines, Diekhoff, LaBeff & Clark 1986.]

Cheating is understandable when other students make no attempt to cover their answers during an exam.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Cheating is understandable if the course is required, but the course material seems irrelevant.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Cheating is okay if the course information is too hard; if no matter how hard a student studies they cannot understand the course material.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

When a student cheats, it isn't hurting anyone.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Cheating is understandable if the instructor acts as if their course is the only one that matters.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Cheating is natural if the instructor leaves the room during an exam.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Cheating is understandable when the instructor doesn't seem to care if students learn the material.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Cheating is okay if a student is in danger of losing his or her scholarship.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Cheating is understandable when a student doesn't have time to study because he/she is working to pay for school.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

Appendix F: SES Manipulation

High SES Condition:

Think of the ladder below as representing where people stand in the United States. Now please compare yourself to the people at the very top of the ladder. These are the people who are the best off, those who have the most money, most education, and the most respected jobs. In particular, we'd like you to think about how you are different from these people in terms of your own income, educational history, and job status. Where would you place yourself on this ladder relative to these people at the very top?



○ Ladder Rung:

Low SES Condition:

Think of the ladder below as representing where people stand in the United States. Now please compare yourself to the people at the very bottom of the ladder. These are the people who are the worst off, those who have the least money, least education, and the least respected jobs. In particular, we'd like you to think about how you are different from these people in terms of your own income, educational history, and job status. Where would you place yourself on this ladder relative to these people at the very bottom?



Ladder Rung:

No Prime Condition:

Think of the ladder below as representing where people stand in the United States. Where would you place yourself on this ladder?



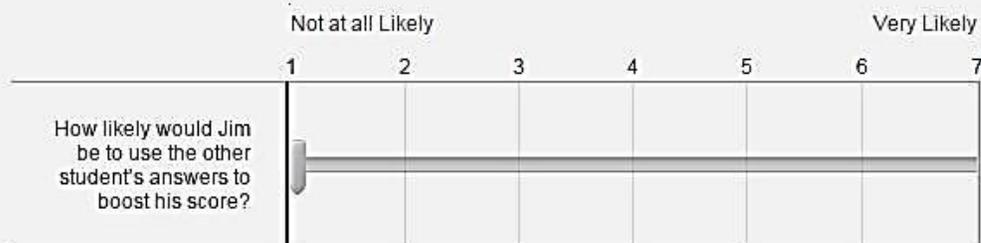
Ladder Rung:

Appendix G: Vignettes & Cheating Measures Study 2:

Condition 1: High Academic Stress, No Job Stress

Please read the following vignette carefully:

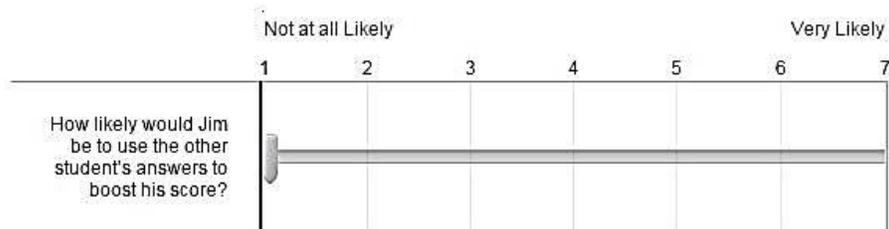
Jim is a sophomore in college. He is currently enrolled in an advanced calculus class that is required for him to graduate. The class is very difficult and Jim has been having problems with it all quarter. During an exam, Jim finds that he is unable to complete several of the problems. The exam is worth 25% of his total grade, and if he does not do well he will be unable to enter his major the following quarter. He notices that another student has already finished his exam and has left the answers easily visible.



Condition 2: No Academic Stress, High Job Stress

Please read the following vignette carefully:

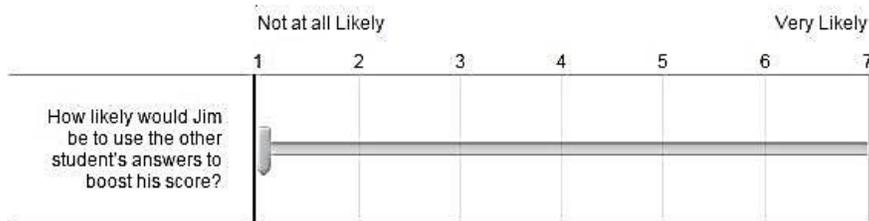
Jim is a sophomore in college. He is currently enrolled in a basic math class that is required for him to graduate. He is also working a second job in order to help pay tuition and rent. The night before a math exam his manager demands that he work a double shift, and by the time he gets home he is too tired to study. He falls asleep without having reviewed the material. During the exam, Jim finds that he is unable to complete a few of the problems. He notices that another student has already finished his exam and has left the answers easily visible.



Condition 3: High Academic Stress, High Job Stress

Please read the following vignette carefully:

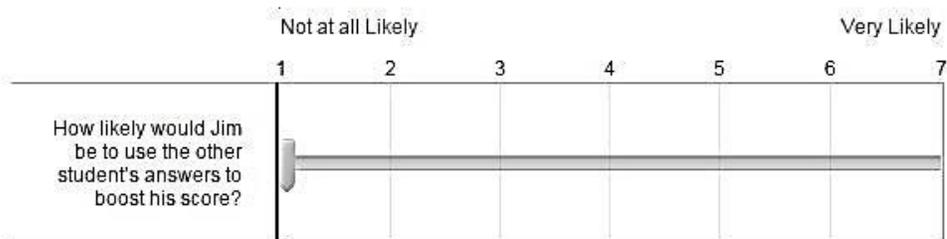
Jim is a sophomore in college. He is currently enrolled in an advanced calculus class that is required for him to graduate. The class is very difficult and Jim has been having problems with it all quarter. He is also working a second job in order to help pay tuition and rent. The night before a math exam his manager demands that he work a double shift, and by the time he gets home he is too tired to study. He falls asleep without having reviewed the material. During the exam, Jim finds that he is unable to complete several of the problems. The exam is worth 25% of his total grade, and if he does not do well he will be unable to enter his major the following quarter. He notices that another student has already finished his exam and has left the answers easily visible.



Condition 4: No Academic Stress, No Job Stress

Please read the following vignette carefully:

Jim is a sophomore in college. He is currently enrolled in a basic math class that is required for him to graduate. During an exam for the class Jim finds that he is unable to complete a few of the problems. He notices that another student has already finished his exam and has left the answers easily visible.



Ethics Questions

After the vignette, participants answered three ethics questions about the morality of the cheating act.

If Jim had used the other student's answers to boost his score it would have been right.

- Strongly Disagree
 - Moderately Disagree
 - Slightly Disagree
 - Slightly Agree
 - Moderately Agree
 - Strongly Agree
-

If Jim had used the other student's answers to boost his score it would have been justified.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

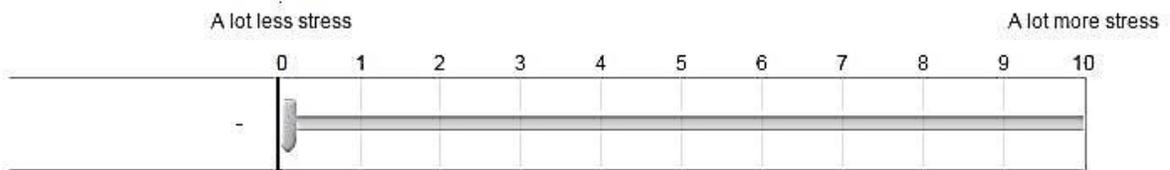
If Jim had used the other student's answers to boost his score it would have been morally wrong.

- Strongly Disagree
- Moderately Disagree
- Slightly Disagree
- Slightly Agree
- Moderately Agree
- Strongly Agree

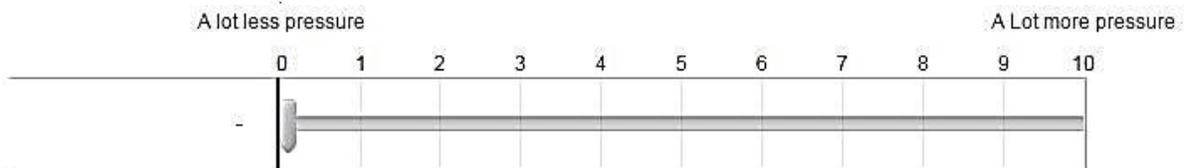
Manipulation Check

After the cheating likelihood questions participants were asked to report about Jim's academic stress and job-related pressure.

Relative to the average college student how much academic stress was Jim experiencing?



How much job-related pressure was Jim experiencing?



Appendix H: Demographics Questionnaire

Please answer the following questions. All responses are anonymous and confidential.

What is your gender?

- Male
- Female
- Other

What year in university are you?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate

How old are you?

What is your cumulative college GPA?