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Deconstructing the Corporate Psychopath: An Examination of Deceptive Behavior

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Abstract

This paper examines whether business students deceive others more often than non-business students. A cheap talk experiment and an ethics questionnaire are employed to examine the subject's behavior. Fundamental differences, such as psychopathic personality, are used to examine their role in deceptive and unethical behavior. The results show that business students deceive others for personal gain more often than non-business students when there is the most to gain; however, business students find deception committed by others as unethical. Business students exhibit more psychopathic tendencies compared to non-business students, including being more likely to fit the prototypical psychopath profile. This fundamental difference in psychopathy can help explain why individuals deceive others and behave unethically. These results have important implications for the business industry and the design of policies. Thus, this study endeavors to advance the literature on fundamental distinctions between those who work in high levels of organizations and how this fundamental difference impacts decision making.

Keywords: Business, Corporate Psychopath, Deception, Ethics, Major, Psychopathy

JEL Classifications: A13, C91, D03,

1. Introduction

The business industry is rampant with lying, deception, and unethical behavior. Recent examples include Enron, Volkswagen emissions scandal, Barclays Libor rigging, Wells Fargo fraud, the Ponzi schemes by Bernie Madoff and Allen Stanford and insider trading from Zvi Goffer and Raj Rajaratnam. Dyck et al. (2013) estimate that 15% of large publicly traded companies commit fraud during any year. Cohn et al. (2014) argue that business culture could explain the dishonesty in the financial industry. Additionally, Akerlof and Romer (1993) maintain that the most profitable strategy for executives of “too-big-to-fail” banks is to loot their company and pay themselves huge rewards because they know that the government will bail them out from bankruptcy, which provides incentives to behave unethically. A New York Time’s article shows that only 20% of individuals trust banks after the fallout of subprime mortgages during the financial crisis (Porter, 2012). Additionally, the article shows that 62% of Americans believe that corruption is widespread across corporate America with nearly 75% of them believing that corporate corruption has increased in the previous three years.

The references above demonstrate the extensive amount of corporate corruption; however, little research is devoted to uncovering the origins of deceptive and unethical behavior that precludes the corruption. In 2015, more than half of Fortune 100 CEOs hold undergraduate degrees in business, and 40% hold a Master’s in Business Administration degree, which shows a strong relationship between business majors working in high levels of management (Stadler, 2015). This presents the question: are students majoring in business more likely to commit deceptive and unethical behavior compared to non-business majors? Additionally, the term “corporate psychopath” has been coined by professionals to describe individuals who work in the business industry that have no conscience, and are willing to lie, manipulate others, and be

ruthless to gain a financial advantage (Boddy et al., 2010). If business students are more likely to deceive others, could it be because they are more psychopathic? Distinguishing between if business majors are more deceitful than non-business majors, and the influence of psychopathy has significant implications for the business industry and the design of public policy.

This study follows the cheap talk experiment from Gneezy (2005) to examine the difference in deceptive acts between business and non-business students where information asymmetry exists, giving individuals the choice whether to deceive others for personal gain. Additionally, following Gneezy (2005), participants are given a questionnaire on ethics following the cheap talk experiment to examine how individuals recognize the unethical behavior. The Psychopathic Personality Inventory- Revised (PPI-R) developed by Lilienfeld et al. (2005) is employed to create a psychopathic trait profile of how business students are fundamentally different from non-business students ¹. Finally, this paper examines how these psychopathic traits relate to deceptive behavior and ethical viewpoints.

The results are summarized as follows. First, business students are more likely to use private information to deceive others when the personal rewards are the highest. However, when provided an example of others committing deceptive acts, business students view the behavior as unethical. Second, business students are more likely to fit the prototypical profile of a psychopath, including being more likely to be rebellious, manipulate others, and have a propensity towards guiltlessness. Third, these fundamental differences in psychopathic personality can help explain why business students deceive others more often compared to non-business students.

¹ Unlike fluctuating shocks to mood and behavior by outside factors, personality traits are habitual (i.e., fundamental) patterns of thought, emotion, and behavior

2. Related literature

2.1. A portrait of business students

Individuals majoring in business are exposed to the self-interest model of economics through their coursework. Therefore, it is expected that they behave differently given they have attained a distinctive way of understanding and interpreting financial information. The self-interest model argues that in a market economy, the best economic benefit is accomplished when individuals act in their own self-interest. In the book “An Inquiry into the Nature and Causes of the Wealth of Nations,” Smith (1817) says "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest." Smith explains that the baker bakes because of his own self-interest to earn enough money to feed his family. However, the baker must bake a bread of high quality that is cheap enough that others are willing to pay for it. Thus, the baker serves his self-interest by producing a good that others find valuable ².

However, if there is not enough competition, or individuals hold private information, one can argue that the self-interest model could lead to price gouging, corruption, and cheating. For example, research shows that individuals exposed to the self-interest model are more likely to free ride (Marwell & Ames, 1981), cooperate less (Frank et al. 1993), exhibit a greater acceptance of greed (Long et al., 2011), cheat to gain an advantage (McCabe et al. 2006), bribe others for personal gain (Frank & Schulze, 2000), behave unethically for “the love of money” (Tang & Chen, 2008), and have less of a concern for fairness (Carter & Irons, 1991) compared to

² For further explanation of the self-interest model see Federal Reserve Bank of St. Louis (2012).

individuals not exposed to the self-interest model. Gandal et al. (2005) explain this behavior by finding that individuals exposed to the self-interest model place more value on achievement and less value on the welfare of others compared to individuals who have not been exposed to the self-interest model.

Research finds a gap in ethical behavior among business students and non-business students such as finding that as the number of business ethics' courses increases, there is no impact on the students moral reasoning (Ritter, 2006; Traiser & Eighmy, 2011). In fact, top business schools weaken the morals of their students as they shift their thoughts of what a company's priority should be from satisfying customers when they start the program to maximizing shareholder value at the end of their program (Schneider & Prasso, 2002). It has even been suggested that the business curriculum has contributed to the unethical behavior (Richards et al. 2002). Others argue that the social environment may shape individuals values and behavior differently for students with different majors (Sims & Keon, 1999, 2000). In fact, Cohn et al. (2014) find that the culture in the financial industry could cause deceptive behavior. Regardless of the reason behind the deception, the first hypothesis is developed as follows:

H1: Business students will deceive others more compared to non-business students.

2.2. A portrait of the corporate psychopath

The general incidence of psychopaths is less than one percent. However, Babiak and Hare (2006) find that the percent of psychopaths working in senior positions of business is roughly four percent. Psychopaths are thought to be attracted to business organizations and politics because it provides them with power, prestige, and money. Additionally, Cleckley (1988)

argues that psychopaths rise quickly in organizations due to their manipulative charisma, deceitfulness, callousness, and determination. In fact, Boddy (2015) argues that the Enron organization and its CEO exhibit the traits of the prototypical psychopath which could explain the company's deceptive behavior. As such, the second hypothesis is developed as follows:

H2: Business students will display higher scores on psychopathy, and psychopathic traits, than non-business students

Research is limited on the behavior of corporate psychopaths. Recent studies show that psychopathy is related to the theft of employees (O'Boyle et al. 2011), corporate bullying (Boddy, 2011), poor management skills (Babiak et al. 2010), and treating employees, the environment, and society poorly (Boddy et al. 2010). Boddy (2011) theorizes that the manipulative, deceitful, and unethical behavior of psychopaths is responsible for the financial crisis in 2007-2008 because they influence the moral and ethical climate of the entire organization. Ragatz et al. (2012) find that perpetrators of white collar crime, such as Ponzi schemes, embezzlement, insider trading, and fraud are more likely to be psychopaths than non-white collar criminals.

Research explains that psychopathic behavior may be due to an abnormality with connections within the brain, specifically in the areas of the amygdala and prefrontal cortex (Blair 2007; Blair, 2008; Glenn et al. 2009; Yang et al., 2009). Due to brain abnormalities, these individuals lack emotions and the ability to sympathize and empathize with others, which could contribute to deceptive behavior, and a lack remorse for their ruthless decisions.

Battigalli et al. (2013) postulate a theory that individuals are averse to deceiving others because of guilt. However, psychopaths do not empathize with others and do not feel guilty for

their actions. Similarly, Tang and Sutarso (2013) develop a model where characteristics of psychopathy such as impulsive behavior and poor social moral values play a major role in deceptive and unethical conduct, as well as the monetary incentive and financial intelligence.

The third hypothesis is developed as follows:

H3: Psychopathy, and its traits, will be related to the act of deception and views of ethical behavior.

3. Methods

3.1. Participants

This study selects participants from upper level (i.e. junior and senior) business students from finance, marketing, management, and accounting courses to collect a well-diversified group of business students that have been exposed to the self-interest model and the social environment of the business school. The sample of 120 business students includes 39 (33%) management, 37 (31%) accounting, 23 (19%) finance, and 21 (17%) marketing majors. Within the sample of business students, there are 53 (44%) males and 67 females (54%) with a median age of 22.6.

Following previous research, the control group is selected from students with liberal arts majors to compare to the business student sample (Tang & Chen, 2008; Traiser & Eighmy, 2011; Chen and Tang, 2013). This comparison is used because while business students may select their degree due to their strong love of money orientation (McCabe et al. 2006), those interested in helping people may choose liberal art majors such as psychology or sociology. Additionally, students from health science degrees are included in the control sample to achieve a more diverse sample with a group of individuals also concerned with helping people with majors in nursing

and pre-med. The control sample of 129 students includes 56 (43%) biology or pre-med ³, 24 (18%) psychology, 19 (15%) nursing, 6 (5%) social work, 6 (5%) criminal justice, 6 (5%) chemistry, and 12 (9%) other liberal arts or health science majors. Within the control, sample there are 42 (33%) males and 87 females (67%) with a median age of 21.5.

The subjects took part in an experiment. First, the subjects participated in the cheap talk experiment where they sat down at their computer and were given instructions for the cheap talk experiment (see Appendix A). In the cheap talk experiment, they are told that they are taking part in the experiment with another student paired at a separate computer, and neither of them will ever know who their partner is. However, there is no other student, and the computer always selects option B to create a sense of empathy for the receiver. After the conclusion of the cheap talk experiment, the participants were given a questionnaire asking them two questions about how they view deception.

For compensation, students received extra credit in their course. Luccasen and Thomas (2014) find no difference in outcomes in experiments using class credit and monetary incentives⁴. Participants were told that the extra credit given was linked to the payoffs of the cheap talk experiment. However, they were all given a flat rate.

3.2. Procedure

3.2.1 Cheap talk experiment

³ Many students reported a dual major in biology and pre-med

⁴ For this reason, I argue that students would rather receive 5-15 points extra credit rather than a small monetary gain for their participation.

This experiment follows Gneezy (2005) in a cheap talk communication game in which one player, the sender, holds private information about the monetary outcomes of option A and option B that the receiver does not have. Here, the sender can send one of two possible messages to the receiver:

Message A: “Option A will earn you more money than Option B.”

Message B: “Option B will earn you more money than Option A.”

After receiving the message, the receiver must pick between the two options but holds no information other than the message the sender chooses. Table 1 presents the three treatments with the potential payoffs for option A and B for each treatment⁵. Each treatment differs regarding the possible gains for the sender and possible loss for the receiver if the option B is executed instead of option A. It is important to note that Option B will always earn the sender more money than option A. In the first treatment, the sender can earn an additional \$1 while the receiver would lose \$1 if option B is implemented. In the second treatment, the sender can earn an additional \$1, while the receiver would lose \$10 if option B is implemented. In the third treatment, the sender can earn an additional \$10, while the receiver would lose \$1 if option B is executed.

3.2.2 Ethics questionnaire

Following Gneezy (2005), the students were given a questionnaire following the cheap talk experiment and asked to judge the following scenario:

⁵ Payments are based upon Gneezy (2005)

“Mr. Johnson is about to close a deal and sell his car for \$1,200. The engine's oil pump does not work well, and Mr. Johnson knows that if the buyer learns about this, he will have to reduce the price by \$250 (the cost of fixing the pump). If Mr. Johnson does not tell the buyer, the engine will overheat on the first hot day, resulting in damages of \$250 for the buyer. Being winter, the only way the buyer can learn about this now is if Mr. Johnson were to tell him. Otherwise, the buyer will learn about it only on the next hot day. Mr. Johnson chose not to tell the buyer about the problems with the oil pump.”

“In your opinion, Mr. John’s behavior is: completely fair, fair, unfair, very unfair.”

After they had completed this scenario, they were asked to judge the following scenario with the same outcomes of completely fair, fair, unfair, very unfair:

“What would your answer be if the cost of fixing the damage for the buyer in case Mr. Johnson does not tell him is \$1,000 instead of \$250?”

3.3. Psychopathy measures

The Psychopathic Personality Inventory–Revised (PPI-R) is employed to measure eight primary psychopathy traits, two secondary traits, and one global trait ⁶. Subjects completed the PPI-R online at their own time before participating in the experiment. Appendix B provides a detailed description of these traits and how the secondary and global traits are calculated. The PPI-R contains three validity scales that are designed to detect insincere, fake, or inconsistent responses: virtuous responding, deviant responding, and an inconsistent responding tool.

⁶ Multiple studies find that the PPI-R is a valid and reliable questionnaire to evaluating psychopathy (Lilienfeld et al. 2005; Lilienfeld et al. 2006; Edens & Mcdermott, 2010).

4. Results

4.1. Deceptive behavior in business students

Figure 1 presents the results from the cheap talk experiment, regarding the percentage of business students and non-business students who lied. In treatment 1, 47 percent of business students lied, while 50 percent of non-business students lied. In treatment 2, where the sender gains \$1 for deceiving the receiver, while the loss to the receiver is \$10, 48 percent of business students and 55 percent of non-business students mislead the receiver (p-value 0.120)⁷. Finally, in treatment 3, where the gain to the sender for deceiving the receiver is \$10 and the loss of the receiver is \$1, 61 percent of business students and 54 percent of non-business students send a deceiving message to the receiver (p-value 0.145). The results from treatment 1 and 2 provide conflicting results to the first hypothesis that business students will deceive others more often than non-business students. However, when there is the most to gain by deceiving the receiver in treatment 3, business students deceive their partner more than non-business students, providing support for hypothesis 3.

For non-business students, the number of individuals who send a deceptive message decreases from treatment 2 to treatment 3, which suggests that these individuals feel remorse for the receiver who has chosen option B in both treatments 1 and 2. However, the difference in the message that business students send in treatment 1 and treatment 2 compared to treatment 3 increases substantially to 61 percent which is statistically significant compared to the previous two treatments (p-value < 0.01). This result provides two important implications. First, when the

⁷ A one-tailed t-test is used to examine significance levels throughout the analysis similar to Gneezy (2005).

stakes are the highest business students are more likely to lie to gain an advantage compared to when the possible gains are low. Second, even though the receiver has chosen option B in both treatments 1 and 2, business students do not show remorse to the receiver and continued to send a deceptive message.

Dreber and Johannesson (2008) and Erat and Gneezy (2012) find that men are significantly more likely to lie for monetary gain compared to women, while Childs (2012) and Gylfason et al. (2013) find no such gender differences using the cheap talk experiment. Given the ambiguity in previous research on gender differences in the cheap talk experiment, the sample is split by gender and major.

Figure 2 presents the results for the split sample by gender and major. The results show that 51 percent of male business students and 50 percent of male non-business students send a deceptive message in treatment 1. The percentage of business students lying decreases to 44 percent in treatment 2 while the proportion of non-business students increases to 52 percent for males. Finally, in treatment 3, 59 percent of male business students send a deceptive message to the receiver while only 50 percent of male non-business students send the same message (p-value 0.207). The results show that in task 1 and 3, where the amount gained by lying is the same or greater for the sender, male business students are more likely to send a deceptive message for monetary gains, which provides evidence for hypothesis 1.

Figure 2 shows that 43 percent of female business students send a deceptive message in treatment 1 compared to 49 percent of female non-business students. During treatment 2, 51 percent of female business students lie to the receiver while 58 percent of female non-business students send the same message. Finally, in treatment 3, 63 percent of female business students

send a message hoping to deceive the receiver compared to 56 percent of female non-business students (p-value 0.215).

There are three main findings in these results. First, when comparing all genders and majors, female business students deceive the receiver less often in treatment 1 and most often in treatment 3 compared to the other groups. Finally, in treatments 2 and 3, female business students and non-business students send a deceptive message more often than their male counterparts. This result is contradictory to previous research showing that males are more likely to deceive than females. However, none of the results (males vs. females, male business students vs. female business students, or male non-business students vs. female non-business students) are significant.

In the financial literature, it is typical to use a 90% confidence interval (p-value of 0.10) within the analysis. However, this paper decreases the significance level when examining the difference between majors and genders for several reasons. First, the sample size is lower than most finance papers that are using thousands of observations; therefore, because of the decreased power of the tests due to the small sample size, this paper uses lower standards of significance levels. Second, the results follow expectations based upon theoretical foundations. Therefore, it is unjust to omit results because they fall shy of the typical 90% threshold. Third, while it may be uncommon, there are finance papers that use broader confidence intervals such as 80% within their analysis (For example, see Galvao (2002), Killeen (2006), Bellotti et al. (2010) to name a few)

4.2. Ethical views in business students

The first experiment is designed to put the subjects in the position where they can lie, but it does not examine how ethical they view these lies. The ethics questionnaire described in section 3.2.2 is employed to examine how ethical the subjects believe deception is when it is committed by others using an empirically realistic scenario. Figure 3 shows two interesting results. First, business students are more likely to believe that the first scenario is fair compared to non-business students (p-value 0.20). This result shows that business students believe that it is more ethical to deceive the car buyer, which is consistent with the results of the cheap talk experiment. Secondly, business students find that this deception is “very unfair” more often compared to non-business students (p-value 0.25). This shows that while business students find Mr. Johnson’s deception as very unfair, they do not find their deception as unfair. However, in this situation, the car buyer will find out about the deception, which suggests they may fear getting caught lying.

Question two in Figure 3 shows a similar percentage of business and non-business students who believe that Mr. Johnson’s deception is completely fair or fair. However, 70% of business students believe the deception is “very unfair” compared to 64% of non-business students. The overall difference between business students and non-business students is significant (p-value 0.173). These results show that while business students are more likely to deceive others, they view the deception as unethical when others commit it.

Figure 4 reports the results for the ethics questionnaire after splitting the sample by gender and major. The results show that both male and female business students find Mr. Johnson’s behavior in question one as more “fair” as well as more “very unfair” compared to their non-business counterpart consistent with Figure 3.

4.3. Psychopathic profile of business students

The second aspect of this paper looks to explain why business students are more deceptive than non-business students. A probit regression is run with the dependent variable being 1, if the student is a business student or 0 otherwise to investigate hypothesis 2. In model 1, the dependent variable is regressed against the global psychopathy trait; in the second model the independent variables are the two secondary psychopathy traits, and the third model is run on all eight primary traits of psychopathy.

Table 2 reports the results from these probit regressions. Model 1 shows that business students are significantly more likely to have a greater probability of matching the features of the prototypical psychopath compared to non-business students. Model 2 reports that business students score significantly higher on fearless dominance which is a collection of the traits social influence, fearlessness, and stress immunity. Finally, Model 3 shows that business students have higher scores on rebellious nonconformity, social influence, and cold-heartedness while having lower scores on carefree nonplanfulness and fearlessness compared to non-business majors. These results suggest that business students are more rebellious, manipulate others more, are more callous, and plan their actions more carefully compared to non-business students. Primary traits of psychopathy can explain nearly 10% of the differences in business and non-business students. These results support hypothesis two and might explain why business students behave differently than non-business students. Additionally, as it is intuitive that business students will work in the business industry, these results support the notion of psychopaths having a higher presence in the business industry ⁸.

⁸ For example, Stadler (2015) show the high relationship to studying business in college and working for corporations.

4.3. Relation between psychopathy and deception

Table 3 presents the results for how psychopathy relates to the treatments from the cheap talk experiment. A probit regression on if the subject sent the deceptive message for each treatment is regressed against the global psychopathy measure in model 1, two secondary traits in model 2, and eight primary traits in model 3 for treatment 1, 2, and 3⁹. Model 1 shows that high scores of psychopathy are significantly related to sending a deceptive message in treatments 1 and 3. Model 2 indicates that the two secondary traits of self-centered impulsivity and fearless dominance are both positively related to sending a deceptive message, although both are insignificant for all treatments. Model 3 reports that carefree nonplanfulness is negatively related to sending a deceptive message in all three treatments, while Machiavellian egocentricity is positively related to sending a deceptive message in treatment 1 and rebellious nonconformity is positively related in treatment 3. These results support hypothesis 3.

Psychopathy research often examines the difference between psychopaths (clinically high) versus non-psychopaths (clinically normal) subjects (Babiak & Hare, 2006; Blair, 2008; Yang et al., 2009; Babiak et al., 2010). Therefore, the following analysis separates the sample of individuals who score clinically high (standardized score ≥ 65) on the various psychopathic traits from those who score in the normal range (standardized score < 65), and then compare their deceptive behavior¹⁰.

⁹ The results are robust when including a dummy variable for both gender and major.

¹⁰ Scores are standardized based on gender and age following the PPI-R protocol.

The results of the comparison between clinically high versus normal levels for all psychopathic traits are reported in Table 4. Panel A shows that clinical psychopaths send a deceptive message more often than normal individuals by sending a deceptive message 71% of the time for treatment 1, 59% for treatment 2 and over 82% for treatment 3 further supporting hypothesis 3. Panel B reports the results for the individuals with clinically high levels of the secondary traits. Interestingly, those in the clinical group of self-centered impulsivity send a deceptive message in treatment 1 significantly more often, while being significantly less likely to lie in treatment 2. Furthermore, individuals in the clinically high group of fearless dominance, a trait that business majors score higher on than non-business majors, is related to sending a deceptive message more than the normal group for all three treatments. Panel C shows that individuals in the clinically high group of Machiavellian egocentricity, social influence, and cold-heartedness send a deceptive message more than their normal counterparts in all three treatments.

One may posit that while the clinical levels of greater than or equal to 65 on the PPI are based on statistical difference compared to the general population, the difference between someone who scores 64 and 65 may be very small. Therefore, it makes sense to split the sample into terciles (3 quantiles) based upon their score in each of the traits and compare the high group and low group for each trait ¹¹. The sample of 249 is split into three groups which provide roughly 80 subjects per group for every trait.

Table 5 presents the results for differences in message choice for individuals in the high and low group. The results show that those with higher scores of psychopathy send a deceptive

¹¹ Analysis of the high group versus the middle group and middle group versus the low group is not examined as the scores in the middle group may be close to some of those in the other groups.

message significantly more for treatment 1 and 3. Additionally, Table 5 indicates that individuals who score in the higher tercile for self-centered impulsivity and fearless dominance send a deceptive message more often than those who score in the low group on the respective trait. Finally, Panel C shows that individuals who score higher on Machiavellian egocentricity, rebellious nonconformity, fearlessness, and stress immunity send a deceptive message more often than their lower-scoring counterparts. These results provide robustness to the previous results by increasing the sample size in the groups and finding similar results.

4.4. Relation between psychopathy and ethics

Table 6 reports the results for how psychopathy relates to the ethics questionnaire. The results show that higher scores of psychopathy are related to believing that Mr. Johnson's actions are more ethical in both scenarios. Model 2 shows that individuals with higher scores of self-centered impulsivity are related to thinking that Mr. Johnson is making an ethical decision. Finally, individuals who are more narcissistic and fearless are more likely to think Mr. Johnson is behaving ethically.

Table 7 provides the comparison between clinically high versus normal levels for all psychopathic traits and the ethical view of Mr. Johnson's actions. The results show that those in the clinically high group of Machiavellian egocentricity, carefree nonplanfulness, and fearlessness view Mr. Johnson's actions as more ethical compared to their normal counterparts. To add robustness to the results and increase the sample size, the sample is split into terciles based on their psychopathic traits, and the high and low group are compared in the same fashion as Table 5.

Table 8 presents the results for the difference between the high and low groups of psychopathy traits and view of ethical behavior. First, individuals who score higher on psychopathy see the deception of Mr. Johnson as more ethical. Panel B shows that subjects with higher scores of self-centered impulsivity believe that Mr. Johnson is behaving ethically compared to those with lower scores. Finally, Panel C reveals that individuals with higher scores of Machiavellian egocentricity, rebellious nonconformity, carefree nonplanfulness, fearlessness, and cold-heartedness are more likely to find the actions of Mr. Johnson as more ethical compared to those who score lower for the respective traits.

5. Discussion and conclusion

The results from this paper show that business students deceive others more often than non-business students when they have the most to gain, with female business students having the highest rate of deception of 63% in treatment 3 of the cheap talk experiment. However, when examining the ethics questionnaire, business students find deception as unethical when others commit it. The results explain that one reason that business students deceive others more often than non-business students is that they are more likely to fit the prototypical profile of a psychopath, including scoring significantly higher on psychopathic traits of rebellious nonconformity, social influence, and cold-heartedness. In fact, psychopathy and cold-heartedness are linked to the act of deception in the cheap talk experiment and are inversely related to the view of how ethical deception is.

These results have implications for the design of policies in the business industry. Individuals in high levels of organizations are more likely to be psychopaths than the general

population (Babiak & Hare, 2006; Babiak et al. 2010) and hold private information not available to others, which is a major problem between company managers and shareholders. Thus, the evidence in this paper suggests that policies should be designed accounting for the fundamental differences in individuals likely to work in the business, such as psychopaths. Boddy (2011) hypothesizes that psychopaths may have caused the financial crisis, and these results provide evidence that supports this notion as this paper shows that psychopathy is highly related to deceiving others for private gain and viewing deception as ethical. Similarly, Stulz (2010) argues the financial crisis was due to financial institutions functioning at exceptionally high levels of leverage, due to holding risk off the balance sheet and lying about their true capital requirement holdings. Therefore, showing that psychopathy is related to lying and deceiving, may explain the behavior of executives controlling company decisions.

In the Enron scandal in 2001, executives lied and deceived to hide large amounts of debt from their balance sheet and then shredded any evidence of their deception from the SEC. From this deception, investors lost billions and employees lost their jobs, but several of those involved never faced jail time and faced very little punishment. After this scandal, legislation changed, such as the Sarbanes-Oxley Act of 2002, to attempt to deter this behavior, but how did Bernie Madoff and Allen Stanford get away with their Ponzi schemes for so many years? Madoff was investigated numerous times in the 2000's for hiding his customer's orders, yet there was no detection of his Ponzi scheme, and many believe if it was not for the financial crisis in 2007-2008, the SEC might have never uncovered the Ponzi scheme. With psychopaths working at such high levels of organizations, there is no telling how much they are deceiving the public and taking millions for themselves.

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Appendix A: Instruction for Sender

This is a short experiment in decision making. In this experiment, you will be matched with another student from a different class. Neither of you will ever know the identity of the other. You will know the payout options for both payments, option A and option B, and the other student will not. The choice of which option your counterpart chooses rest with the other student who can freely choose option A or B. The only information your counterpart will have is the information sent by you in a message.

The two possible monetary payments available to you and your counterpart are as followed:

Option A: you receive \$5 and the other student receives \$6

Option B: you receive \$6 and the other student receives \$5

We will show the other student your message, and ask them to choose either option A or B. As a reminder, your counterpart's choice will determine the payout of the experiment, however, they will never know the sums that were actually offered. (They will never know if your message was true or not).

Which message would you like to send to the other student?

Message 1: "Option A will earn you more money than option B"

Message 2: "Option B will earn you more money than option A"

Appendix B

Description of psychopathy measures

Scale	Construct Descriptions
Panel A: Psychopathy (Global)	
P Psychopathy (SCI + FD + C)	The greater the probability that the respondent matches the features of the prototypical psychopathic individual, such as guiltlessness, callousness, dishonesty, manipulateness, superficial charm, egocentricity, risk taking, and poor impulsive control
Panel B: Secondary Traits	
SCI Self-Centered Impulsivity (ME + RN + BE + CN)	Tendency toward self-centeredness, ruthless use of others, brazen flouting of traditional values, propensity to attribute blame to others for one's mistakes, and reckless impulsivity
FD Fearless Dominance (SOI + F + STI)	Lack of anticipatory social and physical anxiety, low levels of tension and worry, low harm avoidance, and high levels of interpersonal dominance
Panel C: Primary Traits	
ME Machiavellian Egocentricity	Narcissistic and ruthless attitudes in interpersonal functioning
RN Rebellious Nonconformity	Reckless lack of concern regarding social norms
BE Blame Externalization	Tendency to blame others for one's problems and to rationalize one's misbehavior
CN Carefree Nonplanfulness	Attitude of indifference in planning one's actions
SOI Social Influence	Perceived ability to influence and manipulate others
F Fearlessness	Absence of anticipatory anxiety concerning harm and willingness to participate in risky activities
STI Stress Immunity	Absence of marked reactions to anxiety-provoking events
C Cold-Heartedness	propensity toward callousness, guiltlessness, and lack of sentimentality

Notes: This table displays the descriptions of the psychopathic dimensions described in the PPI-R (Lilienfeld, Widows, & Staff, 2005).

Table 1:
Payoffs in the Different Tasks

Treatment	Option	Payoff to Sender	Payoff to Receiver
1	A	5	6
	B	6	5
2	A	5	15
	B	6	5
3	A	5	15
	B	15	5

Notes: This table provides the possible payouts for option A and B for Treatment 1, 2, and 3.

Table 2:
Psychopathic profile

	(1)	(2)	(3)
Psychopathy Traits	Global Psychopathy	Secondary Traits	Primary Traits
Psychopathy	0.617** (2.330)		
Self-Centered Impulsivity		0.148 (0.379)	
Fearless Dominance		1.31*** (2.953)	
Machiavellian Egocentricity			-0.894 (-0.707)
Rebellious Nonconformity			5.01*** (3.374)
Blame Externalization			2.03 (1.522)
Carefree Nonplanfulness			-3.56** (-2.293)
Social Influence			3.27*** (2.823)
Fearlessness			-3.30** (-2.547)
Stress Immunity			1.16 (0.791)
Cold-heartedness			2.51* (1.668)
R-Squared	1.6%	2.6%	9.8%

Notes: This table displays the results from a probit regression where the dependent variable is 0 if the student is a business major or 0 otherwise against psychopathy traits for the full sample (n=249). Model 1 is run against the global psychopathy trait; Model 2 uses the two secondary traits; Model 3 uses the eight primary traits. A description of these traits is in Appendix B. T-statistics are listed in parenthesis and significance is listed at the 10% (*) 5% (**) and 1% (***) levels. Coefficients are multiplied by 100.

Table 3

Relationship between psychopathy traits and deception

VARIABLES	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	Treatment 1	Treatment 1	Treatment 1	Treatment 2	Treatment 2	Treatment 2	Treatment 3	Treatment 3	Treatment 3
Psychopathy	0.461*			-0.152			0.546**		
	(1.749)			(-0.581)			(2.046)		
Self-Centered Impulsivity		0.601			-0.465			0.511	
		(1.530)			(-1.191)			(1.295)	
Fearless Dominance		0.420			0.233			0.642	
		(0.969)			(0.538)			(1.456)	
Machiavellian Egocentricity			2.55**			-0.554			0.822
			(2.045)			(-0.453)			(0.669)
Rebellious Nonconformity			-0.212			0.886			2.790**
			(-0.154)			(0.648)			(1.991)
Blame Externalization			-0.337			-0.774			-0.782
			(-0.263)			(-0.603)			(-0.602)
Carefree Nonplanfulness			-3.01**			-2.460*			-2.440
			(-1.972)			(-1.659)			(-1.603)
Social Influence			0.042			-0.832			-0.000
			(0.039)			(-0.761)			(-0.00)
Fearlessness			1.89			1.160			0.575
			(1.513)			(0.944)			(0.460)
Stress Immunity			-1.93			-0.383			-0.844
			(-1.346)			(-0.272)			(-0.592)
Cold-heartedness			0.835			-0.029			1.790
			-0.577			(-0.020)			(1.214)
R-Squared	0.8%	0.9%	4.2%	0.1%	0.5%	1.8%	1.2%	1.1%	3.5%

Notes: This table displays the probit regression results where the dependent variable is a 1 if the subject deceived the receiver for treatment 1, 2, and 3 for the full sample (n=249 Model 1 is run against the global psychopathy trait; Model 2 uses the two secondary traits; Model 3 uses the eight primary traits. Appendix B provides a detailed description of these traits. T-statistics are listed in parenthesis and significance is shown at the 10% (*) 5% (**) and 1% (***) levels. All coefficients are multiplied by 100.

Table 4

Deception by clinical group

Panel A: Global trait	Treatment	Clinically High	vs	Normal
Psychopathy	1	70.6 (17)	>>	46.6 (232)
Psychopathy	2	58.8 (17)		51.7 (232)
Psychopathy	3	82.4 (17)	>>	55.6 (232)
Panel B: Secondary traits	Treatment	Clinically High	vs	Normal
Self-Centered Impulsivity	1	66.7 (12)	>	47.3 (237)
Self-Centered Impulsivity	2	33.3 (12)	<	53.2 (237)
Self-Centered Impulsivity	3	66.7 (12)		57.0 (237)
Fearless Dominance	1	50.0 (18)		48.1 (231)
Fearless Dominance	2	66.7 (18)		51.1 (231)
Fearless Dominance	3	77.8 (18)	>>	55.8 (231)
Panel C: Primary traits	Treatment	Clinically High	vs	Normal
Machiavellian Egocentricity	1	59.1 (22)		47.1 (227)
Machiavellian Egocentricity	2	50.0 (22)		52.4 (227)
Machiavellian Egocentricity	3	68.2 (22)		56.4 (227)
Rebellious Nonconformity	1	52.2 (23)		47.8 (226)
Rebellious Nonconformity	2	47.8 (23)		52.7 (226)
Rebellious Nonconformity	3	65.2 (23)		56.6 (226)
Blame Externalization	1	48.0 (25)		48.2 (224)
Blame Externalization	2	44.0 (25)		53.1 (224)
Blame Externalization	3	56.0 (25)		57.6 (224)
Carefree Nonplanfulness	1	33.3 (6)		48.6 (243)
Carefree Nonplanfulness	2	33.3 (6)		52.7 (243)
Carefree Nonplanfulness	3	33.3 (6)		58.0 (243)
Social Influence	1	54.5 (22)		47.6 (227)
Social Influence	2	59.1 (22)		51.5 (227)
Social Influence	3	59.1 (22)		57.3 (227)
Fearlessness	1	50.0 (22)		48.0 (227)
Fearlessness	2	50.0 (22)		52.4 (227)
Fearlessness	3	59.1 (22)		57.3 (227)
Stress Immunity	1	48.1 (27)		48.2 (222)
Stress Immunity	2	59.3 (27)		51.4 (222)
Stress Immunity	3	63.0 (27)		56.8 (222)
Cold-heartedness	1	61.8 (34)	>>	46.0 (215)
Cold-heartedness	2	55.9 (34)		51.6 (215)
Cold-heartedness	3	73.5 (34)	>>	54.9 (216)

Notes: This table shows the percentage of subjects who sent a deceptive message in each treatment for the sample (n=249) for subjects who score in the clinically high (standardized score ≥ 65) and subjects with normal psychopathy trait scores (standardized score <65). The sample size for each group is listed in parenthesis. The significance and direction of inequality between the two groups is shown at the 10% (>) 5% (>>) and 1% (>>>) levels. Appendix B describes the psychopathy traits.

Table 5

Deception by high and low groups based upon the sample

Panel A: trait	Treatment	High	vs	Low
Psychopathy	1	51.8	>	41.6
Psychopathy	2	51.8		52.8
Psychopathy	3	61.4	>>	48.3
Panel B: Secondary traits	Treatment	High	vs	Low
Self-Centered Impulsivity	1	53.9	>	43.5
Self-Centered Impulsivity	2	52.6		54.3
Self-Centered Impulsivity	3	64.5	>	53.2
Fearless Dominance	1	53.2		44.9
Fearless Dominance	2	59.7	>>	46.1
Fearless Dominance	3	66.2	>>	49.4
Panel C: Primary traits	Treatment	High	vs	Low
Machiavellian Egocentricity	1	61.0	>>>	38.1
Machiavellian Egocentricity	2	48.1		58.3
Machiavellian Egocentricity	3	59.7		50.0
Rebellious Nonconformity	1	51.8		44.7
Rebellious Nonconformity	2	56.6		49.4
Rebellious Nonconformity	3	61.4	>>	44.7
Blame Externalization	1	52.0		47.6
Blame Externalization	2	46.7		51.2
Blame Externalization	3	58.7		57.1
Carefree Nonplanfulness	1	43.6		50.0
Carefree Nonplanfulness	2	49.7	<	60.5
Carefree Nonplanfulness	3	56.4		60.5
Social Influence	1	43.8		43.8
Social Influence	2	53.8		52.8
Social Influence	3	58.8		53.9
Fearlessness	1	55.3	>>	37.8
Fearlessness	2	55.3		46.7
Fearlessness	3	59.2		50.0
Stress Immunity	1	46.9		48.4
Stress Immunity	2	56.8	>	45.3
Stress Immunity	3	66.7	>	55.8
Cold-heartedness	1	46.8		45.3
Cold-heartedness	2	48.1		53.7
Cold-heartedness	3	60.8		52.6

Notes: This table shows the percentage of subjects who sent a deceptive message in each treatment for the sample (n=249) for subjects based on splitting the sample into terciles to examine the difference between high and low groups. The significance and direction of inequality between the two groups is shown at the 10% (>) 5% (>>) and 1% (>>>) levels. Appendix B describes the psychopathy traits.

Table 6

Relationship between psychopathy traits and ethics

VARIABLES	(1)	(2)	(3)	(1)	(2)	(3)
	Car 1	Car 1	Car 1	Car 2	Car 2	Car 2
Psychopathy	-0.568*** (-4.040)			-0.357*** (-2.762)		
Self-Centered Impulsivity		-0.838*** (-4.020)			-0.587*** (-3.065)	
Fearless Dominance		-0.334 (-1.436)			-0.0944 (-0.441)	
Machiavellian Egocentricity			-2.21*** (-3.478)			-1.18** (-1.978)
Rebellious Nonconformity			0.593 (0.831)			-0.0255 (-0.0383)
Blame Externalization			0.858 (1.285)			0.332 (0.532)
Carefree Nonplanfulness			-0.687 (-0.892)			-0.903 (-1.252)
Social Influence			0.106 (0.186)			-0.501 (-0.941)
Fearlessness			-1.56** (-2.429)			0.0841 (0.140)
Stress Immunity			0.634 (0.858)			0.481 (0.695)
Cold-heartedness			-0.378 (-0.506)			-0.647 (-0.926)
R-Squared	5.8%	6.1%	10.0%	2.6%	3.0%	3.5%

Notes: This table displays the OLS regression results where the dependent variable is how ethical Mr. Johnson's actions are on a 4 point Likert scale with 4 being very unfair for the full sample (n=249). Model 1 is run against the global psychopathy trait; Model 2 uses the two secondary traits; Model 3 uses the eight primary traits. Appendix B provides a detailed description of these traits. T-statistics are listed in parenthesis and significance is shown at the 10% (*) 5% (**) and 1% (***) levels. All coefficients are multiplied by 100

Table 7

Ethics by clinical group

Panel A: Global trait	Scenario	Clinically High	vs	Normal
Psychopathy	1	3.4 (17)		3.5 (232)
Psychopathy	2	3.5 (17)		3.6 (232)
Panel B: Secondary traits	Scenario	Clinically High	vs	Normal
Self-Centered Impulsivity	1	3.3 (12)		3.5 (237)
Self-Centered Impulsivity	2	3.4 (12)		3.6 (237)
Fearless Dominance	1	3.4 (18)		3.5 (231)
Fearless Dominance	2	3.5 (18)		3.6 (231)
Panel C: Primary traits	Scenario	Clinically High	vs	Normal
Machiavellian Egocentricity	1	3.1 (22)	<<<	3.5 (227)
Machiavellian Egocentricity	2	3.3 (22)	<<	3.6 (227)
Rebellious Nonconformity	1	3.5 (23)		3.5 (226)
Rebellious Nonconformity	2	3.6 (23)		3.6 (226)
Blame Externalization	1	3.4 (25)		3.5 (224)
Blame Externalization	2	3.6 (25)		3.6 (224)
Carefree Nonplanfulness	1	2.7 (6)	<<<	3.5 (243)
Carefree Nonplanfulness	2	2.7 (6)	<<<	3.6 (243)
Social Influence	1	3.5 (22)		3.5 (227)
Social Influence	2	3.6 (22)		3.6 (227)
Fearlessness	1	3.2 (22)	<<	3.5 (227)
Fearlessness	2	3.4 (22)	<	3.6 (227)
Stress Immunity	1	3.6 (27)		3.5 (222)
Stress Immunity	2	3.6 (27)		3.6 (222)
Cold-heartedness	1	3.3 (34)		3.5 (215)
Cold-heartedness	2	3.5 (34)		3.6 (215)

Notes: This table shows the average choice of how ethical Mr. Johnson's actions are on a 4 point Likert scale with 4 being very unfair for the full sample (n=249) for subjects who score in the clinically high (standardized score ≥ 65) and subjects with normal psychopathy trait scores (standardized score < 65). The sample size for each group is listed in parenthesis. The significance and direction of inequality between the two groups is shown at the 10% (>) 5% (>>) and 1% (>>>) levels. Appendix B describes the psychopathy traits.

Table 8

Ethics by high and low groups based upon the sample

Panel A: Global trait	Scenario	High	vs	Normal
Psychopathy	Car 1	3.27	<<<	3.64
Psychopathy	Car 2	3.43	<<<	3.67
Panel B: Secondary traits	Scenario	High	vs	Normal
Self-Centered Impulsivity	Car 1	3.30	<<<	3.62
Self-Centered Impulsivity	Car 2	3.47	<<<	3.71
Fearless Dominance	Car 1	3.48		3.53
Fearless Dominance	Car 2	3.61		3.56
Panel C: Primary traits	Scenario	High	vs	Normal
Machiavellian Egocentricity	Car 1	3.09	<<<	3.62
Machiavellian Egocentricity	Car 2	3.38	<<<	3.69
Rebellious Nonconformity	Car 1	3.35	<<<	3.60
Rebellious Nonconformity	Car 2	3.55	<	3.68
Blame Externalization	Car 1	3.40		3.50
Blame Externalization	Car 2	3.55		3.65
Carefree Nonplanfulness	Car 1	3.38	<	3.55
Carefree Nonplanfulness	Car 2	3.50	<	3.66
Social Influence	Car 1	3.48		3.51
Social Influence	Car 2	3.58		3.58
Fearlessness	Car 1	3.42	<<	3.61
Fearlessness	Car 2	3.62		3.60
Stress Immunity	Car 1	3.49		3.45
Stress Immunity	Car 2	3.64		3.58
Cold-heartedness	Car 1	3.41	<	3.55
Cold-heartedness	Car 2	3.51	<	3.65

Notes: This table shows the average choice of how ethical Mr. Johnson's actions are on a 4 point Likert scale with 4 being very unfair for the full sample (n=249) for subjects based on splitting the sample into terciles to examine the difference between high and low groups. The significance and direction of inequality between the two groups is shown at the 10% (>) 5% (>>) and 1% (>>>) levels. Appendix B describes the psychopathy traits.

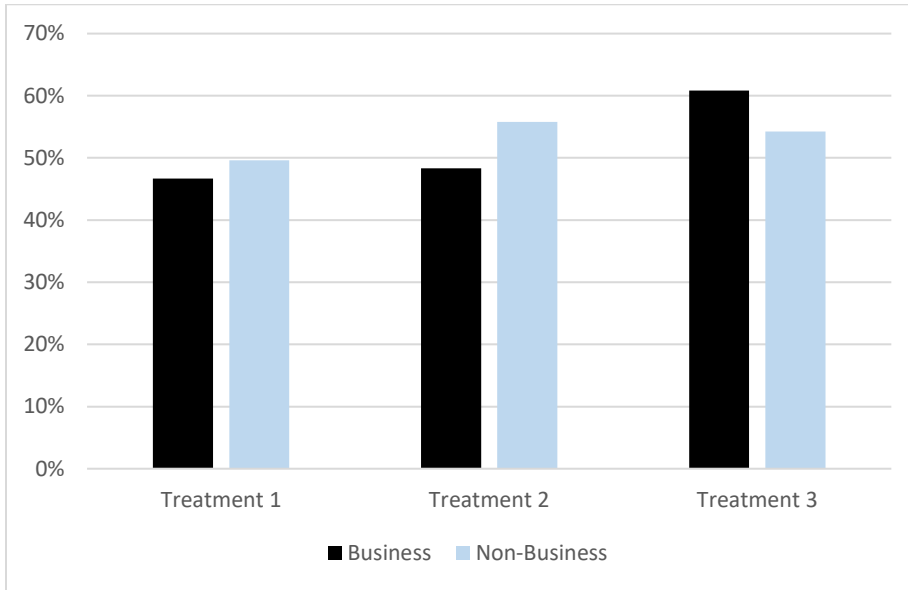


Figure 1. This chart shows the percentage of business students (n=120) and non-business student (n=129) who elect to send a deceptive message for each treatment.

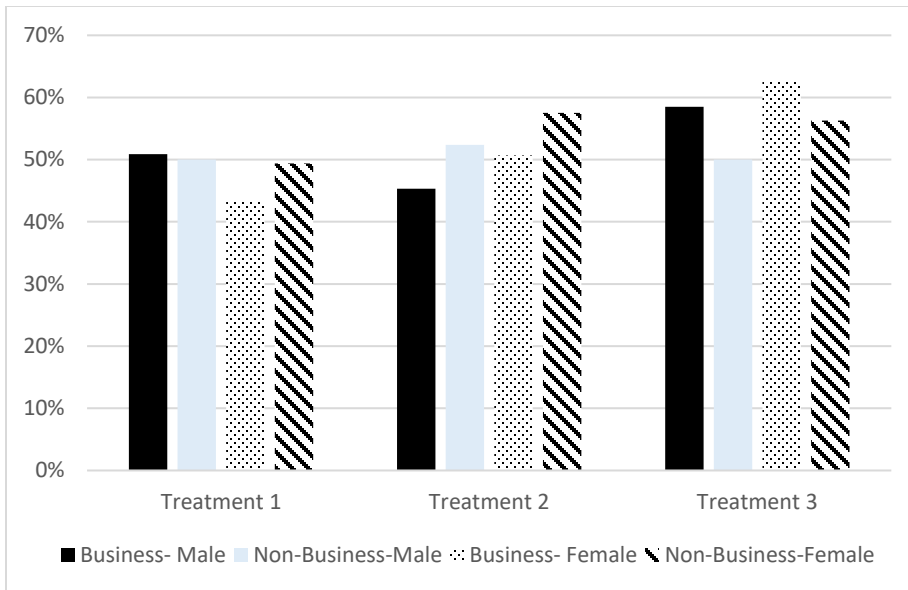


Figure 2. This chart shows the percentage of male business students (n=53), male non-business students (n=42), female business students (n=67), and female non-business students (n=87) who elect to send a deceptive message for each treatment.

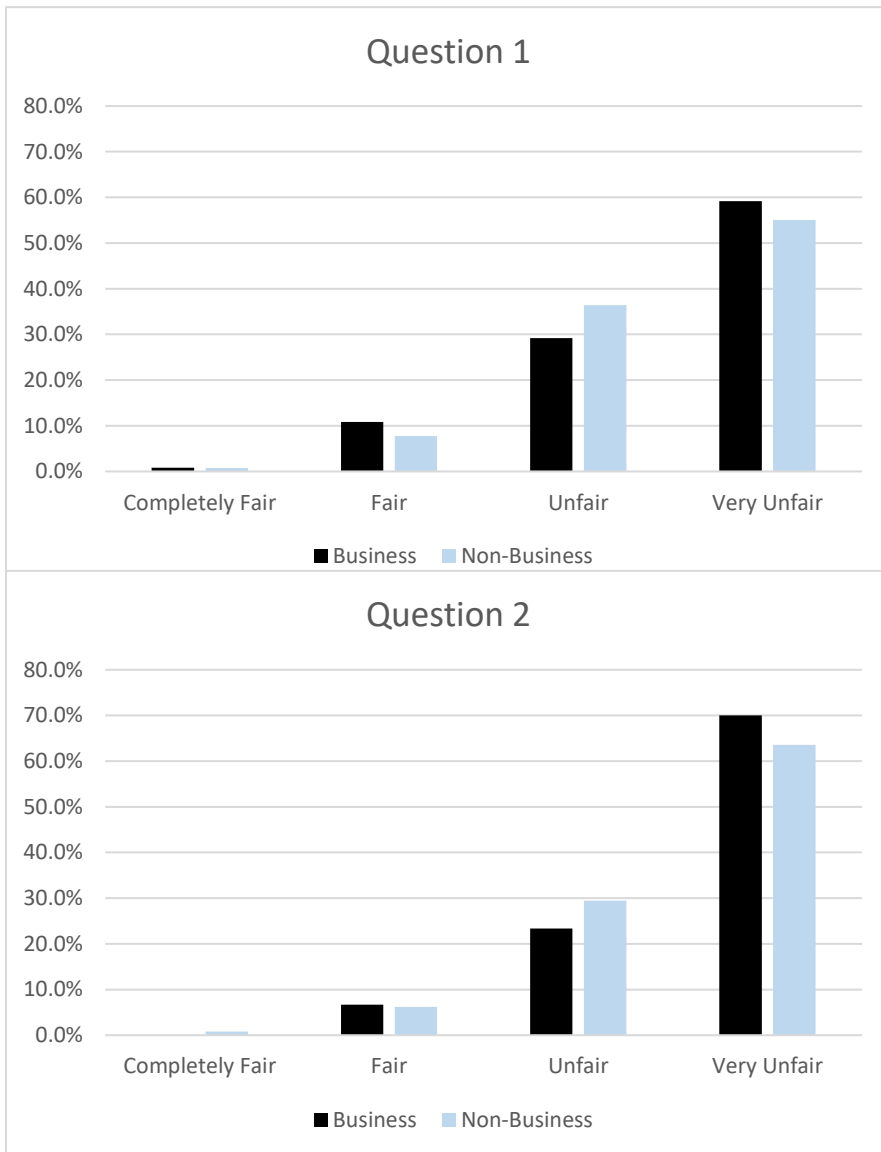


Figure 3. This chart shows the percentage of business students (n=120) and non-business student (n=129) who select each option for Mr. Johnson’s action.

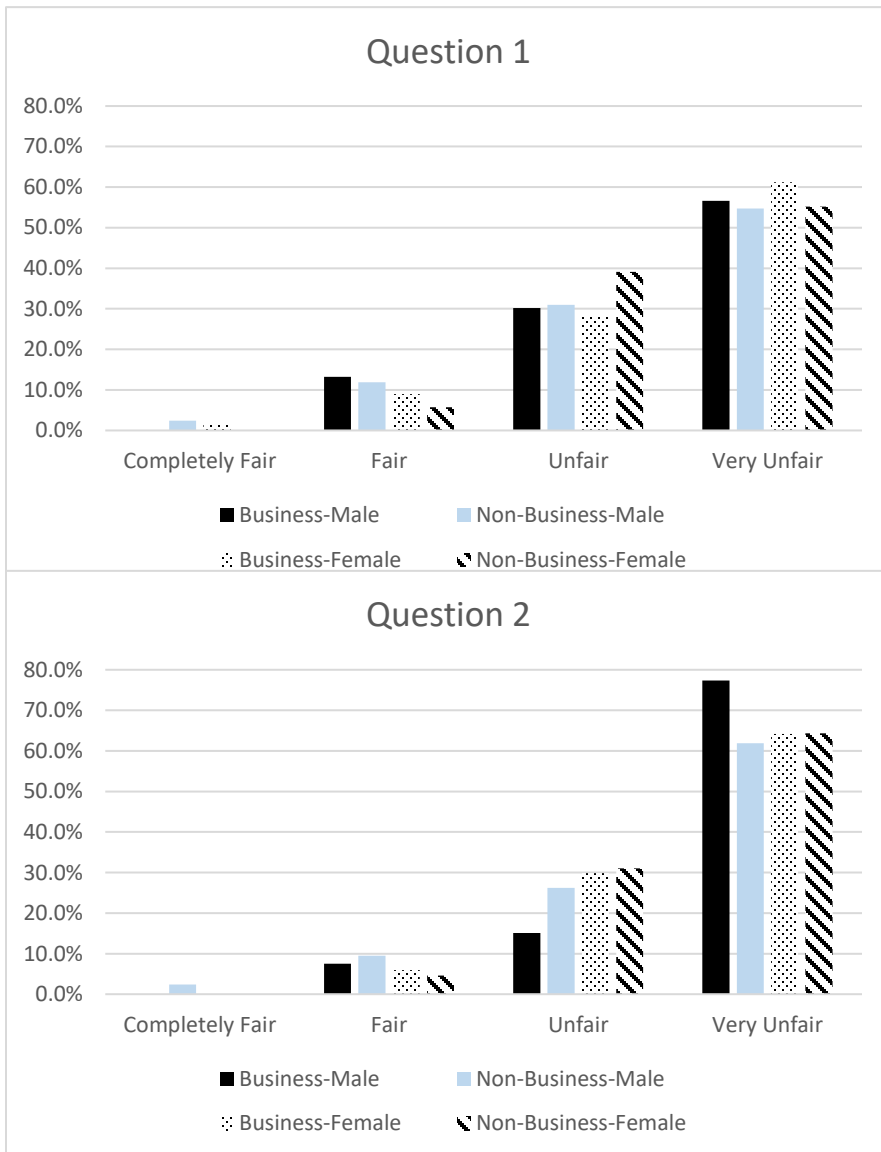


Figure 4. This chart shows the percentage of male business students (n=53), male non-business students (n=42), female business students (n=67), and female non-business students (n=87) who select each option for Mr. Johnson's action.