THE EFFECTS OF CONTRACT FRAMING ON MISCONDUCT

BY

JENNIFER EVE NICHOL

DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Accountancy
in the Graduate College of the
University of Illinois at Urbana-Champaign, 2015

Urbana, Illinois

Doctoral Committee:

Associate Professor Clara Chen, Chair
Professor Mark Peecher
Assistant Professor Romana Autrey
Professor Joseph Mahoney

ABSTRACT

This study examines the effects of incentive contract framing on two types of misconduct: misreporting and shirking. I conduct a 2x2 between subjects experiment, manipulating incentive contract framing (*Bonus*/*Penalty*) and the awareness of the opportunity to misreport (*Before Effort*/*After Effort*). I predict and find that (1) penalty contracts cause a higher rate and degree of misreporting, (2) this greater misreporting occurs due to a greater sense of entitlement to the incentive funds, and (3) even though misreporting occurs more with penalties, people *shirk* more in response to a *bonus*. Collectively, this study's theory and results indicate that while penalty contracts can increase effort relative to bonus contracts, they also encourage greater dishonesty in reporting when that effort is not successful.

ACKNOWLEDGEMENTS

I am very grateful to my dissertation committee, Romana Autrey, Joe Mahoney, Mark Peecher, and especially my committee chair, Clara Xiaoling Chen, for the generous contribution of their time, comments, and guidance. For helpful comments and suggestions, I thank Elizabeth Altiero, Andrew Bauer, Tim Bauer, Sarah Bonner, Paul Demere, Cassandra Estep, Brent Garza, Steph Grant, Gary Hecht, Elena Klevsky, Jeremy Lill, Thomas Vance, Yue (May) Zhang, Flora Zhou, and workshop participants at the University of Illinois at Urbana-Champaign, the University of Southern California, and Northeastern University. I would also like to thank the Richard D. and Anne Marie Irwin Foundation and the Center for Professional Responsibility in Business and Society at the University of Illinois at Urbana-Champaign for their generous financial support. Finally, I would like to thank my son, Connor Meade, whose presence in my life has made every step of this process just a little bit easier and a whole lot happier than it otherwise would have been.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION

Incentive contracts represent an important tool in the design of management control systems to induce desirable behaviors and reduce undesirable behaviors. Incentive contracts can be framed as bonus contracts, where the employee is promised a wealth increase for meeting some target level of performance, or as penalty contracts, where the employee is threatened with a wealth reduction for failing to meet the target level of performance. Prior accounting research has focused on the effects of contract framing on effort (Christ et al. 2012; Hossain and List 2012; Hannan et al. 2005). However, previous studies have not allowed for the opportunity to engage in misreporting. In reality, employees often can distort their actual performance, making it appear as if they have worked harder or produced more than they actually have (Maas and van Rinsum 2013). It is unclear from prior research which contract frame will be more likely to induce misreporting or how the contract frame will affect effort once employees can misreport instead. This study examines the effect of incentive contract framing on two specific types of misconduct: misreporting and shirking. Specifically, this study examines (1) whether a penalty framed incentive contract causes greater employee misreporting than a bonus framed incentive contract, (2) whether the increase occurs due to an increased sense of entitlement to the incentive funds, and (3) whether penalty framing will reduce shirking when misreporting is an option.

Christ et al. (2012) note that incentive contracts usually are framed as bonus contracts but that interest in the use of penalty contracts has been growing in the post-SOX environment. Bonus contracts have been under a great deal of criticism in the past few years for creating incentives that encourage managers to manipulate accounting information in order to maximize their pay (Dehaan et al. 2013). In response, Section 304 of the Sarbanes-Oxley Act of 2002 ("SOX") requires CEOs and CFOs to return awards after a financial restatement if earned as a

result of misconduct, and Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank") directs the SEC to craft new rules for additional clawbacks that go considerably further than the clawback provisions in SOX. However, many companies have begun voluntarily implementing penalty-based policies that go beyond the requirements of Section 954, choosing policies that take back compensation for a variety of reasons (e.g., failing to meet performance targets) and extend to employees far outside of the executive ranks (PwC 2014, 2015; Equilar 2013). While these variations may hold the label of "clawback" in company documents, the PwC study notes that they may not be considered clawbacks at all but instead *represent performance conditions of compensation*.[1]

While the SOX and Dodd-Frank clawback regulations are meant to deter executives from publishing misstated accounting information (Dehaan et al. 2013), theory exists for predicting that the modified versions some companies have begun implementing will likely have the opposite effect and ultimately induce even greater misreporting than before. Kahneman and Tversky's (1984) theory of loss aversion states that the disutility of giving up an object is greater than the utility of acquiring it. A penalty contract frames pre-penalized funds as something that belongs to the employee, which is likely to create a sense of entitlement to those funds even if the employee fails to meet the incentive contract requirements. If so, employees are likely to believe they are more justified in taking alternative action to retain those funds when they have failed to meet the requirements of the incentive contract. Accordingly, I predict that (1)

[1] Typically the target funds of clawbacks have been bonuses, stock options, or other incentive awards, but industries have started developing new types of clawbacks to address a variety of risks (PwC 2014, 2015).

misreporting will be greater in response to a penalty contract and (2) the greater misreporting will occur due to a sense of entitlement to the incentive funds.

Shirking represents a type of misconduct whereby an employee chooses an effort level below the level of effort the principal requires (Fehr and Schmidt 2007). Prior accounting research into the effects of contract framing on effort did not permit employees to misreport performance as an alternative to achieving target performance through honest effort (Christ et al. 2012; Hossain and List 2012; Hannan et al. 2005), and it is an open question as to whether prior effort predictions will hold when misreporting is an option. Drawing on psychology research suggesting that people have a preference for honesty (Mazar et al. 2008), I predict that a penalty contract will affect misreporting and shirking differently. Although a penalty contract is expected to induce greater misreporting, I predict that a penalty contract will lead to less shirking than a bonus contract.

I use a 2x2 between subjects experiment to investigate the effects of contract framing (*Bonus*/*Penalty*) and misreporting opportunity awareness (*Before Effort*/*After Effort*) on misreporting, shirking, and perceptions of entitlement to the incentive amount. I manipulate misreporting opportunity awareness in order to control for the possibility that the ability to misreport will interact with contract framing's effects on effort. If penalty framing increases misreporting as predicted, and people know they will be able to misreport rather than exerting effort on the task, it could cause them to choose misreporting *instead* of effort (i.e., use misreporting as a substitute for effort). Such substitution could eliminate or even reverse prior literature's findings that penalty framing causes greater effort than bonus framing (Hossain and List 2012; Hannan et al. 2005). I find that (1) penalty contracts cause a higher rate and degree of misreporting, (2) this higher misreporting occurs due to a greater sense of entitlement to the

incentive amount, and (3) even though misreporting occurs more with penalties, people *shirk less* in response to a penalty than to a bonus, irrespective of whether they know they will have the opportunity to misreport instead.

This research contributes to the management accounting literature on contract framing (Christ et al. 2012; Hossain and List 2012; Hannan et al. 2005; Luft 1994). It provides insight into potential advantages of bonus contracts over penalty contracts by revealing some costs of penalty contracts that would be more difficult to detect in practice. Specifically, it identifies that while penalty contracts can reduce shirking relative to bonus contracts, penalty contracts can also lead to greater dishonesty when effort is not successful. Thus penalty contracts may be counterproductive when increased effort does not satisfy incentive contract requirements.

This research also contributes to the accounting literature on misreporting (e.g., Maas and van Rinsum 2013; Hannan, Rankin, and Towry 2006; Evans et al. 2001) by identifying the perception of entitlement as a mechanism for misreporting. Although the perception of entitlement arises from contract framing in this study, it may arise from other factors in practice, and thus, the results may have further implications for employee behavior beyond what is shown in this research.

Finally, this research offers important practical implications for regulators and managers as it addresses an all too common workplace scenario where an employee is called upon to report his or her performance and has both the opportunity and incentive to make that performance appear better than what actually occurred. For example, employees at all levels may overstate hours worked or claims for travel or subsistence expenses, while employees in management positions often have discretion when reporting their unit's results and can alter depreciation methods, estimates of asset value, or provisions for future expenses (e.g., Bowen, Rajgopal, and

Venkatachalam 2008; Burgstahler and Dichev 1997). Such misreporting can vary in egregiousness, from the subtle manipulation of various line items in the financial statements (e.g., earnings management) to outright falsification and fraud (Hobson, Mayew, and Venkatachalam 2012). When actual performance is too low to meet the threshold for gaining a desired incentive or avoiding an undesirable outcome, my research suggests penalty framing will lead to a greater tendency to fall on the dishonest side of the spectrum when reporting. However, my research also suggests that penalty framing will drive employees to try harder first--before resorting to dishonesty. This highlights the importance of setting targets that can be achieved through the greater exertion of effort when using penalty framing.

The remainder of this study is organized as follows: Section II develops the hypotheses. Section III describes the experimental design and procedures, and Section IV presents the results. Section V provides conclusions.

CHAPTER 2: HYPOTHESIS DEVELOPMENT

Given the financial scandals and crises in recent years, bonus contracts have come under a great deal of criticism, and clawbacks have become increasingly prevalent (Dehaan et al. 2013). The number of Fortune 100 companies disclosing some form of a clawback clause in their executive compensation contracts went from three to 82 percent between 2005 and 2010 (Dehaan et al. 2013). While SOX requires CEOs and CFOs to return awards after a financial restatement, if earned as a result of misconduct, Dodd-Frank expands this requirement. Section 954 of Dodd-Frank directs the SEC to craft new rules for additional clawbacks, requiring public companies to implement and disclose a clawback policy that takes back erroneously awarded incentive-based compensation paid to executive officers following accounting restatements, whether or not the executive officers engaged in misconduct. In response, companies have further implemented and modified their clawback policies in anticipation of the new SEC rules, which have yet to be issued. The 2014 PwC study notes that 40% of the companies reviewed made some type of change to their plan during 2013.

However, the modified versions of the clawback policies that companies are using often *go beyond* the requirements of Section 954 and take back employee compensation for reasons other than restatements (PwC 2015). For example, some companies require employees to return compensation when (1) the financials are impacted even through no fault of the employee, (2) when the employee is perceived to have engaged in excessive risk taking, or (3) when performance targets/thresholds are not met. Given that most of the sampled companies are a Fortune 100 company and that many apply their modified clawback policies not only to executives but to all employees, the use of penalty contracts appears to be a growing phenomenon.

While Dodd Frank may be inadvertently leading some companies to experiment with penalty based contracts, in some industries such contracts are nothing new. For instance, contractors commonly face penalty based contract provisions in "Incentive/Disincentive" clauses. Disincentive provisions assess a penalty for each day the contractor overruns the time allotted for the completion of identified critical work (Bubshait 2003). The construction industry is well known for having high levels of corruption (Lurie and Burkill 2013), and it is an open question whether there is a causal link between the corruption and the widespread use of disincentive contracts.

In spite of the above examples, bonus framing is far more commonly used in incentive contract design. However, penalty based incentive contracts ultimately exist for all employees as they can lose their jobs for failing to meet performance requirements. This is true for employees at all levels. For example, top management's tenures, compensation packages, and reputations are often determined by the extent to which their companies perform relative to analysts' forecasts (Zahra, Priem, and Rasheed 2007). A survey of 1,087 board members from 286 organizations who had removed their CEOs from office revealed that 27 percent had fired their organization's CEO for *tolerating low performers* (Murphy 2005). This result not only highlights the penalty-based pressure on CEOs to meet performance targets but also the expectation that the CEO will apply such pressure on other employees in the organization. Penalty framing therefore provides a strong incentive for employees to do what they can to avoid being penalized.

Theory suggests penalties would more effectively motivate employee effort due to loss aversion (Kahneman and Tversky 1979). Hannan et al. (2005) and Hossain and List (2012) use loss aversion to predict that employees facing penalty contracts will expend greater effort to avoid the loss associated with the potential penalty than they will expend to gain a bonus and

find that lower levels of effort or productivity are a cost of bonus contracts. Fryer et al. (2012) show in a field study of nine K-8 Chicago Heights schools that teachers under penalty contracts achieve a higher performance than those under a bonus contract.[2] Luft (1994) shows that while employees prefer contracts that are framed as bonus contracts to those framed as penalty contracts, penalty framing appears to lead to better performance. However, prior studies limited or did not investigate possible alternative means of avoiding a penalty or acquiring a bonus outside of increased effort. In reality, there are often options available to employees beyond increasing effort, options that may include undesirable behaviors such as misreporting.

Misreporting represents a way to avoid the negative consequences of failing to achieve the target level of performance. As noted in Dehaan et al. (2013), performance-based compensation may mitigate shirking but it also encourages managers to manipulate accounting information in order to maximize their pay. When effort is perceived as too costly or has failed to produce results that would avoid a penalty or obtain a bonus, employees may resort to unethical means such as earnings management or fraud to avoid the negative consequences if they believe they can get away with it. I theorize that just as loss aversion predicts that employees will expend more effort under penalty contracts, it also implies employees will be more motivated to resort to misreporting in order to avoid a penalty than to gain a bonus when effort has failed to achieve the level of performance necessary to avoid the loss or gain the bonus.

The *endowment effect* is based on loss aversion and suggests that one will value more an

[2] Their research prompted Inc. magazine, a monthly publication focused on growing companies, to recommend that businesses consider using penalties to boost productivity.

object that one owns (Thaler 1980). A penalty contract frames pre-penalized funds as belonging to the employee, and inasmuch as employees attend to this aspect of contract framing, the endowment effect suggests pre-penalized funds will be perceived as more valuable than pre-awarded bonus funds. Moreover, penalty framing is likely to create a sense of entitlement to those funds even if the employee fails to meet the incentive contract requirements.

An entitlement reflects a psychological property right that exists independently of legal property rights and carries a motivational disposition to defend that perceived property right (Gächter and Riedl 2005; Schlicht 1998). Entitlement can be thought of as an expectation with normative force, i.e., an expectation that one has a *right* to something and *should* receive it (Major 1994; Singer 1981). While there is some overlap between the two constructs, the endowment effect ultimately reflects an economic valuation while entitlement reflects a cognitive judgment that has both affective and motivational implications (Major 1994; Lerner 1987). For example, prior research suggests that entitlement is associated with lower pay satisfaction (Graham and Welbourne 1999), supervisor conflict (Harvey and Martinko 2009), reduced job satisfaction (King and Miles 1994), and heightened levels of turnover intentions (King and Miles 1994; King, Miles, and Day 1993).

In contract framing, the psychological role of entitlement is important because a penalty frame has a fundamentally different conceptual base (initial ownership of incentive funds) from a bonus frame. Contract framing is therefore likely to cause employees to differ in the degree to which they feel they have a right to the incentive funds. Prior research has found that employees often view stealing from their employer as a morally justified source of income to which they are *entitled* (Greenberg 1993, 1990; Mars 1974, 1973). A greater sense of entitlement to the incentive funds is therefore likely to increase employees' comfort with using unethical means to

increase their income when those incentive funds are withheld. I theorize that penalty framing is more likely than bonus framing to engender a sense of entitlement due to the sense of ownership conveyed by a penalty. As a consequence, employees are likely to believe they are more justified in lying to protect what they perceive themselves to own than in lying to obtain something they do not believe they own.

In short, penalty contract framing relies on the concept of taking back what psychologically has previously been added to a person's general endowment. Inasmuch as people mentally lay claim to those funds and perceive them as part of their endowment, a penalty contract is likely to invoke a sense of entitlement to the funds being threatened by a penalty, thus allowing employees to believe they are more justified in engaging in misreporting. Thus, entitlement should at least partially mediate the effect of contract framing on misreporting. This leads to the following hypotheses:

H1a: ***Misreporting will be greater in response to a penalty contract than to a bonus contract.***

H1b: ***The greater misreporting from a penalty contract will occur through a greater sense of entitlement to the incentive funds.***

Prior accounting research on the effects of contract framing on effort examined those effects in the *absence* of the opportunity to misreport (Christ et al. 2012; Hossain and List 2012; Hannan et al. 2005).[3] In the absence of the opportunity to misreport, penalty framing was found

[3] Prior literature defines shirking as exerting less effort than what is in the profit-maximizing interests of the principal (Harrison

to increase effort more than bonus framing in the tasks incentivized by the contract. Hannan et al. (2005) attributed this effect to loss aversion. However, prior research has shown that people sometimes use misreporting instead of effort, altering performance measures rather than altering the effort those measures were meant to capture (e.g., Guidry et al. 1999; Indjejikian and Matejka 2009; Maas and Matejka 2009). Ultimately, both effort and misreporting represent potential ways to avoid the negative effects of missing the target level of performance.

When misreporting is known to be an option and is something the employee believes (s)he can get away with, it is no longer necessary to use effort to try to avoid the negative effects of missing the target level of performance. Inasmuch as people view misreporting as a lower cost alternative to effort, they should reduce the portion of their effort that is driven by the desire to avoid a penalty or gain a bonus. As a consequence, contract framing should no longer affect effort through loss aversion. However, because people have a preference for honesty (Mazar et al. 2008), they are likely to have some preference to *try* to meet the target level of performance through effort *before* resorting to misreporting. Thus, to the extent that people are trying to rely on effort rather than dishonesty, effort should still be driven by the desire to avoid a penalty or gain a bonus. Loss aversion and prior research suggest that penalty framing will motivate greater effort than bonus framing.

In short, the effort decision is made under a different set of information than the misreporting decision. When choosing effort, employees do not know if their effort will be

---

and Harrell 1994; Rutledge and Karim 1999) or exerting less effort than the customary amount of effort for one's job (Shapiro and Stiglitz 1984).

sufficient to meet the target level of performance. However, because they have a preference for honesty, they are likely to still be motivated to try. Therefore, while penalty contracts may ultimately increase misconduct in the form of misreporting, penalty contracts are less likely than bonus contracts to result in misconduct in the form of shirking, irrespective of awareness of the opportunity to misreport. This leads to the following prediction:

H2: Shirking will be lower in response to a penalty contract than to a bonus contract.

CHAPTER 3: METHOD

3.1. Participants

I recruited 99 undergraduate business students from upper-level business classes of a large state university to participate in one of nine 30-minute experimental sessions. The number of participants in each session varied in size from 3 to 27 students; as the treatments were randomly assigned per participant rather than per session, any session effects should be randomly distributed across conditions and thus not bias results. Of the 99 participants, 52 (52.5%) were male and 47 (47.5%) were female. Participation in the experiment took about 30 minutes on average and earnings ranged from $10 to $15.

3.2. Research Design

The experiment uses a 2x2 between subjects experiment to investigate the effects of contract framing (*Bonus*/*Penalty*) and misreporting opportunity awareness (*Aware Before Effort*/*Aware After Effort*) on misreporting likelihood, dishonesty, shirking, and perceptions of entitlement to the incentive amount. The experiment was conducted in a computer laboratory using Qualtrics software, which randomly assigned each participant to one of the four treatments. All experimental materials were administered via computer, and between each computer was a divider for privacy.

Participants read instructions, went through a short practice task, viewed their compensation contract, received information about effort options, performed the official task (Official Round), viewed and reported their scores, and answered a post-experimental questionnaire. The Official Round involved answering a total of 30 difficult multiple-choice questions from each of the following categories: critical reasoning, sentence completion, and sentence correction. Participants had up to 15 minutes to complete the task, after which they

were informed of how many questions they had answered correctly. They were then asked to report the number of correct answers. Their payoff was determined by the number they reported, not by the actual number of correct answers. Prior to the task, participants completed a short practice test with 3 sample questions of comparable difficulty to the official task; the practice test results were shown to them but they were not asked to report their practice score and their practice score did not affect their pay. No deception of any kind was used and participants were debriefed at the end of the experiment to ensure the experiment would not inadvertently lead them to believe misreporting is ethical.

3.2.1. Contract Framing

Consistent with Christ et al. (2012) and Hannan et al. (2005), I manipulate contract framing as either (1) a positively framed contract that rewards agents for meeting performance targets with a bonus payment (Bonus), or (2) a negatively framed contract that penalizes agents for missing the target (Penalty). Specifically, participants in the two conditions were told the following:

> *Bonus:* "You will be paid a salary of $10 for your work in this experiment. In addition, you will receive a $5 BONUS if your score shows you answered at least 25 of the 30 questions correctly in the Official Round."
>
> *Penalty:* "You will be paid a salary of $15 for your work in this experiment. However, you will be charged a $5 PENALTY if your score does not show you answered at least 25 of the 30 questions correctly in the Official Round."

The contracts are monetarily equivalent, as under both contracts the employees will receive $15 if they reach the target score of 25 and $10 if not. In order to prevent differences in misreporting between treatments from being driven by differing levels of effort having

differentially affected the opportunity to misreport, I chose a target score that was too challenging for most to achieve in the time allotted. I analyze data only for participants who failed to achieve the target score.

3.2.2. Misreporting Opportunity Awareness

I manipulate misreporting opportunity awareness in order to provide evidence that loss aversion is insufficient to explain the effects of contract framing on effort and that penalty framing carries psychological messages that drive misreporting and shirking in opposite directions. Also, by preventing misreporting from being used as a substitute for effort in one condition, I am able to observe any changes in how contract framing affects effort when misreporting can be used as an alternative to effort. In so doing, I maintain an environment similar to prior research into the effects of contract framing on effort, which allows for greater comparison between the effects found in this study and the effects found in prior literature.

All participants had the option to misreport. After they completed the Official Round, participants were shown how many questions they asked correctly and all treatments viewed the following: "The previous number represents your actual score for this period. However, your pay will be calculated based only on the score you report. If you choose to lie about your score, you will not be caught. However, you will have to live with the knowledge that you chose to lie." Similar to Maas and van Rinsum (2013), which also examined misreporting, it was important to have an experimental setup where participants were aware that overstating their performance was possible but not completely appropriate within “the rules of the game.”

I manipulate misreporting opportunity awareness by informing half the participants *prior* to the task that they will be able to lie. Specifically, participants in the two conditions were told the following just before the Official Round:

Aware Before Effort: "At the end of the official round, the computer will tell you how many questions you answered correctly. You will then be asked to report your score. Your pay will be calculated based only on the score you report. If you lie about your score, you will not be caught."[4]

Aware After Effort: "At the end of the official round, the computer will tell you how many questions you answered correctly."

3.2.3. Dependent Variable: Misreporting

The dependent variable of misreporting is measured both in likelihood and degree. Misreporting likelihood is coded as 1 if the reported score differed from the actual score and 0 if the reported score matched the actual score. Dishonesty measures the extent to which participants overstated their performance, taking into account their actual scores. It is calculated as (*Reported Score - Actual Score*) / (30 – *Actual Score*) and represents the percentage of the available room for overstatement that is actually used. This dependent variable is included to improve comparability with prior research in this area (e.g., Evans et al. 2001; Maas and van Rinsum 2013).

3.2.4. Dependent Variable: Shirking

Immediately before the official round task, participants were told they would have up to 15 minutes to answer the questions but that they could click submit at any point, whether they had answered the questions or not, to proceed to the next stage of the experiment. The potential

[4] Participants were informed at the beginning of the experiment that their decisions in the experiment would be viewed by researchers but only as anonymous data that could not be tied to their actual identity.

advantages and disadvantages were pointed out to them as follows: "If you spend more time on the questions, it may help you answer more questions correctly. If you spend less time on the questions, you will be able to complete the experiment more quickly and you can leave sooner." The dependent variable of shirking is measured as the maximum amount of time a participant could have spent on the official round task minus the actual amount of time spent on the task.[5]

3.3. Generalizability

Although the experimental setting should not attempt to capture all of the variation in the naturally occurring environment (i.e., mundane realism), it *should* sufficiently recreate the pertinent elements of the settings to which the results are meant to generalize (Brunner, McKee, and Santore 2008). To that end, the following list represents the key aspects of the real world necessary to recreate for this study.

3.3.1. Motivation and opportunity

There must be an incentive tied to meeting a threshold (to make it *attractive* to lie), the participant's performance must fail to meet that threshold (to make the participant *need* to lie to get the incentive), and participants must have the opportunity to get away with the lie (to make the lie have a positive expected value). My operationalization guarantees participants can get away with the lie, which goes further than most opportunities that would exist in reality, where there would usually be some risk of getting caught. However, the risk of being caught is not necessary to specifically include in this experiment, as it should simply exert a unilateral

[5] The maximum time allowed for the task was set at 15 minutes, which was just barely sufficient to read through the questions and answer them, but it did not allow much time for thinking through the questions carefully.

downward pressure on misreporting for both bonus and penalty framing. As my research is interested in the directional differences between bonus and penalty framing, the inclusion of an additional cost of misreporting is unnecessary and would simply reduce the expected value of misreporting. As the expected value is already quite small ($5) and far less than values that cause misreporting in reality, a further reduction would be more likely to reduce generalizability rather than enhance it. Moreover, the removal of any economic cost of misreporting allows me to observe whether loss aversion sufficiently explains the effects of contract framing (see earlier discussion for hypothesis development of H2).

3.3.2. Responsibility for outcome

The task must be one over which the participant can influence the outcome. This is necessary as people are generally considered undeserving of both positive and negative outcomes for which they are not responsible (Feather, 1999). A lack of feeling any responsibility for the outcome could drive feelings of entitlement under a penalty (as participants would not feel they deserved the penalty) while creating a sense of luck under a bonus (as participants would likewise not feel they deserved the bonus). Preserving some measure of participant responsibility for the outcome biases against my results.

3.3.3. Misreporting cannot be a game

The environment must be one in which lying is not simply part of a game where it has lost its moral connotations. This is necessary in order to have confidence that misreporting decisions follow the same underlying mechanisms that would be in effect outside the experimental setting. My operationalization helps ensure this by utilizing a context highly appropriate for the participant pool: a test. Students are accustomed to taking tests and know the 'rules' involved, so a decision to misreport a test score was less likely to be perceived as a game.

Moreover, my design made the moral cost of lying salient by pointing out that they would have to "live with the fact" that they had lied. Free responses in the post experimental questionnaire indicate participants saw the decision to lie or be honest about their score as a moral dilemma. In fact, 71 of the 98 participants who failed to achieve the target score were honest in the experiment. Of the 27 participants who lied, most pointed to either the test difficulty or the monetary benefit as their reason for lying.[6] Participant responses are shown in Appendix C.

[6] When asked why they had chosen to overstate their score, one participant stated, "because it appeared you wanted me to." No analyses were significantly affected by removing that participant from analyses.

CHAPTER 4: RESULTS

4.1. Preliminary Analysis

After eliminating the only participant whose actual score was high enough to not need to misreport, I had 98 usable observations. Data acquired through the post-experimental questionnaire indicate that, on average, participants participated seriously, found the task interesting and challenging, found the target goal fair, and were motivated to perform well. Manipulation checks (not tabulated) confirm that both manipulations were successful. The manipulation of the impact of contract framing was checked with the following, where (a) is coded as 1 and (b) is coded as 0:

Please choose the answer that BEST represents your compensation structure:

(a) If I reported scoring less than the target score of 25, I would be penalized by $5

(b) If I reported scoring at least the target score of 25, I would receive a bonus of $5.

The mean score option (a) is higher in the *Penalty* conditions (.82, SD = 0.39) than in the *Bonus* conditions (.14, SD = 0.35). The manipulation of misreporting opportunity awareness was checked with the following, where (a) is coded as 1 and (b) as 0:

Please choose the answer that BEST represents your situation:

(a) I knew about the option to overstate my score BEFORE I answered the official round questions.

(b) I didn't know about the option to overstate my score until AFTER I answered the official round questions.

The mean score option (a) is higher in the *Before* conditions (.43, SD = 0.5) than in the *After* conditions (.14, SD = 0.35). In both cases the difference is significant ($p < 0.001$), confirming the manipulations were successful. Overall, 83% of participants passed the contract

framing manipulation check while 64% passed the awareness timing manipulation check. The lower pass rate for the awareness timing manipulation is likely due to the subtlety with which the information was presented. Information about the opportunity to misreport was not highlighted or otherwise made unusually salient to avoid demand effects.

The distribution of male and female participants across conditions is fairly even (not tabulated). The percentage of female participants ranges from 40% (in the *Bonus*/*Before* condition) to 56% (in the *Penalty*/*After* condition). A chi-square test indicates that the proportion of female participants does not vary significantly between conditions ($\chi 2 = 1.37$, $p = 0.504$).

Table 1 provides descriptive statistics regarding performance as measured by *Actual Score*, *Reported Score*, and *Shirking*. On average, participants answered 28.59 questions (SD = 2.67) and skipped 1.41 (SD = 2.67) questions. The value of *Actual Score* varies between 5 and 23 with a mean of 14.82 (SD = 4.35). The value of *Reported Score* varies from 5 to the maximum of 30 with a mean of 17.79 (SD = 6.50). *Shirking* is measured as the maximum amount of time a participant was able to spend on the official task minus the actual time spent on the task, where time is measured as the seconds from participants' first moment on the task page until they either clicked submit or their time ran out. Values ranged from 0 to 651.5 seconds from a possible 0 to 904.9 seconds.[7]

Tables 3 and 4 tabulate misreporting tendencies. The variable *Misreporting Likelihood* measures whether participants overstated their score or not. It is coded as a 1 if they misreported

[7] The maximum time for the task was set at 900 seconds, but the programming picked up a slight delay in loading the next screen.

and a 0 otherwise and captures the proportion of participants who misreported their score. The mean value of *Misreporting Likelihood* is 27.6%. The lowest mean is found in the *Bonus*/*Before* condition (Mean = .12, SD = .33) and the highest in the *Penalty*/*After* condition (Mean = .40, SD = .50). The variable *Dishonesty* measures the extent to which participants overstated their performance, taking into account their actual scores (see Table 4). It is calculated as (*Reported Score - Actual Score*) / (30 – *Actual Score*) and represents the percentage of the available room for overstatement that is actually used. This dependent variable improves comparability with prior research in this area (e.g., Evans et al. 2001; Maas and van Rinsum 2013). The mean value of *Dishonesty* is 19.5%. The lowest mean is found in the *Bonus*/*Before* condition (Mean = .095, SD = .27) and the highest in the *Penalty*/*After* condition (Mean = .284, SD = .38). There is considerable variation across conditions in the mean value of each of the above misreporting variables.

4.2. Tests of Hypotheses: H1

H1a predicts that misreporting will be greater in response to a penalty contract than to a bonus contract. To test H1a, I run a full factorial model with the two manipulations as fixed factors and *Misreporting Likelihood* and *Dishonesty* as the dependent variables (each tested separately).[8] The results are displayed in Tables 3 and 4 and indicate a main effect of contract framing for all three variables and no significant effect of either misreporting opportunity awareness or the interaction. The main effect of contract framing is significant in the predicted

[8] Results remain significant when actual score is included as a covariate; actual score is not a significant predictor of any of the three misreporting variables.

direction, with a one-tailed p-value of <.03 for all three dependent variables, providing strong support for H1a.

In addition, because prior research has often found a gender effect on misreporting (e.g., Maas and van Rinsum 2013; Croson and Gneezy 2009), I regressed each misreporting variable on gender as well. I do *not* find evidence that women misreport less than men (p-value > .67 for each misreporting variable). I also test for possible interaction effects of gender and the independent variables, running an ANCOVA with gender as a third factor for all three misreporting dependent variables. The results (not tabulated) indicate that neither the three-way interactions, nor any of the two-way interactions, are significant, while the main effect of contract framing remains significant for each misreporting variable. This finding indicates that both women and men are similarly affected by contract framing when deciding whether to misreport their performance.

H1b predicts that the greater misreporting from a penalty contract will be accompanied by a greater sense of entitlement to the incentive funds. The theoretical reasoning underpinning H1b maintains that a penalty frames pre-penalized funds as belonging to the employee, thus creating a sense of entitlement to those funds regardless of whether the employee meets the target goal. This greater level of entitlement, in turn, leads to a greater level of misreporting.

To test H1b, I conduct additional analyses to verify the mediating mechanism underlying the contract framing effect documented above. I use the following two statements in the post-

experimental questionnaire to capture perceptions of entitlement:[9]

1. I deserved to receive the full $15 in this experiment.

2. I feel entitled to the full $15 in this experiment.

Participants' responses to these two statements were elicited on a 6-point Likert scale with "1" labeled "strongly disagree" and "6" labeled "strongly agree." As shown in Table 6, Panel B, these two items (item 5 and item 6 on the post-experimental questionnaire) load on the same factor in the factor analysis. Table 7 summarizes the participants' average responses to these statements by condition. The Cronbach's Alpha for the two statements is .8385, indicating good internal consistency of the two statements. Accordingly, I base the analyses in this section on the average of the two items.

To formally test the mediating effect of entitlement, the following four conditions must be established: (1) misreporting is significantly greater in response to a penalty contract than to a bonus contract, (2) entitlement is significantly greater in response to a penalty contract than to a bonus contract, (3) entitlement significantly increases misreporting when controlling for the effects of the manipulated variables, and (4) the effect of contract framing on misreporting is reduced to zero for full mediation or partially reduced for partial mediation (MacKinnon et al. 2002; Baron and Kenny 1986).[10]

The first condition establishes that there is an effect that may be mediated. This effect is

---

[9] The two questions were adapted from the Psychological Entitlement Scale (PES). While the PES captures entitlement related to one's personality rather than to external circumstances, it relies primarily on two words: "deserve" and "entitlement." I modified the form of the questions to attempt to capture the relevant aspects of entitlement for this study.

[10] See also David A. Kenny's mediation website for a helpful discussion (http://davidakenny.net/cm/mediate.htm).

established in the test of H1a, which shows that misreporting will be greater in response to a penalty contract than to a bonus contract (see Tables 3 and 4). The second condition establishes that the manipulation of interest significantly affects entitlement in the predicted direction. To test this, I run a full factorial model with the two manipulations as fixed factors and entitlement as the dependent variable. The results are displayed in Table 8, Panel A and indicate a main effect of contract framing on entitlement in the predicted direction, with a one-tailed p-value of .0218. This satisfies the second condition.

The third and fourth conditions are tested in a single model. I run a full factorial model with the two manipulations as fixed factors, *Entitlement* as a covariate, and *Misreporting Likelihood* and *Dishonesty* as the dependent variables (with each DV again tested separately). The results are displayed in Table 8, Panels B and C and show that entitlement significantly increases misreporting when controlling for the effects of the manipulated variables. This establishes condition 3. The coefficient estimates for contract framing show a negative relationship between the Bonus condition and misreporting; the coefficients decreased in absolute value from -.0901 to -.0694 for *Misreporting Likelihood* and from -.0746 to -.0549 for *Dishonesty* after the mediator was added to the model. Notably, contract framing loses significance once *Entitlement* is added to the models. Collectively, these results provide strong support for the theoretical argument that entitlement at least partially mediates the effect of contract framing on misreporting. H1b is therefore supported.

To provide additional support for the theory that penalty framing is likely to create a sense of ownership to the incentive funds, I asked participants who did not receive the incentive if they believed their money had been stolen and participants who *had* received the incentive if they believed their money *would* have been stolen if they had not misreported (Table 6, Panel A,

Item 7). Participants agreed more often in response to penalty framing than bonus framing (p=.0910 two tailed). This indicates that penalty framing creates a greater sense of ownership to the funds being threatened by a penalty than bonus framing creates to the funds offered as a bonus. It also indicates penalty framing creates a greater sense that the principal is violating the employee's rights when denying the employee the incentive funds. Untabulated analyses reveal that *Entitlement* fully mediates the effect of contract framing on the degree to which participants feel their money was stolen or would have been stolen. Contract framing loses significance once *Entitlement* is added to the model (contract framing p-value goes from .0927 to .3927, two-tailed; *Entitlement* p-value < .0001, two-tailed). Moreover, *Money Stolen* also mediates the effect of contract framing on *Misreporting Likelihood* and *Dishonesty* (*Money Stolen* p-values < .0002, two tailed; contract framing two-tailed p-values = .15 and .11 respectively). This suggests penalty framing increases entitlement to the incentive funds, which in turn increases the degree to which people perceive the withholding of those incentive funds as a violation of their rights, which in turn increases their tendency to use dishonest means of obtaining the incentive funds. This provides strong support for the theoretical reasoning underpinning H1b.

4.3. Tests of Hypotheses: H2

H2 predicts that shirking will be lower in response to a penalty. To test H2, I run a full factorial model with the two manipulations as fixed factors and *Shirking* (total seconds possible on task - total seconds spent on task) as the dependent variable. The results are displayed in Table 5, Panel A and show no evidence of the predicted main effect of contract framing on shirking. Further analyses (not tabulated) also reveal no main effect of contract framing on *Actual Score*. Another potential measure of shirking comes from participants' self-reported effort level. In the post-experimental questionnaire, participants were asked the degree to which they

agreed with the following statement: "I tried my hardest in this experiment" (see Table 6, Panel A, Q13). Running the model with this response as the dependent variable (not tabulated) again shows no indication of an effect of contract framing (p-value > .45).

Some of the additional data gathered offer insight into the seeming lack of effect. Many participants had taken a required business ethics course prior to the experiment.[11] Running a 2x2x2 with participation in the ethics course as an IV reveals that participants who had *not* yet taken the ethics course responded to contract framing as predicted by H2 and shirked more response to a bonus contract than to a penalty contract (*Shirking* one-tailed p-value = .015 simple effect).[12] However, participants who had already taken the ethics course exerted a high level of effort regardless of contract frame (see Table 2 for descriptive statistics). In fact, there was a general main effect where those who had taken the ethics class spent more time on the task and performed better than those who had not taken the class when measured by *Shirking* (one-tailed p-value < .03, Table 5, Panel B), *Self-Reported Effort* (one-tailed p-value < .03, not tabulated), and *Actual Score* (one-tailed p-value < .01, not tabulated). In each of these measures, those who had taken the ethics course showed no sensitivity to contract frame (p-values > .80 for simple effects of contract frame).

Collectively, these additional analyses suggest penalty contracts reduce shirking as predicted by H2. The analyses also reveal a reassuring finding indicating that business ethics

---

[11] Approximately 64% of participants had taken the ethics course. These participants were distributed fairly evenly across conditions.

[12] Participants who did not take the ethics course were evenly distributed across the four treatments (7, 10, 10, 8) with 17 and 18 in Bonus and Penalty conditions respectively.

courses may have the ability to improve students' ethical behavior. It is interesting to note, however, that while the ethics course participants shirked less, their misreporting did not differ from those who had not taken the course. Further research is needed to parse out the differences between the two groups to understand why ethics training appears to have been effective in instilling a strong work ethic but not honesty.

4.4. Supplemental Analyses

To shed light on the process underlying individuals' misreporting and shirking decisions, I conduct additional analyses of the post-experimental questions collected. I then conduct mediation analyses to examine how the treatments influence these constructs and how these constructs influence participants' misreporting and shirking decisions. Table 6, panel A presents the descriptive statistics of participants' responses to the post-experimental questionnaire items by condition. Table 6, panel B presents the results of the factor analysis of the post-experimental questionnaire items. The factor analysis extracts five factors, accounting for 72.43 percent of the total variance in the data. I eliminate questions with factor loadings below 0.7 (Comrey and Lee 1992).

Items 11 and 12 load on Factor 1, *Fairness*, and reflect the fairness with which participants feel they were treated in the experiment. Items 5 and 6 load on Factor 2, *Entitlement*, and reflect how entitled participants feel to the incentive funds. Items 3 and 4 load on Factor 3, *Ethics of Own Behavior*, and reflect how honest and ethical participants perceive themselves to have been in the experiment. Item 2 loads on Factor 4, *Work Ethic*, and reflects how important participants believe it is to work hard. Items 8 and 9 load on Factor 5, *Goal Achievability*, and reflect how reasonable participants believed the target score to be. I use the average of participants' responses to the questions that load on each factor for the analyses.

The supplemental analyses show that, among the factors extracted from the factor analysis, the only construct that is influenced by the treatments and also influences misreporting is the entitlement construct. These results provide further evidence that misreporting is driven by entitlement rather than by other mechanisms. I elaborate on the findings from these supplemental analyses below.

Factor 1 (*Fairness*): consistent with prior literature, I find that participants view bonus contract framing as more fair than penalty contract framing (mean of 4.87 for Bonus versus 4.38 Penalty, $p = .06$, two-tailed). These results could indicate a reciprocity story, where participants reciprocate with either positive or negative behavior. However, results show that participants thought they were treated well and fairly in both penalty and bonus treatments, providing evidence against a negative reciprocity story, as there is no negative event perception to which they would respond by 'getting back at' the principal. A positive reciprocity story would mean those in the bonus conditions would be more likely to respond with positive behavior (e.g., apply themselves more to the task). However, bonus participants shirked more while penalty participants worked harder, which is the opposite of what would be expected for a reciprocity story. Furthermore, *Fairness* did not predict shirking, misreporting likelihood, or dishonesty when added to the 2x2 model (*Contract Framing* x *Awareness Timing*) as well as when partitioning based on ethics course participation. These results suggest that neither fairness nor reciprocity drives my results.

Factor 2 (*Entitlement*): as noted in the main results, *Entitlement* mediates the effect of contract framing on misreporting. However, one possibility is that the effect of penalty framing on *Entitlement* comes from penalty framing inducing greater effort than bonus framing; expending greater effort could cause people to feel more entitled to incentive pay even when

they failed to meet the target level of performance (Gravert 2013). Adding *Shirking* to the 2x2 model predicting entitlement reveals no effect of effort on entitlement (p = .35, two-tailed). Likewise, adding *Shirking* to the 2x2 model predicting misreporting likelihood and dishonesty again reveals no effect of effort (p = .36 and .18 respectively, two-tailed). This non-result held even when the sample was partitioned based on ethics course participation. These results suggest that effort based entitlement does not drive my results.

Factor 3 (*Ethics of Own Behavior*): I find that participants view themselves as more honest and ethical under bonus contract framing than penalty contract framing (mean of 5.12 for Bonus versus 4.49 Penalty, p = .0457, two-tailed). Given that participants lied more in response to a penalty contract, this effect could simply come from the fact that participants *were* more honest under a bonus contract. However, after controlling for differences in misreporting, the effect still stands: when people lie under a bonus, they think they are more honest and ethical than when they lie under a penalty (mean of 3.13 for Bonus versus 2.39 Penalty, p = .0480 simple effect, two-tailed). Prior research has shown people are more likely to excuse others for misconduct that occurs to avoid a penalty than to gain a bonus (Greitemeyer and Weiner 2008). If lying under a bonus is less excusable, it makes sense that people would feel a greater need to downplay the lie under a bonus than a penalty in order to justify the dishonest actions taken to gain the bonus or avoid the penalty.

This need for additional justification could also explain the lower misreporting in response to a bonus, where lying in response to a bonus is perceived as more wrong than lying in response to a penalty. Item 1 did not load on any factor but measures the extent to which participants believe overstating performance is wrong. Collapsing *Misreporting Opportunity Awareness* across conditions and analyzing a 2x2 of *Contract Framing* x *Misreporting*

Likelihood shows participants who lied were more likely to agree overstating is wrong in response to a penalty (mean of 4.56 for Penalty versus 3.67 Bonus among those who lied, p = .04 simple effect, two-tailed).[13] However, participants who were honest saw overstating as equally wrong across bonus and penalty conditions (mean of 5.06 for Penalty versus 5.03 Bonus, p = .88 simple effect, two-tailed). This is consistent with a self-justification story. However, while adding Item 1 to the main 2x2 model shows that participants' belief about overstating wrongness is a significant covariate, it does not mediate the effect of *Contract Framing*. Instead, *Contract Framing* becomes even more significant (p-value goes from .0287 to .0153, two tailed, for *Dishonesty*) and the effect size increases (-.0908 to -.0973). Thus, the need for additional justification does not drive my results.

Factor 4 (*Work Ethic*) is comprised solely of Item 2. Using Factor 4 in the analysis of misreporting reveals that *Work Ethic* does not influence misreporting likelihood or dishonesty after controlling for my treatments. Thus, Factor 4 does not drive my results for H1.

Factor 5 (*Goal Achievability*) reflects the achievability of the target level of performance. My treatments do not affect *Goal Achievability* nor does *Goal Achievability* predict misreporting likelihood or dishonesty after controlling for the effects of my treatments. Adding *Goal Achievability* to the 2x2x2 ethics participant model predicting shirking reveals that it is a significant covariate. However, there is no evidence that achievability mediates the effect of framing on shirking, as framing becomes even more significant when achievability is added to

[13] Item 1 did not vary according to *Misreporting Opportunity Awareness* so I collapsed across conditions for simplicity of analysis. Results are quantitatively and qualitatively comparable running a full 2x2x2.

the model. Therefore achievability does not drive results for either H1 or H2.

Overall, these additional analyses help rule out potential alternative explanations for the mechanisms behind the effects of *Contract Framing* on misconduct.

CHAPTER 5: CONCLUSION

Many organizations' control systems contain performance measures that can be manipulated (Maas and van Rinsum 2013). Misreporting represents an ongoing area of concern for organizations and an important topic in management accounting research. The results of this study suggest that the framing of the incentive contract influences misconduct in different ways depending on the type of misconduct considered. First, misreporting is higher in response to a penalty contract. Next, the higher misreporting in response to a penalty occurs due to a greater sense of entitlement to the incentive amount. Finally, people *shirk less* in response to a penalty than to a bonus, regardless of whether or not they know misreporting is an option. This research contributes to the literature on honesty in performance reporting (e.g., Maas and van Rinsum 2013; Rankin et al. 2008; Hannan, Rankin, Towry, et al. 2006; Evans et al. 2001) by examining the effects of contract framing on honesty. It also contributes to the literature on the effects of contract framing (Christ et al. 2012; Hossain and List 2012; Hannan et al. 2005; Luft 1994) by exploring the link between effort and misreporting and identifying underlying mechanisms through which contract framing influences misconduct.

Collectively the results indicate that while penalty contracts may reduce shirking relative to bonus contracts, penalty contracts also promote greater dishonesty when effort is not successful. Thus penalty contracts may be counterproductive when effort is not a strong predictor of performance or when the performance target is set at a very challenging level. My results suggest that companies should be aware of the potential undesirable consequences of using bonus or penalty framing and should design complementary control elements accordingly. For example, when companies use bonuses, their controls should focus on increasing effort. When companies use penalties, their controls should focus on reducing dishonesty. Insights from this

study can help managers and auditors identify and manage the risks created by incentive contracts by providing a better roadmap to use when looking for potential weaknesses. Moreover, this study sheds light on some potential pitfalls of the modified clawback schemes many companies are implementing and may provide guidance to regulators as they consider how best to word their requirements for Section 954 of Dodd-Frank. Ultimately, misreporting is not simply a product of increased yet unfruitful effort but comes from a sense of entitlement created by the contract frame itself. To the extent that a sense of entitlement can be created by other factors as well, the results of this study may have implications for employee behavior beyond what is shown in this research.

A limitation of this study is that it consists of a single shot experiment. In a repeated trial experiment, the effects of contract framing could change, depending on whether the target level of performance is repeatedly missed. Over time, the increased effort from a penalty may evaporate in an environment where the target level of performance is repeatedly missed and a penalty (or not receiving a bonus) is the rule and not the exception. Moreover, lying may become more and more acceptable, undermining desirable ethical norms in the organization. Future research is needed to examine the cumulative effects of using bonus versus penalty framing to motivate performance.

REFERENCES

Baron, R. M., and D. A. Kenny. 1986. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology* 51 (6): 1173–1182.

Bowen, R. M., S. Rajgopal, and M. Venkatachalam. 2008. Accounting Discretion, Corporate Governance, and Firm Performance. *Contemporary Accounting Research* 25: 351–405.

Bruner, D., M. McKee, and R. Santore. 2008. Hand in the Cookie Jar: An Experimental Investigation of Equity-Based Compensation and Managerial Fraud. *Southern Economic Journal* 75 (1): 261–278.

Bubshait, Abdulaziz A. 2003. Incentive/disincentive contracts and its effects on industrial projects. *International Journal of Project Management* 21.1: 63-70.

Burgstahler, D., and I. Dichev. 1997. Earnings Management to Avoid Earnings Decreases and Losses. *Journal of Accounting and Economics* 24: 99–126.

Christ, M. H., K. L. Sedatole, and K. L. Towry. 2012. Sticks and Carrots: The Effect of Contract Frame on Effort in Incomplete Contracts. *The Accounting Review* 87 (6): 1913–1938.

Comrey, L.A., and Lee, H.B. 1992. A first course in factor analysis (2nd ed.). Hillside, NJ: Lawrence Erlbaum Associates.

Croson, R., and U. Gneezy. 2009. Gender differences in preferences. *Journal of Economic Literature* 47 (2): 448–474.

Dehaan, E., F. Hodge, and T. Shevlin. 2013. Does voluntary adoption of a clawback provision improve financial reporting quality? *Contemporary Accounting Research* 30 (3): 1027-1062.

Equilar. 2013. *Clawback Policy Report*. Equilar, Inc.

Evans, J. H., III, R. L. Hannan, R. Krishnan, and D. V. Moser. 2001. Honesty in Managerial

Reporting. *The Accounting Review* 76 (4): 537–559.

Feather, N. T. 1999. *Values, achievement, and justice: Studies in the psychology of deservingness*. Dordrecht, The Netherlands: Kluwer.

Fehr, E., and K. M. Schmidt. 2007. Adding a Stick to the Carrot? The Interaction of Bonuses and Fines. *American Economic Review* 97 (2): 177–181.

Fryer, R. G., Jr., S. D. Levitt, J. List, and S. Sadoff. 2012. Enhancing the Efficacy of Teacher Incentives Through Loss Aversion: A Field Experiment. *National Bureau of Economic Research*.

Gächter, S., and A. Riedl. 2005. Moral Property Rights in Bargaining with Infeasible Claims. *Management Science* 51 (2): 249–263.

Graham, M. E., and T. M. Welbourne. 1999. Gainsharing and women's and men's relative pay satisfaction. *Journal of Organization Behavior* 20, 1027-1042.

Gravert, C. 2013. How luck and performance affect stealing. *Journal of Economic Behavior and Organization* 93: 301–304.

Greenberg, J. 1993. Stealing in the Name of Justice: Informational and Interpersonal Moderators of Theft Reactions to Underpayment Inequity. *Organizational Behavior and Human Decision Processes* 54 (1): 81–103.

Greenberg, J. 1990. Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. *Journal of Applied Psychology* 75 (5): 561.

Greitemeyer, T., and B. Weiner. 2008. Asymmetrical Effects of Reward and Punishment on Attributions of Morality. *The Journal of Social Psychology* 148 (4): 407–420.

Guidry, F., A. J Leone, and S. Rock. 1999. Earnings-based bonus plans and earnings management by business-unit managers. *Journal of Accounting and Economics* 26 (1): 113–

142.

Hannan, R. L., F. W. Rankin, and K. L. Towry. 2006. The Effect of Information Systems on Honesty in Managerial Reporting: A Behavioral Perspective. *Contemporary Accounting Research* 23 (4): 885–918.

Hannan, R. L., V. B. Hoffman, and D. V. Moser. 2005. Bonus versus Penalty: Does Contract Frame Affect Employee Effort? *Experimental Business Research*: 1–19.

Hannan, R., F. Rankin, K. Towry, S. Salterio, and A. Webb. 2006. The Effect of Information Systems on Honesty in Managerial Reporting: A Behavioral Perspective. *Contemporary Accounting Research* 23 (4): 885–932.

Harrison, P., and A. M. Harrell. 1994. An incentive to shirk, privately held information, and managers' project evaluation decisions. *Accounting, Organizations and Society*.

Harvey, P., and M. J. Martinko. 2009. An empirical examination of the role of attributions in psychological entitlement and its outcomes. *Journal of Organizational Behavior* 30, 459-476.

Hobson, J., W. Mayew, and M. Venkatachalam. 2012. Analyzing Speech to Detect Financial Misreporting. *Journal of Accounting Research* 50: 349-392.

Hossain, T., and J. A. List. 2012. The Behavioralist Visits the Factory: Increasing Productivity Using Simple Framing Manipulations. *Management Science* 58 (12): 2151–2167.

Indjejikian, R., and M. Matejka. 2009. CFO Fiduciary Responsibilities and Annual Bonus Incentives. *Journal of Accounting Research* 47 (4): 1061–1093.

Kahneman, D., and A. Tversky. 1984. Choices, Values and Frames. *American Psychologist* 39 (4): 341–350.

Kahneman, D., and A. Tversky. 1979. Prospect theory: An analysis of decision under risk.

Econometrica 47 (2): 263–291.

King, W. C., and E. W. Miles. 1994. The measure of equity sensitivity. *Journal of Occupational and Organizational Psychology* 67, 133–142.

King, W. C., E. W. Miles, and D. D. Day. 1993. A test and refinement of the equity sensitivity construct. *Journal of Organizational Behavior* 14, 301−317.

Lerner, M. J. 1987. Integrating societal and psychological rules of entitlement: The basic task of each social actor and fundamental problem for the social sciences. *Social Justice Research, I,* 107- 125.

Luft, J. 1994. Bonus and Penalty Incentives: Contract Choice by Employees. *Journal of Accounting and Economics*: 1–26.

Lurie, J., and N. Burkill. 2013. "Bribery and Corruption in the Construction Industry: Challenges for International Construction and Engineering Projects," Construction Law Journal.

Maas, V. S., and M. Matejka. 2009. Balancing the dual responsibilities of business unit controllers: Field and survey evidence. *The Accounting Review* 84 (4): 1233–1253.

Maas, V. S., and M. van Rinsum. 2013. How Control System Design Influences Performance Misreporting. *Journal of Accounting Research* 51 (5): 1159–1186.

MacKinnon, D. P., C. M. Lockwood, J. M. Hoffman, S. G. West, and V. Sheets. 2002. A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods* 7 (1): 83–104.

Major, B. 1994. From social inequality to personal entitlement: The role of social comparisons, legitimacy appraisals, and group membership. *Advances in Experimental Social Psychology*.

Mars, G. 1974. "Dock pilferage: A case study in occupational theft." *Deviance and social control* 209: 228.

Mars, G. 1973. Chance, punters, and the fiddle: Institutionalized pilferage in a hotel dining room. *The sociology of the workplace*, 200-210.

Mazar, N., O. Amir, and D. Ariely. 2008. The Dishonesty of Honest People: A Theory of Self-Concept Maintenance. *Journal of Marketing Research* 45 (6): 633–644.

Murphy, M. 2005. Why CEOs Get Fired. *Leadership Excellence* 22 (9): 14.

PwC. 2014. *Executive Compensation: Clawbacks — 2013 Proxy Disclosure Study*. PwC.

PwC. 2015. *Executive Compensation: Clawbacks — 2014 Proxy Disclosure Study*. PwC.

Rankin, F. W., S. T. Schwartz, and R. A. Young. 2008. The Effect of Honesty and Superior Authority on Budget Proposals. *The Accounting Review* 83 (4): 1083–1099.

Rutledge, R., and K. Karim. 1999. The influence of self-interest and ethical considerations on managers' evaluation judgments. *Accounting, Organizations and Society*.

Schlicht, E. 2008. Consistency in organization. *Journal of Institutional and Theoretical Economics* 164: 612–623.

Shapiro, C., and J. E. Stiglitz. 1984. Equilibrium Unemployment as a Worker Discipline Device. *The American Economic Review* 74 (3): 433–444.

Singer, E. 1981. Reference groups and social evaluations. In M. Rosenberg & R. H. lbrner (Eds.), *Social psychology: Sociological perspectives* (pp. 66-93). New York: Basic Books.

Thaler, Richard. 1980. "Toward a Positive Theory of Consumer Choice." *Journal of Economic Behavior and Organization* 1: 39-60.

Zahra, S., R. Priem, and A. Rasheed. 2007. Understanding the Causes and Effects of Top Management Fraud. *Organizational Dynamics*: 1–18.

APPENDIX A: TABLES

TABLE 1
Descriptive Statistics of Performance

Mean (Standard Deviation) Actual Score [a]

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	14.84 (4.51) n=25	14.92 (4.77) n=24
Penalty for *not* Achieving Target	14.46 (3.73) n=24	15.04 (4.57) n=25

Mean (Standard Deviation) Reported Score [b]

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	16.52 (5.87) n=25	16.92 (6.44) n=24
Penalty for *not* Achieving Target	18.33 (6.84) n=24	19.36 (6.79) n=25

Mean (Standard Deviation) Shirking [c]

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	78.84 (178.3) n=25	49.01 (76.1) n=24
Penalty for *not* Achieving Target	51.46 (81.4) n=24	50.10 (88.3) n=25

[a] *Actual score* is the score earned in the official task; scores ranged from 5 to 23 out of a possible 0 to 30.
[b] *Reported score* is the score earned in the official task; scores ranged from 5 to 30 out of a possible 0 to 30.
[c] *Shirking* is the maximum amount of time a participant was able to spend on the official task minus the actual time spent on the task, where time is measured as the seconds from participants' first moment on the task page until they either clicked submit or their time ran out. *Shirking* values ranged from 0 to 651.5 seconds.

TABLE 2
Descriptive Statistics of Shirking by Ethics Course Participation

Ethics Course Participants

Mean (Standard Deviation) Shirking [a]

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	33.31 (58.77) n=15	28.51 (42.89) n=17
Penalty for *not* Achieving Target	61.29 (85.18) n=16	38.24 (65.10) n=15

Ethics Course Non-Participants

Mean (Standard Deviation) Shirking [a]

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	147.13 (266.06) n=10	98.79 (114.92) n=7
Penalty for *not* Achieving Target	31.82 (74.43) n=8	67.88 (116.71) n=10

[a] *Shirking* is the maximum amount of time a participant was able to spend on the official task minus the actual time spent on the task, where time is measured as the seconds from participants' first moment on the task page until they either clicked submit or their time ran out. *Shirking* values ranged from 0 to 651.5 seconds.

TABLE 3
The Effects of Contract Framing and Misreporting Opportunity Awareness on Misreporting Likelihood

Panel A: Frequency (Percentage) of Misreporting Likelihood [a]

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	3 (12%) (n = 25)	6 (25%) (n = 24)
Penalty for *not* Achieving Target	8 (33%) (n = 24)	10 (40%) (n = 25)

Panel B: Analysis of Variance[†]

Factor	*Df*	*Mean Square*	*F*	*p-value* [b]
CONTRACT FRAMING [c]	1	.8082	4.11	**0.0454**
MISREPORTING OPPORTUNITY AWARENESS [d]	1	.2368	1.21	0.2751
CONTRACT FRAMING x MISREPORTING OPPORTUNITY AWARENESS	1	.0246	0.13	0.7245
Error	97			

[a] *Misreporting Likelihood* is the participant's decision to misreport his/her score, which is coded as 1 if a participant reports a score higher than the score they actually achieved, and 0 otherwise. *Percentage of Misreporting Likelihood* is the number of participants who misreported divided by the total number of participants in each treatment.

[b] All p-values in this Table are two-tailed.

[c] *Contract Framing* was manipulated between subjects at two levels. Participants were either promised a bonus for scoring greater than or equal to 25 or threatened with a penalty for scoring less than 25.

[d] *Misreporting Opportunity Awareness* was manipulated between subjects at two levels. All participants were told, "At the end of the official round, the computer will tell you how many questions you answered correctly." The *Aware Before Effort* participants were further told, "You will then be asked to report your score. Your pay will be calculated based only on the score you report. If you lie about your score, you will not be caught." The *Aware After Effort* participants were told this as well but only after they had completed the official round task.

[†] An ANOVA is used here for ease of interpretation. When the more appropriate logistic regression is used to test the binary dependent variable, the significance of *Contract Framing* results in an Effect Likelihood Ratio two-tailed p-value of .0354.

TABLE 4
The Effects of Contract Framing and Misreporting Opportunity Awareness on Dishonesty

Panel A: Mean (Standard Deviation) Dishonesty [a]

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	.095 (.27) (n = 25)	.145 (.28) (n = 24)
Penalty for *not* Achieving Target	.254 (.39) (n = 24)	.284 (.38) (n = 25)

Panel B: Analysis of Variance

Factor	*Df*	*Mean Square*	*F*	*p-value* [b]
CONTRACT FRAMING [c]	1	.5450	4.93	**0.0287**
MISREPORTING OPPORTUNITY AWARENESS [d]	1	.0397	0.36	0.5503
CONTRACT FRAMING x MISREPORTING OPPORTUNITY AWARENESS	1	.0025	0.02	0.8818
Error	97			

[a] *Dishonesty* is (*Reported Score - Actual Score*) / (30 – *Actual Score*).

[b] All p-values in this Table are two-tailed.

[c] *Contract Framing* was manipulated between subjects at two levels. Participants were either promised a bonus for scoring greater than or equal to 25 or threatened with a penalty for scoring less than 25.

[d] *Misreporting Opportunity Awareness* was manipulated between subjects at two levels. All participants were told, "At the end of the official round, the computer will tell you how many questions you answered correctly." The *Aware Before Effort* participants were further told, "You will then be asked to report your score. Your pay will be calculated based only on the score you report. If you lie about your score, you will not be caught." The *Aware After Effort* participants were told this as well but only after they had completed the official round task.

TABLE 5
The Effects of Contract Framing and Misreporting Opportunity Awareness on Shirking [a]

Panel A: Analysis of Variance

Factor	*Df*	*Mean Square*	*F*	*p-value* [b]
CONTRACT FRAMING [c]	1	4232.196	0.32	.5718
MISREPORTING OPPORTUNITY AWARENESS [d]	1	5958.996	0.45	.5024
FRAMING x AWARENESS	1	4961.416	0.38	.5405
Error	97			

Panel B: Analysis of Variance

Factor	*Df*	*Mean Square*	*F*	*p-value* [b]
CONTRACT FRAMING	1	16302.059	1.31	0.2562
MISREPORTING OPPORTUNITY AWARENESS	1	2228.229	0.18	0.6737
FRAMING*AWARENESS	1	6058.828	0.49	0.4878
ETHICS COURSE (1=YES)	1	46990.823	3.76	**0.0555**
FRAMING*ETHICS COURSE [†]	1	46826.959	3.75	**0.0559**
AWARENESS*ETHICS COURSE	1	335.581	0.03	0.8701
FRAMING*AWARENESS*ETHICS COURSE	1	14580.667	1.17	0.2827
Error	97			

[a] *Shirking* is the maximum amount of time a participant was able to spend on the official task minus the actual time spent on the task, where time is measured as the seconds from participants' first moment on the task page until they either clicked submit or their time ran out. *Shirking* values ranged from 0 to 651.5 seconds.

[b] All p-values in this Table are two-tailed.

[c] *Contract Framing* was manipulated between subjects at two levels. Participants were either promised a bonus for scoring greater than or equal to 25 or threatened with a penalty for scoring less than 25.

[d] *Misreporting Opportunity Awareness* was manipulated between subjects at two levels. All participants were told, "At the end of the official round, the computer will tell you how many questions you answered correctly." The *Aware Before Effort* participants were further told, "You will then be asked to report your score. Your pay will be calculated based only on the score you report. If you lie about your score, you will not be caught." The *Aware After Effort* participants were told this as well but only after they had completed the official round task.

[†] Simple effects reveal a significant effect whereby participants who had not taken the ethics course exerted less effort in response to a bonus than to a penalty (two-tailed p-value = .0107).

TABLE 6
Descriptive Statistics and Factor Analysis of Post-Experimental Questionnaire Responses

Panel A: Means of Post-Experimental Questionnaire Responses

		Bonus			Penalty		
Questionnaire Items		*Aware Before Effort*		*Aware After Effort*	*Aware Before Effort*		*Aware After Effort*
1.	Overstating one's performance is wrong.	4.80		4.75	4.88		4.88
2.	Not working as hard as you can is wrong.	4.44		4.54	5.00		4.56
3.	My choices in this experiment were ethical.**	5.08		5.08	> 4.58		4.25
4.	I was honest in this experiment.*	5.08		5.25	> 4.71		4.32
5.	I deserved to receive the full $15 in this experiment.**	3.16		2.88	< 3.96		3.56
6.	I feel entitled to the full $15 in this experiment.	2.72		2.92	3.42		3.20
7.	My money was stolen or would have been stolen if I hadn't misreported my score.** †	1.92	>	1.29	< 2.29	>	1.68
8.	Prior to answering the questions in the Official Round, I believed I could achieve the target score of 25.	3.20		3.33	3.21		3.36
9.	The target score for the Official Round was fair.	3.80		3.54	3.21		3.52
10.	The way I expect to be paid is fair.	4.44		4.54	4.46		4.32
11.	I was treated fairly in this experiment.*	4.88		4.75	> 4.42		4.28
12.	I was treated well in this experiment.*	4.88		4.96	> 4.38		4.48
13.	I tried my hardest in this experiment.	4.52		4.54	5.00		4.56

** two-tailed p-value < .05 for full factorial ANOVA of *Contract Framing* x *Misreporting Opportunity Awareness*

* two-tailed p-value < .10 for full factorial ANOVA of *Contract Framing* x *Misreporting Opportunity Awareness*

Table 6, Panel A (Cont.)

† This question was asked in two parts to get at the extent to which participants believed they had a right to the incentive funds; responses to "My money was stolen" were taken from those who did *not* misreport (and therefore did not get the incentive funds) while responses to "My money would have been stolen if I hadn't misreported my score" were taken from those who *did* misreport. The extent to which they agreed with each statement was aggregated into one question for consistency in analysis.

Table 6 (Cont.)
Panel B: Factor Analysis

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1	0.0425000331	-0.20823178	0.391529121	*0.6038942209*	-0.027947565
2	0.1021902808	-0.163809471	0.0056801224	**0.8028132103**	0.0961292284
3	0.0890760403	-0.162358075	**0.9134436261**	0.0423449861	-0.032718088
4	0.1377081799	-0.099359167	**0.9250843843**	-0.000927308	0.0451482492
5	-0.051576014	**0.9000546786**	0.0503730063	-0.036090483	0.0864766095
6	-0.000030338	**0.8852444958**	-0.15935552	-0.102487263	-0.034287928
7	-0.117858641	*0.6096866068*	-0.332311332	-0.016266839	-0.082856281
8	-0.060036115	0.1186437298	-0.139467003	0.1404821542	**0.7438490911**
9	0.2576654434	-0.149856204	0.2056682073	-0.055975895	**0.7196663002**
10	*0.6336895495*	-0.055126221	-0.013965489	0.2940365276	*0.4484848269*
11	**0.8910585708**	-0.106557341	0.1465164805	0.2112970507	0.0988008412
12	**0.9448416901**	-0.024062798	0.1313569639	0.039135231	-0.040863927
13	0.202239709	0.1485357862	-0.113261333	*0.6517708685*	0.0657886382
Variance Explained	17.35%	16.50%	16.12%	12.33%	10.13%
Cumulative Percent	17.35%	33.85%	49.97%	62.30%	72.43%
Factor Labels	*Fairness*	*Entitlement*	*Ethics of Own Behavior*	*Work Ethic*	*Goal Achievability*

** two-tailed p-value < .05 for full factorial ANOVA of Contract Framing x Misreporting Opportunity Awareness

* two-tailed p-value < .10 for full factorial ANOVA of Contract Framing x Misreporting Opportunity Awareness

Panel A of this Table presents the descriptive statistics of participants' responses to the post-experimental questionnaire by condition. Each statement was elicited using a 6-point Likert scale with "1" labeled "Strongly Disagree" and "6" labeled "Strongly Agree."

Panel B of this Table presents a factor analysis on participants' responses to these statements from a principal component analysis using Varimax rotation.

Refer to Panel A of this Table for the items.

TABLE 7
Descriptive Statistics of Questionnaire Items Capturing the Entitlement Measure

(1) I deserved to receive the full $15 in this experiment.

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	3.16 (1.62) n=25	2.88 (1.60) n=24
Penalty for *not* Achieving Target	3.96 (1.60) n=24	3.56 (1.73) n=25

(2) I feel entitled to the full $15 in this experiment.

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	2.72 (1.62) n=25	2.92 (1.56) n=24
Penalty for *not* Achieving Target	3.42 (1.64) n=24	3.2 (1.47) n=25

(3) Entitlement (mean of above measures: [measure 1 + measure 2] / 2)

	Aware Before Effort	*Aware After Effort*
Bonus for Achieving Target	2.94 (1.53) n=25	2.9 (1.51) n=24
Penalty for *not* Achieving Target	3.67 (1.51) n=24	3.38 (1.40) n=25

This Table summarizes the two statements used to capture perceptions of entitlement to the incentive amount and the descriptive statistics of participant responses to the two statements by condition. Each statement was elicited using an 6-point Likert scale with “1” labeled “Strongly Disagree” and “6” labeled “Strongly Agree."

TABLE 8
Entitlement [a] as a Mediator of Misreporting

Panel A: Analysis of Variance for Effects of Contract Framing and Misreporting Opportunity Awareness on Entitlement [a]

Factor	*Df*	*Mean Square*	*F*	*p-value [b]*
CONTRACT FRAMING [c]	1	9.2878	4.18	**.0436**
MISREPORTING OPPORTUNITY AWARENESS [d]	1	.7572	.34	.5606
FRAMING x AWARENESS	1	.4246	.19	.6629
Error	97			

Panel B: Analysis of Variance for Effects of Contract Framing, Misreporting Opportunity Awareness, & Entitlement on Misreporting Likelihood

Factor	*Df*	*Mean Square*	*F*	*p-value [b]*
ENTITLEMENT [a]	1	1.0081	5.37	**.0227**
CONTRACT FRAMING [c]	1	.4521	2.41	.1242
MISREPORTING OPPORTUNITY AWARENESS [d]	1	.2982	1.59	.2108
FRAMING x AWARENESS	1	.0124	.07	.7979
Error	97			

Panel C: Analysis of Variance for Effects of Contract Framing, Misreporting Opportunity Awareness, & Entitlement on Dishonesty

Factor	*Df*	*Mean Square*	*F*	*p-value [b]*
ENTITLEMENT [a]	1	.8542	8.34	**.0048**
CONTRACT FRAMING [c]	1	.2825	2.76	.1001
MISREPORTING OPPORTUNITY AWARENESS [d]	1	.0647	.63	.4287
FRAMING x AWARENESS	1	.0001	.00	.9805
Error	97			

[a] *Entitlement* is the mean of the two entitlement measures, as shown in Table 7. The mediation analysis follows the steps laid out in Baron and Kenny (1986). The coefficient estimates for *Contract Framing* (showing a negative relationship between the Bonus condition and the dependent variables) decreased in absolute value from -.0901 to -.0694 for *Misreporting Likelihood* and from -.0746 to -.0549 for *Dishonesty* after the mediator was added to the model.

Table 8 (Cont.)

[b] All p-values in this Table are two-tailed.

[c] *Contract Framing* was manipulated between subjects at two levels. Participants were either promised a bonus for scoring greater than or equal to 25 or threatened with a penalty for scoring less than 25.

[d] *Misreporting Opportunity Awareness* was manipulated between subjects at two levels. All participants were told, "At the end of the official round, the computer will tell you how many questions you answered correctly." The *Aware Before Effort* participants were further told, "You will then be asked to report your score. Your pay will be calculated based only on the score you report. If you lie about your score, you will not be caught." The *Aware After Effort* participants were told this as well but only after they had completed the official round task.

APPENDIX B: FIGURES

Figure 1

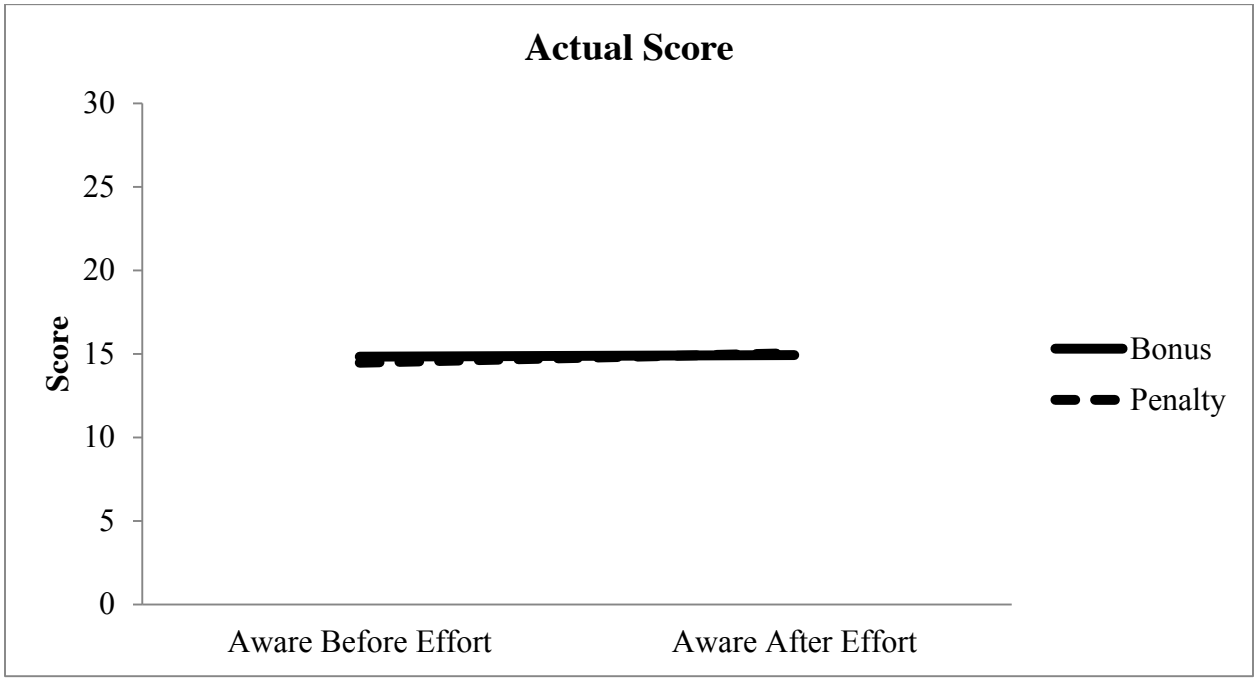


Figure 2

Figure 3

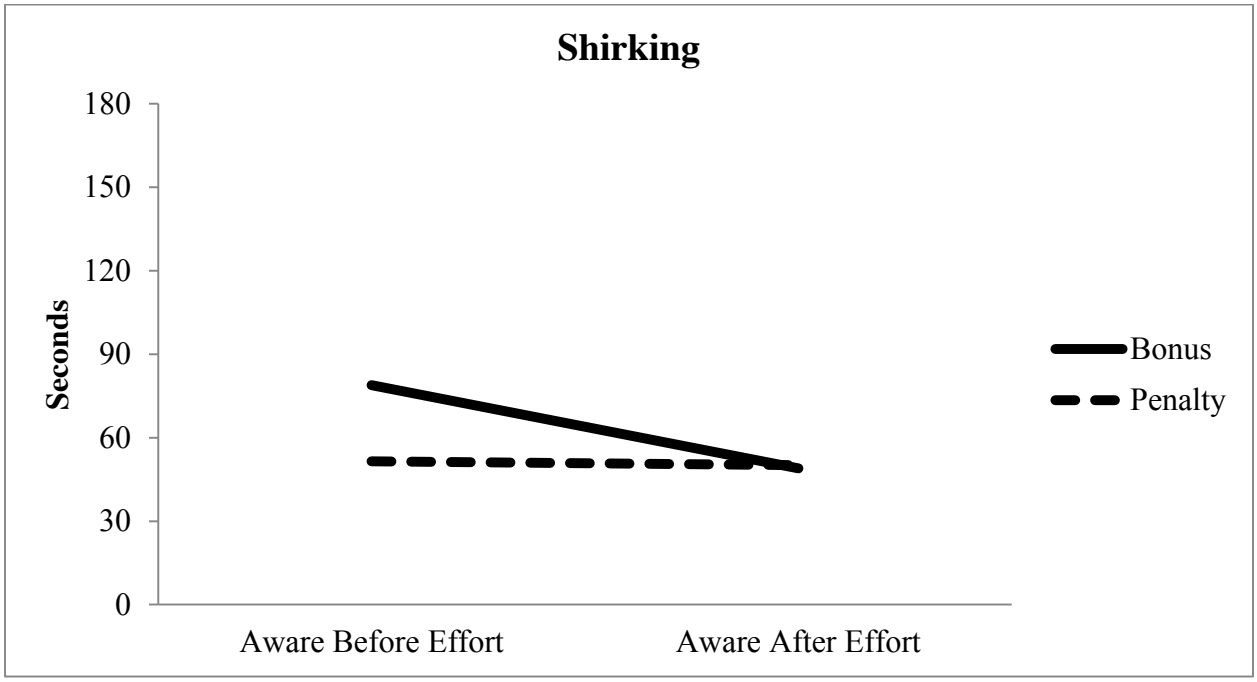


Figure 4

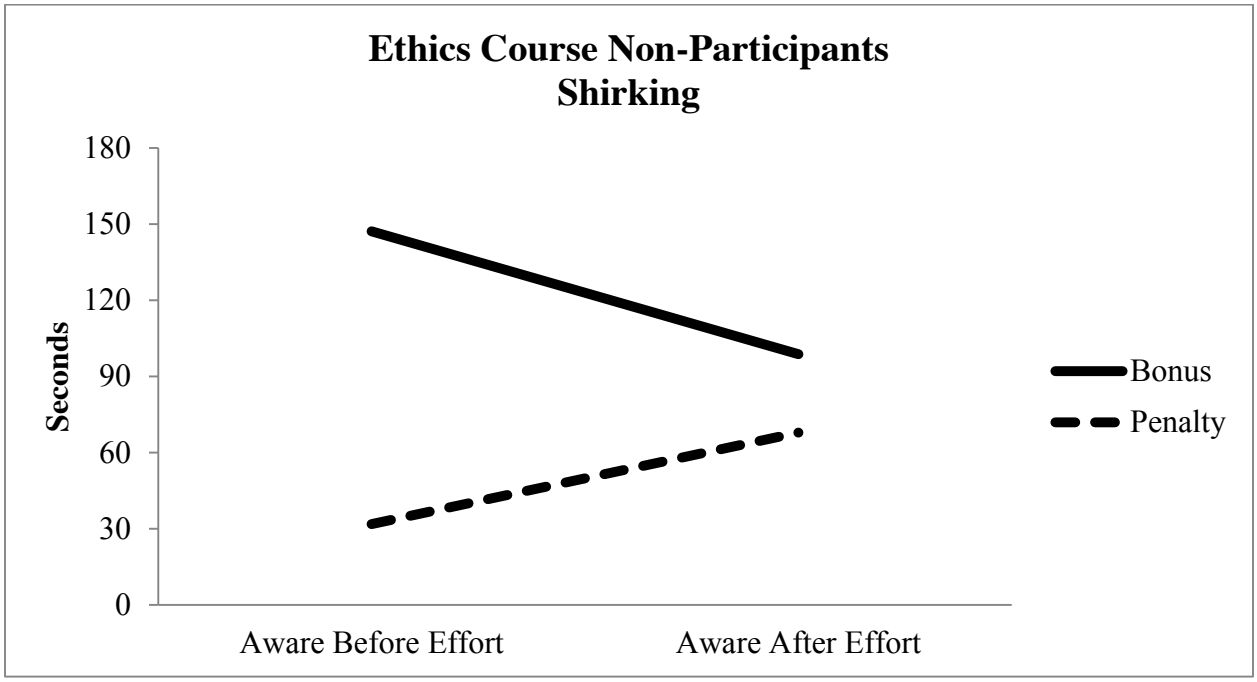


Figure 5

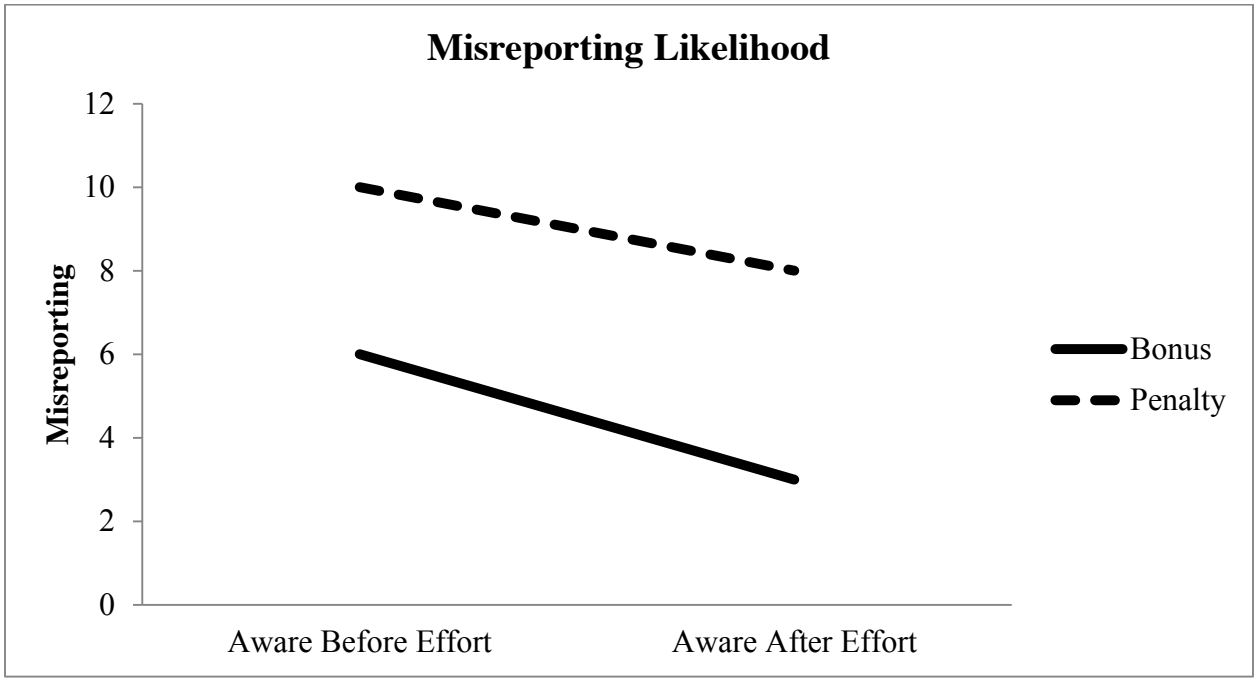
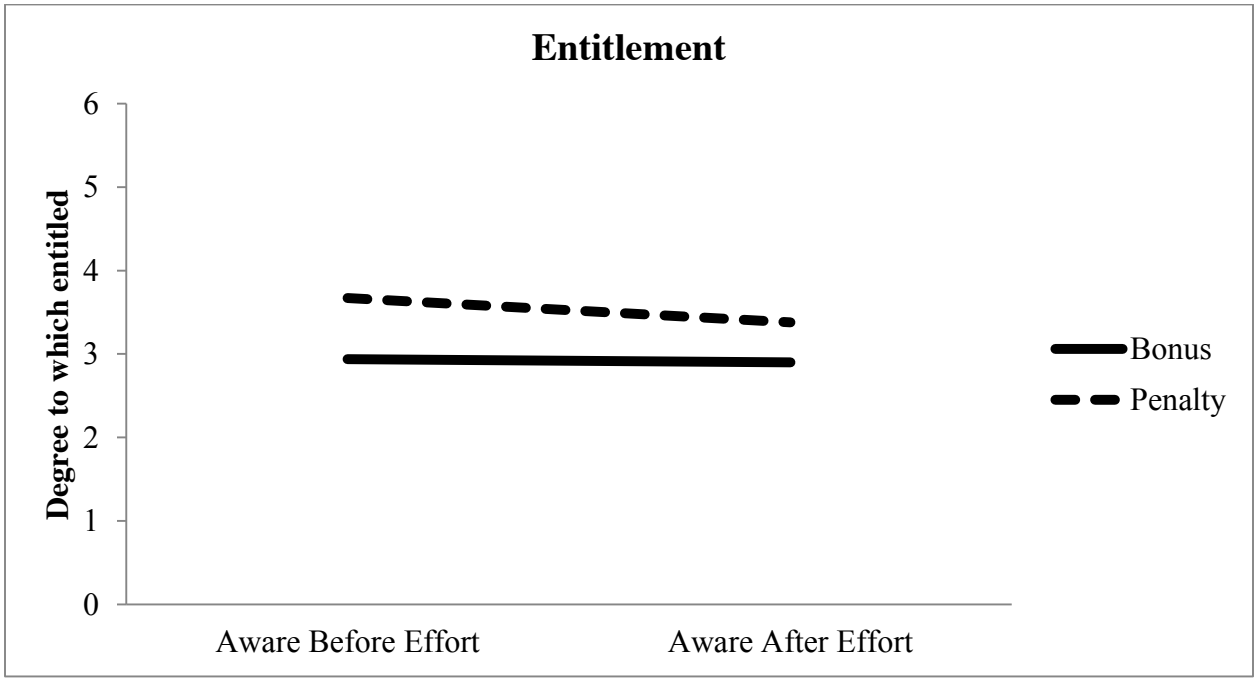


Figure 6



APPENDIX C: PARTICIPANT RESPONSES

This appendix lists direct quotations from participants in response to the request that they "Please briefly describe why you chose to overstate or not overstate your score." This information was solicited at the very beginning of the post-experimental questionnaire.

Participants who misreported gave the following reasons for having misreported:

Bonus - Aware After

1. I only claim what I earned.
2. By overstating my score I will receive extra bonus.
3. The incentive of 5 dollars is too great
4. I chose to overstate because there was only a reward and no penalties for doing so.
5. I didn't overstate my score because I scored above 25. That made it easy not to lie.
6. because it appears that you wanted me to

Bonus - Aware Before

7. I think it might not be hard for many people to score 25 so I think I can lie about my score.
8. There is pretty limited time for me to finish all those 30 questions.
9. Questions were boring and incomprehensible. I got bored of the questions and felt entitled to the money. I over stated my score as 30 when in reality I got 10.

Penalty - Aware After

1. Didn't want to get the $5 dollars that I didn't deserve.
2. I chose to overstate my score because I'm perfectly capable of living with the fact that I lied. This is only an experiment, so I felt that there wasn't much of a consequence in this situation as there would be in the real world. However, if this were a real life situation where I could actually get in trouble for it, I would have told the truth.
3. Well, to be frank, I don't have $15 so it would be really nice to have $15 instead of having $10. That's a whole 33% difference.
4. I rather not lose the $5 I know is possible to get
5. Because I forgot to bring cash out for lunch and I think 10 bucks is not enough.. Plus the cost of lying here is close to zero.
6. It is a gloomy Friday morning, and I am sick so I need the extra $5 for medicine.
7. I do not want to pay for the lab. there are questions that I did not prepare before. so it is reasonable that I did not do well,
8. I chose to overstate because there will be $15 given and I won't get caught on my lies.
9. I felt guilty to overstate my option, but I want $15 rather than nothing. Also I felt no responsibility here.
10. I overstated my score because $15 is more than $10. I would have overstated even if I was "caught" if it meant I got $5 more.

Penalty - Aware Before

11. I got 20 as my real score but I wanted to overstate a little (by 3 points) because I was running out of time / If I was given more time, I am sure I could do better
12. Overstating the score since I would not be penalized for $5

13. I chose to overstate my score because I knew I would be penalized $5 dollars for a lower score.
14. for additional money
15. I overstated my score to receive five more dollars. There was a moral penalty for lying about my score, but the fact that I am simply in an experiment and not in a real world situation made me feel comfortable enough to lie.
16. It was in my best interest to overstate my score to ensure I was paid the maximum compensation.
17. I chose to overstate my score to receive more money.
18. I overstate my score because I don't want to be penalized. I got a score lower than 25.

Participants who were honest gave the following reasons for having been honest:

Bonus - Aware After

1. I didn't know if I could overstate my score
2. I never even thought to overstate my score although I would not have just because of my morals that I follow.
3. I knew that I did not earn the additional $5 based on my score. It wouldn't be fair for me to overstate my score.
4. I do not choose to lie, as having additional $5 does not worth me to betray my value.
5. I chose to not overstate my score because I do not deserve the bonus when I did not achieve the required goal. Also, I am an honest person and could not live with that lie on my head.
6. I chose to be honest because it is not encouraged to lie on something
7. I chose not to overstate my income because I value integrity. The extra $5 is not worth it to me to lie about my results.
8. Just to be honest
9. I just did not wanted to cheat for 5 dollars.
10. only 5 dollars. probably would have overstated it if it was more than 5
11. 1. I have a low expectation on my payment. $10 is sufficient for an experiment like this. / 2. 5 dollar bonus isn't that attractive to me / 3. I choose not to lie if it's unnecessary / 4. I really suck on answering these problem. I kind of give up in the middle because I knew I couldn't finish it one time, neither get the 5 dollar bonus. I am happy with $10
12. I did not overstate because what's $5 dollars really??
13. I choose not to overstate my score because I was concerned I would get caught. Honestly it wasn't worth losing everything over an extra $5. I was happy with the $10 and decided to keep just that considering I didn't actually answer all of the questions.
14. I did not feel I earned the adequate score to be compensated an extra $5. Also, the baseline $10 for 20 minutes of work was very adequate in my opinion.
15. I thought that my score would be reported along with what I actually reported, would be easy to see my lie.
16. As it was computerized, I figured the researcher would be able to see my actual score versus the score that I reported.
17. In case the scores were being monitored by the individual conducting the study.
18. the time is limited and there is no time for me to think if the question is right or wrong.

Bonus - Aware Before

19. Since I did not know about the option to overstate my score, I did not overstate my score.
20. I did not know I could and I kind of though about it but I did not want to.
21. I did not overstate my score because I did not know I could.
22. I didn't overstate my score because I thought I should be honest and truthful

23. I decided not to overstate my score because I choose to be honest and have integrity. As a business student, I understand the temptations there are to lie, but I wanted to keep my integrity because of my personal morals.
24. i figured honesty is best
25. Even though the study stated that we would be paid for overstating, I knew I would feel guilty later on.
26. I felt that it was right to tell the truth about my score even though I could have lied to get the bonus.
27. This study, like anything else, is a representation of who I am as a person. I pride myself on my own integrity and it was abundantly clear that overstating my results would not be the right thing to do.
28. I chose not to overstate because I did not feel it was right.
29. Just wanted to tell the truth
30. I just did not think lying about my score was the correct option to choose. If this survey was to assess whether or not I would get a job that was suitable for my skill set, I could lie and get the job, but I will perform horribly later in my job and get fired regardless.
31. it felt wrong to overstate
32. I value morals and honesty.
33. I did not achieve a score of 25, and I would feel guilty if I overstated my score. I am not happy with myself that I wasn't able to get a score of 25, and I would love to see what I got wrong, but I would feel bad about myself if I lied about achieving something that I wasn't able to.
34. I chose not to overstate my score because I believe I should receive the compensation I earned and receiving $15 when I only earned $10 is not something I feel comfortable doing. Lying to receive an extra five bucks just isn't worth it to me.
35. Because I really did bad on the research questions, and I am very ashamed about that. I want to write down the actual score I got to kind notice myself how bad I did. Besides, I already got the $10, no matter what score I got.
36. I didn't know the consequence of overstating my score. Even if I did, I feel that the protector would have a way to figure out if I overstate it or not, so I think it's better to not falsify it.
37. I didn't overstate my score because I did not earn the $5 reward. Although lying for $5 didn't seem like that big of a deal, I was also concerned that I might get caught.
38. I didn't know the meanings of many words in the questions since I am not a native-speaker of English. After I completing the practice round, I have already know it is impossible for me to get at least 25 questions correct in 15 minutes without using dictionary. I just randomly pick the choices for answering the questions.
39. [no response]
40. [no response]

Penalty - Aware After

1. I did not know about the option to overstate my score. I thought the computer new what it was.
2. I chose not to overstate my score simply because this information is valuable to someone and I would not want another person to mess up my research if I was conducting this survey.
3. I did not think about overstate my score and I think I should be honest on this experiment.
4. I choose not overstate my score, since it is not necessary to overstate my score. Just tell the real score. Be integrity.
5. I am honest
6. I didn't answer 25 questions correctly so I didn't want to cheat or lie just to make an extra $5. I am already making $10, and I believe it was best to take it with honesty.
7. I did not overstate my score because I didn't want to lie. I wanted to earn the extra $5 through my own intelligence and not by cheating.
8. I'm an honest person
9. I chose to not overstate my score because I am a honest person in general.

10. I chose not to overstate my scores because I would feel like it was stealing and would feel guilty about it. The rules clearly stated how much compensation I would receive depending on the amount of questions I answered.
11. It was the right thing to do.
12. Although lying did not matter, I feel like it was hard for me to lie because it felt like I was taking a standardized test. Especially because money was on the line, I further felt guilty and did not lie.
13. I did not think that 5 dollars was worth it.
14. I chose not to overstate my score because I felt like it wasn't a big deal to have to lie to get an extra $5. I would be getting $10 and I am satisfied enough by that not to have to lie to get more.
15. Not overstate. Because I don't think that the computer sill not know my actual scores. And maybe if I overstate, the computer or the experiment instructor will know.

Penalty - Aware Before

16. I chose not to overstate my score because I did not know that I could overstate it. Furthermore, I did not want to give false information.
17. I choose to not overstate my score because it is pretty obvious that it is very tough to get a 25 out of 30 on this assessment.
18. Because I am honesty.
19. I am a honest person, and money, for me are not that important
20. I didn't choose to overstate my score because its wrong and I would feel guilty for taking the extra 5 dollars I didn't earn
21. I chose not to overstate my score because that would have been unethical. It never even crossed my mind to do so.
22. I chose to not overstate my score because I believe that honesty is extremely important and is a value that I try to maintain.
23. I don't really need the extra $5, and I'm sure it could be used to better help the program.
24. Integrity. And I believe if I tell the truth, good luck will come to me.
25. I chose not to overstate my score because that would be a lie.
26. I don't think it's worth it to lie for 5 dollars. You can make 5 dollars easily, but having the burden to know that you lied just isn't something I want to experience.
27. I didn't have enough incentive to overstate and I would rather just tell the truth.
28. I chose not to overstate because I was still rewarded for answering the questions. I just did not see the advantages to getting compensated a little more (overstating) but having to lie.
29. I chose not to overstate my score because I am content with receiving the $10 base pay. It would be nice to receive $5 more by overstating my score, but I wouldn't feel like I deserved it.
30. I chose not to overstate because my official score was far lower than the target score, thus felt like putting higher risk by manipulating the score. If the score were close to the target score, I may have changed my score, but since it wasn't, I decided that honesty would play better. Also by overstating much, there is more risk of getting caught.
31. I was not cnofident [sic]

APPENDIX D: EXPERIMENTAL INSTRUMENT

Each page that follows represents a separate page/screen that was viewed by participants on a computer. At the bottom of each page was a button for participants to click "Next" when they were ready to proceed to the next screen. They were informed that they would be unable to return to previous screens after clicking this button. Any information presented within brackets was not shown to participants but is listed here when necessary to identify which treatment observed the page (e.g., [BONUS] reflects that participants in the bonus conditions were shown the information listed).

DO NOT TOUCH THE COMPUTER UNTIL INSTRUCTED BY PROCTOR

Once the experiment begins, use the computer ONLY to participate in the experiment--no opening other programs or browsing the Internet.

Thank you! :)

END SCREEN

Instructions

In this experiment, you will be asked to answer a set of questions from each of the following categories: critical reasoning, sentence completion, and sentence correction. These questions are difficult, and your pay will depend on your score. The details of your compensation will be provided prior to answering the questions.

Once you have finished answering the questions, the computer will calculate your score as the number of questions you answered correctly. You will then proceed to the final stage of the experiment.

Prior to beginning the question task, you will complete a short practice round where the difficulty of the questions is comparable to what you will face in the official round. Your score in the practice round will NOT affect your pay.

NO PHONES, INTERNET BROWSING, ETC. ARE ALLOWED FOR THE DURATION OF THE EXPERIMENT.

END SCREEN

Practice Round

Compensation:

Your pay will NOT be affected by this round.

At the end of the practice round, the computer will tell you how many questions you answered correctly.

END SCREEN

Practice Round

Effort:

You will be given 3 questions this round. You will have up to 1 minute and 30 seconds to answer these 3 questions. However, you may click submit at any point, whether you have answered the questions or not, to proceed to the next stage of the experiment.

If you spend more time on the questions, it may help you answer more questions correctly.
If you spend less time on the questions, you will be able to complete the experiment more quickly and you can leave sooner.

END SCREEN

Critical Reasoning

The following section tests critical reasoning. After reading the following question, please select the best answer among the choices that follow.

1.) Beautiful beaches attract people, no doubt about it. Just look at this city's beautiful beaches, which are among the most overcrowded beaches in the state.

Which of the following exhibits a pattern of reasoning most similar to the one exhibited in the argument above?

- a. Moose and bear usually appear at the same drinking hole at the same time of day. Therefore, moose and bear must grow thirsty at about the same time.
- b. Children who are scolded severely tend to misbehave more often than other children. Hence, if a child is not scolded severely that child is less likely to misbehave.
- c. This software program helps increase the work efficiency of its users. As a result, these users have more free time for other activities.
- d. During warm weather, my dog suffers from fleas more so than during cooler weather. Therefore, fleas must thrive in a warm environment.
- e. Pesticides are known to cause anemia in some people. However, most anemic people live in regions where pesticides are not commonly used.

Sentence Completion

The sentence below has one or two blanks, with each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled (a) through (e). Select the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

2.) His ------ was so limitless that it bordered on recklessness, for he gave more to charity than he could really afford.

- a. amicability
- b. inexorableness
- c. frivolity
- d. munificence
- e. venerability

Sentence Correction

The following section tests correctness and effectiveness of expression. Part of the sentence or the entire sentence is underlined; beneath the sentence are five ways of phrasing the underlined material. Choice (a) repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the other alternatives, select choice (a); if not, select one of the other choices.

In making your selection, follow the requirements of standard written English. That is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection

should result in the most effective sentence – clear and precise, without awkwardness or ambiguity.

3.) After shopping all day in crowded department stores, Kathy and Erica were as tired as if running a marathon.

- ❍ a. if running
- ❍ b. having run
- ❍ c. if from running
- ❍ d. if they had run
- ❍ e. if they would have run

END SCREEN

Practice Round Results

The highest possible score for the practice round was 3. You answered <insert practice round score> question(s) correctly in this round.

Your score: <insert practice round score>

Your pay was NOT affected by this practice round. You have now completed the practice round.

END SCREEN

[BONUS/BEFORE TREATMENT]

OFFICIAL Round

Compensation:

You will be paid a salary of $10 for your work in this experiment. In addition, you will receive a $5 BONUS if your score shows you answered at least 25 of the 30 questions correctly in the Official Round.

At the end of the official round, the computer will tell you how many questions you answered correctly. You will then be asked to report your score. Your pay will be calculated based only on the score you report. If you lie about your score, you will not be caught.

END SCREEN

[BONUS/AFTER TREATMENT]

OFFICIAL Round

Compensation:

You will be paid a salary of $10 for your work in this experiment. In addition, you will receive a $5 BONUS if your score shows you answered at least 25 of the 30 questions correctly in the Official Round.

At the end of the official round, the computer will tell you how many questions you answered correctly.

END SCREEN

[PENALTY/BEFORE TREATMENT]

OFFICIAL Round

Compensation:

You will be paid a salary of $15 for your work in this experiment. However, you will be charged a $5 PENALTY if your score does not show you answered at least 25 of the 30 questions correctly in the Official Round.

At the end of the official round, the computer will tell you how many questions you answered correctly. You will then be asked to report your score. Your pay will be calculated based only on the score you report. If you lie about your score, you will not be caught.

END SCREEN

[PENALTY/AFTER TREATMENT]

OFFICIAL Round

Compensation:

You will be paid a salary of $15 for your work in this experiment. However, you will be charged a $5 PENALTY if your score does not show you answered at least 25 of the 30 questions correctly in the Official Round.

At the end of the official round, the computer will tell you how many questions you answered correctly.

END SCREEN

OFFICIAL Round

Effort:

You will be given 30 questions this round. You will have up to 15 minutes to answer these 30 questions. However, you may click submit at any point, whether you have answered the questions or not, to proceed to the next stage of the experiment.

If you spend more time on the questions, it may help you answer more questions correctly. If you spend less time on the questions, you will be able to complete the experiment more quickly and you can leave sooner.

END SCREEN

Critical Reasoning

The following section tests critical reasoning. After reading the following questions, please select the best answer among the choices that follow.

1.) Experts studying patterns of shark attacks on humans have noted that attacks tend to diminish when the water temperature drops below 65 degrees Fahrenheit. Until recently, researchers believed this was because sharks prefer warmer water, and thus are present in fewer numbers in colder water. However, new research shows that sharks are present in equal numbers in cold and warm water. Which of the following, if true, best explains the apparent paradox?

- a. In general, humans prefer warm water.
- b. Sharks' keen sense of smell is enhanced in cold water.
- c. In the Pacific, shark attacks tend to occur more frequently in the daytime.
- d. Of the more than 200 types of sharks present in the ocean, only three attack humans.
- e. The average temperature of the earth's ocean is 55 degrees.

2.) Scientists today accept that the increased severity of hurricanes in the last 10 years has been the result of warmer water in the Caribbean, which "feed" the storms as they pass over it by a mechanism not yet completely understood. Thus, these severe hurricanes are yet more evidence of global warming. Which of the following, if true, would most strengthen the argument above?

- a. Accurate statistics on the warming of the earth do not go back more than 100 years.
- b. Scientists have not discovered a new undersea current, fueled by an undersea volcano, which could have funneled warmer water into the Caribbean.
- c. The artic ice caps have been losing three feet of circumference each year for the past five years.
- d. A new modeling computer program projects that the severity of hurricanes will increase over the next 10 years.
- e. Some scientists believe they will soon prove that the mechanism by which a storm picks up energy from warm water is based on convection.

3.) A pharmaceutical company claims that its new drug promotes learning in children. To back up its claims, the company points to a study of 300 children who were given the drug, along with a control group of 300 children who were given a placebo. The 300 children who were given the drug reported that they were able to retain new information much more easily. Which of the following statements, if true, would most tend to weaken the claims of the pharmaceutical company?

- a. The 300 children in the control group also reported that they were able to retain new information much more easily.
- b. The drug has also been shown to prevent common skin rashes.
- c. The drug has been proven to have severe side effects.
- d. The children in the study were not given any other medications during the study.
- e. The children who were given the drug did better on cognitive measurement tests after the drug therapy than before.

4.) In order to understand the dangers of the current real-estate bubble in Country Y, one has only to look to the real-estate bubble of the last decade in Country Z. In that country, incautious

investors used the inflated value of their real estate as collateral in risky margin loans. When the real-estate market collapsed, many investors went bankrupt, creating a major recession. Country Y is in real danger of a similar recession if more-stringent laws restricting margin loans are not enacted promptly.

The answer to which of the following questions would be most useful in evaluating the significance of the author's claims?

- a. Was the real estate in Country Z located principally in rural areas or was it located in more urban communities?
- b. Could the bankruptcies in Country Z have been prevented by a private bailout plan by the nation's banks?
- c. Does Country Y currently have any laws on its books regarding margin loans?
- d. Are there business ties and connections between Country Y and Country Z?
- e. Were there other factors in the case of Country Y that would make the comparison with Country Z less meaningful?

5.) A prolonged period of low mortgage rates resulted in a period of the most robust home sales ever. At the same time, the average sale price of the resale homes actually dropped, when adjusted for inflation. Which of the following, if true, would explain the apparent contradiction between the robust home sales and the drop in the average sale price of resale homes?

- a. The inflation rate during this period exceeded the increase in the average salary, thus preventing many buyers from securing mortgages.
- b. Resale homes represent the best value on the real estate market.
- c. Without the adjustment for inflation, the price of resale homes actually increased by a very slight amount.
- d. The decrease in mortgage rates was accompanied by a widening of the types of mortgages from which borrowers could choose.
- e. The increase in home sales was due entirely to an increase in the sale of new homes.

6.) Luis is taller than Rei. Kiko is taller than Marcus. Therefore, Kiko is taller than Rei.

The conclusion drawn above is not supported by the argument; however, the addition of one additional piece of information would make the conclusion logically sound. All of the following could be the additional piece of information EXCEPT:

- a. Kiko is taller than Luis.
- b. Luis is taller than Marcus.
- c. Luis and Marcus are the same height.
- d. Marcus and Rei are the same height.
- e. Marcus is taller than Rei.

7.) It is the policy of SubStop Sandwiches to give discretionary raises only to employees who demonstrate a strong commitment to their jobs and have worked at SubStop for more than six months. However, a state labor law requires SubStop to provide annual cost-of-living raises to all employees who have been continuously employed for at least six months. Last year, SubStop complied fully with its own policy and with the state's labor laws. Yet, 2-and only 2-of SubStop Sandwiches' 8 employees received any wage raise whatsoever last year. If the information

provided is true, which of the following must on the basis of it also be true about SubStop last year?

- a. Two of its employees demonstrated a strong commitment to their jobs.
- b. None of its employees received a discretionary raise.
- c. Six of its employees failed to demonstrate a strong commitment to their jobs.
- d. Two of its employees worked at SubStop continuously for at least six months.
- e. It claimed to provide wage raises in compliance with the State's labor law but in fact did not.

8.) Everyone agrees that current licensing requirements for child-care facilities are reasonably necessary to ensure public safety. Current licensing requirements for handgun ownership are far less stringent than those for operating child-care facilities. Yet the recent flurry of school shootings by young children using their parents' handguns shows that handgun ownership poses a significant potential threat to public safety. The author is arguing that:

- a. The recent school shootings would not have occurred were it not for lenient handgun ownership laws.
- b. Parents of young children should not be allowed to own handguns.
- c. The legal requirements for obtaining a license for operating a child-care facility are more stringent than those for handgun ownership.
- d. Unlicensed child-care and unlicensed handgun ownership both pose a potential threat to public safety.
- e. It would be reasonable to impose more stringent requirements for handgun ownership.

Sentence Completion

Each sentence below has one or two blanks, with each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled (a) through (e). Select the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

9.) Alex is so ------ that it is nearly impossible to offer him constructive criticism without him taking it personally and acting defensively.

- a. cerebral
- b. obdurate
- c. sensitive
- d. pretentious
- e. enervated

10.) Many artists seem to be seeking to express what they consider to be ------, or incommunicable by any other means.

- a. ineffable
- b. mundane
- c. onerous
- d. incisive
- e. auspicious

11.) Because Ben had been known for being ------ in college, his former classmates were surprised to hear that his colleagues at work found him rather lazy.

- a. indiscriminate
- b. enigmatic
- c. vicarious
- d. rancorous
- e. assiduous

12.) The teacher tried to negotiate an agreement between the quarreling students but felt ------ about the outcome because the students refused to compromise.

- a. cordial
- b. dubious
- c. benevolent
- d. biased
- e. prophetic

13.) Since the mid-eighteenth century, there has been much ------ between the cultures of France and Germany despite the frequent ------ between those two countries.

- a. communication…alliances
- b. hatred…opposition
- c. interaction…enmity
- d. antagonism…misunderstandings
- e. hostility…alienation

14.) Developmental psychologists often cite yelling at children as ------ and a poor way to help them learn.

- a. benign
- b. diagnostic
- c. inefficacious
- d. discretionary
- e. therapeutic

15.) The young professional's boss praised her ------ nature and stated that she seemed to have an unconquerable positive spirit.

- a. morose
- b. opulent
- c. indomitable
- d. lithe
- e. ephemeral

16.) A male green anole lizard views his territory as ------ and often instigates confrontations with any male of his species that may wander within its boundaries.
- a. dissipated
- b. circuitous
- c. unparalleled
- d. inviolable
- e. mandated

17.) ------ is a common theme in Greek tragedies and mythology, whose stories often featured protagonists suffering from exaggerated pride and subsequently being punished by the gods for it.
- a. Obstinacy
- b. Hubris
- c. Impetuosity
- d. Valor
- e. Callousness

18.) The newly found eyewitness filled in many of the gaps in the case, providing certainty where before there had been a ------ of evidence.
- a. spate
- b. revision
- c. dearth
- d. dispersal
- e. consensus

19.) The senators decided to ------ the most contentious bill and focus instead on passing another law on which it was easier to reach a suitable ------.
- a. table…consensus
- b. enact…opinion
- c. berate…decision
- d. proclaim…agreement
- e. endorse…compromise

Sentence Correction

The following section tests correctness and effectiveness of expression. Part of each sentence or the entire sentence is underlined; beneath each sentence are five ways of phrasing the underlined material. Choice (a) repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the other alternatives, select choice (a); if not, select one of the other choices.

In making your selection, follow the requirements of standard written English. That is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence – clear and precise, without awkwardness or ambiguity.

20.) Although dismissed by salon attendees for its subject matter, most artists viewed Manet's Olympia as a groundbreaking work.

- a. most artists viewed Manet's Olympia as a groundbreaking work
- b. most artists viewed Manet's Olympia to be a groundbreaking work
- c. a groundbreaking work was what most artists viewed Manet's Olympia as
- d. Manet's Olympia was viewed by most artists as a groundbreaking work
- e. Manet's Olympia, a groundbreaking work in the view of most artists

21.) Analysts say that the companies' projected annual profit, which is $10 million less than expected and $15 million less than the previous year, is a severe disappointment to stockholders.

- a. which is $10 million less than expected and $15 million less than
- b. estimated $10 million lower than expected while having fallen $15 million from
- c. with an amount $10 million less than expected as well as $15 million less than that of
- d. $10 million less than expected, and it amounts to $15 million less than
- e. being $10 million less than expected and $15 million less than measured from

22.) Though strongly dependent on the Moscow government for regulations and laws while former Soviet countries supply Kaliningrad with business, as a city it remains geographically independent of both.

- a. laws while former Soviet countries supply Kaliningrad with business, as a city it remains
- b. laws and on business by former Soviet countries, Kaliningrad, a city
- c. laws and on former Soviet countries for business, Kaliningrad is a city
- d. laws, former Soviet countries supply Kaliningrad with business, but it is a city
- e. laws, former Soviet countries supply Kaliningrad with business, while it remains a city

23.) The secretary of state's speech, detailing foreign policy in this hemisphere and beyond and setting out a plan for peace in the region, became a classic of modern statesmanship.

- a. The secretary of state's speech, detailing foreign policy in this hemisphere and beyond and setting out a plan for peace in the region,
- b. Detailing foreign policy in this hemisphere and beyond, the secretary of state's speech setting out a plan for peace in the region, it also
- c. With details of foreign policy in this hemisphere and beyond and setting out a plan for peace in the region, the secretary of state's speech
- d. The secretary of state's speech with its detailing of foreign policy in this hemisphere and beyond and setting out a plan for peace in the region,
- e. Although the secretary of state's speech detailed foreign policy in this hemisphere and beyond and also set out a plan for peace in the region,

24.) In the city, by just walking outside or taking the subway, new people and events can be seen.

- a. new people and events can be seen
- b. seeing new people and events
- c. new people and events being seen
- d. one can see new people and events
- e. it is new people and events that can be seen

25.) Some fans believe that in the next Olympics, Michael Phelps will not only win seven gold swimming medals, but also many world records will be claimed.

- a. Michael Phelps will not only win seven gold swimming medals, but also many world records will be claimed
- b. Michael Phelps will win not only seven gold swimming medals, but will claim many world records as well
- c. Michael Phelps will not only win seven gold swimming medals, but also claim many world records
- d. Michael Phelps will not only win seven gold swimming medals, but claim many world records in addition
- e. Michael Phelps will not only win seven gold swimming medals, but he will claim many world records also

26.) Hauling the laundry basket up the fifth flight of stairs, exhaustion forced Maria to stop and sit down on the landing for a moment.

- a. exhaustion forced Maria to stop and sit down
- b. exhaustion was what forced Maria to stop and sit down
- c. it was exhaustion that forced Maria to stop and sit down
- d. Maria, forced by exhaustion to stop and sit down
- e. Maria was forced by exhaustion to stop and sit down

27.) People who have low motivation or are not at least moderately intelligent are not likely to make it as international journalists.

- a. have low motivation or are not at least moderately intelligent
- b. has either low motivation or not intelligence in at least moderate amounts
- c. are not highly motivated or who don't have at least moderate intelligence instead
- d. are not highly motivated or at least moderately intelligent
- e. has low motivation or else at least moderate amounts of intelligence

28.) Although Mike is very much interested in music, he does not play an instrument and has never attended a musical.

- a. he does not play an instrument and has never attended a musical
- b. it is without being able to play an instrument or having attended a musical
- c. he does not play an instrument and has never seen it
- d. he does not play an instrument nor has he ever seen it
- e. it is without playing an instrument nor having seen it

29.) Having Sam Erlich as their leader and the increasing athletic ability of the team helped to bring about a victorious era for track and field at Bartle High School.

- ❍ a. Having Sam Erlich as their leader
- ❍ b. Having the leadership of Sam Erlich's
- ❍ c. Sam Erlich as their leader
- ❍ d. To be led by Sam Erlich
- ❍ e. The leadership of Sam Erlich

30.) The issue the economists considered, which was whether a tax decrease will cause an increase in consumer spending or simply an increase in consumer savings.

- ❍ a. considered, which was whether a tax decrease will cause an increase
- ❍ b. considered was if they would decrease taxes would this cause an increase
- ❍ c. considered was that a decrease of taxes would result in an increased
- ❍ d. considered was will decreasing taxes mean an increase
- ❍ e. considered was whether a tax decrease would cause an increase

END SCREEN

[BONUS TREATMENTS]

Official Round Results

The highest possible score for the official round was 30. You answered <insert actual score> question(s) correctly in this round. Your score: <insert actual score>

The previous number represents your actual score for this period. However, your pay will be calculated based only on the score you report.

If you choose to lie about your score, you will not be caught. However, you will have to live with the knowledge that you chose to lie.

Remember: You will be paid a salary of $10 for your work in this experiment. In addition, you will receive a $5 BONUS if your score shows you answered at least 25 of the 30 questions correctly in the Official Round.

Please report your score here: ____

END SCREEN

[PENALTY TREATMENTS]

Official Round Results

The highest possible score for the official round was 30. You answered <insert actual score> question(s) correctly in this round. Your score: <insert actual score>

The previous number represents your actual score for this period. However, your pay will be calculated based only on the score you report.

If you choose to lie about your score, you will not be caught. However, you will have to live with the knowledge that you chose to lie.

Remember: You will be paid a salary of $15 for your work in this experiment. However, you will be charged a $5 PENALTY if your score does not show you answered at least 25 of the 30 questions correctly in the Official Round.

Please report your score here: ____

END SCREEN

Your final compensation for this experiment is <insert value based on reported score>.

END SCREEN

Post-Experimental Questionnaire

Please choose the answer that BEST represents your compensation structure:

- ❍ If I reported scoring less than the target score of 25, I would be penalized by $5.
- ❍ If I reported scoring at least the target score of 25, I would receive a bonus of $5.

Please choose the answer that BEST represents your situation:

- ❍ I knew about the option to overstate my score BEFORE I answered the official round questions.
- ❍ I didn't know about the option to overstate my score until AFTER I answered the official round questions.

Please briefly describe why you chose to overstate or not overstate your score: _____

Please estimate the percentage of participants in this experiment that you believe overstated their scores:

_____ Participants who overstated score:

Please indicate the extent to which you agree or disagree with each of the following statements:

	strongly disagree	disagree	slightly disagree	slightly agree	agree	strongly agree
Overstating one's performance is wrong.	❍	❍	❍	❍	❍	❍
Not working as hard as you can is wrong.	❍	❍	❍	❍	❍	❍
My choices in this experiment were ethical.	❍	❍	❍	❍	❍	❍
I was honest in this experiment.	❍	❍	❍	❍	❍	❍
I deserved to receive the full $15 in this experiment.	❍	❍	❍	❍	❍	❍
I feel entitled to the full $15 in this experiment.	❍	❍	❍	❍	❍	❍
My money was stolen.	❍	❍	❍	❍	❍	❍
My money would have been stolen if I hadn't misreported my score.	❍	❍	❍	❍	❍	❍
Prior to answering the questions in the Official Round, I believed I could achieve the target score of 25.	❍	❍	❍	❍	❍	❍
The target score for the Official Round was fair.	❍	❍	❍	❍	❍	❍
The way I expect to be paid is fair.	❍	❍	❍	❍	❍	❍
I was treated fairly in this experiment.	❍	❍	❍	❍	❍	❍
I was treated well in this experiment.	❍	❍	❍	❍	❍	❍
I tried my hardest in this experiment.	❍	❍	❍	❍	❍	❍
I didn't try as hard to answer the questions correctly because I knew I could just overstate my score if I didn't do well.	❍	❍	❍	❍	❍	❍
I didn't try as hard to answer the questions	❍	❍	❍	❍	❍	❍

correctly because I had already decided to overstate my score.						

Do you regret your decision to overstate your score?
- ❍ Yes, I regret overstating my score.
- ❍ No, I do not regret overstating my score.
- ❍ Not applicable (I did not overstate my score)

Do you regret your decision to NOT overstate your score?
- ❍ Yes, I regret NOT overstating my score.
- ❍ No, I do not regret NOT overstating my score.
- ❍ Not applicable (I overstated my score)

Please select your gender:
- ❍ Male
- ❍ Female

Are you an international student or a citizen of the U.S.?
- ❍ International student
- ❍ Citizen of the U.S.

Do you consider English your second language?
- ❍ Yes
- ❍ No

Please select your school year:
- ❍ Freshman
- ❍ Sophomore
- ❍ Junior
- ❍ Senior
- ❍ Grad student

Are you a James Scholar?
- ❍ Yes
- ❍ No

Have you taken BUS101?
- ❍ Yes
- ❍ No

Do you have anything else you'd like to tell us?

END SCREEN

DEBRIEFING

Thank you for your participation in today's study. This study examines how incentive schemes affect the tendency to be unethical, specifically the tendency to misreport one's performance as well as how the option to commit misconduct affects effort decisions. Hopefully you resisted the urge to lie, even though lying could have benefited you financially, as misreporting is wrong.

All the information collected in today's study will be confidential, and there will be no way of identifying your responses in the data archive. This research is not interested in any one individual's responses but looks at the general patterns that emerge when the data are aggregated together.

Your participation today is appreciated and will help researchers discover more ways of encouraging ethical behavior. Please do not discuss the nature of the study with others who may later participate in it, as this could affect the validity of the research conclusions.

If you have any questions or concerns, you are welcome to talk with Jennifer Nichol (jnichol@illinois.edu). If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Office for the Protection of Research Subjects at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at irb@illinois.edu.

THANK YOU AGAIN FOR YOUR PARTICIPATION.

Please continue to the next and final page of the experiment, where you will view the total compensation you have earned.

END SCREEN

Your final compensation for this experiment is <insert amount earned>. Please raise your hand and the proctor will come and pay you the amount shown on this screen.

The proctor MUST view this screen or YOU WILL ONLY BE PAID THE MINIMUM OF $10.

END SCREEN