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Tim Brown
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“Advantageous Comparison and the Slippery
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Advantageous Comparison and the Slippery Slope to Fraud

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ABSTRACT

Schrand and Zechman (2011) posit that managers who engage in severe earnings management often go down the “slippery slope,” in which the amount of earnings management by a company increases over time. This paper proposes that psychological forces can encourage individuals to slide down the slippery slope. I show that, under certain circumstances, engaging in a small amount of earnings management alters the manager’s beliefs about the appropriateness of the act, which makes further earnings management more likely. Specifically, I predict and find in two experiments that making an initial decision to manage earnings creates a desire for rationalization. Participants presented with an egregious example of earnings management, which are commonly the focus of enforcement actions and press reports, engage in rationalization through a mechanism called “advantageous comparison” by which they conclude that what they did was relatively innocuous and therefore appropriate. My analysis also indicates that participants do not infer a signal about regulator intentions or the commonality of earnings management from the egregious example, and that presenting participants with an article detailing a similar example of earnings management mitigates advantageous comparison. These results have implications for academics interested in how fraud might occur over time and for regulators and practitioners who are interested in preventing it.

I. INTRODUCTION

There is a great deal of interest in earnings management in both the accounting literature (see Healy and Palepu 2001 and Healy and Wahlen 1999 for comprehensive reviews) and the popular press (Giroux 2003; Creswell 2002). This paper focuses on the “slippery slope to fraud,” a specific pattern of earnings management documented by Schrand and Zechman (2011). The slippery slope to fraud predicts that earnings management behavior increases over time, with initial small decisions building up to more severe earnings management in later periods. Schrand and Zechman (2011) find archival evidence for this pattern of earnings management, showing that firms punished by the SEC for severe instances of earnings management increased the amount of earnings management performed over time. Schrand and Zechman (2011) posit that economic factors drive their result. More specifically, the authors note that small misstatements designed to increase income usually reverse in future periods, decreasing future performance. In addition, since markets generally expect a trend of steadily increasing performance over time these misstatements also increase expectations about future performance. These two factors encourage executives to engage in larger and larger instances of earnings management over time to meet expectations and cover up their initial misstatements. My paper builds on theirs by showing that choosing to manage earnings in the current period can change managers’ beliefs about earnings management. I propose that managers engage in rationalization, believing that their actions were more appropriate than they believed before the initial act. This makes future earnings management seem more appropriate.

In my setting, making a choice to manage earnings can create a conflict within the mind of a manager between the desire to meet a performance benchmark and the desire to think of themselves as an “honest person,” an important part of an individuals’ self-concept (Mazar, Amir

and Ariely 2008). This conflict will create cognitive dissonance, the uncomfortable feeling of conflict between the beliefs a person holds and the actions they take (Sloane 1944; Festinger 1957). When individuals experience cognitive dissonance, they are motivated to reduce it, usually through changing their beliefs. Cognitive dissonance is likely to be reduced in my setting through rationalization, the process of concluding that a negative action is relatively appropriate. However, the mere existence of this conflict might not be enough to produce rationalization. Previous research has shown that individuals do not simply believe whatever they choose (Kunda 1990). Instead, individuals must be presented with an opportunity to see their actions in a more favorable light for rationalization to take place.

I expect that participants who choose to manage earnings will engage in a process called “advantageous comparison” (Bandura 1999) when presented with an egregious example of earnings management. They will justify their actions by comparing them to much more egregious actions and conclude that their own conduct was not nearly as bad (and relatively appropriate). In combination, making a choice to manage earnings produces a desire to rationalize, and presenting an example of more egregious behavior provides an opportunity to rationalize, encouraging individuals to head down the slippery slope. Thus, I expect that participants who both choose to manage earnings *and* are presented with a more egregious example will conclude that earnings management is more appropriate than individuals who either did not make this choice or did not read the example.

I conduct two experiments to investigate these questions. Experiment One uses a 2 X 2 between-participants factorial design, manipulating the existence of a choice to perform earnings management and the content of a business press article presented to participants. All participants are graduate business students from a major university in the Eastern United States. Participants

are placed in the role of a division manager and told that they can meet a profit target by accruing an artificially low estimate for warranty expense. Participants are then either asked to make a decision about whether or not to engage in earnings management (the “choice” condition) or told to assume that they had engaged in earnings management (the “no choice” condition). Participants also review one of two articles from the business press. The first article (the “egregious” condition) discusses a recent SEC enforcement action against a company accused of engaging in severe earnings management. This article was designed to both mirror the content included in real SEC enforcement releases and allow for the possibility of advantageous comparison. The second article (the “irrelevant” condition) includes irrelevant information about an appointment at the SEC.

All participants then answer a question designed to measure their beliefs about the appropriateness of earnings management, along with questions measuring other potentially important variables. My results show an interaction, where participants who *both* made a choice to manage earnings and were presented with the egregious example article reported that earnings management was more appropriate than individuals who did not make a choice or who did not review the egregious article. This result supports my predictions and suggests that managers who have both the motivation and the opportunity to rationalize their earnings management behavior will do so by concluding that what they did was relatively appropriate.

Experiment Two extends Experiment One by asking all participants to make a decision about managing earnings and including the two article conditions used in Experiment One. Experiment Two also adds a third condition, providing some participants with an article that describes an instance of earnings management which is very similar to the decision they are asked to make (the “similar” condition). If the results from Experiment One were due to a

change in participants' views of the commonality of earnings management (an "everyone is doing it" phenomenon), this article would have the same effect as the egregious example article. If it was taken as a sign of regulatory intentions, it would have the opposite effect from the egregious example article. I expect and find that participants who are exposed to this article do not engage in rationalization – their beliefs about the appropriateness of earnings management are lower than those of individuals who see the egregious article and similar to the irrelevant article condition. This result suggests that advantageous comparison drives the results of Experiment One. This result also suggests that regulators might be able to curb slippery slope behavior by publicizing enforcement actions against smaller instances of earnings management from time to time, since similar articles do not encourage earnings management.

Experiment Two also includes several within-subject questions designed to measure the process underlying my results. Responses on these questions indicate that participants believe earnings management will be less likely when they review an article about an SEC enforcement action related to either an egregious or similar example of earnings management, suggesting that my between-subjects results may be unintentional. The results of Experiment Two confirm my theoretical explanation for the results of Experiment One and suggest that participants are not inferring signals about regulatory intent or the commonality of earnings management from my experimental materials.

This research contributes to the current literature in several respects. First, the results of this study show how managers might change their beliefs when they have both the motivation and the opportunity to rationalize their behavior. While other papers in accounting have examined how the traits of managers influence their willingness to engage in earnings management (Brown, Rennekamp, Seybert and Zhu 2011; Desai, Trompeter and Wright 2010;

Schrand and Zechman 2011), my study shows how simply making a decision might increase the willingness of managers to engage in earnings management when rationalization methods are available. Second, my results provide a complementary psychological explanation for the slippery slope of earnings management documented in Schrand and Zechman (2011). Although economic forces are undoubtedly a key driver of earnings management behavior, my paper suggests that simply making a decision to manage earnings might make future earnings management seem more appropriate, encouraging managers to go down the slippery slope. Third, this study shows how a manager's actions can change the way they view an egregious example of earnings management. I presume that the SEC publishes Accounting and Auditing Enforcement Releases (AAERs) in part to show market participants that earnings management is being detected and punished. However, my results suggest that individuals who have already decided to manage earnings might use these examples as an opportunity for rationalization through the process of advantageous comparison, encouraging earnings management in the future, rather than constraining it. The results of my second experiment suggest that the SEC could counter this effect by publishing AAERs about smaller, relatively common forms of earnings management. Finally, this study provides useful information to practitioners in the field about how small instances of earnings management might influence behavior over time. Practitioners should understand that small, relatively innocuous incidents of earnings management could have an effect on how information is interpreted.

The remainder of this paper is organized as follows. Section II discusses the specific theories used in the experiment and provides specific hypotheses. Section III discusses the experimental methods I use to investigate my hypotheses in Experiment One. Section IV

discusses the results of Experiment One. Section V discusses Experiment Two. Section VI concludes the paper.

II. THEORY & HYPOTHESES

The Slippery Slope of Earnings Management

According to Healy and Palepu (1999), earnings management occurs “when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers.” The majority of studies examining earnings management have explored three primary topics: 1) how earnings are managed and how this earnings management can be detected when it occurs (e.g., Dechow, Sloan and Sweeney 1995; Nelson, Elliott, and Tarpley 2002); 2) what factors predict earnings management (e.g., Kasznik 1999; Leuz, Nanda and Wysocki 2003; Hunton, Libby and Mazza 2006); and 3) examining the consequences of earnings management (e.g., Dechow and Skinner 2000; Hennes, Leone and Miller 2008; Karpoff, Lee and Martin 2008). The vast majority of this research has focused on the economic determinants of earnings management – how the balance of benefits (e.g., direct compensation for higher earnings, additional perquisites, capital market benefits, etc.) and costs (e.g., penalties if the earnings management is detected, the difficulty of maintaining positive performance in the future, etc.) leads managers to manage earnings.

Schrand and Zechman (2011) provide a particularly interesting explanation for egregious earnings management: the “slippery slope to fraud.” The authors evaluate firms which were subject to Accounting and Auditing Enforcement Releases (AAERs) from the SEC for inappropriate accounting practices between 1996 and 2003. The authors measure the amount of earnings management by comparing earnings reported at the time of the fraud against

“unmanaged” earnings (taken from restatement data for the same period), and find that the amount of earnings management steadily increased over time.

This result is attributed to economic forces. Consider a manager who is just short of a specific benchmark in the current period. This manager can make a small, relatively innocuous accounting choice to meet this benchmark (for example, recording an inappropriately small estimate of future bad debt expense). This choice will have two effects on future performance. First, the small instance of earnings management will usually reverse in future periods (in the example, bad debt expense is higher than the estimate in the next period) directly reducing future performance. Second, the small instance of earnings management will increase expectations about the future performance of the firm. If future performance is not sufficiently high, additional earnings management must be performed to both meet expectations and conceal past earnings management. This pattern continues until managers are committing egregious earnings management to meet highly inflated performance targets. My study complements Schrand and Zechman’s study by proposing that small instances of earnings management not only erroneously increase market expectations about the future, but also alter management’s beliefs in a way that makes future earnings management seem more appropriate.

Rationalization of Earnings Management

This paper proposes that making the first decision on the “slippery slope to fraud” (the decision to engage in a small amount of earnings management) can produce cognitive dissonance, which is resolved through rationalization.¹ My experiments focus on accruals manipulation, choosing an opportunistic estimate of future expenses to reach a desired earnings

¹ Rationalization is also discussed as a part of the “fraud triangle,” where incentive, opportunity and rationalization combine to produce fraud (SAS No 99). My paper examines how providing individuals with both a motivation and an opportunity to rationalize can change their beliefs when they make initial earnings management decisions without altering either opportunity or incentives. Thus, my research builds on the model by examining how rationalization might carry over between periods.

target. The literature indicates a consensus that manipulating accruals to reach preferred accounting targets is seen as an inappropriate, unethical action (William and Merchant 1990; Fischer and Rosenzweig 1995; Kaplan, McElroy, Ravenscroft and Shrader 2007).

I predict that participants will rationalize earnings management behavior by changing their beliefs about earnings management, seeing earnings management as a relatively appropriate and acceptable activity. Warren and Smithe-Crow (2008) discuss how beliefs about the ethical appropriateness of actions are often inherently malleable in a corporate setting. Small instances of earnings management likely fall into this category. Determining estimates for a reserve account or calculating an amount of a probable loss are highly uncertain activities, and can be framed as sound business decisions even if they violate ethical principles. This malleability could help propel the manager down the slippery slope to fraud.

Prior accounting research has demonstrated the importance of rationalization in promoting misreporting. Desai, Trompeter, and Wright (2010) find that practicing managers who score high on a susceptibility to rationalization scale are more likely to manage earnings when both pressure and opportunity to manage earnings are low. Murphy (2010) finds that attempts to “cut off” common avenues of rationalization reduce accounting students’ cheating behavior. Both of these papers support the idea that rationalization should be a key driver of earnings management behavior. However, they focus on factors that influence a single decision. They do not examine how making an initial decision about an accrual amount could influence beliefs about the appropriateness of earnings management. Holderness and Hunton (2010) examine a related concept, showing that managers who cut R&D spending to meet an earnings benchmark report that R&D spending is less likely to produce value in the future, compared with individuals who were not under significant external pressure (and did not cut R&D spending). This belief

makes cutting R&D seem more appropriate. However, their experiment was not designed to separate out the effects of external pressure from the effect of making the decision.² My paper separates out the effects of making the earnings management decision and investigates how key external circumstances can influence rationalization.

I predict that participants who choose to engage in earnings management will have a desire to rationalize their behavior. Providing them with an egregious example of earnings management will provide them with a mechanism they can use to change their beliefs. These two concepts are discussed further below.

Motivation

Why will engaging in earnings management produce a desire for rationalization? I propose that the decision will produce cognitive dissonance (originally proposed by Festinger 1957), the uncomfortable feeling of conflict between an individual's actions and their beliefs. An influential paper by Mazar, Amir and Ariely (2008) proposes that unethical behavior (like earnings management) is not determined solely by the benefits of dishonesty and the probability of detection. Instead, an individual also considers whether the behavior complies with society's norms and values which are internalized as a part of their self-concept as an honest individual (Campbell 1964; Heinrich et al 2001). With this in mind, I predict that when individuals choose to manage earnings, it will create a conflict with their self-concept and produce cognitive dissonance.

² Although this paper provides evidence of belief revision similar to this experiment, there is an important difference in the experiments and their purpose. In Holderness and Hunton (2010), participants who chose to cut R&D were placed under external pressure to do so (the presence of an earnings benchmark). Thus, beliefs about the value of R&D spending might be driven by either the decision to cut R&D spending or the existence of external pressure to meet an earnings benchmark. My paper holds external pressure constant across conditions to examine how making a choice to engage in earnings management can alter beliefs about earnings management, making earnings management appear more appropriate.

Cognitive dissonance predicts that individuals experiencing a conflict between their actions and their beliefs will alter their beliefs to fit their actions. Although cognitive dissonance is one of the most extensively researched concepts in all of psychology (see Harmon-Jones, Amodio and Harmon-Jones 2009 for a review), my experiment applies this theory to a specific setting with direct relevance to accounting. The most relevant research examining cognitive dissonance uses a “forced compliance” paradigm, which focuses on individuals who are asked by an authority figure to advocate a position which is contrary to fact. My research examines decisions individuals make of their own volition about an ethically questionable action. Thus, my paper attempts to extend the current literature by examining accounting decisions made voluntarily, and examining how those decisions alter beliefs. In this setting, individuals will update their beliefs through rationalization, concluding that their action is “not that bad.” This is a specific application of cognitive dissonance which has important implications for understanding earnings management. Consider a manager who is tasked with making an estimate for future warranty expenses. If the manager accrues an artificially low amount, he will be able to meet a profit target for the current period. Managers who choose (as opposed to are forced) to accrue a low amount face a threat to their self-concept – they have performed an ethically questionable action to achieve an economic gain. I predict that this choice will create dissonance, which will be resolved through rationalization of their actions. Other research in accounting shows that making unethical decisions in an accounting setting can create stress, which is consistent with this idea (Hobson, Mayew and Venkatachalam 2010).

Opportunity

Although a manager is likely to be motivated to rationalize their decision to manage earnings, simply wanting to justify an unethical action is not enough; an individual is generally

not able to believe whatever they wish (Kunda 1990). Instead, an individual must have a plausible method of rationalization to alter their beliefs. I predict that an example of severe earnings management will provide this avenue for rationalization. Managers who are presented with a severe example of earnings management can engage in a process called advantageous comparison (Bandura 1999), justifying their actions by comparing them to more severe immoral actions and concluding that their own conduct was appropriate in comparison. Although this theory has usually been applied to even more ethically charged domains, like military intervention or human rights abuses, a similar effect could occur in my setting. The advantageous comparison process provides an avenue for rationalization that allows managers to see their own conduct as relatively harmless and appropriate.

While making a choice to manage earnings may create a desire to rationalize behavior by changing beliefs about the appropriateness of earnings management, participants might not be able to change their beliefs without a readily available rationalization mechanism like advantageous comparison. Thus, I do not make a specific prediction about the effect of making a decision to manage earnings in my experiment.

However, when participants have *both* a desire to rationalize their behavior and access to advantageous comparison, participants will rationalize their behavior and conclude that earnings management is relatively appropriate. Thus, participants who have made the choice to engage in earnings management and reviewed information about an egregious example of earnings management will believe that earnings management is appropriate. The existence of a choice to manage earnings produces the drive to rationalize their behavior while the existence of the egregious example provides an opportunity to rationalize through advantageous comparison. Stated in hypothesis form:

H1: When individuals **choose** to engage in earnings management and review information about an egregious example of earnings management, their future beliefs about the appropriateness of earnings management will be **higher** compared to the case where they do not make a choice or where they make a choice and review irrelevant information from the same source.

H1a: When individuals **choose** to engage in earnings management, their future beliefs about the appropriateness of earnings management will be **higher** when they review information about an egregious example of earnings management compared to the case where they review irrelevant information from the same source.

H1b: When individuals review information about an **egregious example** of earnings management, their future beliefs about the appropriateness of earnings management will be **higher** when they made a choice to manage earnings compared to the case where they did not make a choice.

This set of comparisons provides a thorough test of my theoretical expectations. The first hypothesis predicts an interaction, while the second two test the specific importance of both opportunity and motivation.

III. METHOD – EXPERIMENT ONE

Participants

Participants are 110 graduate business students from a major university in the eastern United States. Following the recommendations of Libby, Bloomfield and Nelson (2002), I choose my participant pool based on the knowledge required to complete my task. Individuals who are enrolled in a graduate-level business program receive training in accounting and finance, and should be familiar enough with accrual accounting and managerial reporting incentives to understand my experimental scenario. In addition, I expect that my results are likely to generalize to professionals, since rationalization of unethical activities is commonly viewed as a fundamental property of the cognitive system (Warren and Smith-Crowe 2008). The average

participant is 27 years old, with an average of 4 years of work experience. Participants have completed an average of 2 accounting and 3 finance courses.

Design

My experiment uses a 2 X 2 between-subjects design manipulating the existence of a choice to manage earnings and the content of an article describing a recent action of the SEC. The primary dependent variable is judgment about the appropriateness of earnings management, measured after participants have made their decision and been exposed to the article.

Procedure

The experiment is administered through an online program called Qualtrics, which allows participants to access the experimental instrument via a hyperlink. In return for participation, participants are paid \$10 or offered extra class credit.

Once participants have started the experiment, they are asked to assume that they are a division manager at a multi-national firm. They are told that their division has slightly exceeded an earnings target set by headquarters, but they have not yet determined a warranty estimate for a new product. Participants are presented with a range of possible values for this estimate. Participants are told that the company usually estimates expenses by accruing the midpoint of the range, but that if they accrue just above the bottom end of the range, they will exactly meet the earnings benchmark set by headquarters. If the earnings target is missed, participants are informed that they will lose a substantial bonus and possibly need to lay off workers in their division. In the “choice” condition, participants are asked to choose the amount they wish to accrue. In the “no choice” condition, participants are told to assume for the purposes of this

experiment that they have accrued warranty expense just above the low end of the range.³ The information presented to participants is identical in both cases (included as Appendix A).

My study focuses on the effects of engaging in earnings management, not the circumstances which induce individuals to engage in it. Therefore, I make several specific design choices to increase the number of individuals who will choose to manage earnings in the “choice” condition. First, the decision is framed as avoiding a miss rather than achieving a target. Previous research shows that individuals are more likely to engage in unethical behavior when outcomes are framed as a loss rather than as a gain (Kern & Chugh 2009), and that individuals are more likely to commit ethical violations when they are close to meeting a difficult goal (Schweitzer, Ordonez and Douma 2004). Second, the opportunistic accrual amount is near the low end of the range, but not at the lowest point. Previous work on ethicality has established that individuals are more likely to cheat if they only cheat “part way” (Murphy 2010). Giving subjects information about how they could include an even more biased estimate should increase the number of individuals who choose to manage earnings. Third, I include information about the negative social consequences of missing the target (layoffs). Previous research has shown that unethical behavior is more likely when the benefits are split among multiple people (Wiltermuth 2011).

Once participants have made their earnings management decision, all participants are told that their estimates have been selected for additional review. Participants are asked to write a few sentences justifying the amounts they accrued for warranty expense. Writing this justification

³ I instructed participants to assume they engaged in earnings management to attempt to remove responsibility for the action without changing the information included in the case. Alternatively, I could have told some participants to assume that they had been forced to manage earnings by their superiors. I did not do this because including this additional information about superiors could alter beliefs about the experimental materials, making my results difficult to interpret. To the extent that participants view the “no choice” condition as actually portraying a choice they have already made, the choice manipulation should be weaker, which biases away from finding results. Additional research could examine how my findings apply to individuals who were forced to manage earnings, rather than told to assume that they did so.

should force participants to consider the decisions they have made more carefully, and mirrors how earnings management might be questioned in practice (e.g. unexpected auditor questions, including justifications of accrual amounts as a part of internal controls, etc.).

Once participants have written this short report, they shown a press release from the SEC (included in Appendix B). In the “egregious” condition, this article discusses a high-profile, egregious example of earnings management and its consequences to both the perpetrating individual and the firm. However, the article deals with an unrelated industry (the housing industry) and involves earnings management activities which are both much larger (\$25M) and much more inappropriate (excluding expenses entirely rather than underestimating them) than the scenario presented to participants in the first part of the experiment. In the “irrelevant” condition, the article discusses the appointment of a new head of the SEC broker-dealer examination program, which is unrelated to the earnings management example in the first part of the experiment and is designed to be a “filler” article with no relevance to the task.

Once participants have read the article, they answer a question designed to measure their beliefs about the appropriateness of earnings management and answer a series of debriefing questions that measure their judgments of the general ethicality of accruals management, their beliefs about the future performance of the firm, the reliability of accounting estimates, and the likelihood of the SEC questioning their estimate. These questions are included to measure other beliefs that might drive earnings management (e.g. modifying beliefs about the future performance of the firm). I also include demographic questions.

Primary Dependent Variable

I measure beliefs about earnings management by first informing participants that they have met a friend of theirs who manages a similar business at a trade conference. This manager

is attempting to establish an estimate for an environmental liability, and is trying to decide if he should accrue an aggressively small amount. My primary dependent variable is a question asking participants for their opinion of the appropriateness of choosing an opportunistic accrual in this case, rated on a 9-point Likert scale with the labels “1 – Not appropriate,” “5 – Somewhat Appropriate,” “9 – Very Appropriate.” This question is included in Appendix C. This dependent variable focuses on their beliefs about the appropriateness of earnings management, rather than attempting to capture their beliefs about what they just did in my experiment.

Measuring the beliefs of participants this way has several advantages. First, this method does not require individuals to report that they believe making an unethical decision is appropriate. Asking participants to report their own beliefs can create self-presentation concerns, where participants are hesitant to admit that they believe engaging in bad behavior is appropriate (O’Fallon and Butterfield 2005). Asking participants to provide advice to a friend helps alleviate these concerns, since they are not being asked to report beliefs about their own behavior. Second, this method helps hold economic factors constant across conditions. Participants could be influenced by the expected reversal of their aggressive accrual, reporting that earnings management is more appropriate because they expect to perform it again in the future. My method helps remove this economic confound from my results. Third, this method helps ensure that my results are not driven by a need for consistency. Participants could be motivated to be consistent in my experiment, reporting that earnings management is appropriate to be consistent with their choice to manage earnings (rather than answering with their true beliefs). My method makes self-presentation concerns less severe, since participants are being asked to provide advice to someone else. This type of dependent variable has been used to measure beliefs in many other studies (e.g. Cooper and Fazio 1984).

IV. RESULTS – EXPERIMENT ONE

Comprehension Checks

The debriefing questions at the end of my experiment included two comprehension check questions to ensure that participants understood the experimental task. The first question asked about the existence of a profit target in the first part of the experiment. The second question asked participants to recall the type of accrual their friend mentioned in the primary dependent variable screen. Eight participants (7%) missed one of these two questions, indicating that the majority of the participants understood the experimental materials.⁴

Hypothesis Test – Full Sample

Descriptive statistics (means, standard deviations, and medians) for my appropriateness measure are presented in Panel A of Table 1. To test my primary hypothesis, I determine contrast weights according to the procedure outlined in Buckless and Ravenscroft (1990). The specific contrast weights I use are as follows: +3 in the Choice/Egregious Article condition, -1 in the Choice/Irrelevant Article condition, -1 in the No Choice/Egregious Article condition, and -1 in the No Choice/Irrelevant Article condition. These contrast weights compare the cell where rationalization is most likely to take place (since both the motivation and opportunity to rationalize is present in this cell) against the other three cells. Results of this planned contrast are presented in Panel B of Table 1.⁵ I find marginal support for the interaction predicted in H1 (p=0.087, one-tailed). Figure 1 presents the plot of the interaction between choice and article content. An evaluation of differences between cells testing H1a and H1b shows that participants in the Choice / Egregious Article condition provided marginally higher appropriateness

⁴ This section includes the responses of all participants. The results are unchanged if these individuals are excluded from the analysis.

⁵ The interaction of choice and article content is insignificant without the planned contrast weights (p=0.12, one-tailed)

judgments than participants in the Choice / Irrelevant Article condition ($p = 0.094$, one-tailed), providing marginal support for H1a. A comparison of the Choice / Egregious Article condition with the No Choice / Egregious Article condition does not support H1b ($p = 0.119$, one-tailed).

The marginal significance of these results can be explained by the earnings management behavior of my participants. Although I designed the initial earnings management task in a way that encourages participants to manage earnings, only 44% of my participants chose to manage earnings when they were asked to make a decision. This is in contrast to other work examining earnings management behavior in managers (Desai, Trompeter and Wright 2008; Holderness and Hunton 2010), which generally shows that approximately 90% of participants choose to manage earnings in similar situations.

The slippery slope pattern documented in other research requires an individual to make an initial decision to manage earnings.⁶ Since my study focuses on how beliefs change when managers decide to manage earnings, the remainder of this analysis section will focus on individuals who actually made the decision to manage earnings. Of course, individuals who chose to manage earnings could differ systematically from the rest of the Choice participants, introducing a selection bias in comparisons with the No Choice condition. To mitigate that concern, I identify earnings managers among participants in the No Choice condition by including a choice question after the dependent variables have been collected: “When you started this experiment, you were told to ASSUME that you had chosen to record \$150,000 as an estimate for expected warranty costs on a new product. If you had a CHOICE in this case, what amount would you choose?” Using this question, I can compare individuals who *would have* managed earnings in the No Choice condition against individuals who *chose* to manage earnings

⁶ When an individual is unwilling to make this initial decision, there is no behavior to rationalize and no danger of going down the slippery slope.

in the Choice condition, allowing me to determine how the act of making the decision changes behavior.

Hypothesis Test –Earnings Manager Sample

Descriptive statistics (means, standard deviations and medians) for my appropriateness measure for this smaller sample are presented in Panel A of Table 2. As shown in this table, participants who made the choice to manage earnings are evenly divided among experimental conditions, indicating that there is no significant difference in the number of individuals who would chose to manage earnings between conditions. I conduct the same contrast analysis on this data. Results of this planned contrast are presented in Panel B of Table 2.⁷ My predicted interaction is significant in this sample ($p=0.016$, one-tailed), providing support for H1. Figure 2 presents the plot of the interaction between choice and article content. I also perform simple effects tests on my data to test H1a and H1b. I find that participants in the Choice / Egregious Article condition provide significantly higher appropriateness judgments than participants in the Choice / Irrelevant Article condition ($p = 0.029$, one-tailed), which supports H1a. I also find that participants in the Choice / Egregious Article condition provide significantly higher appropriateness judgments than participants in the No Choice / Egregious Article condition ($p = 0.050$, one-tailed), supporting H1b. These simple effects support my hypothesis that presenting participants with both a choice to manage earnings and the egregious article gives participants both a motivation to rationalize and a method of rationalization: advantageous comparison.

⁷ The interaction of choice with article content is marginally significant without the planned contrast weights ($p=0.09$)

V. EXPERIMENT TWO

Overview

Experiment One provides evidence that individuals believe that earnings management is more appropriate when they have both the motivation and the opportunity to rationalize their behavior. Experiment Two extends the findings of Experiment One in two important respects. First, Experiment Two examines how providing participants with a different type of SEC article will influence beliefs about earnings management. Experiment Two includes a condition where participants are shown a less egregious example of earnings management (i.e., an example which is closer to the behavior participants perform in the first part of the experiment). I expect that participants will not be able to rationalize their choice to manage earnings when they are exposed to the “similar” article. Thus, their beliefs about the appropriateness of earnings management will be below those of participants in the “egregious” article condition. If this expectation holds, it suggests that regulators might be able to prevent slippery slope behavior by publicizing examples of relatively small earnings management, to help ensure that managers do not rationalize their earnings management tactics through advantageous comparison.

Second, Experiment Two provides additional information about the process underlying my experimental results. The results of Experiment One could be explained by two alternative theories. The first is “regulatory signaling,” where publicizing an egregious example of earnings management signals that the SEC is only interested in stopping very severe cases of earnings management. This signal might make less severe earnings management seem more appropriate, or at least less likely to be penalized. The second is the “commonality of earnings management,” where reading any article discussing an example of earnings management leads participants to conclude that it is relatively common practice and therefore appropriate. To address these

alternative explanations, I include several within-subject questions at the end of the experiment. These questions are designed to investigate whether participants believe that their earnings management behavior would be influenced by the presence of an SEC article with different types of content. These questions allow me to determine whether either of these alternative explanations are driving the results of my experiment, and provide me with additional information about how the articles I present to participants affect their beliefs about earnings management.

Method

Except as noted, the method in Experiment Two is the same as that used in Experiment One.

Participants

Participants are 74 graduate students from a major university in the eastern United States. The average participant is 28 years old, with an average of 6.5 years of work experience. Participants have completed an average of 2 accounting and 1 finance courses.

Design

Experiment Two uses a 1 X 3 between-subjects design manipulating the content of an SEC article presented to participants. All participants are given a choice to manage earnings.

Materials and Procedure

The experiment is administered through Qualtrics, either in an experimental lab or through an online survey completed on a personal computer.⁸ Participants are offered \$10 in exchange for their participation. The materials used in Experiment Two are identical to Experiment One, with two exceptions.

⁸ 12 participants took the experiment online, and 62 took it in a lab setting. The method of administration (lab vs. online survey) did not have a significant effect on any experimental results.

First, participants are provided with one of three different articles discussing a recent SEC action: an “irrelevant” article (identical to Experiment One), an “egregious” article (identical to Experiment One) or a “similar” article. The “similar” article (included in Appendix B) describes an SEC enforcement action against a company that managed its earnings, but discusses amounts that are much smaller than the “egregious” article (\$150,000 vs. \$150,000,000 in inflated earnings) and methods of earnings management that are much less severe than the “egregious” article (underestimating expenses vs. failing to record estimates). These changes are intended to reduce the possibility of advantageous comparison by presenting participants with an example of earnings management that was detected and punished and that was relatively similar to the decision they were asked to make in the first part of the experiment.

Second, the end of the experiment includes three within-subject questions designed to assess participants’ beliefs about how different types of SEC articles could alter their behavior. All three questions ask participants to consider how reading one of two different articles from the SEC (labeled as “Scenario A” and “Scenario B”) would change the earnings management decision they were asked to make in the first part of the experiment.⁹ For each question, participants are asked “Would you be less likely to select the low accrual amount to meet your profit target in Scenario A or Scenario B?” on a 7-point Likert scale with the labels “1 – Much Less Likely in Scenario A”, “4 – No Difference”, “7 – Much Less Likely in Scenario B.” The three questions are:

- 1) “SEC Enforcement”: The first question presents participants with the “irrelevant” article, and either the “egregious” article or the “similar” article.¹⁰

⁹ Order was counterbalanced between participants on all questions, and had no effect on the results.

¹⁰ Participants in the “egregious” and “irrelevant” cases were presented with the “egregious” article as Scenario A and the “irrelevant” article as Scenario B. Participants in the “similar” condition were presented with the “similar”

- 2) “Size”: The second question presents participants with two SEC articles describing either a large (\$150,000,000) or a small (\$150,000) example of earnings management.¹¹
- 3) “Similarity”: The third question presents participants with two SEC articles describing either a similar (recording artificially low estimates of expenses) or a dissimilar (using off-balance sheet entities to conceal interest expense) example of earnings management.

Each of these questions is designed to investigate how participants believe reading different types of articles discussing an SEC enforcement action would influence their behavior. I expect that participants will report that they would be less likely to manage earnings when they see an article describing an SEC enforcement action, a response which is inconsistent with my Experiment One results, thereby providing evidence that the effects of advantageous comparison are unconscious.

Results

Comprehension Checks

The debriefing questions at the end of Experiment Two included two comprehension check questions, which were identical to the questions included in Experiment One. 6 participants (9%) missed one of these two questions, indicating that the great majority of the participants understood the experimental materials.¹²

Between-Participants Tests

I focus on the 38 participants who made the choice to manage earnings in Experiment Two, since these individuals are the most likely to exhibit the slippery slope pattern of earnings

article as Scenario A and the “irrelevant” article as Scenario B. Experimental condition had no effect on the response to the question.

¹¹ For the “size” and “similarity” questions, participants were shown a modified version of the article they saw in the between-subjects portion of the experiment. Experimental condition had no effect on the response to either question.

¹² This section includes the responses of all participants; the results are unchanged if these individuals are excluded from the analysis.

management.¹³ Descriptive statistics (means, standard deviations and medians) for my appropriateness measure of these participants are presented in Panel A of Table 3. The number of participants who made the choice to manage earnings is slightly different across cells in Experiment 2. However, since participants make the choice to manage earnings before they are shown the article from the SEC (the independent variable in this experiment), condition could not have an effect on the number of individuals who chose to manage earnings. Thus, selection bias is unlikely to be a problem in my results.

To evaluate these responses, I perform a series of planned comparisons examining differences between experimental cells. Results of these planned comparisons are presented in Panel B of Table 3. I find that participants believe that earnings management is more appropriate in the “egregious” condition compared to the “irrelevant” condition ($p = 0.025$, one-tailed). This result replicates the findings of Experiment One. I also find a marginally significant difference between the “egregious” condition and the “similar” condition ($p = 0.082$, one-tailed), where participants believe that earnings management is less appropriate in the “similar” condition. This result is consistent with my expectations. I find no difference between the “similar” condition and the “irrelevant” condition ($p = 0.474$, two-tailed). Figure 3 presents a plot of my experimental results.

These results suggest that showing participants a less egregious example of earnings management reduces advantageous comparison, thereby limiting participants’ rationalization of their behavior through changing their beliefs.

¹³ If I evaluate the responses of all participants in this experiment (i.e. both those who chose to manage earnings and those who chose not to manage earnings) the qualitative results do not change.

Within-Participants Tests

I also focus on the 38 participants who made the choice to manage earnings when evaluating responses to my within-subject questions.¹⁴ Descriptive statistics (means, standard deviations and medians) for the three within-participants questions (the “SEC Enforcement” question, the “Size” question and the “Similarity” question) are presented in Panel A of Table 4.¹⁵ Since a response of “4” on these questions indicates that their behavior would not change based on the article they read, I test if the mean responses provided by participants are different from “4.” The results of these tests are presented in Panel B of Table 4. I find that responses to the “SEC enforcement” question are significantly below 4 ($p = 0.007$, one-tailed), indicating that participants believe they would be less likely to manage earnings when they read an article discussing an SEC enforcement action. This test indicates that participants on average do not infer that the SEC is unlikely to punish small instances of earnings management or infer that earnings management is common and therefore appropriate when they read an article discussing an SEC enforcement action.

I find that responses to the “Size” question are not significantly different from 4 ($p = 0.351$, one-tailed). This indicates that participants do not draw a signal from the size of the earnings management example discussed in an SEC enforcement action. However, I find that responses to the “Similarity” question are marginally less than 4 ($p = 0.060$, one-tailed), indicating that participants believe they would be less likely to manage earnings when the SEC publicizes enforcement actions related to relatively similar forms of earnings management.

These responses provide some interesting insights about my overall results. First, they show that participants believe that reviewing an article about an SEC enforcement action will

¹⁴ Evaluating the responses of all participants produces qualitatively similar results.

¹⁵ Experimental condition has no effect on the responses to any within-subject question.

reduce their intention to engage in earnings management. Since these results are opposite to my between-subject results, this data suggests that my between-subjects results are unintentional (Libby, Bloomfield and Nelson 2002) and helps eliminate possible alternative explanations. Second, these responses suggest that beliefs about earnings management are constrained in the “similar” article condition by the type of earnings management discussed in the article, rather than the size of the manipulation. This suggests that the SEC might try to curb slippery slope behavior by publicizing examples of relatively common earnings management techniques, since these examples will “cut off” advantageous comparison.

VI. CONCLUSION

Recent research examining earning management proposes that egregious earnings management might occur because of a slippery slope to fraud by which executives begin with small earnings management decisions and gradually progress towards severe earnings management (Schrand and Zechman 2011). My paper extends this line of research by conducting two experiments examining how making a decision to manage earnings changes individuals’ beliefs about the appropriateness of earnings management.

In the first experiment I show that individuals who make a choice to manage earnings, and are presented with information discussing an egregious example of earnings management, report that earnings management is more appropriate than individuals who are not given a choice or who are not provided with the example. Psychological theory indicates that these results occur because choosing to manage earnings creates cognitive dissonance within the mind of a manager, between the decision to manage earnings and the desire to be an “honest person.” Managers reduce this conflict by rationalizing their decision to manage earnings, concluding that it is relatively appropriate. Managers are better able to do this when presented with an opportunity to

rationalize their behavior. I provide this opportunity by showing participants an egregious example of earnings management, which allows them to engage in advantageous comparison and conclude that their actions are actually appropriate. The results of my second experiment provide additional support for advantageous comparison by demonstrating that presenting participants with a less egregious, more similar example of earnings management does not produce rationalization. My second experiment also suggests that my results are unintentional and not driven by signaling about the SEC's enforcement intentions or the commonality of earnings management.

The differences in beliefs shown in my experiment could have an effect on future decisions. Previous research suggests that the personal traits of executives of executives can influence financial reporting decisions (Hribar and Yang 2010; Schrand and Zechman 2011). The changes in beliefs produced by rationalization could have a similar effect to the "trait" variables examined in these papers. Previous research examining belief change has shown that these changes are long-lasting, persisting for a number of years after the initial revision (Freedman 1965), even for highly salient issues like job choice (Lawler, Kulek, Rhode and Sorenson 1975). Decisions about earnings management are likely to be highly salient and memorable, resulting in lasting belief changes that do not degrade over time. Future research could investigate how future actions change based on initial decisions.

The results of my experiments show that providing managers with an example of egregious earnings management can have unintended consequences. The SEC presumably publishes press releases about enforcement actions to serve as a warning to managers, but when managers already have made a relatively innocuous decision to manage earnings, they may view examples of egregious earnings as a comparison point rather than a warning against their

behavior. Such egregious examples may allow managers to conclude that their own behavior is relatively appropriate by comparison. This process could extend to other examples of egregious misbehavior, such as a fellow employee being disciplined for failing to record accruals, or articles in the business press discussing fraud in financial reporting. The results of my second experiment suggest that regulators could attempt to curb this type of behavior by publicizing examples of less egregious earnings management. These smaller examples are less likely to encourage advantageous comparison and might serve to curb small instances of earnings management more effectively than egregious examples.

These results also complement the findings provided in Schrand and Zechman (2011). My results indicate that managers might conclude that earnings management is more appropriate based on rationalization of their prior actions. Simply making the choice to manage earnings changes a participant's beliefs about the appropriateness of earnings management when a basis for rationalization is in place, even when economic conditions are held constant. In other words, when a method of rationalization is available, the simple fact that managers have engaged in earnings management can change their future behavior and send them down the slippery slope of earnings management.

My results are subject to several limitations. First, my study participants are MBA students, rather than practicing managers. The majority of previous research on rationalization and earnings management has generally used more experienced participants (Desai, Trompeter and Wright 2009; Holderness and Hunton 2010) to try to determine why practicing managers make earnings management decisions. However, my study focuses on the concept of rationalization, a fundamental property of human psychology (Sloan 1944; Festinger 1957), and higher levels of expertise or experience are unlikely to influence the basic need for

rationalization. Using years of work experience as a covariate in my experimental tests has no effect on the significance of my results. Additional research could extend my experimental results to see if expertise changes the types of rationalization performed in a similar setting – perhaps more experienced participants change their beliefs about the future performance of the firm, or change their perceptions of the corporate culture of their firm.

Second, I do not provide real monetary incentives to encourage earnings management in my study. The lack of a monetary payoff could be one possible reason why relatively few participants chose to manage earnings in the choice condition. This concern biases against finding significant results. When individuals are presented with a real monetary reward for earnings management, both the number of people who choose to manage earnings and the need for rationalization should be higher than in my hypothetical scenario, which should strengthen my reported results. Additional research could examine how providing different types of real incentives to participants influences rationalization behavior.

My results provide several interesting avenues for future research. Future research could investigate other types of earnings management, and other mechanisms for rationalization, to investigate how motivations and opportunities interact to produce rationalization. Future research also could examine how initial actions influence beliefs and possibly alter future decisions. For example, auditors who decide to accept a client's aggressive position may be more likely to agree to another deviation from GAAP when firm training manuals emphasize high-level failures, and managers might be more likely to accept sacrificing value to achieve accounting targets when they read articles about failed businesses. I hope that this paper will serve as a springboard for additional research examining how beliefs are shaped by actions in unanticipated ways.

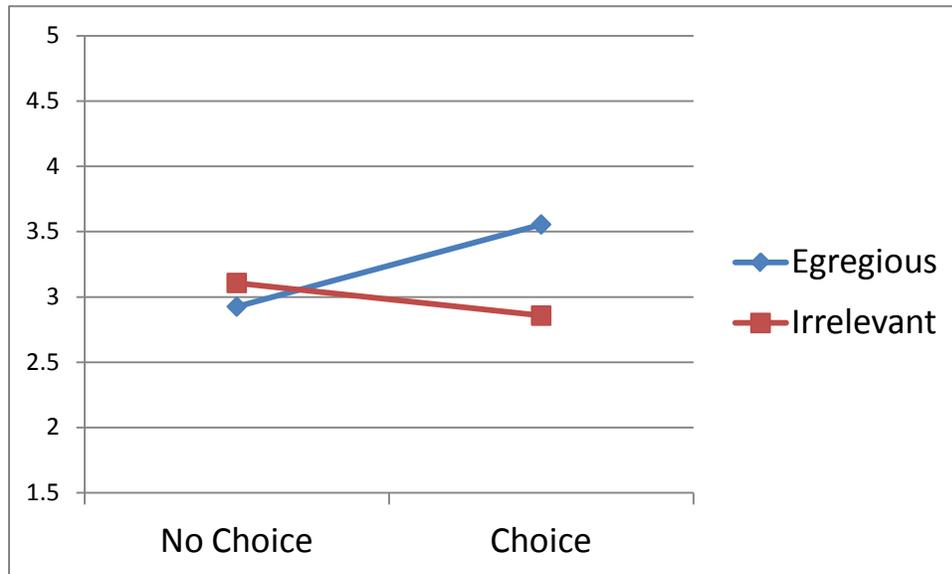
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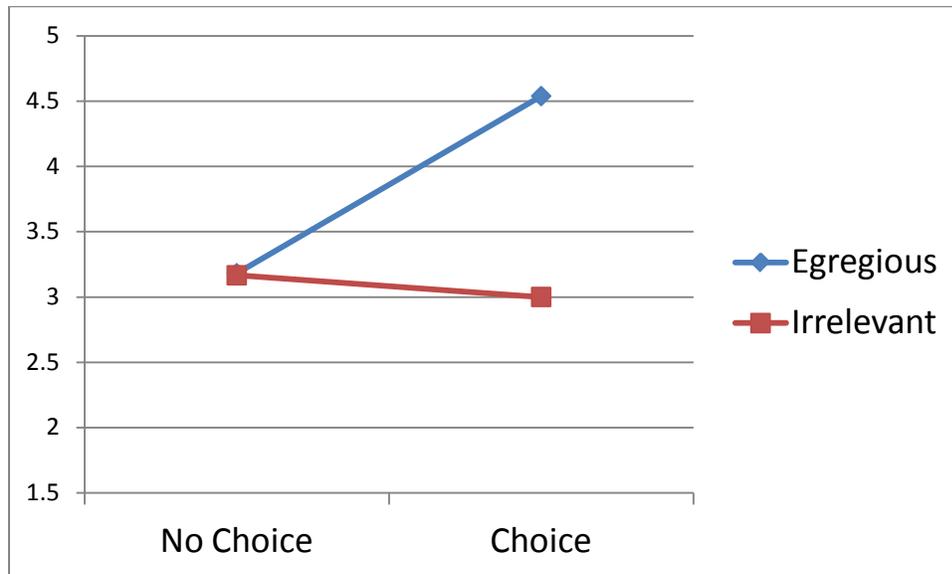
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Figure 1. Plot of Choice X Article Content Interaction – Full Sample



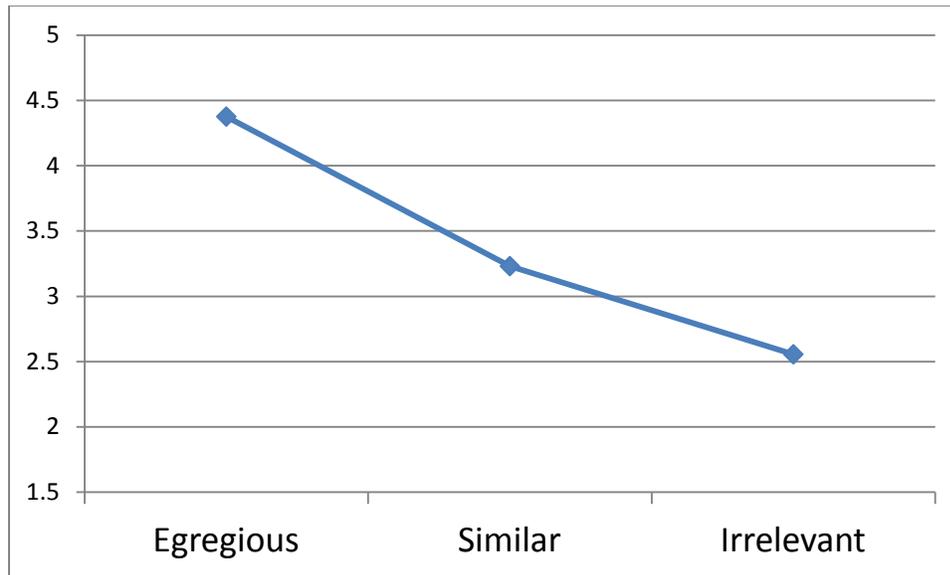
This figure plots means for Experiment One, in which 110 participants either made a decision about managing earnings or were told to assume that they managed earnings, then reviewed a press release from the SEC containing details about an egregious example of earnings management or containing details about an irrelevant appointment. The experiment measures beliefs about the appropriateness of earnings management by asking participants to provide advice to a friend about the appropriateness of under-accruing an environmental liability. Participants respond on a 9-point Likert scale with points labeled “1 – Not Appropriate”, “5 – Somewhat Appropriate” and “9 - Very Appropriate.”

Figure 2. Plot of Choice X Article Content Interaction – Manipulator Sample



This figure plots means for the experiment for the 48 participants who made the decision to manage earnings. In all conditions, participants were asked if they would be willing to engage in earnings management. This graph compares the judgments of these individuals in each experimental cell. All other details are identical to Figure 1.

Figure 3. Plot of Experiment Two – Manipulator Sample



This figure plots means for the 38 participants who made the decision to manage earnings in Experiment 2, in which all participants made a decision about managing earnings, then reviewed either a press release from the SEC containing details about an egregious example of earnings management, a similar example of earnings management, or an irrelevant appointment. The experiment measures beliefs about the appropriateness of earnings management by asking participants to provide advice to a friend about the appropriateness of under-accruing an environmental liability. Participants respond on a 9-point Likert scale with points labeled “1 – Not Appropriate”, “5 – Somewhat Appropriate” and “9 - Very Appropriate.”

Table 1. Descriptive Statistics and Analysis of Variance For Experiment One – Appropriateness Judgments, Full Sample

Panel A. Descriptive Statistics for Appropriateness Judgment: Mean, (Standard Deviation), and [Median]

	Presented with a Choice to Manage Earnings?		Overall
	Given a Choice	Not Given a Choice	
Article Content			
Egregious	3.555 (2.309) [3] <i>n</i> = 27	2.926 (1.879) [3] <i>n</i> = 27	3.241 (2.109) [3] <i>n</i> = 54
Irrelevant	2.857 (1.325) [3] <i>n</i> = 28	3.107 (2.149) [3] <i>n</i> = 28	2.982 (1.773) [3] <i>n</i> = 56
Overall	3.200 (1.889) [3] <i>n</i> = 55	3.018 (2.004) [3] <i>n</i> = 55	

Panel B. Contrast Coding and Simple Effects Tests for Appropriateness Judgments

Comparison #1 -Choice / Egregious Article vs. All Other Cells					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	7.143	1	7.143	1.88	0.087
Residual	0.922	2	0.461	0.12	0.887
Comparison #2 - Choice / Egregious Article vs. Choice / Irrelevant Article					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	6.704	1	6.704	1.76	0.094
Residual	1.361	2	0.681	0.18	0.836
Comparison #3 -Choice / Egregious Article vs. No Choice / Egregious Article					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	5.352	1	5.352	1.41	0.119
Residual	2.713	2	1.357	0.36	0.700

This table presents descriptive statistics, contrast-coded ANOVA, and simple main effects tests for Experiment One, in which 110 participants either made a decision about managing earnings or were told they managed earnings, then reviewed a press release from the SEC containing details about an egregious example of earnings management or containing details about an irrelevant appointment. Experiment One measures judged appropriateness of earnings management by asking participants to provide advice to a friend about the appropriateness of under-accruing an environmental liability. Participants respond on a 9-point Likert scale with points labeled “1 – Not Appropriate,” “5 – Somewhat Appropriate” and “9 - Very Appropriate.” Comparison #1 has the following contrast weights: +3 in the Choice/Egregious Article condition, –1 in the Choice/Irrelevant Article condition, –1 in the No Choice/Egregious Article condition, and –1 in the No Choice/Irrelevant Article condition. All p-values are one-tailed.

Table 2. Descriptive Statistics and Analysis of Variance For Experiment One – Appropriateness Judgments, Subjects Who Reported That They Would Manage Earnings

Panel A. Descriptive Statistics for Appropriateness Judgment: Mean, (Standard Deviation), and [Median]

	Presented with a Choice to Manage Earnings?		Overall
	Given a Choice	Not Given a Choice	
Article Content			
Egregious	4.538 (2.183) [5] <i>n</i> = 13	3.182 (2.401) [2] <i>n</i> = 11	3.083 (1.558) [3] <i>n</i> = 24
Irrelevant	3.000 (1.348) [3] <i>n</i> = 12	3.166 (1.800) [3] <i>n</i> = 12	3.917 (2.339) [3.5] <i>n</i> = 24
Overall	3.800 (1.958) [3] <i>n</i> = 25	3.173 (2.059) [3] <i>n</i> = 23	

Panel B. Contrast Coding and Simple Effects Tests for Appropriateness Judgments

Comparison #1 - Choice / Egregious Article vs. All Other Cells					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	19.167	1	19.167	4.95	0.016
Residual	1.947	2	0.9735	0.21	0.812
Comparison #2 - Choice / Egregious Article vs. Choice / Irrelevant Article					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	14.769	1	14.769	3.81	0.029
Residual	4.691	2	2.3455	0.61	0.549
Comparison #3 - Choice / Egregious Article vs. No Choice / Egregious Article					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	10.966	1	10.966	2.83	0.050
Residual	8.494	2	4.247	1.10	0.343

This table presents descriptive statistics, contrast-coded ANOVA, and simple main effects tests for participants who reported that they would manage earnings in Experiment One. There were a total of 48 participants across all conditions who made this decision. In Experiment One, all participants either made a decision about managing earnings or were told they managed earnings, and then reviewed a press release from the SEC containing details about an egregious example of earnings management or containing details about an irrelevant appointment. The experiment measures judged appropriateness of earnings management by asking participants to provide advice to a friend about the appropriateness of under-accruing an environmental liability. Participants respond on a 9-point Likert scale with points labeled “1 – Not Appropriate,” “5 – Somewhat Appropriate” and “9 - Very Appropriate.” Comparison #1 has the following contrast weights: +3 in the Choice/Egregious Article condition, –1 in the Choice/Irrelevant Article condition, –1 in the No Choice/Egregious Article condition, and –1 in the No Choice/Irrelevant Article condition. All p-values are one-tailed.

Table 3. Descriptive Statistics and Analysis of Variance for Experiment Two – Appropriateness Judgments, Manipulator Sample

Panel A. Descriptive Statistics for Appropriateness Judgment: Mean, (Standard Deviation), and [Median]

	Experimental Condition			Overall
	Egregious	Similar	Irrelevant	
Appropriateness Judgments	4.375	3.230	2.555	3.552
	(2.362)	(1.589)	(2.455)	(2.226)
	[4.5]	[3]	[1]	[3]
	<i>n</i> = 16	<i>n</i> = 13	<i>n</i> = 9	<i>n</i> = 38

Panel B. Simple Effects Tests for Appropriateness Judgments

Comparison #1 - Egregious > Irrelevant					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	19.067	1	19.067	4.11	0.025
Residual	2.047	2	1.0235	0.22	0.803
Comparison #2 - Egregious > Similar					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	9.391	1	9.391	2.03	0.082
Residual	11.723	2	5.8615	1.26	0.295
Comparison #3 - Similar > Irrelevant					
Factor	S.S.	d.f.	M.S.	F Ratio	p-value
Model Contrast	2.425	1	2.425	0.52	0.474
Residual	18.689	2	9.3445	2.02	0.148

This table presents descriptive statistics and simple main effects tests for the 38 participants who chose to manage earnings in Experiment Two, in which 67 participants were asked to make a decision about managing earnings, then reviewed either a press release from the SEC containing details about an egregious example of earnings management, a similar example of earnings management, or an irrelevant appointment. The experiment measures beliefs about the appropriateness of earnings management by asking participants to provide advice to a friend about the appropriateness of under-accruing an environmental liability. Participants respond on a 9-point Likert scale with points labeled “1 – Not Appropriate”, “5 – Somewhat Appropriate” and “9 - Very Appropriate.” All p-values are one-tailed, except for the similar vs. irrelevant comparison, which is two-tailed.

Table 4. Descriptive Statistics and Means Tests for Experiment Two – Within-Subject Questions

Panel A. Descriptive Statistics for Within-Subject Questions: Mean, (Standard Deviation), and [Median]

Within-Subjects Question	Overall
SEC Enforcement	3.105
	(1.942)
	[2.5]
	<i>n</i> = 38
Size	3.864
	(2.136)
	[4]
	<i>n</i> = 37
Similarity	3.552
	(1.735)
	[4]
	<i>n</i> = 38

Panel B – Test of Mean Responses to Within-Subject Questions < 4

Dependent Variable	Difference from 4	d.f.	t-value	p-value
SEC Enforcement	0.895	37	-2.84	0.007
Size	0.136	36	-0.38	0.351
Similarity	0.448	37	-1.59	0.060

This table presents descriptive statistics and difference tests for within-subject questions asked of the 38 participants who chose to manage earnings in Experiment Two. The within-subject questions ask participants to consider how reading one of two different articles from the SEC (labeled as “Scenario A” and “Scenario B”) would change the earnings management decision they were asked to make in the first part of the experiment. “SEC Enforcement” presents participants with the “irrelevant” article, and either the “egregious” article or the “similar” article. “Size” presents participants with two SEC articles describing either a large (\$150,000,000) or a small (\$150,000) example of earnings management. “Similarity” presents participants with two SEC articles describing either a similar (recording artificially low estimates of expenses) or a dissimilar (using off-balance sheet entities to conceal interest expense) example of earnings management. After reviewing these articles, participants are asked to answer the question “Would you be less likely to select the low accrual amount to meet your profit target in Scenario A or Scenario B?” on a 7-point Likert scale with the labels “1 – Much Less Likely in Scenario A,” “4 – No Difference,” “7 – Much Less Likely in Scenario B.” All p-values are one-tailed.

Appendix A – Initial Earnings Management Decision

Please assume that you work as a division manager for a consumer goods company.

It is the end of the year, and you are finalizing your division's financial records. You have one more major decision to make.

Your division has started selling a new product this year, a type of vacuum cleaner that is very popular among consumers. These products are sold with a 10-year warranty.

You need to estimate expected warranty expense for this product and record it as an expense. Since this product is new, your staff has provided you with a range of possible outcomes for this expense:

Warranty Expense Probability

\$100,000	20%
\$150,000	20%
\$200,000	20%
\$250,000	20%
\$300,000	20%

As you review this information, you note that your division has earned **\$4.20 million dollars** in operational profit this year. This is a significant increase from the previous year.

Senior management at your firm has set up a new requirement that each division meets a certain operational profit target each year. If your division meets its profit target, you will receive a bonus for the year (worth approximately 50% of your yearly salary) and your division will receive more resources to expand into new markets. If you do not, you will not receive a bonus and you may need to lay off personnel next year.

Senior management has set an operational profit target for your division of **\$4.05 million dollars**. Thus, before you have recorded your estimate of warranty expense, **you will meet the profit target this year**.

You note that your division usually determines an expense estimate by multiplying each estimate by its probability and recording the average amount. If you follow this approach, **it will reduce operational profit for your division by \$200,000**. This means **your division will miss its profit target by \$50,000**.

However, you note that you could record the second-to-lowest estimate included in the range. If you follow this approach, **it will reduce operational profit for your division by \$150,000**. This means **your division will exactly meet its profit target**. You note that initial reports of the reliability of the vacuum are good.

Based on this information, **what amount would you record as an estimate of warranty expense?**

Appendix B – SEC Articles Presented to Participants

Egregious Case:

Porbella CEO Must Return \$25M in SEC Settlement

The Securities and Exchange Commission has filed an action against the CEO of Porbella Homes, forcing him to return nearly \$25 million in bonuses, stock options and other compensation he received while the Atlanta-based home builder was committing accounting fraud.

The SEC has stated that Porbella managed its earnings during the period primarily by failing to record estimates of expected housing repairs, excluding over \$150 million in expenses from their 2008 financial results. These activities artificially increased Porbella's net income by over \$150 million dollars. Once this accounting fraud was revealed, the company's stock price declined by over 50%, losing over \$500 million in market value.

Irrelevant Case:

SEC Announces New Appointment to Lead National Broker-Dealer Program

The Securities and Exchange Commission today announced that Julius Leiman-Carbia has been appointed an Associate Director to lead the National Broker-Dealer Examination Program in the SEC's Office of Compliance Inspections and Examinations (OCIE).

In this role, Mr. Leiman-Carbia oversees a staff of approximately 300 lawyers, accountants and examiners responsible for the inspections of U.S.-based broker-dealers. He succeeds Mary Ann Gadziala, who retired from the SEC in September. Mr. Leiman-Carbia said, "I look forward to working with this talented and dedicated team of examiners, and I welcome the opportunity to use my expertise from the industry to further strengthen the National Exam Program."

Similar Case:

Porbella CEO Must Return \$25,000 in SEC Settlement

The Securities and Exchange Commission has filed an action against the CEO of Porbella Homes, forcing him to return nearly \$25,000 in bonuses, stock options and other compensation he received while the Atlanta-based home builder was manipulating accounting estimates.

The SEC has stated that Porbella managed its earnings during the period primarily by recording artificially low estimates of expected housing repairs, reducing their 2008 expenses by \$150,000. These activities artificially increased Porbella's net income by over \$150,000. The company's stock price declined by 5% when this accounting issue was revealed, losing over \$500,000 in market value.

Appendix C – Main Dependent Measure

About a month later, you are at a conference for managers in the consumer goods industry. You come across an old friend of yours that used to work for a related division. He currently runs the manufacturing division of a large company in your industry.

Your friend tells you that he needs to make a decision about how to report his financial results. His division has been struggling, and he is in danger of reporting a significant loss this year. If this happens, he may lose his job, and he will almost certainly have to lay off a significant portion of his workforce.

He tells you that he needs to estimate how much his division will spend to clean up a toxic spill that came from one of its plants. The total amount this will cost is very uncertain, and has a range of possible amounts. If he records the mid-point of this range, his division will report a loss for the year. But if he records the low point of the range, his division will report a small gain.

In your opinion, how appropriate would it be for your friend to record the low point of the range of estimates?

CURRICULUM VITAE

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EDUCATION

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Double Major in Psychology and Managerial Studies

RESEARCH INTERESTS

Investigating how managers, investors and auditors process and use accounting information to reach decisions.

DISSERTATION

- “Advantageous Comparison and the Slippery Slope to Fraud.”

ABSTRACT: Schrand and Zechman (2011) posit that economic factors can drive managers down the “slippery slope” of earnings management, in which the amount of earnings management by a company increases over time. This paper proposes that psychological forces can further encourage individuals to slide down the slippery slope. I show that, under certain circumstances, engaging in a small amount of earnings management alters the manager’s beliefs about the appropriateness of the act, which makes further earnings management more likely. Specifically, I predict and find in two experiments that making an initial decision to manage earnings creates a desire for rationalization. Participants presented with an egregious example of earnings management, which are commonly the focus of enforcement actions and press reports, engage in rationalization through a mechanism called “advantageous comparison” by which they conclude that what they did was relatively innocuous and therefore appropriate. My analysis also indicates that participants do not infer a signal about regulator intentions or the commonality of earnings management from the egregious example, and that presenting participants with an article detailing a similar example of earnings management mitigates advantageous comparison. These results have implications for academics interested in how fraud might occur over time and for regulators and practitioners who are interested in preventing it.

WORKING PAPERS

- “Financial Statement Disaggregation and Auditors’ Tolerance for Misstatement”
With Robert Libby (2nd round review at *The Accounting Review*)

ABSTRACT: Current IFRS requires significant disaggregation of income statement numbers while such disaggregation is voluntary and less common under U.S. GAAP. We examine whether voluntary disaggregation of income statement numbers might increase the reliability of income statement subtotals because auditors permit less misstatement in the disaggregated numbers. In our experiment, experienced auditors require correction of smaller errors in disaggregated numbers. Auditors also believe that greater disaggregation will increase SEC scrutiny of uncorrected financial statement errors in the disaggregated numbers. However, the effects are substantially reduced if the disaggregated numbers are presented in the notes. Furthermore, there is significant disagreement among participants on whether disaggregated numbers are relevant materiality benchmarks, and on what current auditing guidance requires. These results suggest a potential deficiency in current audit guidance, which traditionally has been aimed at promoting consensus in practice among auditors. If auditors react in a similar fashion to required disaggregation, it also suggests that requiring more disaggregation through U.S. adoption of IFRS or the recommendations of the joint FASB/IASB financial statement presentation project may have an unintended positive consequence.

- “Who Stands at the Top and Bottom of the Slippery Slope?”
With Kristina Rennekamp, Nicholas Seybert and Wenjie Zhu (under review at *The Accounting Review*)

ABSTRACT: Prior research argues that sequential decisions lead to a slippery slope toward misconduct and that Machiavellian worldviews of corporate executives contribute to fraud, with little evidence to support such claims. We experimentally manipulate whether participants engage in an increasing or decreasing sequence of infractions related to an ambiguously unethical decision. We find that low-Machiavellians commit larger cumulative infractions when the infraction opportunities are increasing in magnitude. High-Machiavellians are less susceptible to slippery slope behavior and are more likely to commit larger total infractions. Our results confirm the slippery slope toward misconduct but demonstrate differential effects across individuals and situations.

- “Contrast Effects in Application of Accounting Standards”
With Scott Asay, Mark Nelson and Jeff Wilks (under review at the *Journal of Accounting Research*)

ABSTRACT: Accountants applying professional standards are increasingly aware of standards from multiple reporting regimes that offer conflicting guidance. This paper examines whether accountants in such circumstances are vulnerable to contrast effects, whereby reporting judgments are systematically biased away from the alternative that would be supported by standards that apply in another regime. We report the results of two experiments indicating that upper-level accounting students display systematic contrast effects, that contrast effects decrease under time pressure, and that these effects are not anticipated by the decision makers who exhibit them. These results suggest that contrast effects do not operate as a heuristic, but rather require effortful (but error prone) information processing, consistent with psychology theory. These results have implications for the use of professional standards in the current incomplete-convergence reporting environment, and suggest further research that examines how accountants apply their knowledge of alternative standards and related implementation guidance.

WORK IN PROGRESS

- “The Effects of Mandatory Rotation and Tax Advising on Jury Decision Making”
With Eldar Maxsymov and Mark Nelson (design stage)
- “Compliance with Ethically-Questionable Requests in Firms: Contrasting the Effects of the ‘Foot-in-the-Door’ vs. ‘Door-in-the-Face’ techniques of Social Influence.”
With J. Edward Russo and Kristina Rennekamp (pilot data collected)

TEACHING EXPERIENCE AND INTERESTS

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PROFESSIONAL EXPERIENCE & CERTIFICATIONS

Certified Public Accountant (CPA), 2005

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Austin, TX

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AFFILIATIONS

- American Accounting Association
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