ABSTRACT

In order to carry out unethical acts, individuals engage in a rationalization process to “morally disengage” from the consequences of their actions. Rationalizations provide the mechanism through which individuals are able to “morally disengage.” The purpose of our research is to examine three experimenter-devised interventions to moderate the influence of rationalizations in the process of making ethics-related decisions. Our first two interventions attempt to mitigate one’s ability to rationalize by highlighting the false premises of readily available rationalizations; whereas, our third intervention attempts to bolster the importance of one’s own self-regulation by providing a cautionary explanation of how individuals are inappropriately motivated to rationalize bad behavior. We predict that these interventions should enhance one’s ethical intentions through a reduction in rationalization. Furthermore, we anticipate that the success of our proposed interventions may vary with the degree of auditor professional commitment to the accounting profession. To test our hypotheses, we conducted an experiment with 88 auditors from four public accounting firms. Our results indicate that for auditors with a low professional commitment, two of the rationalization interventions were effective in lowering auditors’ willingness to accede to his superior’s unethical request than participants in the control group, while the third was not. As expected, the rationalization interventions were not effective for auditors with a high professional commitment level as these individuals are found less likely to rationalize. Implications of our research and suggestions for future research are also discussed.
INTRODUCTION

Fraud has been and continues to be a significant concern for companies, shareholders, auditors and regulators. A substantial amount of research has been devoted to the antecedents, patterns and consequences of fraud, and particularly fraudulent financial reporting (Trompeter, Carpenter, Desai, Jones, and Riley 2013). Research also has begun to address various means to prevent, detect, and remediate fraud (Hogan, Rezaee, Riley, and Velury 2008; Free and Murphy 2015). In this vein, audit standards have identified three elements that are necessary for fraud to occur (i.e., the fraud triangle): motivation, opportunity, and rationalization/attitude (AICPA 2002; PCAOB 2005; IAASB 2009). In general, while the motivation and opportunity legs of the fraud triangle have been extensively studied, rationalization has only been sparsely researched to date, and therefore is the least understood component (Carcello and Hermanson 2008; Hogan et al. 2008; Murphy and Dacin 2011; Trompeter et al. 2013). Moreover, the limited published experimental research in accounting to date has relied on (1) students as participants and (2) abstract experimental games that incentivize misreporting behavior with minimal payouts in non-accounting contexts (e.g., Murphy 2012; Mayhew and Murphy 2014). While these studies provide a base foundation that links rationalizations to unethical conduct, it is unclear if and how their results generalize to unethical acts among professionals with realistic contexts.

Non-accounting research in this area has shown that individuals over time develop internal moral standards and a self-regulatory system that monitors their conduct (Detert, Trevino, and Sweitzer 2008). In order to carry out unethical acts, individuals cognitively reconstruct past or future events with the purpose of disabling one’s own self-regulatory mechanisms that govern moral conduct (Sykes and Matza 1957; Bandura 1999). Rationalizations provide the mechanism through

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1 We use the term “fraud” to refer specifically to fraudulent financial reporting in this paper, as this form of fraud has the most severe consequences (Murphy 2012; ACFE 2016).
2 Going forward, we will focus on rationalization rather than attitude, as rationalization is directly germane to our study. Under the subsection — The Rationalization Component — we differentiate these two concepts and make it clear why we are focusing on rationalization.
which individuals are able to “morally disengage.” In this manner, we link the theory of moral disengagement to the rationalization component of fraud.

In a recent report, nearly half of the executives surveyed by a Big 4 accounting firm, openly admitted a willingness to rationalize unethical behavior (EY 2016). Such levels of acceptance are worrisome, as rationalizations are a critical part of the initial stages of normalizing organizational corruption (Ashforth and Anand 2003). If prior research has established that individuals can rationalize unethical conduct, and this is even true amongst professional CPAs that should have a more ethical mindset and be more aware of their professional responsibilities (Reckers, Reinstein, and Sauciuc 2018), then it would behoove researchers to devise and investigate interventions that hold the promise of mitigating the influence of rationalizations (Murphy and Dacin 2011).

The purpose of our research is to examine three theoretically-motivated interventions to moderate the influence of rationalizations in the process of making ethics-related decisions. We propose two key theoretical mechanisms to reduce the cogency of possible rationalizations that foster unethical behavior. First, discredit specific rationalizations; once discredited they should be less likely to be used in decision processes. Second, focus on elevating an individual’s own general self-monitoring efforts. Based on these two theoretical mechanisms, we developed materials for three possible interventions. Our first two interventions attempt to mitigate one’s ability to rationalize by highlighting the false premises of readily available rationalizations (i.e., the first mechanism described above). Our third intervention attempts to bolster the importance of one’s own self-regulation by providing a cautionary explanation of how individuals in general (and CPAs) fall prey to rationalizations in justifying unethical/unprofessional conduct. We predict that these interventions should enhance one’s ethical intentions through a reduction in rationalization. Furthermore, we anticipate that the success of our proposed interventions may vary with the degree of auditor professional commitment with the accounting profession. It was our expectation (and finding) that
our interventions would be most effective among auditors most likely to engage in unethical conduct – those with low professional commitment to and low identification with the accounting profession.3

To test our hypotheses, we conducted an experiment with 88 auditors from two Big 4 accounting firms and two non-Big 4 national accounting firms. We manipulated rationalization interventions such that we had three separate interventions and a control group. We then measured auditors’ professional commitment and separated their responses at the median into high and low groups. We examined the influence and association of rationalization interventions and professional commitment with participants’ assessment of the likelihood that an audit senior would accede to a superior’s unethical directives as set forth in two scenarios. Our results indicate that for auditors with a low professional commitment, two of the rationalization interventions were effective in lowering auditors’ willingness to accede to his superior’s unethical request than participants in the control group, while the third was not. As expected, the rationalization interventions were not effective for auditors with a high professional commitment level as these individuals are found less likely to rationalize in the control condition.

The remainder of this paper is organized as follows. The next section provides a literature review and develops testable hypotheses. The third section details the research methodology and experimental design. The fourth section presents the results of the study. Finally, the last section provides conclusions, consideration of implications, and future research.

**LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

**The Fraud Triangle**

The fraud triangle is a conceptual framework that builds on the assumption that three components are necessary for fraud to occur: (1) motivation, (2) opportunity, and (3) rationalization.4

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3 The tendency to rationalize can vary significantly across individuals (Detert et al. 2008) making it a fertile area for further study.
4 Some authors have suggested a fourth component of fraud – capability (Boyle, DeZoort, and Hermanson 2015). In our case, auditors have the education and knowledge to be complicit in fraud.
Researchers to date have focused their attention primarily on the motivation and opportunity components. For instance, a substantial amount of research has examined the motivation component including aggressive earnings targets (Albrecht and Romney 1986; Bell and Carcello 2000), meeting analyst forecasts (Koh, Matsumoto, and Rajgopal 2008), compensation and incentive structures (Hogan et al. 2008; Trompeter et al. 2013), and a desire to obtain external financing at a low cost (Dechow, Sloan, and Sweeney 1996). Research has also thoroughly investigated the opportunity component and its role in perpetrating fraud by examining the effects of ineffective (or absent) controls, (Asare et al. 2012; Dorminey, Fleming, Kranacher, and Riley 2012), management override (Cohen, Ding, Lesage, and Stolowy 2011), fraud risk assessment (Trompeter et al. 2013), and weak corporate governance (Hogan et al. 2008).

*The Rationalization Component*

Regarding the rationalization component, very little research has been conducted in the accounting discipline for various reasons (Carcello and Hermanson 2008; Hogan et al. 2008; Murphy and Dacin 2011). First, the act of rationalizing untoward behavior is not directly observable and cannot be easily measured (Johnson, Kuhn, Apostolou, and Hassell 2013; Trompeter et al. 2013). Rationalizations are cognitive and can be hidden or suppressed in order to deceive (Cohen et al. 2011). Second, while the auditing standards often use the terms attitude and rationalization interchangeably (AICPA 2002), they are distinct constructs. This creates a challenge for researchers to tease out one influence from the other. We posit that attitudes are predispositions toward behavior, whereas rationalizations are a form of justification to make otherwise unreasonable behavior seem appropriate. Extant research in this area has focused on attitudes (Trompeter et al. 2013). In fact, in a comprehensive fraud review study, Hogan et al. (2008) refer only to research related to attitudes and not to rationalizations.

Research regarding rationalizations in the context of the fraud triangle has been limited to a theoretical study (Murphy and Dacin 2011), two experimental studies with students (Murphy 2012;
Mayhew and Murphy (2014), and a recent working paper (Reckers et al. 2018). Murphy (2012) conducted an experimental game providing student participants with the opportunity to misreport the outcome of their own performance; that is, participants knew that what they reported would be accepted without question. The experimental setting further provided motivation for financial enhancement by paying participants based on the amount they reported irrespective of actual performance. Thus, having provided both motivation and opportunity, Murphy then could focus her attention on rationalization processes. She found that participants whose disposition favored rationalizing did so and were more likely to misreport. Murphy (2012) then proceeded to interfere in her participants’ rationalization process by providing two distinct interventions. The results of these interventions were mixed (and are discussed in the next section).

Mayhew and Murphy (2014) likewise utilized student participants in an experimental game in which incentives and opportunity to misreport were available to participants. To facilitate (not mitigate) the rationalization process, the authors utilized an authority figure under one experimental condition who instructed participants to misreport. Their results revealed that when participants were instructed to misreport, they were significantly more likely to do so. Mayhew and Murphy also found that misreporters rationalized their decision by displacing responsibility to the authority figure.

Reckers et al. (2018) conducted a behavioral experiment with 128 CPAs in which they tested whether exposure to context-specific rationalizations would influence ethical judgments. Half of the participants were provided with rationalizations; the other half were not. All participants were warned in the beginning of their case instrument of the potential dangers of rationalizations leading to unethical behavior. Nonetheless, the authors reported a significant influence of exposure to rationalizations on ethical judgments. This influence manifested irrespective of gender, experience or graduate education. While the study provides preliminary evidence using professional subjects, Reckers et al. did not attend to efforts to mitigate rationalization processes.
The Rationalization Process and its Effects on Moral Disengagement

Before one can devise interventions to neutralize the effects of rationalizations on behavior, one must understand how rationalizations affect individuals’ tendency to morally disengage. Every individual has a moral identity; and with few exceptions (e.g., Machiavellians, psychopaths, etc.) every person aspires to think of her/himself as moral (Mazar, Amir and Ariely 2008). Nonetheless, good people do bad things. Psychologists increasingly say this occurs because people “disengage” their conscience by re-imaging the untoward action as either not untoward or less untoward.

Moral disengagement has its seeds in research conducted by Sykes and Matza (1957) in which the authors identified five “techniques to neutralize” perceptions of misconduct and by doing so protect oneself from self-blame (guilt). Specifically, one could protect their sense of self-worth and moral identity, by denial of responsibility, denial of injury, denial of victim, condemning the condemners and by appealing to higher loyalties. That is, respectively, by rationalizing to oneself that they had no choice in the action, no one was hurt by the action, people got what they deserved, everyone does the same or harm was an inconsequential by-product of a meritorious outcome, individuals are able to maintain their moral identity.

Bandura (1999) expanded on this theme several years later. Bandura’s basic premise was:

“Moral agency is manifested in both the power to refrain from behaving inhumanely and the proactive power to behave humanely. Moral agency is embedded in a broader socio-cognitive self-theory encompassing self-organizing, proactive, self-reflective, and self-regulatory mechanisms rooted in personal standards linked to self-sanctions. The self-regulatory mechanisms governing moral conduct do not come into play unless they are activated, and there are many psychosocial maneuvers by which moral self-sanctions are selectively disengaged from inhumane conduct.” (Bandura 1999, 193)

Thus, Bandura (1986, 1999) conceptualized moral disengagement as an extension of social cognitive theory. Social cognitive theory dictates that individuals are moral agents who are constantly self-monitoring and regulating their actions in light of internal moral standards (Moore, Detert, Trevino, Baker, and Mayer 2012; Johnson and Buckley 2015). Individuals internalize
behavioral standards (societal, firm, and professional values and norms) through developmental experiences and social interactions. This set of moral standards is used to guide and regulate good behavior and deter bad behavior as individuals use these standards to anticipate, monitor, and judge their own actions (Bandura 2002; Kish-Gephart, Detert, Trevino, Baker, and Martin 2014; Johnson and Buckley 2015). As individuals uphold these moral standards, their self-worth is maintained or enhanced. If individuals violate these standards, it brings self-condemnation and guilt. If an opportunity arises to engage in unethical behavior, individuals activate these moral standards and self-regulating mechanisms that constrain unethical behavior. This process results in cognitive dissonance between their internal moral standards and the unethical act. This dissonance often causes individuals to experience discomfort and negative affect (Bandura 1991; Mayhew and Murphy 2014).

To resolve these conflicted objectives and discomfort, individuals may choose not to carry out unethical behavior. Alternatively, individuals may attempt to deactivate their moral self-regulatory process by mentally accessing rationalizations as a means of suppressing present or anticipated uncomfortable feelings (Murphy and Dacin 2011; Trompeter et al. 2012). To the extent that individuals are provided with or self-generate effective rationalizations, their tendency to conduct unethical behavior increases (Bandura, Barbaranelli, Caprara, and Pastorelli 1996). Bandura (1999) identified eight moral disengagement mechanisms that can deactivate this moral self-regulatory process: moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, minimizing the consequences, denial of a victim, and dehumanization. These rationalization mechanisms allow individuals to justify inconsistent actions and feel less uncomfortable about these unethical acts (Festinger 1957; Ross and Nisbett 1991;

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5 Cognitive dissonance can be defined as the uncomfortable feeling of conflict between one’s moral beliefs and one’s untoward desires (Festinger 1957).

6 Consistent with prior research (e.g., Murphy 2012; Kish-Gephart et al. 2014; Mayhew and Murphy 2014), we do not include dehumanization as one of the moral disengagement mechanisms that we examine. Our reasoning is that this rationalization may be somewhat inflammatory and therefore not be suitable for IRB approval.
Moreover, these mechanisms provide individuals with opportunities to act on self-interested motives while also avoiding self-censure, thereby maintaining a positive self-image (Osofsky, Bandura, and Zimbardo 2005). Individuals are “freed” from self-sanctions and guilt that result from behavior that violates internal moral standards, thus, making it more likely that they will make unethical decisions (Detert et al. 2008; Mayhew and Murphy 2014).

In their seminal research study on moral disengagement, Bandura et al. (1996) found that these moral disengagement mechanisms (psychosocial maneuvers) significantly predicted students’ injurious behavior. These results have since been replicated in a wide variety of organizational settings (e.g., corporate personnel, hospital workers, athletes) and ethical transgressions (e.g., fraud, political and civic corruption, computer hacking) using adult participants (Bandura, Caprara and Zsolnai 2000; Caprara and Capanna 2005; Duffy, Aquino, Tepper, Reed, and O’Leary-Kelly 2005; Young, Zhang and Prybutok 2007; Detert et al. 2008; Moore et al. 2012). For example, Duffy, Scott, Shaw, Tepper, and Aquino (2012) examined, among hospital workers, the relationship between moral disengagement and unethical decision-making, finding moral justification positively related to subsequent unethical behavior. Detert et al. (2008) similarly report a significant positive relationship with respect to decisions involving cheating, lying, stealing, and other unethical behaviors in student participants.

**Rationalization Interventions**

Murphy and Dacin (2011) suggest that researchers need not only to better understand the rationalization process, but more importantly, determine how to impede and/or moderate the use of rationalizations. That is, the ultimate goal of research in this area should be to develop interventions (or debiasing techniques) that potentially thwart the rationalization process leading to less moral disengagement and subsequent unethical behavior (Mayhew and Murphy 2014). Arguably, certain interventions such as training and forced thinking could lessen or prevent individuals from rationalizing, or a more fundamental, theoretical approach might be to directly intervene in the
rationalization process by making certain common rationalizations unavailable to individuals. If certain rationalizations are discredited they may be less likely to be used in one’s decision process. Furthermore, there may even be spillover effects of discounting other rationalizations as well.

Murphy (2012) developed two interventions using certain rationalization factors based on the Bandura (1986) moral disengagement framework. In the first intervention, the common rationalization of the minimization of consequences (no one was hurt) was impeded by telling student participants that any misreporting would result in a financial hurt to another student in the room. This first intervention had very little effect on participants’ rationalizations or their subsequent misreporting, possibly because it was operationalized as a very mild treatment.⁷

In a second intervention, student participants were first prompted to think about the ethics of their decision and how they might feel if they misreported. This instruction was combined with a description of multiple rationalizations (minimization of consequences, advantageous comparison, diffusing responsibility). Under this second intervention, somewhat surprising outcomes were observed, as participants were marginally significantly more likely to rely on rationalizations (particularly those outside the scope of the intervention) but significantly less likely to misreport overall. Interestingly, having three rationalization factors obstructed, participants indicated they relied more on other rationalizations yielding no favorable spillover but rather a backlash effect. Still unethical conduct lessened, arguably due to instructions to think first about the ethics of their decision and how they might feel if they misreported. As a result, it is difficult to generalize from Murphy (2012) with student participants and a simplistic (nonaccounting) task to a professional setting with accounting practitioners or auditors. Further, the intervention has multiple features such that it is difficult to determine the specific causal nature of each feature.

⁷ Murphy (2012) operationalized this factor such that only one other person would incur financial hurt, and the loss would be rather small ($3 or $5).
In our study we follow a somewhat similar approach but include significant adaptations consistent with an accounting context, practicing auditors, and realistic audit scenario cases. We are also careful to focus on and isolate a single intervention feature rather than multiple features. Our first two interventions examine to what extent showing the false premise of certain common rationalizations would enable accounting professionals to be less likely to use rationalizations to morally disengage and thus be less apt to intend to perform unethical behavior. These interventions likewise focus on rationalization factors common to Sykes and Matza (1957) and Bandura (1986).

For the first intervention, we point out the typical misconception (false premise) “no one was hurt” embedded in the rationalization of the minimization of consequences. We reasoned that this rationalization is used frequently in accounting and auditing contexts even though corporate malfeasance often has a large negative impact on firms, families, and individuals. Pilot tests conducted by Murphy (2012) and Reckers et al. (2018) revealed that this rationalization was the factor most used by student participants in justifying their behavior.

Our second intervention draws attention to the false premise underlying the rationalization concept of displacement of responsibility, whereby, people rationalize that they “have no choice” and thus accede to their superiors. This concept is common in hierarchical structure organizations such as encountered in accounting environments in which subordinates rationalize their compliance with their superiors’ requests by shifting responsibility to their superior.

The third intervention takes a different approach by explaining the destructive behavioral rationalization process in general and its unethical ends. By directly describing this destructive process it was expected that individuals would elevate their self-monitoring efforts and not fall prey to the harmful effects of rationalizations.

**Professional Commitment**

Interventions are likely to have varying degrees of effectiveness across individuals. Due to individual differences, certain people are likely to be more susceptible to available rationalizations
and thus influence behavior. Murphy (2012) utilized this concept in measuring her student participants’ level of Machiavellianism. While she found no evidence that Machiavellianism is related to rationalizations, she did find that those high in Machiavellianism were more likely to misreport and experience less discomfort in carrying out unethical behavior.\(^8\)

We identify and examine the individual difference of *professional commitment* as it is more aligned with the accounting profession. Our participants were practicing auditors and, if found significant, professional commitment could potentially have significant practical implications. Auditors in business settings function in a dual role as (1) employees and are bound to serve their superiors, and (2) professionals who are bound by the profession’s code of ethical conduct and identify themselves as a member of the accounting “profession” (Westra 1986; Bauer 2015; Fiolleau and Kaplan 2017; Thorne 2017). Professionals, by definition, have a fiduciary responsibility to give others’ interests priority over their own interests. In an accounting context in which social influence pressures exist, auditors struggle in ethical conflict situations in which they must make decisions from both an organizational and professional perspective (Lord and DeZoort 2001). Those auditors that lack professional commitment are likely to have a stronger bond toward their own superiors or organization rather than the professional code of ethical conduct of the accounting profession. With this in mind, it is these individuals with low professional commitment that we expect to be more willing to rationalize in support of unethical behavior and thus constitute the group in greatest need of interventions.

**Hypotheses**

Taken together, this discussion leads us to predict that, for an individual with greater susceptibility to pressure (i.e., those low in professional commitment), the influence of relevant

\(^8\) Murphy (2012) acknowledged that utilizing information about Machiavellianism would have little, if any, practical implications.
rationalizations should have a significant, negative effect on their ethical intentions. As such, to mitigate this problem, effective interventions must significantly reduce the cogency of such rationalizations. We, therefore, designed our interventions to discredit certain rationalizations (interventions #1 and 2) and highlight the destructiveness of rationalizations in general (intervention #3). Thus, we predict a mediation model (see Figure 1), in which one’s rationalization assessments act as a mediator between our interventions and ethical intentions:

**H1:** In auditors with low professional commitment, rationalization interventions will increase ethical intentions.

**H2:** In auditors with low professional commitment, rationalization interventions will decrease rationalization assessments.

**H3:** In auditors with low professional commitment, rationalization assessments will mediate the relationship between the interventions and ethical intentions.

We expect these hypotheses to hold over all three of our interventions: (1) the minimization of consequences rationalization intervention (e.g., no one was hurt); (2) the displacement of responsibility rationalization intervention (e.g., I have no choice); and (3) the cautionary explanation intervention. However, we remain agnostic to the relative strength of these interventions against each other.

**RESEARCH METHOD**

We utilize a 4 × 2 (Intervention × Professional Commitment) factorial, between-participants experimental design in which individuals are provided audit cases and asked to assess the likelihood that an audit senior would agree to a fraudulent financial reporting request. We manipulated the use of interventions at four levels to test the effectiveness of rationalization interventions on auditors’ decisions. Thus, we have a control group with no interventions, along with three different groups each provided with one of our three distinct interventions. The second independent variable is our

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9 Pressure is a necessary component of the fraud triangle and therefore our predictions are more relevant to those who are more susceptible to pressure.
participants’ level of professional commitment. We measured professional commitment and subsequently classify individuals as either high or low in professional commitment.

Participants

The preceding hypotheses were tested with 97 auditors from four public accounting firms, including two Big 4 firms. For each of these firms, the experimental materials were sent to an audit partner liaison, who then distributed the research packages to audit seniors and managers. Nine participants did not pass attention checks, leaving 88 participant responses that were subsequently analyzed. Of these participants, the average age was 28.9 years; 50 percent were female. Participant responses from the four firms were aggregated into one sample since no firm or Big4/non-Big 4 firm effects were found. Furthermore, there were no significant differences in the distribution of these demographics or professional commitment across our experimental conditions. Refer to Table 1 for further detail on these descriptive statistics.

Experimental Cases

Participants were asked to assume the role of a typical fourth-year audit senior. Participants addressed two audit scenario cases; each case included specific requests by their superior to engage in proposed unethical behaviors. We were careful to provide scenarios developed with the assistance of practicing professionals that included situational factors that can challenge one’s moral identity and with situational rationalizations potentially leading to unethical behavior (Murphy and Dacin 2011). In the first case, participants were told that in the conduct of their audit, the client CEO has stressed to his employees that it is critical to meet sales and profit targets for the current year. The employees for the audit client had worked very hard to reach its profit targets, and sales and production teams had worked overtime. In early January, it became apparent that those targets would not be reached. Subsequently, you find to your surprise that the sales and profit targets were met. For the audit client to meet their sales and profit targets, you suspect that the audit client has held open the books in the shipping department (i.e., have reset dates on computer clocks) to record shipments
for the first week of January as December sales. Your immediate supervisor tells you to disregard your suspicions (skepticism) and go along with the clients’ numbers in order to keep the client happy.

In the second case, participants were told that a certain client is desperate to show improved profits for the period and that there has been heavy pressure applied internally to reduce estimated expenses related to bad debts, product defects, warranty costs, and product obsolescence. Participants further were told that while their independent work led to proposals for significant audit adjustments in those areas, the audit manager had asked the audit senior to revise the audit work papers and propose only modest changes to the client’s estimates. The audit manager had emphasized that the client was by far the largest audit client, and further, that it is imperative to make sure the audit team and the audit firm did not lose this client.

**Independent Measures**

**Rationalization Interventions**

Participants were provided rationalizations given the expectation that in the real world such rationalizations would be provided by the audit manager simultaneous with his “ask/request” or by other members of the audit team. The objective of the intervention treatments (manipulations) was to blunt the influence of these available rationalizations. There were four treatment levels. The first level served as a control condition in which the participants were provided the scenario and the rationalizations, but no interventions. All other levels provided the same information as the control condition plus one of the three intervention treatments. The first two interventions examine to what extent showing the fallacy of certain common rationalizations, enable accounting professionals to be less likely to rely upon rationalizations (to morally disengage) and therefore be less apt to intend to perform unethical behavior.

Intervention #1 includes an intervention treatment designed to mitigate rationalizations in general and more specifically, the *minimization of consequences* rationalization. It is common for people to rationalize bad behavior through the self-justification that “No one was hurt. So, what’s the
big deal?” Of course, we know that often real people are hurt, if we only think about it. Corporate malfeasance often has a large negative, if not devastating, impact on firms, families, and individuals.

Intervention #2 includes an intervention treatment designed to mitigate rationalizations in general and more specifically, a displacement of responsibility rationalization. It is common for people to rationalize bad behavior through the self-justification that “I had no choice.” Of course, we all have choices, but we may not like the consequences of some choices: risks to friendships, promotions, bonuses, jobs themselves. A displacement of responsibility rationalization simply blames another for our bad behavior. Appendix A provides the exact wording of this intervention, as well as the wording of the other interventions.

Intervention #3 takes a different tact; it does not have a lead focus on any one common rationalization, but rather the destructive rationalization process in general. This intervention explains how wrong but tempting it is to rationalize inappropriate behavior to resolve a conflict (cognitive dissonance) between meeting others’ expectations and one’s own desire to be a good person.

Participants are told that CPAs, as well as others, fall prey to rationalizing unethical/unprofessional conduct and they must be vigilant in self-monitoring their behavior.10

Professional Commitment

Participants responded to a Professional Commitment Scale derived from Porter, Steers, Mowday, and Boulian (1974) and Aranya, Pollock, and Amernic (1981). This scale measures the degree to which participants feel committed to the accounting profession. All items represented statements in which the participant responded on a 7-point Likert-type scale, ranging from “strongly disagree” to “strongly agree” (e.g., “I am willing to put in a great deal of effort beyond that normally

10 After each intervention, participants were asked two questions to enable them to process each intervention and be more engaged. The first question stated, “Can you think of an audit instance where someone you know has used the aforementioned rationalization, even though they knew they were violating professional or firm standards of conduct? The second question asked, “Have you ever been in a job situation where you were tempted to use the afore-mentioned rationalization? How did you respond to this situation?”
expected in order to help my profession be successful”). An aggregate measure (factor) was calculated, for which the Cronbach’s alpha score is .849 (Cronbach 1951). Scale responses were split at the median partitioning participants into high and low professional categories. Appendix B provides the scale. The scale responses did not vary significantly across conditions. Refer to Table 1 for these descriptive statistics by condition.

**Dependent Measures**

After reading each audit case, participants were provided with seven possible rationalizations. These categories of rationalizations correspond to Bandura’s (1986, 1999) moral disengagement framework and have been identified and experimentally confirmed in a plethora of studies in psychology (e.g., Osofsky et al. 2005; White, Bandura, and Bero 2009; Kish-Gephart et al. 2014; Fida et al. 2015) and in Reckers et al. 2018).

For each rationalization, auditor participants were asked their assessments of how influential they believed that the rationalization would be in moderating a typical audit senior’s internal conflict so that the audit senior would comply with their superior’s request. Responses were registered on an 11-point scale, anchored by 0 = “Not Strong at All” to 10 “Very Strong”. Responses to the seven rationalization responses for both cases were aggregated to provide one measure (hereafter *Rationalization*); the Cronbach’s alpha among all participants was .964; among low professional commitment participants, .947; among high professional commitment participants, .973. This indicates that the *Rationalization* measure is highly reliable. The measure explained 68%, 75% and 60% of the variance (respectively). Higher values indicate a perceived greater likelihood that the rationalizations would lead audit seniors to comply with their superior’s request to carry out unethical behavior.

We next elicited responses to our primary dependent measure regarding their ethical intentions. Auditors were asked, “In your opinion, what is the likelihood that someone in the audit
senior’s position would agree to this request?” The response scale ranged from 0% to 100%. Given their high correlation, responses for the two cases were combined using principal component analysis with varimax rotation. Component retention criteria were (1) eigenvalues greater than 1.0 and (2) factor loadings greater than .50. This analysis yielded a single overall component, which we labeled the “Ethical Index” (or Ethical). This component explained 89 percent of the variance for the two scenarios; component scores are standardized (0, 1). Higher values on Ethical indicate a greater likelihood of unethical behavioral intentions. The corresponding Cronbach’s alpha is .880.

Various demographic and psychological measures also were collected including age, gender, academic degrees, professional certifications, the Narcissistic Personality Inventory (Raskin and Terry 1986; Ames, Rose, and Anderson 2006), and the Moral Disengagement Scale (Detert et al. 2008). These measures indicate that randomization of participants across conditions was sufficient. Further, these measures were examined for significance as covariates and/or as partitioned variables. None were significant.

RESULTS

Table 1 presents our univariate results. As previously discussed, Panel A shows that the distribution of demographics and professional commitment is consistent across each of our four conditions. However, when we split our sample in two based on professional commitment (i.e., High vs. Low PC), we see a large difference in ethical intentions (Ethical). Those with Low PC appear to have much lower ethical intentions in the control condition than those with High PC (diff. -0.979, untabulated p=0.024, two-tailed). Furthermore, per our planned contrasts in Panel C, while the High PC auditors are not significantly affected by the introduction of any of our interventions (p-values all greater than 0.30), those with Low PC show significant increases in their ethical intentions with Interventions #1 and #2 (both p<0.01, two-tailed). Intervention #3, however, does not appear to

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11 As an important design consideration, we chose to ask participants the intentions of an audit senior rather than their own intentions. This decision was made to lessen the degree of social desirability that may be elicited (Cohen, Holder-Webb, Sharp, and Pant 2007; Johnson et al. 2016).
significantly affect participants’ intentions (p=0.193, two-tailed). To better understand the effects of each distinct intervention on ethical decisions, we now turn to our multivariate hypotheses tests.

**Hypotheses Tests**

In our first hypothesis, we predicted that each of our three interventions would be successful at increasing auditors’ ethical intentions, but only with those who were low on professional commitment (PC). We tested this hypothesis by regressing Ethical on each of the individual interventions across the full sample, as well as both subsamples of auditors with Low and High PC. As expected, the interventions were only successful in the Low PC group (see model 3 in Table 2), as these are the individuals most likely to need intervention in the first place (i.e., they have significantly lower ethical intentions). Furthermore, while our results support H1 for Interventions #1 and #2, Intervention #3 is not significantly effective at shifting participants’ ethical intentions (coeff. 0.567, p-value=0.147, two-tailed). Intervention #3 described the overall fallacies of the behavioral rationalization process, with the expectation that individuals would elevate their self-monitoring efforts. The direct (blatant) manner in which this intervention was designed may have contributed to participants resisting its influence.

To test our remaining hypotheses, we will restrict the following analyses to the effective, rationalization-specific interventions (i.e., we will exclude Intervention #3).\(^\text{12}\) As shown in Table 1, Panel C, Interventions #1 and #2 are not significantly different from each other and from a theoretical perspective, these interventions are similar. Both of these interventions highlight the false premises of specific rationalizations (i.e., the minimization of consequences and displacement of responsibility

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\(^{12}\) In untabulated results, we also ran our Sobel-Goodman mediation tests of H2 and H3 using our full sample, which weakened our results. Specifically, we found that Intervention #3 does not significantly affect participants’ rationalization assessments (p=0.956). As such, including it in the sample masks the effectiveness of the first two interventions.
rationalizations, respectively) in an attempt to defuse their potency; whereas, Intervention #3 relies on a more general precautionary mechanism meant to elevate an individual’s own self-monitoring behavior. Thus, we have categorized Interventions #1 and #2 as “rationalization-specific interventions” and will focus our remaining analyses on identifying the mechanism through which these interventions work — rationalization assessments.

H2 predicts that our interventions will significantly decrease Low PC auditors’ assessments of provided rationalizations. That is, the cogency of these rationalizations should be lower if the interventions are successful. Furthermore, as rationalizations allow individuals to morally disengage, they should have a negative effect on ethical intentions. Therefore, if our interventions decrease the rationalization process, H3 predicts a positive overall effect on ethical intentions. Table 3, Panel A shows the results of our Sobel-Goodman mediation analyses, in which we (1) establish the direct effect by regressing Ethical on our Rationalization-Specific Interventions (coeff. 1.382, p<0.001), (2) regress the proposed mediator, Rationalization, on our Rationalization-Specific Interventions (coeff. -0.705, p=0.021), and finally (3) regress our dependent variable, Ethical, on both our Rationalization-Specific Interventions (coeff. 0.797, p=0.002) and the mediator (coeff. -0.830, p<0.001). The negative and significant results of Step 2 support H2. Additionally, both the direct and indirect effects of this mediation model are significant (p=0.024 and p<0.001, respectively) and 42.3% of the total effect is mediated by the Rationalization Assessments. This supports H3, showing that the rationalization assessments partially and significantly mediate the relationship between our effective interventions and ethical intentions.

[INSERT TABLE THREE ABOUT HERE]

We performed additional robustness checks to our mediation analyses by case (i.e., Case 1, the “clocks” case; Case 2, the “signoff” case). These results are shown in Table 3, Panel B. We find that our inferences discussed above hold across both cases individually, with 42.1% and 47.1% of the total effects in each case mediated by the rationalization assessments, respectively.
Ancillary Analysis

We performed ancillary analyses to further investigate the specific rationalization mechanisms through which our effective interventions work (refer to Appendix C for the full list of possible rationalizations). As shown in Table 4, Intervention #1 had a significant influence on the targeted rationalization, i.e., Minimizing Consequences (coeff. -0.627, p=0.028). Moreover, it also significantly decreased the influence of the Moral Justification (coeff. -0.742, p=0.003), Displacing Responsibility (coeff. -0.683, p=0.027), Diffusing Responsibility (coeff. -0.788, p=0.014) and Euphemistic Labeling (coeff. -0.556, p=0.021) rationalizations. This provides evidence of strong spillover effects. Furthermore, there is strong support that the targeted rationalization is the key mechanism through which the intervention affected participants’ Ethical index (coeff. -0.960, p=0.010).

The influence of Intervention #2 also was found to be diffuse across non-targeted rationalizations – i.e. Minimizing Consequences (coeff. -0.643, p=0.018) and Euphemistic Labeling (coeff. -0.556, p=0.030) – while also reaching traditional significance levels with respect to the two targeted rationalizations, Displacing Responsibility (coeff. -1.175, p<0.001) and Diffusing Responsibility (coeff. -1.060, p<0.001). Furthermore, there is marginal support that one of the two targeted rationalizations (Displacing Responsibility) is the key mechanism affecting participants’ Ethical index (coeff. -0.656, p=0.059).

[INSERT TABLE 4 ABOUT HERE]

DISCUSSION AND IMPLICATIONS

This study furthers our knowledge of the influence of the rationalization process on auditors, and particularly the potential of interventions to deter this process. Our results reveal that selected interventions hold the promise of mitigating the rationalization process, even in the presence of available rationalizations. Mayhew and Murphy (2014) surmised that auditors (and particularly CPAs) may have a reasonably strong self-regulation mechanism as they have been socialized within
a profession and therefore be less likely to rationalize. We found this to be the case only among auditors with high professional commitment. Nonetheless, while we found auditors with lower professional commitment will rationalize bad behavior, selected interventions can mitigate that rationalization process. Clearly, further research is needed but our study highlights the potential for interventions to mitigate rationalizing bad behavior among people likely to do so.

This study has several noteworthy contributions and implications for both theory and practice. First, our results suggest that audit firms need to be aware of the detrimental effects of rationalizations on moral disengagements of their auditors. Equally important, it suggests training intervention programs could be implemented to assist auditors in recognizing the false premises of common rationalizations as well as understanding certain individual differences among auditors that make one more susceptible to proffered rationalizations (Detert et al. 2008). Unfortunately, while not addressed above, we did not find that the Moral Disengagement Scale (Detert et al. 2008) was an effective discriminator among auditors more or less susceptible to proffered rationalizations.

Second, our study shows the importance of auditors maintaining a strong professional commitment in their conduct as audit seniors in their firms. The accounting profession could encourage more Continuing Professional Education (CPE) programs that raise auditors’ levels of professional commitment and thereby align auditors’ identity with the accounting profession. This is particularly important given that professional commitment may be decreasing within the profession as a result of the increased focus on advisory services and the commoditization of audit services.

Third, given the importance of the rationalization process in the conduct of fraud, future research should focus on the design and implementation of other interventions (or debiasing strategies) that potentially deter misreporting. For instance, Mayhew and Murphy (2014) found that the anticipation of negative affect resulting from performing an unethical act provides an impetus for students not to morally disengage. An affect-based intervention could be developed and empirically
tested with auditors in which individuals are prompted to consider the consequences of making an unethical decision and the negative affect that accompanies this decision.

The results of our study should be interpreted in light of the following limitations. First, we designed two ethics-related cases to be used with common rationalizations. It cannot be stated, however, without testing, that our results would replicate with other types of cases and/or other interpretations of rationalizations. However, it is important to note that our design choices reflect those situations and rationalizations that correspond to a public accounting environment and were developed with the assistance of practicing auditors. Second, when conducting ethics-based research it is important to acknowledge the issue of social desirability bias. In designing this study, we were careful to ask participants their assessments of another audit senior rather than their own. Research has shown that individuals are more likely to inflate their own ethical intentions but be more objective in assessing others’ intentions (Cohen and Monroe 2003; Kaplan, Pope, and Samuels 2010). We also instructed participants that there were no right or wrong answers and assured them that their responses would be anonymous. In this manner, we were striving to limit any social desirability bias.
REFERENCES


FIGURE 1
Hypothesized Effects of Rationalization Intervention on Ethical Intentions

Rationalization Assessment

Rationalization Intervention

Ethical Intentions

H2

H3

H1

+
TABLE 1
Descriptive Statistics

Panel A: Summary Statistics by Condition, Mean (Std. Dev.)

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>Male</th>
<th>Age</th>
<th>Big 4</th>
<th>PC</th>
<th>Ethical</th>
<th>Rationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Sample</td>
<td>88</td>
<td>49.5%</td>
<td>28.9</td>
<td>34.0%</td>
<td>28.77</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Control</td>
<td>21</td>
<td>60.9%</td>
<td>29.5</td>
<td>30.4%</td>
<td>29.26</td>
<td>-0.20</td>
<td>-0.19</td>
</tr>
<tr>
<td>Intervention #1</td>
<td>20</td>
<td>45.5%</td>
<td>28.4</td>
<td>31.8%</td>
<td>28.55</td>
<td>0.24</td>
<td>-0.17</td>
</tr>
<tr>
<td>Intervention #2</td>
<td>22</td>
<td>42.3%</td>
<td>29.7</td>
<td>34.6%</td>
<td>28.62</td>
<td>0.12</td>
<td>0.10</td>
</tr>
<tr>
<td>Intervention #3</td>
<td>25</td>
<td>50.0%</td>
<td>27.9</td>
<td>38.5%</td>
<td>28.69</td>
<td>-0.13</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Panel B: *Ethical* Means across Conditions, by *Professional Commitment (PC)*

![Graph showing ethical means across conditions and professional commitment levels]

Panel C: Mean Contrasts of *Ethical* across Conditions, by *Professional Commitment (PC)*

<table>
<thead>
<tr>
<th></th>
<th>Low PC</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low PC</td>
<td></td>
<td></td>
<td></td>
<td>High PC</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control vs. Intervention #1</td>
<td>1.310</td>
<td>0.004***</td>
<td>-0.287</td>
<td>0.490</td>
<td></td>
<td></td>
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<tr>
<td>Control vs. Intervention #2</td>
<td>1.237</td>
<td>0.007***</td>
<td>-0.394</td>
<td>0.322</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Control vs. Intervention #3</td>
<td>0.543</td>
<td>0.193</td>
<td>-0.249</td>
<td>0.540</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Intervention #1 vs. Intervention #2</td>
<td>-0.073</td>
<td>0.866</td>
<td>-0.107</td>
<td>0.798</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention #1 vs. Intervention #3</td>
<td>-0.767</td>
<td>0.059*</td>
<td>0.039</td>
<td>0.927</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention #2 vs. Intervention #3</td>
<td>-0.694</td>
<td>0.087*</td>
<td>0.145</td>
<td>0.720</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

***, ** and * indicate significance at the .01, .05 and .10 levels, respectively using two-tailed tests. All results are based on OLS regressions with *Ethical* as the dependent variable. *Ethical* is the principal component of participant responses to the question, “In your opinion, what is the likelihood that someone in the audit senior’s position would agree to this request?” ranging from 0% to 100%, multiplied by negative one. Higher values indicate higher ethicality. The three main independent variables of interest are indicator variables for each of our three interventions.
### TABLE 2
**Effect of Interventions on Ethical Decisions**

<table>
<thead>
<tr>
<th>Test Variables</th>
<th>(1) Full Sample</th>
<th>(2) Full Sample</th>
<th>(3) Low PC</th>
<th>(4) High PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention #1</td>
<td>.442 (.313)</td>
<td>.470 (.313)</td>
<td>1.315 (.419) ***</td>
<td>-.210 (.447)</td>
</tr>
<tr>
<td>Intervention #2</td>
<td>.322 (.305)</td>
<td>.297 (.304)</td>
<td>1.155 (.413) ***</td>
<td>-.389 (.429)</td>
</tr>
<tr>
<td>Intervention #3</td>
<td>.066 (.296)</td>
<td>.112 (.299)</td>
<td>.567 (.383)</td>
<td>-.238 (.448)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>(1) Full Sample</th>
<th>(2) Full Sample</th>
<th>(3) Low PC</th>
<th>(4) High PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>-.064 (.215)</td>
<td>-.042 (.022) *</td>
<td>.053 (.031) *</td>
<td>.030 (.032)</td>
</tr>
<tr>
<td>Age</td>
<td>-.214 (.220)</td>
<td>-.224 (.298)</td>
<td>-.293 (.336)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>-.051 (.225)</td>
<td>-.246 (.303)</td>
<td>-.233 (.345)</td>
<td></td>
</tr>
<tr>
<td>Big 4</td>
<td>-.200 (.218)</td>
<td>-.166 (.404)</td>
<td>-2.013 (1.070) *</td>
<td>-.155 (1.293)</td>
</tr>
<tr>
<td>Intercept</td>
<td>-.200 (.218)</td>
<td>-.166 (.404)</td>
<td>-2.013 (1.070) *</td>
<td>-.155 (1.293)</td>
</tr>
</tbody>
</table>

#### Model Results

- **N**: 88 (88), 43 (45)
- **Prob > F**: 0.432, 0.294, 0.019, 0.739
- **R²**: 0.03, 0.10, 0.33, 0.08

***, ** and * indicate significance at the .01, .05 and .10 levels, respectively using two-tailed tests.

All results are based on OLS regressions with **Ethical** as the dependent variable. **Ethical** is the principal component of participant responses to the question, “In your opinion, what is the likelihood that someone in the audit senior’s position would agree to this request?”, ranging from 0% to 100%, multiplied by negative one. Higher values indicate higher ethicality.

The three main independent variables of interest are indicator variables for each of our three interventions. Control variables include: **Professional Commitment (PC)** defined based on the Professional Commitment Scale derived from Porter et al. (1974) and Aranya et al. (1981), measuring the degree to which participants feel committed to the accounting profession (see Appendix B); Age in years; a gender indicator equal to 1 for Male participants, 0 otherwise; and Big 4 equal to 1 for participants at one of the Big 4 public accounting firms, 0 otherwise.

Models (1) and (2) were run using the full sample, including all participants and both cases. Models (3) and (4) were partitioned on professional commitment, where participants with professional commitment below (above) the overall median are classified as **Low PC** (**High PC**).
TABLE 3
Mediation Analyses of Rationalization-Specific Interventions for Low PC

Panel A: Low PC Subsample, Both Cases

<table>
<thead>
<tr>
<th>Test Variables</th>
<th>Step 1: Ethical</th>
<th>Step 2: Rationalization</th>
<th>Step 3: Ethical</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS Intervention</td>
<td>1.382 (.315) ***</td>
<td>-.705 (.287) **</td>
<td>.797 (.233) ***</td>
</tr>
<tr>
<td>Rationalization</td>
<td></td>
<td></td>
<td>-.830 (.143) ***</td>
</tr>
<tr>
<td>Intercept</td>
<td>-.759 (.260) ***</td>
<td>.184 (.237)</td>
<td>-.606 (.175) ***</td>
</tr>
</tbody>
</table>

N       28
Prob > F <0.001 0.021 <0.001
R²      0.43 0.19 0.75

Sobel-Goodman Tests
Indirect effect  .585 (.259) **  
Direct effect  .797 (.233) ***  
Total effect  1.382 (.315) ***

Proportion of total effect mediated 42.3%

***, ** and * indicate significance at the .01, .05 and .10 levels, respectively using two-tailed tests.

Ethical is the principal component of participant responses to the question, “In your opinion, what is the likelihood that someone in the audit senior’s position would agree to this request?”, ranging from 0% to 100%, multiplied by negative one. Higher values indicate higher ethicality.

Rationalization is defined as each participant’s aggregate response to seven provided rationalizations (using 11-point Likert scales), in which participants indicate how influential they believed that the rationalization would be in moderating a typical audit senior’s internal conflict so that the audit senior would comply with their superior’s request.

RS Intervention (Rationalization-Specific Intervention) is an indicator variable equal to 1 for conditions using Intervention #1 and Intervention #2; and 0 for the control group. The sample excludes the ineffective intervention, i.e. Intervention #3, and participants with High PC.
TABLE 3 (continued)
Mediation Analyses of Rationalization-Specific Interventions for Low PC

Panel B: Subsample by Case

<table>
<thead>
<tr>
<th>Test Variables</th>
<th>CASE ONE</th>
<th>CASE TWO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1:</td>
<td>Step 2: Rationalization</td>
</tr>
<tr>
<td>RS Intervention</td>
<td>Ethical</td>
<td>Ethical</td>
</tr>
<tr>
<td>28.1 (7.84) ***</td>
<td>16.3 (7.12) **</td>
<td>30.2 (7.81) ***</td>
</tr>
<tr>
<td>Rationalization</td>
<td>-1.88 (.352) **</td>
<td>-13.3 (3.50) ***</td>
</tr>
<tr>
<td>Intercept</td>
<td>-51.1 (6.51) ***</td>
<td>.412 (.292)</td>
</tr>
<tr>
<td>N</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td>&lt;0.001</td>
<td>0.018</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.32</td>
<td>0.19</td>
</tr>
<tr>
<td>Sobel-Goodman Tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of total effect mediated</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***, ** and * indicate significance at the .01, .05 and .10 levels, respectively using two-tailed tests.

Ethical is the principal component of participant responses to the question, "In your opinion, what is the likelihood that someone in the audit senior’s position would agree to this request?", ranging from 0% to 100%, multiplied by negative one. Higher values indicate higher ethicality.

Rationalization is defined as each participant’s aggregate response to seven provided rationalizations (using 11-point Likert scales), in which participants indicate how influential they believed that the rationalization would be in moderating a typical audit senior’s internal conflict so that the audit senior would comply with their superior’s request.

RS Intervention (Rationalization-Specific Intervention) is an indicator variable equal to 1 for conditions using Intervention #1 and Intervention #2; and 0 for the control group. The sample excludes the ineffective intervention, i.e. Intervention #3, and participants with High PC.
TABLE 4
Structural Equation Model of Rationalization Mechanisms

Panel A: Intervention 1

![Diagram of Structural Equation Model]

- Minimizing Consequences
- Advantageous Comparison
- Moral Justification
- Denial of Victim
- Displacing Responsibility
- Diffusing Responsibility
- Euphemistic Labeling

Intervention 1 → Minimizing Consequences → Ethical
- .68 (.35)**
- .36 (.38)
- .74 (.27)***
- .44 (.39)
- .68 (.35)**
- .79 (.36)***
- .56 (.27)**

Ethical → Minimizing Consequences
- .96 (.41)***
- .23 (.39)
- .12 (.36)
- .01 (.35)
- .33 (.61)
- .16 (.57)
- .35 (.25)
Panel B: Intervention 2

The coefficient and standard errors are shown next to each path. Panel A shows the results of the SEM for Intervention 1, with an overall \( \chi^2 = 157.92 \) (Prob > \( \chi^2 = 0.000 \)). This analysis includes the 19 observations from the Control and Intervention #1 conditions only. Similarly, Panel B shows the results of the SEM for Intervention 2, with an overall \( \chi^2 = 121.82 \) (Prob > \( \chi^2 = 0.000 \)). This analysis includes the 18 observations from the Control and Intervention #2 conditions only. The Intervention variables are indicators equal to 1 for each respective condition and 0 for the Control. Ethical is the principal component of participant responses previously discussed, for which higher values indicate greater ethicality. Each of the mediators reflect participant responses to one of the seven specific rationalizations (using 11-point Likert scales). The bolded rationalizations reflect those specifically targeted by the respective intervention.
APPENDIX A
Interventions

Intervention #1: Nobody was really hurt!

Rationalizations are attempts that people make to convince themselves that what they know is wrong is not really wrong, or not very wrong…and thus the act is OK to do. One very dangerous rationalization that people often fall into is that “Nobody was really hurt; so it is OK. I am still a good person.”

But people are often hurt; but we tend to ignore thinking about the real people who bear the consequences of our bad acts. Corporate and audit malfeasance does affect real people, like Linda and Richard Mettemeyer of Quincy, Illinois who make significant sacrifices to save funds on a weekly basis toward their children’s future in college funds and corporate stocks. Linda is an elementary school teacher; Rich works in construction…they are not wealthy, and they are vulnerable. Their children, Eric and Leslie, are young now but Linda and Rich know they grow fast and financial needs will be significant. Like most parents they want their children to have more than they have. The same is true of Diana (a nurse) and Chuck (a state trooper) Porter of Jacksonville Florida and countless other parents. Their hopes and aspirations for their children rest on the integrity of the accountants, auditors, and advisors. The savings of many parents have been wiped out in accounting scandals over the last decade. Fidelity Investments notably emphasizes the importance of personal responsibility, reminding their employees that they do not “manage money”, they “manage people’s money”.

The story of the demise of Arthur Andersen CPA firm follows much the same story line. The risk of losing one big client and the negative impact on one audit partner’s career allegedly took precedence in his mind over the risks imposed on thousands of other Andersen employees (who all lost their jobs) as well as thousands of Enron employees and investors who lost their jobs and their pensions.

The loss of savings, pensions, stockholdings, jobs, etc., to individuals like Richard Mettemeyer as well as to Andersen and Enron employees are direct and conspicuous. But there are also hidden institutional costs of improprieties…costs to the reputation of the audit firm, and the accounting profession and costs to society in losing faith in banks, corporations, auditors. Capital markets are built upon the trust in the accounting profession to provide credibility to the financial statements.

Intervention #2: “I had no choice!”

Rationalizations are attempts people make to convince themselves that what we know is wrong is not really wrong…and thus the act is OK to do. One very dangerous rationalization that people often fall into is that “I had no choice.” Hitler’s lieutenants are infamous for using this rationalization, in very extreme cases. But, we are all often tempted by this rationalization. Of course what people are really saying is that they have a choice, but it might risk their promotion, job, bonus, friendships…things they very much want. In the corporate world of today, accountants and auditors similarly have choices to do right or wrong. “I had no choice” again means I could do right but at a personal risk…and promotions and my career are more important than doing right. I come first!
In sentencing an accountant involved with the WorldCom fraud, Judge Barbara S. Jones of the United States District Court stressed the importance of subordinates refusing to collude. In her defense, the accountant spoke about being under pressure, indicating “I felt like if I didn't make the entries, I wouldn't be working there”. Judge Jones, however, opined that the accountant had higher responsibilities and “. . . had [she] refused to do what she was asked, it's possible this conspiracy might have been nipped in the bud.”

Another accountant at WorldCom defended his part in the corporate financial fraud stating he thought it would be a one time “compromise” and WorldCom's business would soon improve. Of course, it did not. And, the typical “slippery slope” of unethical behavior ensued. Rather than being a stopgap measure, the improper accounting continued. “[E]ach quarter they found themselves in the same uncomfortable spot, and wound up making giant and fraudulent entries. In the second quarter, they transferred $560 million to the capital accounts. In the third quarter it was $743 million, and in the fourth quarter it was $941 million.” “. . .Mr. Myers helped direct false entries again and again.”

Intervention #3: Cognitive Dissonance - Rationalizing Bad Behavior

People who are asked to go along with something that they view as potentially improper often develop motivations to rationalize their behavior due to a conflict between meeting others’ expectations and their desire to view themselves as an “honest person.” This “cognitive dissonance” is the uncomfortable feeling of conflict between what we know is right and the actions that others want us to take or actions that we want to take for our own self-serving benefit. Rationalizations are our attempt to convince ourselves that what we know is wrong is not really wrong.

Rationalization is an evil mistress. Rationalizing bad behavior is incongruent with a CPA’s professional code of conduct. But, rationalization is stealthy and seductive, and must be vigilantly guarded against.

Recently, we conducted a study with a sample of over 200 CPAs regarding the influence of rationalization opportunities on unethical dilemmas they faced. Two findings emerged from this study:

1. A significant number of CPA participants’ showed a reasonably high willingness to engage in unethical/unprofessional conduct, and

2. Their unethical conduct related directly to both:
   a. the individual’s own tendency to rationalize and,
   b. the simple availability of rationalizations provided by others. Thus, just having suggestions of possible rationalizations lead some individuals to disengage from appropriate ethical behaviors.
APPENDIX B
Professional Commitment Scale

Describe your level of agreement with each of the statements below by circling your response using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
<td>Somewhat Disagree</td>
<td>Slightly Disagree</td>
<td>No Opinion</td>
<td>Slightly Agree</td>
<td>Somewhat Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. I am willing to put in a great deal of effort beyond that normally expected in order to help make my profession successful.  
2. I am proud to tell others that I am part of this profession.  
3. Being a member of this profession really inspires the very best in me in the way of job performance.  
4. I really care about the fate of this profession.  
5. For me, this is the best of all professions to be a member of.
APPENDIX C
Case Scenarios

CASE SCENARIO ONE:

Please respond to the following scenarios as you believe TERRY CRAWFORD would.

Audit Scenario 1: In the conduct of your audit (Terry Crawford) have been aware that the audit client CEO has stressed to his employees that it is critical to meet sales and profit targets for the current year. Everyone was being called upon to go the extra mile. The employees for the audit client had worked very hard to reach its profit targets; sales and production teams worked overtime, and even the Christmas break was cut short. In early January it became apparent to you that those targets would not be reached. Subsequently, you find to your surprise that the sales and profit targets were met. For the audit client to meet their sales and profit targets, you suspect that the audit client has held open books in the shipping department (i.e., have reset dates on computer clocks) to record shipments for the first week of January as December sales. You speak about this to your immediate supervisor, who tells you “Terry, just let this go. This is no time to make waves. Just look beyond this…keep your eye on the big picture. This engagement is out for bids and we need to keep this client happy!”

1. Possible rationalizations for this scenario:

   a. MINIMIZING THE CONSEQUENCES OF THE BEHAVIOR (i.e., rationalizing that nobody is really hurt or hurt very much. No one else has expressed any suspicion, and even if the client held open the books, over a two-year period the sales numbers will even out anyway.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

      Not Strong at All 0…..1…..2….3…..4…..5…..6…..7…..8…..9….10 Very Strong

   b. ADVANTAGEOUS COMPARISONS (i.e., rationalizing that the proposed behavior is not so bad; obvious client fraud is not being overlooked. These are real sales numbers that are recognized a little bit early.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

      Not Strong at All 0…..1…..2….3…..4…..5…..6…..7…..8…..9….10 Very Strong

   c. MORAL JUSTIFICATION (i.e., rationalizing that the behavior serves one or more important outcomes. People have families to support; it’s important for you to keep your job; this is an investment to keep good relations with the supervisor and advance in the firm). How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

      Not Strong at All 0…..1…..2….3…..4…..5…..6…..7…..8…..9….10 Very Strong
d. DENIAL OF THE VICTIM (i.e., rationalizing that audit quality is not significantly sacrificed. Nobody is really harmed, certainly not very much – and auditors do not guarantee numbers to the penny. Investors must accept some risks for the rewards they get.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1….2….3….4……5……6……7……8……9……10 Very Strong


e. DISPLACING RESPONSIBILITY (i.e., rationalizing that you are not responsible. This was not your choice; your supervisor has directly asked you to do this. You cannot question every decision he makes.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1….2….3….4……5……6……7……8……9……10 Very Strong

f. DIFFUSING RESPONSIBILITY (i.e., rationalizing that you are not the only one responsible for any possible consequences. The people above you make the ultimate decisions and they have faith in the client.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1….2….3….4……5……6……7……8……9……10 Very Strong

g. EUPHEMISTIC LABELING (i.e., rationalizing by re-framing the act. Rather than view the act negatively, reframe the act positively….compliance will signal commitment to your supervisor. This is the give-and-take of the business world.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1….2….3….4……5……6……7……8……9……10 Very Strong

RECAP: Your immediate supervisor asked you to ignore your suspicions that your audit client held open the books in the shipping department (i.e., reset dates on computer clocks) to record shipments for the first week of January as December sales. In your opinion, what is the likelihood that someone in Terry Crawford’s position would agree to this request?

   0%……10……20……30……40……50……60……70……80……90……100%
CASE SCENARIO TWO:

Audit Scenario 2: Your biggest engagement (on which you work most of the year) is a very important engagement for the local office. In fact, a significant portion of the revenues of the office come from this client. This client is desperate to show improved profits this period. The internal audit staff appear scared to death…and your audit manager also seems very nervous about an upcoming meeting with the CEO and audit partners. You have heard that there has been heavy pressure applied to the controller’s office and internal audit to reduce some of the estimated expenses and especially those related to bad debts, product defects, warranty costs, and product obsolescence. While your work thus far proposes significant audit adjustments in these areas, assume that your audit manager has asked that you revise your audit work papers and propose only modest changes to the client’s estimates. Your audit manager has emphasized that this is by far our largest audit client. In fact, he has said emphatically that, “Terry, you need to be a team player! It is imperative to make sure we do not lose this client.”

2. Potential rationalizations for this scenario

a. MINIMIZING THE CONSEQUENCES OF THE BEHAVIOR (i.e., rationalizing that nobody is really hurt or hurt very much. These are all soft estimates – they can be adjusted next year. The client is strong overall.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1…..2…..3…..4…..5…..6…..7…..8…..9….10 Very Strong

b. ADVANTAGEOUS COMPARISONS (i.e., rationalizing that the proposed behavior is not so bad; obvious client fraud is not being overlooked (e.g., no bogus revenue entries or capitalized expenses.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1…..2…..3…..4…..5…..6…..7…..8…..9….10 Very Strong

c. MORAL JUSTIFICATION (i.e., rationalizing that the behavior serves one or more important outcomes. People have families to support, this is a big client for the firm; and this is an investment to keep good relations with your audit manager and advance in the firm). How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1…..2…..3…..4…..5…..6…..7…..8…..9….10 Very Strong

d. DENIAL OF THE VICTIM (i.e., rationalizing that audit quality is not significantly sacrificed. Nobody is really harmed – and auditors do not guarantee numbers to the penny. Investors must accept some risks for the rewards they get.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

   Not Strong at All 0…..1…..2…..3…..4…..5…..6…..7…..8…..9….10 Very Strong
e. DISPLACING RESPONSIBILITY (i.e., rationalizing that you are not responsible. This was not your choice; your audit manager has directly asked you to do this.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

Not Strong at All 0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 Very Strong

f. DIFFUSING RESPONSIBILITY (i.e., rationalizing that you are not the only one responsible for any possible consequences. The people above you make the ultimate decisions and they have faith in the client.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

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g. EUPHEMISTIC LABELING (i.e., rationalizing by re-framing the act. Rather than view the act negatively, reframe the act positively….compliance will signal commitment to your audit manager. This is the give-and-take of the business world.) How influential (strong) do you believe that this rationalization will moderate Terry’s internal conflict and thus allow compliance with the request?

Not Strong at All 0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 Very Strong

RECAP: Your audit manager instructed you to revise your audit work papers and propose only modest changes to the client’s estimates (e.g., bad debts, product defects, warranty costs, and product obsolescence), even though you believe that the client has reduced these estimated expenses significantly and you initially proposed to make substantial audit adjustments to these estimates. In your opinion, what is the likelihood that someone in Terry Crawford’s position would agree to this request?

0%.....10.....20.....30.....40.....50.....60.....70.....80.....90.....100%